

Layne Norton Frequently Asked Questions (FAQ)

Compiled by Patrick Dib "Hypertrophik" from the Layne Norton "Str8flexed" thread at Muscular Development

<http://forums.musculardevelopment.com/showthread.php?t=4226>

Updated: December 18, 2007

Table of Contents

Part A: General Nutrition

Topics:

[On Fruits and Vegetables](#)

[On Juice Plus vs Regular Veggies](#)

[On sweet potatoes vs oats](#)

[On Red Meat:](#)

[On dietary fats:](#)

[On Blood Pressure:](#)

[Comments on an old school weight gaining shake:](#)

[On Bowel Movements during Dieting:](#)

[On eating fat free low sugar yogurt during diet](#)

[On preworkout food:](#)

Part B: Food Information:

Topics:

[Layne's Favorite tasting whole food protein source](#)

[Cocoa and Testosterone levels](#)

[On horse chestnuts and vascularity](#)

[On Alcohol](#)

[On Nighttime nutrition:](#)

[On night feeds:](#)

[On Fast food fried products:](#)

[On Water consumption](#)

[On Fiber Caloric value:](#)

[On Layne's main carb source:](#)

[On Fiber One:](#)

[On Whole Eggs and Cholesterol Concerns](#)

[On Milk:](#)

[On Counting Fibers during Diet:](#)

[On Acesulfame K:](#)

[On Fruit Consumption:](#)

[On Salt intake:](#)

[Regarding Egg quality:](#)

[On EZEKIAL bread](#)

[On Lettuce:](#)

Part C: Diet Products

Topics:

[On Diet Sodas](#)

[On Calorie free products](#)

Part D: Protein Info

Topics:

[On Protein Intake:](#)

[On the need for Protein Shakes/ Optimal amount of Protein / Whole Food vs Whey](#)

[On Aging and Protein Consumption:](#)

[On the trend of more protein is better](#)

[Old school vs Present day differences in Protein consumption](#)

[The use of Microwaves and Protein Degradation:](#)

[The use of Microwaves and Protein Degradation:](#)

[On Products low in Carbs](#)

[Absorption of BCAA with food](#)

[Egg vs Casein Protein before bed](#)

[On Soy Protein](#)

[On Di/Tri/long peptides digestion and assimilation:](#)

[On counting protein from carb sources:](#)

[On Gluconeogenesis after large consumption of protein:](#)

[On Chicken vs Beef bioavailability](#)

[On Gemma Protein](#)

[On Protein Absorption:](#)

[On Gemma being equivalent to soy:](#)

[On when to take Whey Isolate:](#)

[On Muscle growth:](#)

[On Whey Hydrolysate:](#)

[Heating / Cooking and Protein quality:](#)

[On buckwheat fraction protein:](#)

[General Protein/BCAA questions :](#)

[On amounts of shake layne uses a day:](#)

[On Protein requirements/ PEPTIDE-bound amino acids vs free form amino acids](#)

[On Protein Powders:](#)

[On Denaturing egg protein:](#)

[On Chewing and denaturing:](#)

[On Protein Frequency](#)

[On Protein Absorption:](#)

[On Calculating protein requirements:](#)

Part E: BCAA's

Topics:

[On Why the preference of BCAA over Whey in PWO shakes](#)

[On BCAA Absorption](#)

[On BCAA dosing:](#)

[On Caloric Value of Xtend/ BCAA effect on insulin](#)

[On Counting BCAA towards Protein requirement:](#)

[On Benefits of Leucine / BCAA](#)

[On BCAA Timing:](#)

[On benefits of BCAA supplementation:](#)

[On Why Layne likes BCAA supplementation:](#)

[Recommended BCAA dosing:](#)

[On BCAA supplementation on a tight budget](#)

[BCCA vs EAA](#)

[Powder BCAA vs Capsule BCAA](#)

[On sipping BCAA's](#)

[Do BCAA behave like creatine in terms of Saturation/ Maximum amount of recommended BCAA](#)

[On during workout nutrition:](#)

[On Using Leucine as a replacement of carbs in PWO nutrition during low carb dieting:](#)

[BCAA timing issues:](#)

[On the need of BCAA's:](#)

[On BCAA effectiveness during Ketogenic diets:](#)

[Opinion on different BCAA products:](#)

[On BCAA stability/Potency in Solution:](#)

[On Dissolving BCAA's](#)

[On using Whey and Carbs vs. BCAA and Carbs:](#)

[On cycling Protein and BCAA's:](#)

[On the effects of EAA/ BCAA on Keto :](#)

[On BCAA's and Fasting:](#)

[On BCAA dosing between meals:](#)

[On studies that suggest compositional changes when supplementing with BCAA/Leucine](#)

[On sipping BCAA's:](#)

[Troubleshooting BCAA dosing:](#)

[On determining BCAA amounts:](#)

Part F: Pre/Post Workout Nutrition

Topics:

[Pre Workout meal:](#)

[On Preworkout meals:](#)

[On Peanut butter in PWO shakes:](#)

[On dextrose in PWO shakes](#)

[On whole food consumption after a PWO drink](#)

[Comments on a PWO drink](#)

[On night time PWO meals :](#)

[On differences between PWO carb sources](#)

[On Carbs before/during/after training:](#)

[On Layne's Personal PWO shake](#)

[On during workout shakes:](#)

[On WMS in PWO shake:](#)

[Comments on carb source in a PWO shake:](#)

[On PWO shakes during a Cut:](#)

[On recommended amount of sugar in PWO shakes:](#)

[On Leucine in PWO shakes:](#)

[On Milos Sarcev during workout shakes:](#)

[On Protein sources for PWO shakes:](#)

[On carbohydrate intake with Protein Post workout](#)

[Troubleshooting Foam in PWO shake](#)

[On having 2 PWO meals:](#)

Part G: Study Discussions

Topics:

[Modulations of muscle protein metabolism by branched-chain amino acids in normal and muscle-atrophiying rats.](#)

[Timing of amino acid-carbohydrate ingestion alters anabolic response of muscle to resistance exercise](#)

[The Effects of Protein and Amino Acid Supplementation on Performance and Training Adaptations During Ten Weeks of Resistance Training](#)

[Caffeine is ergogenic after supplementation of oral creatine monohydrate.](#)

[On mixed-muscle fractional synthesis rate \(FSR\)](#)

Part H: Training:

Topics:

[On leg training:](#)

[On squats and lower back:](#)

[On Upper back:](#)

[On resting between sets:](#)

[On overtraining:](#)

[On rep/set schemes:](#)

[On High Volume training:](#)

[Opinion on routine by T-nation:](#)

[Frequent training and Soreness:](#)

[Powerlifting:](#)

[Light Day workout](#)

[On Chest development:](#)

[Layne's Workout Journal:](#)

[On Calves:](#)

[On circuit training:](#)

[On Layne performing Traditional squats:](#)

[On squats for glutes and hams:](#)

[On warming up:](#)

[On Layne's Dynamic delts routine:](#)

[Thoughts on a leg routine:](#)

[On inner thigh development:](#)

[Quad help](#)

[On splitting leg routines:](#)

[On the effects of calisthenics on recovery](#)

[On workout effort:](#)

[On front squat form:](#)

[On Total Body Training:](#)

[On taking a week off from training:](#)

[On training adaptation:](#)

[On Push/Pull/Legs routine:](#)

[On layne performing deadlifts with a trap bar:](#)

[On squat form:](#)

[On Layne's workout scheme:](#)

[On Training till failure:](#)

[On hack squats:](#)

[On Glute ham raises \(GHR\) :](#)

[On workout duration:](#)

[On laggin lats:](#)

[On training methodology during the 2-3 week cut :](#)

[On vastus medialis training](#)

[On Sprints for quad sweeps:](#)

- [On Heavy/Light training :](#)
- [On Volume training during dieting:](#)
- [On shoulders being stronger than chest:](#)
- [On nutrition after a sprint workout:](#)
- [On DC training:](#)
- [On Precontest training:](#)
- [On increasing weights on deadlifts:](#)
- [On layne's preferred workout :](#)
- [On gauging working sets:](#)
- [On Dumbbell lateral raises:](#)
- [On Caloric intake for lagging parts/ High intense cardio during bulking](#)
- [On Deloading:](#)
- [On expanding the ribcage:](#)
- [On HIIT with weights:](#)
- [On Knee height rack deadlifts:](#)
- [On incorporating hang cleans and power cleans to workout routine:](#)
- [On abdominal training:](#)
- [On Back width:](#)
- [On MMA training](#)
- [On Max-OT training:](#)
- [On Rest days:](#)
- [On Progressive overload / Variety:](#)
- [Post contest training:](#)

Part I: Cardio

Topics:

- [On Empty Stomach Cardio:](#)
- [On doing HIIT and low intensity cardio](#)
- [On performing cardio right after weight training:](#)
- [On the "Fat burning Zone"](#)
- [On Cardio being catabolic:](#)
- [On Performing Cardio to reduce bodyfat during a cut:](#)
- [HIIT vs Low intensity cardio](#)
- [On Whether or not HIIT "burns muscle" or not:](#)
- [On an Effective HIIT Protocols:](#)

[On Incorporating HIIT with a specific Weight lifting routine:](#)

[On Post HIIT Nutrition](#)

[On HIIT during a precontest cut:](#)

[On performing HIIT on a bike:](#)

[On drinking a shake when doing HIIT](#)

[On Max-OT cardio Inteval training / Post Cardio nutrition](#)

[On other forms of Cardio](#)

[Jog/sprint/jog for your cardio HIIT](#)

[On HIIT on a track](#)

[General HIIT questions](#)

[On HIIT soreness](#)

[On regulating carbs/calories on cardio when bulking](#)

[Opinion on the G-Flux from Berardi:](#)

[On Substrate Utilization during cardio](#)

[BCAA's around low intensity cardio](#)

[On Cardio during the 4 week Bulk/ 2 week Cut protocol](#)

[On the Wind/Parachute sprint:](#)

[On carb intake according to different forms of Cardio](#)

Part J: Supplementation

Topics:

[On Arachidonic Acid](#)

[On Liquid aminos vs Powder aminos](#)

[On Vitamin B Supplementation](#)

[On Banned Compounds/Supplements:](#)

[On Estrogen Blockers](#)

[On Whey Protein](#)

[On Vitamin and Minerals](#)

[Supplements for Bulking to prevent excess Fat gain](#)

[On Diuretics](#)

[On MCT \(Medium Chain Triglycerides\) Supplementation](#)

[On BODY OCTANE by MAN Sports:](#)

[On Steroids](#)

[On Supplements that Layne Takes](#)

[On Omega 3 / 6 Supplementation:](#)

[On Recovery Enzymes:](#)

[On Caffeine Use](#)

[On MyAlli OTC fat loss aid](#)

[On 7-Keto DHEA legality](#)

[On recovery Supplements](#)

[On Cissus:](#)

[On Antioxidants:](#)

[On Liver pills:](#)

[On Leucine supplementation with BCAA's](#)

[On Guggelsterones](#)

[On Abdominal fat reduction:](#)

[On Usinic ACID:](#)

[On How to take Fat Burners + When to do cardio](#)

[On Fat burners administration](#)

[On Bolus Protein dosing](#)

[Creatine and Ketogenic diets](#)

[On Fish Oils](#)

[On DL-Phenylalanine Supplementation](#)

[On phenylalanine and arginine and their effects on insulin secretion](#)

[On Window of Opportunity](#)

[On Glycerol Supplementation](#)

[On Fat loss capsule administration](#)

[On Arms shaking during training](#)

[On CLA](#)

[On Acetyl-L-Carnitine](#)

[On NO supplements:](#)

[Creatine with WMS vs Dextrose](#)

[On Primal N20](#)

[L-Arginine Absorption](#)

[Vasocharge Vs Primal N20](#)

[L-Arginine and GH levels](#)

[On Glucose Disposal Agents \(GDAs\)](#)

[On Red Wine/Grape phytonutrient benefits:](#)

[On Vanadyl Sulfate \(GDA\)](#)

[On Prohormones](#)

[On Creatine While Cutting](#)

[On Stimulant use and its association with cortisol levels](#)

[On Oil supplements:](#)

[On mixing whey with carbonated water:](#)

[On Cissus:](#)

[On DHEA](#)

[WMS vs Vitargo:](#)

[On what to extrapolate leucine dosing to](#)

[On Citrulline Malate](#)

[On Glutamine as a glycogen Resynthesis agent Comments on this study: Effect of oral glutamine on whole body carbohydrate storage during recovery from exhaustive exercise](#)

[On Beta-Alanine](#)

[On natural t-boosting supplements:](#)

[On Nettle root Extract:](#)

[General supplement information:](#)

[On Primaforce BCAA dosing :](#)

[On Arginine and Ornithine Combo](#)

[On Arginine absorption with other aminos](#)

[On Anabolic Pump and Yellow Gold](#)

[On Xtend during cardio and post workout](#)

[On Tyrosine Dangers:](#)

[On K-R-ALA :](#)

[On Xtend Ingredients:](#)

[On Dialene 4 flushing :](#)

[On ALA](#)

[Comments on a Specific Supplement Stack:](#)

[On ALA supplementation during the 2 week cut protocol](#)

[On Vitamin E toxicity:](#)

[On an effective supplement stack](#)

[On WMS:](#)

[On Digestive enzyme supplementation](#)

[On Sesamin/ALA/Chromium/GDA during Bulking:](#)

[On N-Acetyl Cysteine](#)

[On Peptopro “Hydrolysed Casein”](#)

[On Multivitamins](#)

[On Beta-Alanine dosing:](#)

Specific Supplementation: Creatine:

[On Creatine:](#)

[Creatine during fat loss phases](#)

[On Kre-alkalyn](#)

[Creatine and contest day:](#)

[On Caffeine and Creatine:](#)

[On Regular Creatine Monohydrate vs micronized Creatine Monohydrate?](#)

[Is sugar required for creatine?](#)

[On Creatine Brands](#)

[On Creatine Loading:](#)

[On Creatine Stability :](#)

[On How much does Layne Personally consume Creatine?](#)

[On Cycling Creatine:](#)

[On Creatine during last week of contest prep:](#)

[Creatine and Glutamine consumption:](#)

Specific Supplementation: Scivation Products:

[Xtend and WPI:](#)

[On Dialene 4:](#)

Part K: Ketogenic Diets:

Topics:

[On Ketogenic diets:](#)

[On Dave Palumbo's Diet](#)

[On Efficacy of Ketogenic Diets:](#)

[Comments on a specific ketogenic protocol](#)

[On artificial Sweeteners and Ketogenic diets:](#)

[On methods to deliver creatine more effectively during Ketogenic diets](#)

[On Peanut Butter and Protein Isolate Post workout](#)

[Hitting the wall with Keto: 2 cases](#)

[Gluconeogenesis and Ketogenic diets](#)

[Solute Load on Kidneys during ketogenic diets:](#)

[Debate on no bull radio :](#)

[On Cardio while on Keto:](#)

[On Training during Ketogenic Diets:](#)

[BCAA's and Ketogenic diets](#)

Part L: Dieting:

Topics:

[On maintaining fat loss after a low calorie diet:](#)

[On research that studies the effect of fat gain when returning to maintenance from a restrictive caloric cut.](#)

[On Joint Pain during Dieting](#)

[On the Cut Diet:](#)

[On Dave Palumbo's diet:](#)

[On the Body fat Setpoint:](#)

[On the Metabolic Diet:](#)

[On the book sliced:](#)

[On calculating macros:](#)

[On counting Fiber during dieting:](#)

[On Bulk Cycling:](#)

[On Fat calories:](#)

[On Leucine during dieting:](#)

[On Refeeds:](#)

[On carbs during the night:](#)

[On PWO shakes during 2-3 week cut:](#)

[On training during dieting:](#)

[On Carbs during bulking:](#)

[On Carb timing:](#)

[On cheating during dieting:](#)

[On metabolism slowing during dieting:](#)

[On Leptin](#)

[On Offseason bulking](#)

[On Eggs:](#)

[On Females following the contest prep article guidelines:](#)

[On dropping calories for contest prep:](#)

[On spreading carbs during a lean bulk:](#)

[On counting fiber:](#)

[On Caloric cycling:](#)

[On layne's Bulking article:](#)

[On adding weight:](#)

[On the setpoint theory:](#)

[On stimulants during dieting](#)

[Bulking on a budget:](#)

[On liver/kidney support supplements:](#)

[On choosing a diet for contest prep:](#)

[On dieting books:](#)

[On type of foods during dieting:](#)

[On Fat storage](#)

[On introducing carbs while on Keto/low carb diets:](#)

[On carbs around cardio:](#)

[Cereal during dieting:](#)

[On why cereal during dieting:](#)

[On carb types around cardio](#)

[On being an author of "Scivations, Showtime Cut Diet"](#)

[On maintaining muscle mass during a cut.](#)

[On Cardio: Timing / Intensity](#)

[On Keeping Fat gains to a minimum during a bulk](#)

Part M: Contest Prep

Topic:

[Layne's Contest Prep article:](#)

[On performing HIIT and low intensity cardio:](#)

[On Layne's previous articles regarding low intensity and HIIT cardio:](#)

[On the Cut diet:](#)

[Thoughts on a pre contest diet:](#)

[On avoiding certain foods before contest:](#)

[On nutrition during contest day :](#)

[On Last week of Contest Prep:](#)

[On Sodium Loading:](#)

[On counting sodium/ applying preparation H:](#)

[On readjusting the contest prep diet while on it for a while:](#)

[On veggies during contest prep:](#)

[On HIIT during contest prep:](#)

[On starting a keto diet:](#)

[On differences for training/dieting between natural and steroid using bodybuilders:](#)

[On staying dry from pre-judging till evening show:](#)

[On counting food during Offseason and precontest:](#)

[On Carbonated water / Drinking soda during contest prep:](#)

[On max amount of carbs while dieting:](#)

[On different approaches for contest prep:](#)

[On Master's over 50 contest prep:](#)

[On Potassium](#)

[Comments on sodium loading from layne's contest prep article:](#)

[On indulging after the show:](#)

[Questions regarding the cut diet:](#)

[On getting more vascular](#)

[On carbing up 11 days before a show:](#)

[On cutting water:](#)

[On Carb Loading / cutting water](#)

[On dropping water and sodium before a show:](#)

[On cutting water a few days before the show:](#)

[On peaking for multiple contests:](#)

Part N: Body fat measurements:

Topics:

[On Skinfold Calipers:](#)

[On caliper types:](#)

[On converting mm to %
ON DXA \(DEXA\):](#)

Part O: Post Contest

Topics:

[On training post contest:](#)

[On bloating post contest:](#)

[On transition to offseason from competition:](#)

[On resetting metabolism:](#)

[On hunger post contest:](#)

[On offseason post contest:](#)

Part P: Miscellaneous

Topics:

[On creating custom diets:](#)

[On spot reduction:](#)

[Good gyms by the U of Illinois Urbana/Champaign](#)

[On purchasing supplements:](#)

[Offseason/contest stats:](#)

[Abs visible during offseason:](#)

[On natural testosterone production:](#)

[Natural Federations:](#)

[Future competition plans:](#)

[On competing in the NPC](#)

[NGA posing duration:](#)

[Layne's DVD:](#)

[Career highlights:](#)

[On smoking/drinking:](#)

[On taking Prohormones/Prosteroids/banned Substances:](#)

[On Training while sick:](#)

[On future plans:](#)

[Interview with Layne:](#)

Part A: General Nutrition

On Fruits and Vegetables

How many servings of fruits and veggies should a natural bodybuilding have at least a day? How much do you get of them a day? any cheap supplements you recomend to fit more veggies in a diet since it may be an inconvenience to eat them sometimes?

cook em up ahead of time. Veggies & fruit as well as fiber is pretty much inversely correlated with every type of disease you can ever think of. I try to have at least 4 servings per day.

plus it keeps ya regular

On Juice Plus vs Regular Veggies

what's your opinion on juice plus layne , would you ever dish out 40 bucks a month for the stuff? or would you rather pound your dam veggies? Also, what are the best veggies to have on a regular basis?

I wouldn't spend the money

as a general rule, most often whole foods are better than isolated compounds

On sweet potatoes vs oats:

Do you prefer sweet potatoes or oats?

I like oats just because I like the texture better

On Red Meat:

How often you eat red meat

I eat lean red meat probably 4-5x/week, maybe more

On dietary fats:

Do you eat fat with every meal?

Well, it's pretty impossible to eliminate fat no matter what food you eat

Ok, let me rephrase, do you eat a fat source like almonds/pb with every meal?

No, I don't

On Blood Pressure:

Do beta blockers have any effect on fatloss/muscle gain? My dr wants to put me on them for my high BP, but id like to avoid it and lower it naturally.

I cannot foresee any impact that B-blockers would have on fat metabolism.

I always suggest trying to lower blood pressure naturally unless it is pretty high and then you just want to get it under control.

My Average reading is 140 over 90 or higher. I lift weights 3-4 times a week, and 4 days of cardio 30 min sessions on the treadmill at a moderate pace. My diet consists of around 150g protein, under 100g carbs, 40g fats. not sure about the sodium intake.

Try lowering sodium down to 1500mg per day and see if that helps

Do you have any files or studies that prove to my doctor that?

A - High protien levels are not going to kill a person

B - That creatine

1 - Does more than just "hold water"

2 - Is not going to destroy his 2 well functioning healthy kidneys.

The blood levels he will find will support the doc as high protein diets elevate liver enzymes but that is COMPLETELY FINE. They are only marker's of kidney/liver dysfunction and do not cause it.

Tell him to read these articles

<http://www.bodybuilding.com/fun/layne22.htm>

<http://www.bodybuilding.com/fun/layne38.htm>

Tell him to ask the doc to cite peer review literature to support his claims.

He wont' be able to, and what's more, he's a dentist. I doubt he took complex metabolism courses... so tell him to keep his nose in his own fucking business lol. You wouldn't see me going around trying to give people root canals.

Comments on an old school weight gaining shake:

Layne would you use for a weight gaining shake?

I heard of the old school jug method but wasn't sure if it was a good idea?

I guess it what old bodybuilders used before weight gainer were sold as supplements?

1/2 gallon whole milk

2 cups no sugar added ice cream

2 cups heavy whipping cream

16 oz cottage cheese

2 bananas

6 whole eggs

6 scoops of whey protein

4 TBSP natural peanut butter

Drink it 3 times day WITH meals not as a replacement

That's pretty ridiculous and a good way to get fat

On Bowel Movements during Dieting:

When dieting is it normal to have only 1 or 2 bowel movements a week?

On such a low carb diet your fiber is going to be very low so it wouldn't surprise me

I have read places that this is a sign of low metabolism... any truth to this?

No. poop is 80-90% old GI cells that have been replaced. the other 10-20% is bacteria and very little is undigested material (bulk fiber, etc)

The fact that you are eating less will reduce GI cell turnover and the fact that you are low carb will reduce the turnover of the cells more; thus, less feces.

Has nothing to do with metabolism and however the idiots are who say nonsense like that, they need their face rubbed in some poopy

On eating fat free low sugar yogurt during diet

Layne, do you have a problem with eating fat free low sugar yogurt within a bodybuilding diet? i like to mix it with my oats but wondering if eating it everyday would not be a good idea.

Nothing wrong with that.

On preworkout food:

I know it's a whole food meal but how long before your workout do you eat?.

I eat 1-2 hours pre workout

Part B: Food Information

Layne's Favorite tasting whole food protein source

What is your favorite forms of food to get ur protein (not for nutrition-wise but for taste) I'm curious.

For taste? probably a good steak

Cocoa and Testosterone levels

i was reading an article on bb.com and it said that the fats and cocoa are realyl good for testosterone levels. you havent heard anything about this???

that is nonsense. you can't have your fats too low or test will drop that's true. but the notion that eating a bunch of bad fats is going to raise your test in a dose dependant manner is a dumb statement

On horse chestnuts and vascularity

hey layne i read something in flex about horse chestnuts to bring out your straitions and veins whats your take

Sounds like straight up nonsense

On Alcohol

Question : this a honest question sorry if it offends you. do you drink alcohol in the off season?

Answer: occasionally i'll have a beer or two. You know alcohol is actually quite good for you in small doses, it's just when you have 5 or more drinks you have precipitously bad effects

Question : So in small amounts, like say 1 beer with a meal... once or twice per week (offseason obviosly) does that not have any negative effect on testosterone or GH levels?

Answer: no, less than 2 drinks per day in a normal weight person is not going to have any negative health effects that I could possibly conceive of

On Nighttime nutrition:

layne , just wanted to hear how you go about nighttime nutrition , do you take any time released protein , whole food, carbs ect.?

I have a whole food meal, usually a meat w/ rice or something or perhaps oats; then when i wake up to pee (I wake up every night pretty much same time) I down some xtend (BCAAs) & a protein bar then go back to sleep

On night feeds:

lol why not? You wouldn't go 8 hours during the day without eating would ya?

I am looking into the metabolic diet to see if it will work for me. On the dairy issue I must be the only one here(or seem to be) where dairy does not bloat me, give me the shits, or hold water. Does that only happen to people who are lactose intolerant?

It mostly happens to lactose intolerant people, but many people also have allergies to the peptides in milk like the lactalbumins and I knew one girl who was even allergic to casein.

On Fast food fried products:

Just a question regarding nutrition. Specifically: I notice places like McD's advertise the fact that they deep fry in healthy oils. Isn't this totally pointless as the heat destroys the good oils and turns them into trans fats?

I'm not really sure, but healthy oils are only healthy to a point and at the quantity they are using it's all unhealthy.

On Water consumption

On the topic of water, is drinking 3 gallons overkill?

Unless you are an endurance athlete working out in the heat, yes

On Fiber Caloric value:

I did a bit of searching and established that insoluble fiber provides no energy and soluble fiber all told ends up giving about 2 cal's per gram. Does this sound right to you?

2-3kcal/gram

On Layne's main carb source:

layne what do you eat as your main carb source?

I don't really have a main one... i use a bunch of different sources

On Fiber One:

hey layne u think fiber 1 would be ok for a carb source to replace oatmeal/sweet potatoe ?

Fiber one is fine

Hey dude, hope you're well.

On Whole Eggs and Cholesterol Concerns

Is there a guideline for maximum number of whole eggs a day (just concerned about overdoing the cholesterol)? Is 6 too many?

Honestly, your cholesterol levels are much much more so determined by liver production of cholesterol. It is very much a genetic thing. Typically people with low cholesterol won't increase their cholesterol over the long term even if they eat more. whereas someone who has high cholesterol can lower dietary cholesterol and still have elevated cholesterol because their liver compensates by producing more. I think you could have 3 or 4 whole eggs per day and be ok

On Milk:

Wasnt sure where to ask this so came here. Not a fan of milk at all makes me sick most of the time. So I put 8th Contient Soy Milk in my protein shakes prob 2-3 times a day is this hurting me in anyway or is there another alternate

Thanks

Have you tried lactose free milk?

On Counting Fibers during Diet:

Anyhow, i've got a question regarding carb counting. I am eating Trader Joe's High Fiber cereal, it's just wheat bran and a few other things in it, per serving it's got 23g of carbs, and 9g of fiber. Would I count that as 14g of carbs since the fiber doesn't actually count as carbs, or would it count as 23g regardless?

Contrary to popular belief, fiber SHOULD count. Fiber is not absorbed as a carb, however soluble fiber is fermented in the lower intestine and reabsorbed as short chain fatty acids and thus you still get almost ALL the calories from fiber. (it's about

3kcal/gram as opposed to 4kcal/gram with carbs).

On Acesulfame K:

I was wondering if you've done any research or know anything regarding the artificial sweetener Acesulfame K? It's offered in the flavorings from where I order protein and was wanting to know your thoughts on its safety.

I have not seen any evidence that it is dangerous

On Fruit Consumption:

Hey Layne, do you think that is okay to eat fruit, I usually go for apples and bananas, when bulking or are they stored as fat too easily

they are fine in moderation yes

Layne I am a nattie as well , I was wondering what your feelings on fruit are , mainly bananas , apples , grapes , peaches?

I think fruit is fine in moderation

On Salt intake:

Hey Layne. Someone just posted an article regarding salt (sodium chloride specifically). It said that salt doesn't cause hypertension (only exacerbates it) and that bodybuilders don't eat enough and should be eating way more for reasons including enhanced anabolism, workout performance and simply to make the physique look better. It also said not to worry about eating too much as the excess is just flushed out in urine. What are your thoughts about this? Does salt not contribute to the hardening of the arteries?

For most people this is true. today's sodium intake is just tomorrow's output. But I'm not quite sure how it could be anabolic by taking more... since the body will just increase it's own output lol; whoever said it was anabolic defeated their own argument by bringing up the fact that serum sodium levels are so tightly regulated (another reason why it's stupid and futile to deplete them for a contest)

however about 10% of the population are sodium responders and a high sodium will indeed permanently increase their blood pressure and they do need to monitor their sodium intake

Regarding Egg quality:

For the eggs, besides the stress, I was also thinking in terms of what/how much of the crap chickens are fed, is passed through the egg. And even worse if the egg would be to some extent used in kind of a purging/ excreting purpose?

I wouldn't worry about it bro

On EZEKIAL bread

Layne, are your thoughts against EZEKIAL bread positive or negative?

Nothing wrong with it

On Lettuce:

There is no such food that actually uses more calories to burn due to digestion than what the food actually contains in calories correct? I've been told by a prof in university that there is no such thing and people seem to think lettuce is a food that can achieve this.

As far as digestion... lettuce hardly has energy in it; but your body does get some from it; albeit very little

Part C: Diet Products

On Diet Sodas:

Layne what are your thoughts on calorie free beverages when dieting such as diet peps, sams club carbonated water, and wal mart calorie free drink mixes? Can you drink too much?

They are fine, diet sodas are the best appetite suppressants i've ever used lol. As with anything moderation is key, but I have drank 4 or 5 a day with no ill-effects in terms of fat loss

On Calorie free products

Do you think <http://waldenfarms.com/> products are ok to use when cutting? They say that their peanut butter spread and fruit spread is calorie free. What do you think?

Those are fine, I use them

Part D: Protein info

On Protein Intake:

You mentioned that no studies have ever proven that more than 1g of protein/lb of bodyweight is any more effective... but do you think that this could possible be because of the lack of intensity, and or volume that the studied subjects involved? I just ask, because in most studies it seems to me that it is hard and rare for them to have a group of people who train like serious/hardcore bodybuilders or strength athletes.

Actually in most strength athletes they find they use protein more effectively and thus 'need' less. However, the real question is does eating more provide metabolic benefits? That has yet to be seen. Most of these studies have looked at nitrogen balance which only tells you whether a person is anabolic or catabolic and doesn't really give you an idea to the degree they are and it also doesn't let you know what tissues are retaining or losing the nitrogen. The other method is whole body amino acid fluxes, essentially using 'labeled' amino acids isotope and looking at what tissues they flux into and out of. The problem with both of these is they do not account for recycling of the amino acids within various tissues, nor do they take into account that tissues like the gut turnover very rapidly and so much of the whole body flux of amino acids is from the gut. Skeletal muscle turns over comparatively slowly and thus has much smaller effects on whole body amino acid fluxes. For example, the researchers who concluded casien is better than whey looked at whole body amino acid fluxes and concluded that casein reduced breakdown better than whey... BUT THEY LOOKED AT WHOLE BODY PROTEIN BREAKDOWN, which tells you very little about the breakdown occurring specifically in skeletal muscle. In order to get good information you have to look at fractional rates of synthesis and degradation within the skeletal muscle which 1) is much more difficult 2) more expensive 3) requires more skill and 4) requires a biopsy. Thus it is often not used in studies.

In our lab we are measure fractional synthesis rates. Two main questions we are looking at is 1) how much protein at a meal does it take to maximize protein synthesis? 2) how long does the effect last 3) how long after an initial meal can you trigger synthesis again. This will likely be the crux of my PhD thesis. As far as your question, we simply don't know as of now.

On the need for Protein Shakes/ Optimal amount of Protein / Whole Food vs Whey

Layne, what is your take on omitting protein shakes and bars from daily consumption? True enough, most all powders are pre-disgested, manufactured dietary supplements, but I think the value of them cannot be denied. After all, there

is the convenience factor of them, plus proteins have come a long way from the 90's, as they had from the 80's, and so on. I think the biggest thing for me is wanting to include them for these two reasons:

1. I eat eight times a day. At the suggestion of someone else, I cut out protein supplements (at least for this first month to see how my body takes to it), and am looking entirely to whole foods to get my protein intake. The problem with that is that eating eight whole food meals a day is not really agreeing with my stomach, especially considering that I now have to eat more calorie dense meals. So, for me, it is a big help convenience-wise, because I can time everything much better, AND get my protein requirement. And for the record, I have set my protein ratio at 2g of protein per 1 lb. of bodyweight for a grand total of 360g daily. 45g spaced out over 8 meals does not sound so bad, but considering that I do not always meet this requisite, protein shakes help to fill in the remainder. My shakes normally ran 70g protein.

2. While I understand the importance of covering all bases by using whole food to make the best of varying amino acid profiles, do protein shakes (certain products, anyway... my regulars were these type) not have specifically engineered profiles that cannot be had through regular food, hence the importance of having them in the first place?

I ask you because you are a highly regarded natural here on MD.com, and from reading your posts, you have a very sizeable knowledge base, and I am always willing to learn more. My apologies for being long on words with my questioning, but that is just how I am.

no need to cut out protein shakes... unless one has a lactalbumin sensitivity and then they should be limited

1. I think your protein intake is too high. I have literally spent the last 8 years of my life studying protein and more recently my studies at the graduate school level have been spent studying protein synthesis and metabolism in depth. There is just no evidence that anything over 1g/lb is beneficial for anabolism and there is evidence that going too high can actually reduce the anabolic response. I would mitigate your intake to 1.5g/lb. The problem with many bodybuilders is that we have this "more is better" or "all or nothing" ideals. If increased protein is good, then a TON MUST BE GREAT! Another example is vitamins. If you are deficient in a vitamin it can limit growth, but taking a ton of vitamins isn't going to enhance growth and yet many bodybuilders take absurd amount of vitamins

like vitamin C. What they don't realize is that by taking too much of certain vitamins and minerals you can actually get many negative effects and in the case of vitamin C, if you take too much it can actually act as a pro-oxidant instead of an anti-oxidant. More is not better, better is better.

2. Shakes are not 'needed' per say but there is also no reason to cut them out. As far as having profiles that are better than whole foods, whey has probably the best profile in terms of bioavailability and leucine content and there is strong evidence that leucine is the only amino acid that can independently stimulate protein synthesis

On Aging and Protein Consumption:

As you age your body becomes less sensitive to amino acids so it takes more amino acids to get the same effect, if you are going to go that much lower on protein; i would suggest supplementing with leucine or a BCAA product which will help make up for the reduced stimulatory effect from being less sensitive to amino acids and for the fact that you've reduced protein. If not then I would increase protein to about 200g; and I would make fat about 25% of calories, then make up the rest of your calories from carbohydrates.

On the trend of more protein is better

I find that all protein products are pretty much useless as it is simple to get adequate amounts in a 2000-2900 caloric threshold. Most people overconsume protein for no apparent reason other than paranoia.

I agree that most do over consume protein out of paranoia but protein powders can be useful for convenience if nothing else, or if someone is a vegetarian, or has certain food allergies that may prevent them from getting protein from typical sources

Old school vs Present day differences in Protein consumption

Hey Layne do you think old school bodybuilders at all that protein because they didn't have much knowledge on bcaa's. I guess what I am asking is some people believe more is better for protein but with leucine(and other bcaas) you get more protein intake as opposed to taking in a huge amount of protein in hopes that the

level uptake is the same. Damn I confused my self.

250 grm protein +leucine vs 400 grm of protein no additional bcaas

Partly, but I think bodybuilders now take in more protein than they did back in the day

The use of Microwaves and Protein Degradation:

does microwaving your meats degrade the protein?

yes, so does any kind of cooking, but that doesn't mean shit, your body degrades them during digestion too. You end up hydrolyzing all the proteins into the individual amino acids anyway so it doesn't really matter

Cool thanks i just read a couple studies about it and wanted to get your opinion. i make 5 days worth of chicken at a time and just pop it in the micro when needed so this concerned me a little

No, it's no big deal... i never understood why people made an issue out of it in the first place

while we're on the topic of protein degradation, a old roommate of mine used to make hot cocoa with his chocolate whey protein and microwave his shakes until they were steaming hot. I told him that he probably shouldn't do it since it could denature the protein but he said he didn't give a shit. But you are saying its not really a big deal anyways?

It is absolutely no deal whatsoever. You see proteins are long chains of amino acids that are linked together by peptide bonds. Each protein folds into it's own natural 'conformational' shape depending upon the sequence of the amino acids contained within it. Heat and acid will both denature proteins which means they will unfold from this conformational state. However, this does not 'destroy' the protein, it simply causes it to unfold. The amino acids remain intact and are still available. Just to make my point that it does not matter if you denature a protein, look at what happens during digestion. Proteins are exposed to concentrated acid in the stomach (6 Molar Hydrochloric Acid) which will denature almost ANY protein. In the small intestine the denatured protein is then cleaved into individual amino acids, di, and tri-peptides. So as you can see, denaturation is a natural part of digestion and in the end it really doesn't matter anyway if you denature a protein because it ends up being cleaved anyway.

I have been adding Whey protein to my Oatmeal in the morning and I heat it up in the Microwave for about a minute. I was wondering if microwaving the Whey might cause it to breakdown?

i believe i have answered this in depth before in this thread you might try searching for it for a more in depth reply. and no it should not affect it

On Products low in Carbs

do you know of any good MRP's or protein powders that are low or dont have carbs

but high in protein with a balance of fats? Ive been doin no carb and im getting sick of the same foods! 12 weeks is too long!

by nature most MRPs are 'meal replacements so they supply a complete meal of pro/carbs/fats; i do know optimum used to have a MRP called "protein diet" that only had like 5g

Absorption of BCAA with food

In studies by Tipton & Wolfe, Using 6g EAA pre-workout stimulates the protein synthesis (after workout) by much more than whey (250% if I remember correctly). This is if using it on an empty stomach since its the fast uptake that probably is responsible for that effect. Is it the same with BCAA:s? Can they be taken together with food or will that slow down and diminish the effect?

food won't slow down the absorption. In fact there was a study done looking at BCAA alone vs. Whey alone vs. BCAA + Whey and the latter was the best

Egg vs Casein Protein before bed

Which is better to have before going to bed, is it casein or egg protein, I don't see people recommend too much egg protein and it kind of confuses me since egg protein last a lot in the intestines just as casein protein (I believe it's 7 hours).

Is it for the water content and its relation to how much your testosterone can go down when having too much water before bed? or is it something else? Is there a problem if I eat my regular 12 egg whites before bed (besides bad taste)?

egg vs. casein is splitting hairs IMO

On Soy Protein

Soy protein, any myths, truth or hidden dangers with it....?

soy is fine. you'd have to go super high intake to have negative effects. the only people who should be wary are post-menopausal women

But purely anecdotally anything that helps you get warm faster is a good thing and additionally, anything that makes you feel better ie gives you positive feedback (nothing like looking jacked in a tight shirt to fire you up lol) is going to enhance your workout.

asked Layne about Soy because out of a hand full of people, I respect only a few! (When someone has been in the sport supplement business as long as I have...well...I have the up most respect for Layne and Bodyfx2) and to debunk the myths of Soy seem needed!

Soy has a bad rap. Most “think” that soy raises Estrogen/Lowers Test levels and can harm our thyroid output. But this only happens when soy consumed in huge amounts. Most studies on Human subjects show that this is false. But surprisingly most don’t know is that Soy Protein is a relatively a rapid acting protein, which results in rapid urea excretion. Tissues effect mostly by soy was not muscle, but rather splanchnic/internal organs! So it is not as evil as most say it is. Small amount are helpful for males if taken. I am sure Layne can expand further as he is the man (no pun intended).

yea, Tracy Anthony at USI (I collaborate w/her lab) did an experiment where they gave whey or soy post workout and looked at rates of protein synthesis. They found no statistical difference; but both were way better than wheat. Soy is actually pretty high in leucine

Am J Clin Nutr. 2007 Apr;85(4):1031-40.

Consumption of fluid skim milk promotes greater muscle protein accretion after resistance exercise than does consumption of an isonitrogenous and isoenergetic soy-protein beverage.

I’ve seen the latter study and that was free living without tracking total calorie intake so while it is interesting, it is not conclusive. The first one certainly is interesting. I consider 2 scoops of soy as a pretty high dose. I don't think many people take soy in that amount. I believe most bodybuilders get residual soy through protein bars, meal replacements, etc where the concentration is pretty low. At that concentration I doubt it is a problem.

On Di/Tri/long peptides digestion and assimilation:

Hey Layne, what do you think of Dave's statement that di and tri peptides are more easily assimilated than free-form?

they are assimilated faster; not sure about 'easier' depends upon what your definition of 'easier' is

why would BCAAs be preferential to plain old whey isolate? Is it because the body utilizes primarily BCAA during exercise?

Because whey is in long peptides. so it requires even more digestion

So the peptides digest slower yet assimilate faster? how is that possible?

There is a difference between long peptides and di & tri peptides

So what if I had some pure whey isolate 30 minutes before cardio instead of BCAA? would it be as effective since it had time to digest?

Just have both

On counting protein from carb sources:

Just a curious question. Do you calculate the amount of protein coming from your carb sources along with your protein as your total protein count for the day. I'm assuming no...?

Absolutely. Read my 'protein myths' article in the first issue of e-MD

On Gluconeogenesis after large consumption of protein:

In Carlon Colker's Extreme Muscle Enhancement, he mentioned (without a reference except it was a study performed at U-C Berkeley) where 100grams of protein was ingested, he made no mentions of specifics... but he said the researchers found that 55-grams of of the 100 grams of protein ingested became carbohydrate through gluconeogenesis

Does that sound right? I mean excess protein becomes carbohydrate right, but is it really at a %55-percent ratio (obviously that ratio gets higher as the amount of protein ingested gets higher...)

That sounds right to me. I am actually surprised it wasn't higher

On Chicken vs Beef bioavailability

I was wondering how well your body uses red meat, I know chicken is more Bio - available, but I cant stand it. My butcher sells the steroid-hormone free beef. I eat 1 to 2 pounds of lean ground beef a day it seems to be working great. I was just wondering is my body actually able to use the protein effectively.

I'm not sure if chicken is more bioavailable. I think they are both about the same

On Gemma Protein

Layne your opinions (if any at all) on this new protein source for bodybuilders, gemma protein . Link: http://www.trueprotein.com/Product_D...id=22&pid=6816
The only reason I used TP's site is they have all the amino and nutritional break downs for you.would be insightful. Nobody has a really good review article on it online I could find like Soy, Whey, Casein, and EGG proteins.

I'm sure that other suppliers carry it. Seems as if manufactures are looking into an alternative for dairy proteins because of the rising costs (I'm sure there are other factors as well).

It's a suitable replacement for casein; however, it's around 50% lower in leucine than whey I think. The reason the prices went up is because a plan in New Zealand that made about 40% of the world's whey closed down.

On Protein Absorption:

I did some checking and no its about the same. Using TP's guide a scoop contains 2.22 G of Leucine and using my Optimum Gold Standard Whey bag facts pannel its 2.5. That's about the same just a few mg difference. I'm sure this would still be considered a "high in bcaa's protein source" like whey.

I didn't know the absorption was so slow that it would negate it from being a good pre-workout protein though?

As I understand it:

WHEY > EGG / SOY > CASEIN / Gemma (?). This is in terms of absorption rates.

Whey = 2 hours

Casein = 2-7 hours

Egg and Soy falling somewhere in between...

DO I have it right?

absorption isn't as big of a deal as people think. Whey is actually significantly slower digestion when you combine it with carbs & fat. In my research; whey w/ carbs & fat will keep aminos plateaued for 3 hours and they will start falling off after that but at 5 hours post meal they are still elevated above baseline

On Gemma being equivalent to soy:

Anyways, would you consider GEMMA = SOY for the most part? Its also plant sourced so I assume it also has isoflavones?

Not sure

On when to take Whey Isolate:

layne which meals do u suggest I use whey protein isolate for? I eat 6 times a day and i don't take a post workout shake i just go home and eat, should i have whey as soon as i get home and eat oats? I eat pre-workout meal a hour and a half before workout should i take whey with oats here too? and whey for breakfast?

I think whey post workout is fine, but really i just use it whenever i need to get some extra quick protein in

On Muscle growth:

Do you believe there is an upper limit to how much muscle mass, naturally, a body can accrue? I mean, if one were to continually provide ample stimulus to the muscle fibers to grow, and provide a caloric surplus what's to stop indefinite progress....I am always hearing about "natural limits" or filling ones "genetic potential" but in most cases it seems people just get very comfy with eating maintenance calories and lifting the same weights they have been lifting for years, and that maybe that is the true reason they aren't getting bigger as opposed to some "natural limit"thoughts?

It's probably an asymptotic growth curve. Meaning when you first start lifting you grow very fast for a period of time, then it slows, then the gains get slower and slower and slower. I don't think they ever stop so long as you can stay healthy and eat right and keep getting stronger, but they just become very slow. Now once you hit 40-50 you probably aren't going to gain muscle after that just because various factors start working against you: reduced insulin sensitivity, decreased testosterone, etc.

That said, very very few people ever reach their 'genetic potential' most just use the term as a cop out.

I have not been able to find ANYTHING with regards to a 'general rule of thumb' with regards to the amount of muscle that a nattie can put on.

I realise that there are a huge number of variable due to biochemical/genetic/physiological individuality, but I thought with your research background, there must be a rough ball park figure, just as there is the general guidelines of a 1 kg loss of fat per week.

of variable due to biochemical/genetic/physiological individuality, but I thought with

your research background, there must be a rough ball park figure, just as there is the general guidelines of a 1 kg loss of fat per week. well typically the absolute max amount of amino acids that can be deposited in tissue per day is about 5-10g. So let's say you max that at 10g per day. $10 \times 365 = 3,650$ grams. $3650g/454grams \text{ per lb} = 8.04$ lbs. Now that is dry tissue weight. Skeletal muscle is only about 30% dry tissue and 70% water. so if 8.04 is divided by .3 you get about 26.8 lbs per year. Now obviously this is not set in stone but I think it's probably safe to say anything over 25-30 lbs of LEAN tissue gain per year would be close to impossible to achieve without anabolics.

On Whey Hydrolysate:

Is there really any benefit to using Whey hydrolysate. Can you get a good PWO shake with just Whey Concentrate and Isolate. I hear hydrolysates talked about so much but is it overhype?

I'm not layne, but i think as far as Whey Concentrate and Isolate go as a PWO shake, there just fine, quick digesting protein which is good. Also Bcaa's are excellent pre and post workout. I also use protein shakes if i need to up my protein intake, as I find them a quick way to get protein in. As long as you stick with your basic nutrition im sure you'll be fine. What people forget to remember is that, all these supplements are good, but nothing beats good old nutrition which comes your food, chicken breast, eggs, fish, beef etc....(proteins)...Back in the day, bodybuilders didn't have a big range of supplements which we use now days, this just goes to show, its all about hard training and the basics!

I agree with this, though i do think whey may be so slightly better than food sources due to it's digestibility & high leucine content

Heating / Cooking and Protein quality:

Layne, Does the heating or cooking with whey or whey/casein affect the quality and benefits of the protein? I like to mix whey powder with my oatmeal and wondered if the heat has a negative effect.

short answer: no

On buckwheat fraction protein:

Layne, What is the story with buckwheat fraction protein, ie: Kemistry ProCore? Is it a viable protein source? What are your thoughts and opinions.

It is viable. Research seems to suggest it may be a good alternative for casein

General Protein/BCAA questions :

1. I'm a little confused by trying to read some of the literature right now on the difference between a protein and a BCAA. My understanding is that a protein was a BCAA. Can you clarify the differences for me? What makes one better than the other in certain time frames?

2. One of my friends in the office where I work has asked me about how beneficial high levels of protein would be to a person who lifts only twice a week, but does triathalons. I could only tell him about the fat I lost using a high protein/low carb diet and lifting because I limited my cardio to the minimum I needed for my unit PT. Do you have any advice references for me to give to him?

3. I made my goal for meeting weigh in requirements for the physical fitness test, and want to add carbs back into my diet. Actually I have started putting carbs up varying 100-150g/day for the last several days. Is there a happy medium between mass building and dieting such that I can continue to lose fat/lovehandles and build some crazy muscle?

1. protein is made up of amino acids. BCAAs are a category of amino acids.

think of protein as a building made up of bricks. Bricks are those amino acids. BCAAs are a certain type of brick

2. .eating a high protein diet better enables your body to run on endogenous sources of fuel which is great for an endurance athlete. It also helps with mitochondrial turnover
3. no not really. if you want to build significant muscle you are going to have to overeat at some point. If you want to lose fat you are going to have to diet. You cannot overeat and diet at the same time. You may build small amounts of muscle but you aren't going to build 'crazy' muscle.

On amounts of shake layne uses a day:

how many times a day do you usually take a whey shake?

once maybe twice. i'd take it 5x per day if i was in a pinch

On Protein requirements/ PEPTIDE-bound amino acids vs free form amino acids

Layne but what do you think of having a higher protein intake for a macronutrient balance? If you need over 600 carbs to gain something (like me; 21 x bw maintenance) , 1x bw protein will leave me at like 25 grams of protein per meal. If im eating 80 Carbs of pasta for example for a PPWO meal, there will be about 13 Protein grams in the pasta, leaving about the same amount of chicken protein to be eaten (very little chicken and would seem like an unbalanced meal). I know you deal with it by eating less meals with more protein each meal but i can't imagine eating so many carbs in one sitting, the 7 meals i eat now are big enough...

yea then you can go higher if you want to my point has always been more protein probably isn't bad but it certainly isn't 'needed' as so many 'gurus' preach

this is from an article i wrote

Despite the numerous positive benefits to BCAA supplementation, there are many skeptics who suggest that BCAAs are overpriced and that one can just increase their consumption of whey protein which is rich in BCAAs. Unfortunately this is not the case. The BCAAs in whey are peptide bound to other amino acids and must be liberated through digestion & absorbed into the bloodstream to exert their effects. Even though whey protein is relatively fast digesting, it still takes several hours for all the amino acids to be liberated & absorbed into the bloodstream. BCAAs in supplement form however, are free form BCAAs and require no digestion and are therefore rapidly absorbed into the bloodstream, spiking blood amino acids to a much greater extent than peptide bound amino acids. Even a few grams of BCAAs will spike plasma levels of BCAAs to a much greater extent than a 30g dose of whey protein, impacting protein synthesis and protein degradation to a much greater degree. The reason a supplement has such a powerful effect on blood levels of BCAAs is that unlike other amino acids, BCAAs are not metabolized to a significant extent by the small intestine or the liver, therefore an oral supplement is more like a BCAA injection since it reaches the bloodstream so rapidly.

<http://www.strengthandscience.com/january/article5.htm>

Dave Palumbo had this to say about your article:

" How does he explain the fact that PEPTIDE-bound amino acids are more easily absorbed than free form amino acids? In fact, Scott Connelly (the inventor of Met-

Rx) is coming out with a new product (a new company) that contains WHEY FRACTIONS that stimulate protein synthesis better than anything previously seen."

Later on he said

"I'm not a big believer in BCAA's. The truth is that DI and TRI PEPTIDES are more easily assimilated and absorbed than are free form aminos. If you take in 6 solid meals containing high quality protein, your amino acid levels in your bloodstream should always be sufficient to support muscle growth and repair. Will it hurt to take them? Of course not. Is it vital? I'd say no!"

I'd be very very interested to hear your thoughts on this Layne because while BCAA are grilled into us as being important (free form that is). Maybe that statement is over hyped? Can you refute this research that Plaumbo seems to be referring to that says di/tri peptides are better sources of BCAAs than free form. Hydrolyzed Whey > free form BCAA I take it is what he is getting at.

well di-peptides and tri-peptides are absorbed more rapidly due to the greater presence of a transportor for them, however, it appears BCAA can be transported very rapidly as well (most likely because when you take bcaa you are only taking a few grams at a time, whereas with whey you are taking 30-40g) so while there are more transportors for di & tri-peptides, you are also putting a greater load on them. when you take a smaller dose of bcaa 5-15g then there is more than enough transportor capacity to handle them. This is evidenced by the work of koopman et. al who showed that even a comparatively small dose of leucine could cause an almost 2 fold increase in plasma leucine compared to whey. Whey alone will get plasma leucine to about 300uM (280 in my research) whereas adding leucine to it can get it near 700uM.

Let's not go back and forth between me and dave and turn this into an argument. He is entitled to have his opinion, as am I.

the other thing i forgot to mention is that you have to keep in mind most amino acids are extensively metabolized by the liver. Only about 23% of ingested amino acids actually make it into the plasma because they are so extensively metabolized by the gut & liver. The BCAAs really aren't touched at all by either because the liver lacks the BCAT enzyme which catalyzes the first step of BCAA catabolism. Thus BCAA are much much different than any other type of amino acids... even though di & tri peptides may be absorbed 'faster' in some cases, they are also less likely to make it to circulation due to extensive metabolism by the gut & liver.

On Protein Powders:

But can you point me in the direction of some articles and journals online detailing protein, and the science behind putting the powders together, and the various forms (isolate, micro-filtered, etc.)?

how about this: <http://www.bodybuilding.com/fun/layne42.htm>

On Denaturing egg protein:

I know you said raw eggs are less bio-available/digested compared to cooked. I found a study showing raw gets 50% absorbed vs 90% cooked. Now I'm looking at this on wikki about eggs. Consider this heat denatures egg protein but so does beating/blending etc See the whisk drags the liquid through itself creating a force that unfolds the protein molecules. And the air stress which causes the proteins to come out of their natural state denatures it too.

Forget the avidin/Biotin problem as the American Egg Board states you would have to consume 24 egg whites a day for that to happen. Which is GREAT to know!

But the issue is absorption of the protein to me. So what do you think about using physical stress from a blender instead of heat to denature egg protein?

from what i understand heat and acid are the only way to denature protein molecules. I highly doubt that a blender will do it.

I tried to follow eggwhite discussion, but it got incredibly involved/scientific...lol... i buy eggwhites in carton at grocery and of course I cook them, scrambled usually....of course there is denaturation, like there is when meat is cooked...so are we saying that we need to do something other than cooking eggwhites in order to increase bioavailability? Thank u much

no not at all, cooking is fine

i mix my whey with egg whites then cook them as a pancake. does the heat in this situation destroy the protein?

please check out my previous posts, denaturing does not mean destroy

Hey Layne remember I found that info on how physical force can denature egg white proteins (just like acid or heat can). I just thought I'd tell you something I noticed tonight when I was making a shake with whites only tonight (i normally use whole eggs). The whites start as a gel like semi-clear liquid but once you put it in the blender and set it to high it turns into a solid white liquid. It looks just like cooked eggs just not solid.

I know the reason egg whites change color when cooked is because the proteins

change shape and it looks like the same thing happens. This definitely would have effects on bioavailability etc because they are definitely denatured just not pasteurized.

just because it is denatured doesn't mean it is less bioavailable though sometimes denaturing makes it more bioavailable

On Chewing and denaturing:

Layne - does chewing your food denature the protein in it?

no, but no need to worry about denaturation; it is a natural part of digestion; the stomach has concentrated hydrochloric acid & the pepsin enzyme... both of which work to denature & unfold proteins so they can be easier for digestive enzymes to cleave

On Protein Frequency

My buddy has been eating every hour to hour and a half because he gets ravenously hungry after each meal and that quick. He's natural too and he seems to be progressing every month and progressing well. I know you probably shouldn't eat that frequent but why not and what are the drawbacks? What happens when you would eat that frequent? Indigestion?

well there is actually evidence that if you keep amino acids constantly elevated that your body becomes refractory to them. Meaning protein synthesis will decrease in the presence of high levels of amino acids. my research supports this so far; it looks like it may actually be better to consume large protein doses and spread them out further in order to maximize protein synthesis.

Layne on that note do you think these larger feedings should be relatively equal in size or would one much larger meal (such as post-workout, for example) have a more stimulatory effect on protein synthesis at this time? and in another post you stated that 40-45g protein contained enough EAA's to top off protein synthesis...is this based on the approximate leucine content of each protein type? and how would you space out 45g doses and still hit your protein requirement numbers?

yea i would say that 3-4 hours between meals is probably best; that's about 5 meals per day; ends up being about 225g protein/day

On Protein Absorption:

ok so what is this bs that your body can only absorb amount a certian amount of protien per meal? like you shouldnt eat 75 grams of protien for a meal because ur

body cant absorb it? is this true or is this another bb myth?

well i wrote an article on just this subject, but i'd rather not post it because no magazine has accepted it yet

**Probably because your advocating against something that makes them \$?
Think about it they sell protein supplements etc in ads and your saying use less protein etc not MORE.**

It may be political.

no not at all. It is actually not against protein at all

So does this mean the Xtend mega dose practice that some are doing is actually hurting, not helping?

well i recommend higher doses of BCAA but not sipping; dosing them at specific times throughout the day

ok.. so let me ask it a diffent way.. if it ok to eat 75 grams of protien over 4 meals then to eat lets say 50 over 6? is one superior over the other as far as the amount of protien i am absorbing?

no, 75 is too much. 50 over 6 would be far better.

as far as absorption, that is not the issue here. You absorb most everything; 'experts' throw around the term absorption, but they don't even know what they are referring to. Here is an excerpt from the article I wrote. If you guys want to see the whole thing maybe it's time to start asking the mags to put my articles in lol. I've tried everything I can possibly do to get them in the right way without begging and it doesn't seem to work.

" Many 'experts' or gym know it alls out there who will tell you to only consume "X" amount of protein at a meal because only "X" amount of protein can be absorbed by the body at a meal (I'm sure you've all heard this one before). Let this nonsense stop here and now. To begin with, this entire train of thought isn't even on the correct track. Hell it didn't even depart from the right train station! Assuming that you have a healthy digestive system the absorption of the amino acids from a meal containing protein is very efficient and almost never a limiting factor. Absorption only refers to nutrient uptake & absorption via the digestive track (most absorption occurring in the small intestine). If our digestive systems didn't absorb most of what we eat than anytime you had a big meal you would have diarrhea like clockwork from the undigested material in the gut! It also makes very little sense from an evolutionary standpoint to be very wasteful with nutrients when primitive man may have only been able to eat one large meal in a day at times. Our species would not have survived very long if we were wasteful with nutrients and did not absorb amino acids beyond a certain level. In reality, the body has an extremely high capacity for amino acid absorption. What these people who spout this nonsense are really referring to is amino acid utilization. You see, even if we absorb 100% of the amino acids we ingest, that doesn't mean they will all reach the skeletal muscle and input towards building muscle mass. In actuality a very small percentage are used for that role. The cells of the small intestine and liver extract a huge amount of amino acids for energy and their own synthesis of new proteins in first pass metabolism before they ever reach the

bloodstream! Once in the bloodstream amino acids can also be taken up and utilized by other tissues such as the kidneys, heart, skin, etc. So it is not a question of how much protein/amino acids can be absorbed at a meal, rather the question is what level of protein at a meal gives the maximum benefit for muscle building? Essentially anything below this level would not maximally support muscle building, while at a protein intake above this level, the body would merely oxidize the excess amino acids for energy. "

On Calculating protein requirements:

Do you calculate the protein needed from Lean Body mass only or TOTAL body weight. for example 1.5xLBM or 1.5xTOTAL weight (lbm+fat) ??

LBM is probably a better way to calculate it

Part E: BCAA

On Why the preference of BCAA over Whey in PWO shakes

Was curious, while listening to MDR and your conversations (which were awesome by the way, great for us "Natties" to get some exposure) you mentioned you use 15-20 gms of BCAA post workout. I know you follow this up with a whole meal about an hour later, but why do you feel this is more beneficial than say getting a whey protein that is a complete protein that has a good BCAA profile post workout? Do the BCAA's lead to greater/faster protein synthesis than whey?

I think you are saying that whey may be better since it has all the aminos. The BCAAs in particular leucine are the amino acids responsible for stimulating protein synthesis... not the others. The others are needed as substrates but if you are eating like a typical bodybuilder (every 2-3 hours) then you will have AMPLE levels of all the other amino acids and BCAAs alone will be sufficient. And yes the reason I like free form bcaas is because they spike plasma BCAA levels to a much greater extent than whey.

That is very interesting. You would think that more people would be doing this. I am at 160lbs, do you think 15 grams is about the right amount for my bodyweight? I assume powder is best for the quickest absorption?

15g is more than enough, powder is best

On BCAA Absorption

Layne, is it necessary to take a high glycemic carbohydrate source when you take your BCAA's? Or will they get absorbed without em?

They will be absorbed without the carbs.

On BCAA dosing:

How do you dose your BCAA's?

I have 5g BCAA between each meal; i have about 4-6 meals per day so that's about 30g bcaa/day

On Caloric Value of Xtend/ BCAA effect on insulin

I am working with Dave, following a ketogenic diet and am a big fan of the Xtend product which I use during my workouts!

I am getting confusing messages about it's calorie content! I had believed it was 0 but now not quite so sure! What is your take on it & also would it cause insulin secretion at all??

It does have calories. It has 5g of amino acids per scoop which is 4kcal/gram = 20 total kcals per scoop. The reason it is listed as 0 is because they FDA will not allow a company to list free form amino acids as having calories which is absolutely asinine. BCAAs will cause insulin secretion, read my post above yours in this thread.

On Counting BCAA towards Protein requirement:

But you personally do not count the BCAAs towards your protein count, you take them on top of your 1g/pound bodyweight protein, correct?

I count them

On Benefits of Leucine / BCAA

Supposedly, leucine is the powerhouse of the 3 bcaa's , is there any need to supplement with the other 2 ? I'm stripped for cash as a college student and plain Leucine would be cheaper then taking bcaa's altogether (the 3 aminos) but do not want to create an imbalance ect...

Leucine is what stimulates protein synthesis but isoleucine also stimulates glucose uptake, so it does have benefits, but if you are on a budget pure leucine will work fine

On BCAA Timing:

Layne, since we're on the subject of bcaa's. When is the best time to supplement with them? I.e. pre-workout, during, post. I just started taking Xtend (grape flavor). That stuff tastes like Cool Aid! By a recommendation I was told to drink it during my workout, But the directions say immediately post workout. With 16oz. of post workout whey protein (ON), maltodextrin, and creatine. Another 16oz. of bcaa fluid seems like a bunch of fluid at one time. Would you suggest combining them?

Sure you can combine them, would work well. I space out my BCAA like this

5g breakfast

5g preworkout
10-15g postworkout
5g before bed
5g when i wake up to pee during the night lol

On benefits of BCAA supplementation:

Question for Layne. I am reading quite a few positive reviews about BCAAs. But I don't understand why someone needs it if they eat proper nutrition pre en post workout. When you eat a balanced meal 1 to 2 hours before your workout and about an half our before a whey shake with oats you have plenty of BCAA in your nutrition that helps to combat protein breakdown. So what's the advantages of BCAA during your workout or some BCAA midnight in comparison to a blended protein shake.

Here is an excerpt from an article I wrote

Despite the numerous positive benefits to BCAA supplementation, there are many skeptics who suggest that BCAAs are overpriced and that one can just increase their consumption of whey protein which is rich in BCAAs. Unfortunately this is not the case. The BCAAs in whey are peptide bound to other amino acids and must be liberated through digestion & absorbed into the bloodstream to exert their effects. Even though whey protein is relatively fast digesting, it still takes several hours for all the amino acids to be liberated & absorbed into the bloodstream. BCAAs in supplement form however, are free form BCAAs and require no digestion and are therefore rapidly absorbed into the bloodstream, spiking blood amino acids to a much greater extent than peptide bound amino acids. Even a few grams of BCAAs will spike plasma levels of BCAAs to a much greater extent than a 30g dose of whey protein, impacting protein synthesis and protein degradation to a much greater degree. The reason a supplement has such a powerful effect on blood levels of BCAAs is that unlike other amino acids, BCAAs are not metabolized to a significant extent by the small intestine or the liver, therefore an oral supplement is more like a BCAA injection since it reaches the bloodstream so rapidly.

On Why Layne likes BCAA supplementation:

Why do you love bcaa supplements so much when my protein powder + my multi have a higher number of bcaas in a serving as do many of the bcaa supplements out there. I use optimum whey protein (2 scoops) and animal pak multi vitamin post workout amongst other things.

This should answer your question

<http://www.strengthandscience.com/january/article5.htm>

Recommended BCAA dosing:

What is the recommended dosage to notice results with BCAA, because they are expensive and not to mention im in college , 5g pre/ 5 g post

5g with breakfast, 5g preworkout, 10g post workout, 5g before bed would be very good

On BCAA supplementation on a tight budget:

Guess bcaa's are out for me, that would run me like 60 dollars a month on top of food and my foundation supplements (whey,creatine,multi,antioxidants and fishoil)

You could do 5g preworkout & 10g post and still get decent results

BCCA vs EAA

What do you think about EAA as supplements compared to BCAA only?

EAA contains the BCAA as well as all other EAAs.

What are the cons and pros if we compare these to eachother?

BCAA>EAA

Powder BCAA vs Capsule BCAA

I know you are a strong advocate for the the supplementing of BCAA`s, the problem is that I can only get my hands on BCAA capsules. And I was wandering how the capsules compare to the powder,absorption wise? And would a 1g capsule equate to 1g of BCAA powder?

In terms of cost effectiveness powder is far better, but absorption wise there probably is not much difference

On sipping BCAA's

"even though blood amino acid levels were elevated 3 hours after a meal, protein synthesis had stopped. [Layne] hypothesizes that perhaps a spike in blood Leucine levels (via pure Leucine or BCAAs) could be used to kick start protein synthesis again."

...so basically, put 10 scoops Xtend in your water jug and sip throughout the day....that will do the trick

i wouldn't sip it... i would bolus it. so 2-3 hours after a meal and a few hours before your next meal, have 5-10g bcaa

Do BCAA behave like creatine in terms of Saturation/ Maximum amount of recommended BCAA

Very much like creatine we know that once saturation points are reached we are basically taking unnecessary amounts.. When it comes to Bcaas how much is enough 30,000 mgs 40,000 mgs even 50,00 mgs? Assuming your diet is 100% on point with Carbs Fat and using Protein at 2 grams per lb LBM.

BCAAs are somewhat different. Creatine is present in very small amounts so it's easy to saturate the cell. Amino acids actually concentrate in the cell; but are also in a state of flux into and out of the protein bound, extracellular & intracellular pool. Without sounding stuck up it would be really really hard to explain. Essentially it would be very hard to figure out a 'max' level for BCAAs because they are in such a state of flux

So if someones consuming between 40 to 60,000 mgs BCAAS daily Knowing they are using 2 grams protein per lb LBM, would you think they are at any deficit? How many Mgs daily do you recommend?

Absolutely not. 2g/lb is way overkill and adding BCAAs on top of that is exceedingly overkill

On during workout nutrition:

What do you think of the idea that the most anabolic time of day is actually when you're working out (because of the increased blood flow pushing nutrients into the muscles). Advocates of this idea state that if you don't use special formulation providing exact amounts of essential amino acids, the increased blood flow is useless. There is also further rhetoric about essential amino acids being far superior to whole food for muscle building. A lot of what he said sounded like outrageous marketing rubbish and/or just wacky uneducated theories.

I think BCAA & EAA can be better in various situations. There is no reason to use both though, overkill. The blood flow can be helpful but I don't think it makes it that much more anabolic than post workout where blood flow is also elevated. I would disagree with most things he said, but I wouldn't say that you need that exact breakdown or it's 'useless'

On Using Leucine as a replacement of carbs in PWO nutrition during low carb dieting:

When you are following a very low carb or ketogenic diet, what are your thoughts on replacing post workout carbohydrates with leucine, glycine and glutamine? It was mentioned by Christian Thibaudeau, who I have huge respect for, in one of his most recent articles.

"Leucine can spike insulin almost as well as carbs but it doesn't take you out of ketosis or prevent you from being in a fat-adapted state. Glutamine and glycine are two amino acids that have been shown to restore muscle glycogen almost as well as carbs. The 35-55g of combined G&G will almost have the same effect on glycogen replenishment as a similar dose of carbs".

That is a big stretch to say that leucine increases insulin same as carbs. Absolutely not. The insulin spike is significant but not near as much as an equal carb dose. Additionally, carbohydrate induced insulin response is biphasic, with the stored insulin in the pancreas being released immediately and sometime after that, insulin is produced by the pancreas and keeps being produced until the glucose clears. This secondary release of insulin is actually the comparatively larger release. Amino acids like Leucine only cause the initial release of stored insulin, but there is no biphasic response, no sustained release. So in all actuality, insulin release in response to leucine is very different from carbohydrate. As far as glutamine & glycine restoring glycogen; they can through gluconeogenesis... but not as well as carbohydrate. Carbohydrates from diet can get into the bloodstream at a rate of about 50g/hour I believe whereas the maxed out rate of gluconeogenesis is about 5g/hour. So no... they don't restore glycogen as fast.

BCAA timing issues:

Would it be advantageous to take an amino drink before bed? When would it be the best time to take an amino drink during the day? Considering the prohibitive cost, if there was one time during the day, what time would you choose?

I take a bcaa/Leucine supplement in between meals (i eat every 3.5-5 hours) & take a Leucine/bcaa dose in between

“i take a bcaa/Leucine supplement in between meals (i eat every 3.5-5 hours) & take a Leucine/bcaa dose in between”. Don’t you get extremely hungry?? do you have larger meals?

No, your body adjusts to it like anything... it takes a few weeks but on a high protein diet your body can make enough glucose to maintain your blood glucose between meals. I

don't get hungry hardly anymore at all... even when dieting and even if i go 5 hours between meals. and yes my meals are larger

On the need of BCAA's:

How much bcaas / leucine would someone weighing about 160 need a day?

You wouldn't NEED any, 20g BCAA or 10g of leucine would be useful though

question about bcaa's versus whey, if i took 15g of bcaa postworkout like you do (around three scoops xtend) with fast digesting carbs, is wpi beneficial after this?

i think 15g bcaa by itself is probably sufficient to do the job with some fast digesting carbs so long as you have some whole food a few hours later

On BCAA effectiveness during Ketogenic diets:

Layne, So gluconeogenesis is the bio-synthesis of glucose, and starting with pyruvic acid the body converts amino acids into glycogen?? I've also read that amino acids aren't the only source the body can pull to form glucose, it can also use lactic acid, and glycerol from Fat, have you heard of this? If so, is there a general percentage of how much each option is utilized during or before gluconeogenesis? Which brings me to this point...If one is on a ketogenic diet would supplementing (high dosages) of bcaa's even more relevant to a bodybuilders diet? Would a ketogenic individual have a better response to bcaa's?

I'm not sure why a person on keto would have a better/worse response... i'd imagine about the same. You are right on gluconeogenesis. many different substrates though the main ones are amino acids. Which ones are used really really really depends on the physiological situation. I'm afraid you want a simple answer to a ridiculously complex question and I can't give you that on that one.

Is the high amount of leucine say 4-5 grams (out of 10Gs of a bCaa mix of 2:1:1) with the post-workout whey shake enough to cause an insulin spike to work as a carrier/transport for aminos, creatine, beta-alanine etc etc thus negating the need for high gi index carbs in the post workout shake?

insulin responses are complex. when insulin is released in response to carbohydrates it is in 2 phases... the first phase is the release of stored insulin and about 15-20 minutes after that insulin rises again from produced insulin in the pancreas, in other words the insulin response is biphasic. The insulin response to leucine is only monophasic... only stored insulin is released, but the pancreas does not produce a secondary insulin response. Basically leucine only causes a release of stored insulin. Therefore i'd so no, it's not sufficient if you are looking for a decent insulin response

Opinion on different BCAA products:

Do you think is a good BCAA?? <http://www.nutrabio.com/Products/BCAA.htm>

Looks fine to me

**Ok I found this product that has
Each serving (3 tablets) contains the following:
900 mg. of L-isoleucine
1620 mg. of L-leucine
1080 mg. of L-valine
good enough?**

The standard is a 2:1:1 ratio of leucine:isoleucine:valine. This prevents leucine causing a depletion of the other BCAAs. (in order to metabolize 2 leucine molecules you must metabolize a valine & an isoleucine). I forget the mechanism behind it though; guess I should read up on it before prelims

On BCAA stability/Potency in Solution:

not sure if this is a stupid question and I hope this hasn't been asked before but once you mix your BCAA's how long before they're no longer viable or lose their potency? or do they? I generally mix 5 g with crystal light after working out but I don't finish drinking them for another 30-45 mins while I commute to work.

hell... it would be fine for months.

On Dissolving BCAA's

This is probably gonna appear to be a stupid question but, as far as BCAA's and glutamine are concerned do they need to be dissolved in water? i hear a lot of pros talk about how they just pop the powder into there mouth and swish it with water. ive been dissolving my creatine in warmer water (read it in a berardi article). i was just curious if you had any thoughts on this? although i guess it would make sense considering many BCAA supps are capsules or tabs.

Doesn't matter

On using Whey and Carbs vs. BCAA and Carbs:

Do you take whey directly after your workout or dex and leucine?

usually xtend (bcaas) & dex or waxy maize

On cycling Protein and BCAA's:

Is there any benefit to cycling the use of BCAA's, and occasionally taking time off from them? (maybe during the deload weeks?) Also what are your thoughts on similarly cycling your level protein intake, I've read opinions that lowering it for awhile will improve the body's use of it? I currently use your recommended levels of protein intake.

No to both cycling questions. they are not hormones, they are macronutrients. I don't necessarily see downregulation being a problem

On the effects of EAA/ BCAA on Keto :

During a keto diet...would it be counterproductive to be taking in EAA's and BCAA's pre workout...somewhere i read about insulogenic amino acids or something like that...what does this actually mean and should i stay clear of these during a keto diet?

EAA's and BCAA's aren't going to negatively affect Keto Diet. BCAAs have been shown to enhance insulin sensitivity and if anything they have been shown to aid fat loss & muscle retention while on a diet. People have this all or nothing view of insulin... like if you release any at all it stops all fat burning everywhere... which is absolute nonsense

On BCAA's and Fasting:

If someone was gonna do something silly like a fast for a day or two, or even an intermittent fasting type diet where one eats most of their calories in a short feeding window at the end of the day, do you suspect taking a leucine supplement taken every few hours during the fasting days/or fasting window would be beneficial to help offset the muscle loss? If so, what would you recommend in terms of amount and spacing?

yes; however if you were fasting i would not use just leucine. Leucine depletes the other 2 BCAA from the plasma when taken alone. This is not a big deal if you are eating a high protein diet because there will be ample BCAA to guard against this but if you are fasting you will definitely get a depletion so I would recommend 8g of BCAA every 3-4 hours

On BCAA dosing between meals:

Would your suggestion of having BCAA's in between meals have any effect on the refractory period that might be necessary before getting another elevation in muscle protein synthesis the following meal.

Example, if eating 4 meals every 5 hours, you get BCAA's with each meal. But your putting BCAA's in the body every 2.5 hours if taking them between meals as well. Couldn't this possibly mimic the frequent feeding 'infusion' type situation that will prevent a potent stimulus the next meal. Would it make sense to perhaps take a dose of BCAA's or Leucine 15 minutes before each meal, get a maximal spike near the meal and accompany it with the full spectrum of aminos shortly after. Then allow the 4.5-5 hr period to go by unabated.

i don't think so, i think meals lead to a steady release of aminos but by having a bcaa bolus in between each you will definitely cause a big spike in amino acid levels which should give you a synthetic response.

On studies that suggest compositional changes when supplementing with BCAA/Leucine

Do you know of any studies on BCAA/Leucine that show using it adds a significant amount of lean body mass than without like we know whey, Ba, and creatine do. It seems every one Ive seen just showed it just increased protein synthesis in some way. But I cant think of any controlled ones where using it lead to more muscle on a normal BB diet. In other words, I'm looking for research that supports its use in the OFF SEASON during mass gaining. If there is nothing showing this let me know its ok.

This is going to sound like a cop out, but you guys have no idea how hard it is to produce compositional changes; 10 weeks is nothing out of a humans lifetime so trying to get compositional changes out of that is pretty damned tough. Also, not many people willing to fund that... who is going to fund it? that's probably a 50-100k study to run and what reasoning will you provide for people to fund it? "we want to see how to get people huge." not going to fly lol.

there is a study in rats showing that leucine supplementation improves body composition in rats... actually there are 2.

I hate to do this to you and ask *another* BCAA question, but do you think that there is any benefit to having a couple servings of xtend prior to the workout, say in

the hour or two running up to the workout? I'm currently having 3-4 scoops during my workout/cardio session, but I was wondering if there is any advantage to taking some in before this period, if it would have a "super-saturation" effect (or if there's even such a thing)? FYI...I take in adequate protein, between 1g and 1.5g per pound of LBM. Thanks

maybe a scoop or 2

On sipping BCAA's:

I just wanted to know if the post about sipping on BCAA refers to BCAA's in general or just in reference to meal timing. Because I sip on Xtend during my workout and just wanted to know if this is a good or bad idea??

I was referring to people who sip BCAAs throughout the day, sipping during a workout is short term, only about an hour or so, I don't really see a problem with it

Troubleshooting BCAA dosing:

If I started using 5 grams of BCAA's at 6 meals a day in between meals 10 grams pre workout and 30 grams post workout what differences and gains would i expect to see?compared to taking no BCAA's

30g of bcaa post workout? did i read that right? that is SUPER overkill

Im trying to figure out what would be the best amount of BCAA's to take and what benefits id get...i must have read it wrong after searching through the whole thread

10-15g would be max benefit level IMO at any one sitting

ok so 5gms in between meals...15 grams post workout...considering ive never took bcaas before what noticeable benefits would i get from taking them in these amounts?

Well, over time should get more muscle mass; should also notice some resistance to increased fat gain

On determining BCAA amounts:

I got some body armour bcaas today. In four tablets there is : 2000mg of leucine..1000mg of isoleucine..and 1000mg of valine. So in four tablets would this be classed collectively as 1gramm of bcaas? or with the mgs added together 4grams? or would I have to take 18 tablets to get 5gramms?

4 tablets would = 4g

Part F: Pre/Post Workout Nutrition:

On Pre workout meals

What does your ideal pre-workout meal consist of?

Really depends upon several factors... what is optimal for me might not be for you. What it consists of depends upon multiple factors

- total pro/carb/fat intake for the day
- weight
- length of workout
- intensity of workout
- how long before your workout do you eat?

for me, depending upon what bodypart I work (legs are much more difficult) I eat around 30-40g protein/70-100g Carbs pre workout (mix of slow/moderate/ & fast digesting) and I try to keep fat under 10g. I eat this about 1-2 hours preworkout.

On Preworkout meals:

Hey Layne, I just had a question on what you think of preworkout meals. I read alot of stuff by "so called experts" claiming you should eat within 3 hours of training because you can't have blood going to your muscles and digestive system at the same time. But i've done this just to see how the workout felt and i didn't like it at all. My muscles were flat and i just felt sluggish. I usually eat a good protein/carb meal about 30 minutes before i train and that's when i feel the best. My muscles are full, and i feel very pumped and energetic. What's your take on this Layne?

so called experts is right! That's a straight up nonsense notion. preworkout nutrition is just as important as post. Have your preworkout meal

do you ever take in high gi carbs pre workout?

I do take high GI carbs preworkout if I don't have time to get in a good meal, otherwise I don't purposefully take in sugary carbs preworkout

Got a question Layne.

For the pre-workout meal (which is about 100-110 g Carbs for me), which is the better scenario?

- 1) eat all the carbs 1.25 - 1.75 hours pre-workout and then 15-30 minutes before, have a shake of BCAAs and citrulline malate**
- 2) eat 3/4 of the carbs 1.25 - 1.75 hours pre-workout and then 15-30 minutes before, have a shake of 1/4 of the carbs (in the form of oats and dextrose, mostly oats; only like 8 g dextrose), BCAAs, and citrulline malate**

I've been doing scenario 2 for some time and i think its unnecessary to have carbs that close to the workout. And if i start doing scenario 1, whats the best time to have that shake to reap benefit of citrulline malate... right before workout, T-minus 15 min, or T-minus 30 min??

Honestly, I think either one is fine.

Layne. I am a competitive athlete (baseball) and starting monday we will be having weights @ 6am (intense olympic lifts and complexes) as well as practice @ 2pm. What would be something I could eat when I wake up @ 5 30 that will be quick and provide sufficient energy to lift? I will sip ~ 6-8 scoops Xtend during training if that matters.

i would say some whey with dry oatmeal & a bannana into a blender and add cinnamon & PB.

On Peanut butter in PWO shakes:

Layne, What's your take on my postwork out drink? I'm not cutting. My postwork out drink consists of 50g of isolate whey protein, 2 tbsp peanut butter, and 2tbsp of maltodextrin.

I would drop the peanut butter as aformentioned that will slow digestion; save the PB for later.

On dextrose in PWO shakes

I want to start putting some weight back on and bringing my strength back up. So the first thing I wanted to do was add a P/WO shake back into the diet. I used to like using Good old ON Whey pro (2 scoops), dextrose (bout 75 grams). I would like to go back to that again and toss in some Creatine mono. I would throw in 10 grams of that to each shake. Any other suggestions or modifications? 1 scoop of pro? less dex? anything? or does that sound good. I'll be keeping the rest of my day pretty low carb, I just figure post w/o is a good place to start introducing more.

well how much dextrose you add really depends upon several factors such as how long your workouts are & how much volume they have as well as how much you weigh and how many carbs you have preworkout. Also, how soon after your shake is your next meal with complex carbs? sorry for all the questions; I just like to get a good idea before doling out information.

On whole food consumption after a PWO drink

Layne, how about if 45 min to an hour after post workout shake you are not hungry. Do I stuff food down? Is this normal?

I would certainly try to get some food in yes

Comments on a PWO drink

What is best taken post workout? I take one banana + 1 cup of oats + 5 grams leucine + 30 grams of whey protein isolate. Is this okay? I have read that a combination of high GI and low GI is recommended. But also heard someone say that glycogen levels post workout arent depleted after working out as we used to think. So we don't need high GI like dextrose or malto to bump our glycogen levels. What do you think?

What you are doing is fine

On night time PWO meals :

I soon start a clinical in which I have to drive about an hour and a half to and from and thus my workout will not start till about 7 o'clock. I am following the guidelines for your precontest diet and want to know if you think I should do anything different as far as the post-workout meal with the low glycemic carbs being that I would be going to sleep shortly thereafter.

Stick with your normal post workout meal... i workout at night too, eat carbs before bed... it's fine

On differences between PWO carb sources

1 more thing... In your workout shake you recommend dex or malto, would Waxy Maize/Vitargo be as good? I ask because I have WM left over from the winter, wanted to use it up. If dex/malto is better, just say so, I'll buy some I'm not a cheapskate =P

No, I don't think any of them are necessarily better than the others

On Carbs before/during/after training:

What is your view on carbs pre during and after training ? I see you like 20 to 30 grams after training. But now there are also lots of views on pre and during workout (fast) carbs ? WMS and vitargo are getting very popular you think they are better than malto or dextrose ?

20-30 immediately PWO; but about 20 minutes later i have about 100g of moderately fast digesting carbs.

I have about 75-100g preworkout as well during bulking

On Layne's Personal PWO shake

What are you using for a workout shake these days? do you still have an endless supply of substance, or do you do something else?

3 scoops xtend

20-30g dex or waxy maize

20-30g oats

1g beta alanine

5g creatine

When you are cutting do you follow the cut diet principles for the shake?

when cutting I have 15g bcaa, 10-20g dextrose, 3-5g creatine... pretty similar to what i do in the offseason

On during workout shakes:

Are you still using a during workout shake of dextrose and BCAAs?

na, I usually just do a post workout shake w/ BCAAs & dex/waxymaize

At one point you were, correct? Any particular reason you stopped?

yes I was. just found that if my preworkout & post workout nutrition were on point I really didn't need it

On WMS in PWO shake:

Hey Layne, I just picked up Some Waxy Maize Startch today and was wondering about how to put it into my post workout nutrition. I'm a somewhat high volume guy, workouts lasting 60-75min. Then I do 10-15 minutes of cardio post workout... I'd been drinking a BCAA/creatine drink during my cardio in the past, and sometimes at the end of the workout if it was onthe long side. Should I just throw the BCAA's and Creatine in the the Waxy Maize and wait until after the cardio is finished, chug that, and then drink my whey shake ont he drive home? Any suggestions would be appreciated. Thanks dude.

I would do the WMS with the creatine/bcaa drink after your workout before cardio

Comments on carb source in a PWO shake:

I adopted your BCAA, 25g dextrose, and creatine PWO strategy and i follow that up with 100+ oat carbs with whey about 20 min later. Is 20 min too little time to wait? whats the ideal time to wait between those 2 meals?

what is your source for the 100g of carbs

its a blended dry rolled oatmeal shake with whey. then an hour to 1.5 hours after that i eat a whole meal but with less carbs.

sounds solid to me

On PWO shakes during a Cut:

For an endo/meso type, what are your thoughts on post workout carbs while cutting, like dextrose and WMS? Or should one keep blood sugar low and just have food after?

I think a small amount of simple carbs post workout is fine 15-25g, and then get the rest from whole foods

On recommended amount of sugar in PWO shakes:

Layne, im 17 and, I have a small question about post workout supps. I take protein and cell tech postworkout, in a shake with pineapple juice, and two servings of yogurt. (im trying to bulk, im 6'4", and its hard to add mass). There is approx. a SHITLOAD of sugar in the shake, between the yogurt and Cell tech. How much sugar do you recommend post.

well it varies depending on multiple factors but in general i wouldn't go over 50g

You are the first person on this thread that I've ever seen tell someone to limit the SUGAR pwo to 50g where as every other piece of advice was to send blood sugar through the roof.

Well if you are young (under 18) and meso/ecto then maybe 75g may be helpful but in general insulin is not an anabolic hormone in non-growing adults. It does have a synergistic effect with protein however on protein synthesis, but it doesn't take a ridiculous amount. As far as restoring glycogen goes, sugar will do it faster, but whole food will also do it, it will just take a bit longer.

On Leucine in PWO shakes:

I know this has been talked about here but wanted to be sure this is ok. Taking 10G of pure Leucine with PWO Whey shake (not all 3 BCAAs free form) wont through off the balance of amino acids in the body? I mean the idea is to spike protein synthesis by spiking Leucine levels but I think you said you need the other aminos to "process" the Leucine. The reason I ask this I can get bulk L-Leucine cheaper than bulk BCAAs. I think I'm going to put it into capsules (000 or 00).

I think 10g leucine probably overkill... i think 5-7g is plenty. You should be ok so long as you are eating a high protein diet otherwise

On Milos Sarcev during workout shakes:

I was wondering what your opinion is on Milos sarcev's theory of Shake comprised of EAA's and BCAA's with a carb source during the workout...which he says is the most anabolic time of day...ne comments or ideas of how this would be true or not?

Honestly, the shake he recommends is way way way overkill

I have a question for you regarding Post-Workout Nutrition. I am currently taking Universal Torrent PWO, but would like to make my own blend now. I am thinking about using Primaforce Carb Slam (2scoops=60grams). With 9 grams EAA's, 35-40 grams Whey Protein Isolate, and 2 grams Citrulline Mallate. I was also thinking of adding in 5 grams of creatine monohydrate. If you could help me out with my PWO blend I would greatly appreciate your input. And if you have any other suggestions on additions or subtractions please let me know. I weigh 185 Pounds.

i think that's a solid blend but I would replace the EAAS with BCAAs (5-10g) and would also add a gram or two of beta-alanine. that would be SOLID

On Protein sources for PWO shakes:

If absorption doesn't matter like people think i.e. its not life and death pwo, why do people SWEAR by Whey (and no other protein). In theory could any protein be used post. I'm thinking of doing for cost reasons 2 servings of WHEY concentrate 15 + Gemma Protein Isolate 12 + 3 L-Leucine (based on Trueprotein's custom mix) as my new PWO over my old Whey Isolate 40 G + some BCAAs. Then a full meal 30-60 later. I just wanted to make sure with an expert its ok overthe gold standard preached of 40+ G of Whey PWO + BCAA 5-10G

I think protein source is less important, especially considering you are taking leucine on top of that

On carbohydrate intake with Protein Post workout

Isn't it saying that carbohydrate intake has no added benefit in adding muscle when

combined with protein post workout?

<http://www.musculardevelopment.com/content/view/992/54/>

That is only one study and many other studies show opposite results

Troubleshooting Foam in PWO shake

Anyways, here's my question, I bring my PWO shake with me to the gym so the powder is already in it and then I fill up the shake with about 12-14 ounces of water. As I'm finishing the shake there is prob like 2-4 ounces of foam. Is this the wazy maize? Should I be concerned about not getting whatever that foam is down?? Anyway to fix this problem?

Mix it up ahead of time and keep it in the fridge; and no, it will not go 'bad'

On having 2 PWO meals:

Whats your take on the idea of 2 post workout "meals"? some people take 25-50G of carbs with BCAA or CEE and then 20-30 mins later they take X amount of protein then wait an hour and get in a solid food meal. I guess being "traditional" or whatever one wants to call it, i always thought you put it all together in one "meal" i.e. BCAA, CEE, carbs, protein. then an hour later go and have your solid meal. is there any research or studies that benefit one over the other.

i think it's fine, then again don't make it too complex, just hitting the #s is most important

Part G: Study Discussions

What are your thoughts on the following BCAA study?

J Nutr. 2006 Jan;136(1 Suppl):234S-6S.

Modulations of muscle protein metabolism by branched-chain amino acids in normal and muscle-atrophying rats.

Kobayashi H, Kato H, Hirabayashi Y, Murakami H, Suzuki H.

Applied Research Department, AminoScience Laboratories, Ajinomoto Co., Kawasaki, Japan. hisamine_kobayashi@ajinomoto.com

It has been shown that BCAAs, especially leucine, regulate skeletal muscle protein metabolism. However, it remains unclear how BCAAs regulate muscle protein metabolism and lead to anabolism in vivo. We examined muscle protein synthesis rate and breakdown rate simultaneously during BCAA infusion in muscle atrophy models as well as in normal healthy rats. Corticosterone-treated rats and hindlimb-immobilized rats were used as muscle atrophy models. Muscle protein synthesis rate and breakdown rate were measured as phenylalanine kinetics across the hindlimb. In anesthetized normal rats, BCAAs stimulated muscle protein synthesis despite low insulin concentration and did not suppress muscle protein breakdown. In corticosterone-treated rats, BCAAs failed to restore inhibited muscle protein synthesis, but reduced muscle protein breakdown. Immobilization of hindlimb increased muscle protein breakdown within a day. BCAAs did not change muscle protein metabolism, although essential amino acids (EAAs) suppressed muscle protein breakdown in hindlimb-immobilized rats. We also evaluated changes of fractional synthesis rate (FSR) of skeletal muscle protein during infusion of leucine alone or EAAs for 4 h in anesthetized normal rats. FSR showed a transient increase at 15-30 min of leucine infusion and then declined, whereas FSR stayed elevated throughout EAA infusion. We concluded that

- 1) BCAAs primarily stimulate muscle protein synthesis in normal rats independently of insulin**
- 2) EAAs are required to maintain the BCAA stimulation of muscle protein synthesis and**
- 3) The effects of BCAAs on muscle protein metabolism differ between atrophy models.**

Then I would like to see them explain Josh & Tracy Anthony's data showing that leucine alone will stimulate protein synthesis for about 2 hours.

Follow up to the answer above:

Thanks, I take your word above theirs. To play it safe i am thinking , primal eaa pre workout, with xtend + wms + whey (because i like it) post. I may also add wms pre workout, because i hear that it high gi carbs stimulate protein synthesis even more pre workout than post.

The other point to make is that unless you workout in the morning without eating, and you eat like a typical bodybuilder (eating frequently) there will NEVER be a point during the day where you don't have ample levels of EAA available to maintain synthesis

On consuming amino acids+ carbs before exercise

Why don't you advocate having higher gi carbs before as well as after a workout?

Tipton KD, Rasmussen BB, Miller SL, Wolf SE, Owens-Stovall SK, Petrini BE, and Wolfe RR. Timing of amino acid-carbohydrate ingestion alters anabolic response of muscle to resistance exercise. Am J Physiol Endocrinol Metab 281: E197-206, 2001.

here is what the study indicated - These results indicate that the response of net muscle protein synthesis to consumption of an EAC solution immediately before resistance exercise is greater than that when the solution is consumed after exercise, primarily because of an increase in muscle protein synthesis as a result of increased delivery of amino acids to the leg.

I have a problem with the method they use to measure synthesis as it requires a 'steady state' and exercise is NOT steady state

On Protein combinations:

What you mention about absorption got me thinking back to this study with some trainers throw around alot lately. It says basically Casein + Whey mix is superior to Whey + carb or Whey + Bcaa + Glutamine (close to what I do but i use 10 G BCAA) in terms of body mass improvement results. Thus some were recommending to lifters :

20 G of Casein + 20 G Whey pwo (even though the study itself seems to use 40 Whey + 8 Casein). Check the link below:

[The Effects of Protein and Amino Acid Supplementation on Performance and Training Adaptations During Ten Weeks of Resistance Training](#)

I dunno if your familiar with this study. What do you feel about it? Marketing over hype to get us to buy more expensive casein (\$10+/lb) ? What is really ideal pwo wise? These things influence my purchases. I know WHEY is needed but casein is expensive. Hell I may even start using WHeY + 1-2 Table Spoon of Flaxseed Oil at bedtime from what you said. I had no idea.

They didn't really control any variables in the rest of the diet throughout the rest of the day... makes it tough to draw conclusions

On the interactions of caffeine and creatine:

2002 Nov;34(11):1785-92

Caffeine is ergogenic after supplementation of oral creatine monohydrate.

[Doherty M](#), [Smith PM](#), [Davison RC](#), [Hughes MG](#).

Department of Sport, Exercise and Biomedical Sciences, University of Luton, United Kingdom. mike.doherty@luton.ac.uk

PURPOSE: The purpose of this investigation was to assess the acute effects of caffeine ingestion on short-term, high-intensity exercise (ST) after a period of oral creatine supplementation and caffeine abstinence. METHODS: Fourteen trained male subjects performed treadmill running to volitional exhaustion (T(lim)) at an exercise intensity equivalent to 125% VO₂(max). Three trials were performed, one before 6 d of creatine loading (0.3 g x kg x d⁻¹) baseline), and two further trials after the loading period. One hour before the postloading trials, caffeine (5 mg x kg⁻¹) or placebo was orally ingested in a cross-over, double-blind fashion. Four measurements of rating of perceived exertion were taken, one every 30 s, during the first 120 s of the exercise. Blood samples were assayed for lactate, glucose, potassium, and catecholamines, immediately before and after exercise. RESULTS: Body mass increased (P < 0.05) over the creatine supplementation period, and this increase was maintained for both caffeine and placebo trials. There was no increase in the maximal accumulated oxygen deficit between trials; however, total VO₂ was significantly increased in the caffeine trial in comparison with the placebo trial (13.35 +/- 3.89 L vs 11.67 +/- 3.61 L). In addition, caffeine T(lim) (222.1 +/- 48.9 s) was significantly greater (P < 0.05) than both baseline (200.8 +/- 33.4 s) and placebo (198.3 +/- 45.4 s) T(lim). RPE was also lower at 90 s in the caffeine treatment (13.8 +/- 1.8 RPE points) in comparison with baseline (14.6 +/- 1.9 RPE points).

CONCLUSION: As indicated by a greater T(lim), acute caffeine ingestion was found to be ergogenic after 6-d of creatine supplementation and caffeine abstinence.

Caffeine may (not proven) have some negative effects on the creatine transporter but I believe that if you are taking 5g of creatine per day that is going to be enough to override those effects and still saturate the muscle cell.

On mixed-muscle fractional synthesis rate (FSR)

If you get a minute to give your input on this one, it would be appreciated.
2 studies here on mixed muscle FSR :

Aging does not impair the anabolic response to a protein-rich meal.
Symons TB, Schutzler SE, Cocke TL, Chinkes DL, Wolfe RR, Paddon-Jones D.

Division of Rehabilitation Sciences, The University of Texas Medical Branch,
Galveston, TX 77555-1144, USA.

BACKGROUND: Sarcopenia is a debilitating condition afflicting the elderly that may be facilitated by insufficient or ineffectual intake of dietary protein. We previously showed that free-form essential amino acids acutely stimulate muscle protein synthesis in both the young and the elderly. However, the ability of an actual protein-rich food to stimulate anabolism in the young and the elderly has not been explored. **OBJECTIVE:** We aimed to characterize changes in plasma amino acid concentrations and to quantify muscle protein synthesis in healthy young (41 +/- 8 y old; n = 10) and elderly (70 +/- 5 y old; n = 10) persons after ingestion of a 113-g (4-oz) serving of lean beef. **DESIGN:** Venous blood samples and vastus lateralis muscle biopsy samples were obtained during a primed (2.0 mumol/kg) constant infusion (0.08 mumol.kg(-1).min(-1)) of L-[ring-(13)C(6)] phenylalanine. Plasma amino acid concentrations were measured and a mixed-muscle fractional synthesis rate (FSR) was calculated during the premeal period and for 5 h after beef ingestion. **RESULTS:** Mixed-muscle FSR increased by approximately 51% in both the elderly (mean +/- SE measurements: 0.072 +/- 0.004%/h and 0.108 +/- 0.006%/h before and after the meal, respectively) and the young (0.074 +/- 0.005%/h and 0.113 +/- 0.005%/h before and after the meal, respectively) after beef ingestion (P < 0.001). Plasma amino acid concentrations peaked at approximately 100 min after beef ingestion in both age groups but were substantially higher in the elderly (2185 +/- 134 nmol/mL compared with 1403 +/- 96 nmol/mL; P < 0.001). **CONCLUSION:** Despite differences in the concentration of amino acids in the plasma precursor pool, aging does not impair the ability to acutely synthesize muscle protein after ingestion of a common protein-rich food.

AND

Differential stimulation of muscle protein synthesis in elderly humans following isocaloric ingestion of amino acids or whey protein.
Paddon-Jones D, Sheffield-Moore M, Katsanos CS, Zhang XJ, Wolfe RR.

Department of Surgery, The University of Texas Medical Branch, and
Shriners Hospitals for Children, Galveston, Texas 77550, USA.
djpadon@utmb.edu

To counteract the debilitating progression of sarcopenia, a protein supplement should provide an energetically efficient anabolic stimulus. We

quantified net muscle protein synthesis in healthy elderly individuals (65-79 yrs) following ingestion of an isocaloric intact whey protein supplement (WY; n=8) or an essential amino acid supplement (EAA; n=7). Femoral arterio-venous blood samples and vastus lateralis muscle biopsy samples were obtained during a primed, constant infusion of L-[ring-2H5]phenylalanine. Net phenylalanine uptake and mixed muscle fractional synthetic rate (FSR) were calculated during the post-absorptive period and for 3.5 h following ingestion of 15 g EAA or 15 g whey. After accounting for the residual increase in the intracellular phenylalanine pool, net post-prandial phenylalanine uptake was 53.4 \pm 9.7 mg phe leg-1 (EAA) and 21.7 \pm 4.6 mg phe leg-1 (WY), (P<0.05). Postabsorptive FSR values were 0.056 \pm 0.004% h-1 (EAA) and 0.049 \pm 0.006% h-1 (WY), (P>0.05). Both supplements stimulated FSR (P<0.05), but the increase was greatest in the EAA group with values of 0.088 \pm 0.011% h-1 (EAA) and 0.066 \pm 0.004% h-1 (WY), (P<0.05). While both EAA and WY supplements stimulated muscle protein synthesis, EAAs may provide a more energetically efficient nutritional supplement for elderly individuals.

Compared to beef :

Mixed-muscle FSR increased by approximately 51% in both the elderly (mean \pm SE measurements: 0.072 \pm 0.004%/h and 0.108 \pm 0.006%/h before and after the meal, respectively) and the young (0.074 \pm 0.005%/h and 0.113 \pm 0.005%/h before and after the meal, respectively) after beef ingestion (P < 0.001).

Question: *Is mixed muscle FSR increased greater from a beef meal than whey or EAA's? So this is 2 separate studies but is beef showing better muscle protein synthesis with these greater values in FSR rates?*

EAA group

0.088 \pm 0.011% h-1

Whey group

0.066 \pm 0.004% h-1

Beef Meal (elderly)

0.072 \pm 0.004%/h before to 0.108 \pm 0.006%/h after

Beef Meal (young)

0.074 \pm 0.005%/h before to 0.113 \pm 0.005%/h after

You cannot compare FSR rates from separate studies. There was a study done on this recently that showed qualitative comparisons are ok (changes from fasted to fed) but comparing absolute rates has too much error.

In short, don't compare them. Do you know if they all used the same tracer? Same infusion/dose protocol? How did the homogenize the tissue? what column did the use for the GCMS? There are too many variables to make comparisons.

Part H: Training

On leg training:

I just have such a hard time getting my self to work my legs i keep on talking my self out of it. Any advice?

Legs days are what separates the men from the boys. Hell arms... joke. Chest... that's for fun. Back... not even close. Shoulders? Walk in the park. Legs are what separates the recreational lifter from the truly intense. Just keep that in mind whenever you feel like skimping on leg day.

After I am done cutting, I want to start hitting my legs real hard. I have read that you have done a Russian squat routine. Have you done Smolov? Or another program? How did the program look like? What were your results (strenght and size gains and overall weight gain). How did your incorporate your upperbody training?

i did smolov and it worked well but my joints hurt SO bad from squatting so frequently. I am back to hitting it 2x/week legs now.

Basically I just upper body 2x/week with lower volume since smolov has such high volume, I wanted to focus on my legs and give them a chance to properly recover.

Twice a week huh? What sort of volume each time?

around 30-40 sets for quads/hams/calves

That's quite a heap of work Layne (I'm interpreting that as roughly 10 sets per body part twice a week). You're not a subscriber to the less is better ethos?

I saw the recent pics you posted and it seems you're making excellent progress anyway.

absolutely not. volume is the only thing that has ever worked for my legs. I think most people could have volume work for them but they are too scared by all the overtrainnig propoganda

On squats and lower back:

Layne, do you think it is possible for someone to base a leg program around the Leg Press?? I can get away with any other exercise, except squats. I can do them, but I can only go so heavy; it is murder on my lower back, so I may need to give them up. Anything else is fair game though... hack squats, front squats, lunges, etc. I guess my biggest concern is that I do not want to limit my potential growth by not using the best exercise for legs. And I simply refuse to do box squats. Below parallel is the only way for me. But I know I need heavier weight. You are fairly close to me in height (I have you by two inches). Have you had to make this sacrifice for the greater gain?

i would base it around hacks or fronts in that case

On Upper back:

Also I find it hard to get some serious mass on my upper back. Which exercises do you recommend?

as far adding back mass; there is no secret, hard and heavy with rows, chins, and pull downs. Rack chins are something you may want to try.

On resting between sets:

It's typically recommended to rest between sets about 1 minute or under if hypertrophy is your goal (which for me it is) and for strength 2 minutes or more. The only problem with this is that I think strength and size are inextricably linked. So what's the compromise? What are your thoughts on this Layne and how long do you rest between sets?

I rest however long it takes to regain my focus and be 100% ready for my next set. For curls this can be as little as 45 seconds, for something like heavy squats though, I may go well over 5 minutes between sets

On overtraining:

That is an interesting statement. I also think that most people have this overtraining scare. Not ripping on people, just ignorance, which is the lack of knowledge. In my life time of sports (including 3 years at pro level domestic cycling), and body building. I have only ever know of 2 people that were actually in a state of

overtraining. Now of course I come nowhere near to knowing each individual involved in sports, but out of the literally thousands that I have known, that is still a minute number compared to the (as Layne so eloquently put) propaganda that circulates today. Oh and those 2 people were both ultra distance runners who developed eating disorders, with the thinking that lighter is faster. So they cut their calories to a ridiculous level. Layne, what's your take on 'overtraining'? From someone who actually has the science to back him up.

Essentially what people don't realize is that volume is another form of overload. One of the principles of hypertrophy that most people agree on is you must continuously increase overload on the muscle to stimulate new growth. Well you can only gain so much strength, eventually you plateau, but you can ALWAYS add more volume. My friend did his masters in exercise phys at one of the premier places to do that degree (baylor) & during most studies they ran the strongest correlating factor to muscle growth was almost always volume. The reason most people are scared to do volume is 1) they have always been told they will overtrain and 2) when they first start out on the program they lose strength and feel rundown and like shit. This is normal, your body isn't used to it and it must adjust. It takes about 2-4 weeks for your body to adjust, once it does the strength and hypertrophy gains are very noticeable, every client I've ever done this to has worked quite similarly. They are begging me to let them train the old way for the first 2-4 weeks, and after that they send me emails saying they can't believe how fast they are gaining strength.

There are two drawbacks to volume

- 1) more rapid development of injuries as you are doing more sets and if you have any problems in form they will be exaggerated faster with high volume so you may get aches and pains
- 2) It is very mentally tough to keep up with high volume. You will mentally burnout before you ever physically do.

both of these are why volume should be cycles and once every 5-10 weeks depending upon how your body response you should reduce volume and reduce weights to 70% of normal for 2 weeks to regain your focus and let your body's aches and pains subside.

On rep/set schemes:

i do higher volume as well. not super high. but this is the thing. don't limit yourself to a certain amount of sets or reps. imo these are just barriers. how many times have you done 3 sets of 10 reps but probably could have done 5 sets of 11 or 12? whenever i go to the gym the only thing that is preconceived is what exercises im going to do. sometimes im not feeling that great and i'll only do 2 sets other times ill be flyin high and do 10 sets for things like legs. just listen to your body. be

instinctive. that's what this is all about. remember your muscles dont count your brain does and if you wanna work that out theres plenty of love novels out there for you to read. or maybe you can do a nice crossword and have a cup of tea and crumpets

yea i agree that you need to not get TOO hung up on rep/set schemes. In the end the one question you need to ask yourself is "am I working harder than the guy who will be onstage next to me"

i go where the science supports my friend

On High Volume training:

Just curious what you r definition of high volume is? for some its 12-15 sets for other its 20-30 sets.

Yea more or less. If the bodypart is a weakpoint (back/legs) it will get more sets, if it is a strength like chest, I do probably half as many sets as I do for back

Opinion on routine by T-nation:

<http://www.t-nation.com/findArticle.do;jsessionid=ACD8EA5982805F0CEA1B658698258532.ba13?article=263train2>

routine looks very solid

Frequent training and Soreness:

I don't know how people squat 3x a week? When I squat, I am sore 4-5 days. and when I say sore i mean the handrails are my best friend

The more frequent you workout the less you get sore. The best powerlifters squat FREQUENTLY... even up to 4x/week

I have read that the first 4 weeks or so your body has to adjust to the more frequent squatting. A lot of people will get more sore and/or can't squat as heavy as they used to. A lot will stop with more frequent squatting because they feel they are getting weaker. But when your body gets more and more adjusted you will become stronger and stronger. And you can make improvements.

Your body can handle a lot more then a lot of people think.

Exactly, the adaptation period takes time

Yeah but how the hell can you squat with weight when it hurts to even sit on the toilet?

Well you don't squat heavy every single day

hahahaha i dont know any other way!?

Even if squatting 2-3x week with 1-2 heavy days is superior? And there is much evidence

to support that having at least one lighter day is superior for strength and size than just straight up one workout per week

When you say 'lighter day' just wondering whether you mean to use lighter weights and back off the intensity (ie, stopping well short of failure) or use lighter weights with equal intensity as the heavy days.

if i'm doing 3x/week then one day is heavy, one day is light shy of failure, and one day is light but closer to failure

Powerlifting:

When powerlifters lift 2-3 times a week, don't they only do 1 or 2 sets with 1,2 or 3 reps at a workout? It's almost like an entire workout spread out over a week. I'm not sure I see the point of a 'lighter' day. Can you explain the reasoning?

Not really, powerlifters often use a lot of volume. I routinely know powerlifters who will do well over 10 sets on a given exercise

Light Day workout

Can we have some discussion on the 'lighter day' workout? I hear people talk about it. I'm not sure I agree with it. Just looking for some talk about it.

Just because a workout is 'lighter' does not mean you are not stimulating muscle tissue and additionally it also facilitates blood flow to that area. I can tell you right now it certainly enhances recovery by taking advantage of the repeated bout effect

so would you suggest maybe doing 3-5 light sets the day after training a muscle to get a little pump and blood flow? do you do this?

i do one heavy workout per week focussing on 3-8 reps going as heavy as I can on compound movements, still pretty high volume, then later in the week I go lighter for 10-20 reps with more volume but not as much failure as I do earlier in the week.

My legs NEVER grew off one time per week shit. I started training 2x/week and everyone said I would overtrain; low and behold my legs actually grew, the science supports it as do my experiences with myself & my clients

On Chest development:

Layne, my pectoral development is not exactly what I would like it to be, but coming along. I hit it hard once a week. On the days after the workout, can I go with a few hundred pushups for active rest to help with the development, or is this too much?

hell no it's not too much, I'm telling you, once i started working everything out 2x/week

hard; that's when my physique went from middle of the pack to being competitive for my pro card. I am quite convinced that being brave enough to try high volume/frequency was one of the main reasons I am not still an amateur.

Layne's Workout Journal:

Could you please record your workouts on here more often...??? I like to see how others do their workouts...

I have a lot posted in my journal here <http://forum.bodybuilding.com/showthread.php?t=819314>

On Calves:

Layne, what you like to do for your calves? I saw you did 15 sets, you always do a lot of sets like that? You know it's hard for us natties to get those good looking legs that got a lot of thickness. I'm 6'2 so my upperbody is a hell of a lot more powerful than my lower, u think squats that are heavy with lower reps would help to get some mass on them, nething else you suggest feel free. Thanks a lot bro, hope the training is going well. By the way you're a monster with those front squats!

As you probably know legs were a big weakness for me, and I still consider them a lagging bodypart; but not like they used to be. I think high volume/high frequency is really the way to grow. My calves were stuck at 15" until i started working them 2-3x per week with 20-30 sets per week; that got them up to 17".

My calfs suck. I'm 6'2 with 16" calfs (high inserts too) and i'm a hardgainer. My diet/cardio/training (other than calfs) is going really well. I've been doing DC training for the past 2 years so (which is calfs every other workout for 1 set of 10-12 reps with a 5sec neg, 15sec stretch and a hard flex at the top)...

this method isn't really doing much for my calfs (they have hardly grown in those 2 years whereas everything else has)

can you please give me some advice AND post your calf training? i read that you like to do high volume for your calfs. Please list the training in detail (reps/sets/with

what part of split/amount per week/tempo/etc)

calves are something extremely hard to grow... most people who have big calves... have always had big calves. Train them hard and heavy and like a made man. drop sets, super sets, giant sets, hard and heavy. I do over 30 sets per week for calves. my calves when i started were 11" now they are just under 17" not great, but a good improvement

On circuit training:

Hey Layne, you are doing a great work here and I wish you a lot of successes... what do you think about circuit training? They have or have had some place in your workouts during the year?

only time i use circuit training is if i'm on vacation & pressed for time or during the days before a show

On Layne performing Traditional squats:

Layne, do you do traditional squats? I always see your videos of you doing front squats.

I do, just not recently, i feel front squats much more in my quads & it's not near as hard on my lower back & knees

On squats for glutes and hams:

You feel that the front squats work you glutes and hams? or just do direct work for those groups, i.e. GHR's lol

Probably not quite as much, BUT my ass and hams are not my weakpoint... quads are lol yea, quads have been a bane of mine for a long long time. But they have come a long way, at some point I'll post up some progress pics of my legs for you guys

On warming up:

what type of rep range do your warm up sets consist of , saying my goal was to be in the 6-8 rep range , I always followed the max-ot warm up sequence (don't train with max-ot) start with 12 , 6 , 4 , 1 or 2 reps then your working set , i only do this in the beginning or the workout for that muscle , after that i do 1 "feel set " for the other exercises , what you think?

depends on the exercise, on something simple like curls i'll do like 1-2 sets of 8-10 but on something like squats or deads i'll do it like this.

for example on front squats my best is 2 sets of 365 for 5; so if i wanted to warm up for that i'd do

1-135 X 10
2-185 X 7
3-235 X 4
4-275 X 2
5-315 X 1

then i'd do my working sets.

On Layne's Dynamic delts routine:

Layne has your thoughts changed on this article Dynamic Delts?

yes some, but i still think its a solid routine

Thoughts on a leg routine:

So in my quest for better legs I tried a taste of Layne Pain.

All exercises were done with 1 warm up (except squat, which was 1st, and has 2) and 4 working sets with reps taken to almost failure on each.

It looked something like this.

squat

leg press

hack squat (first time I've done that in 15 years and it tried to kill me)

hamstring curls

GHR's (no warm up needed)

good mornings

leg extension

I just followed the same routine last night and it felt great again. I'm not feeling like I need a funeral service today, so that's awesome. I even added some weight to each lift and kept my form.

So

damn nice workout bro! now that is a leg workout!

On inner thigh development:

Layne, when squatting, what is the best way to shift the emphasis to stimulate inner thigh development?

probably going a bit wider, however i'm a fan of just using whatever foot position is most comfortable because you will have better form and use more weight

Quad help

Just a question regarding quads. I really struggle to put size on my quads, would you recommend doing quads twice a week? Could I do one day of close-stance squats, leg press etc... and one day wide-stance?

I killed myself for YEARS on legs going once per week and just hammering the living hell out of them til I couldn't walk or tie my shoes the next day. Made very little progress. People told me i was over training so i backed off. Made even less progress. Then a friend of mine who is very intelligent told me to forget all that nonsense and try training them 2x/week and low and behold, my legs actually grew. I swear by 2x/week. One day is lower volume and lower reps focussing on heavy compound movements moving as much weight as possible the other day is lighter, with more reps, less rest between sets and more volume.

On splitting leg routines:

layne how do you feel about splitting legs up , like quads one day and hams another? or do you feel its best to work both together

depends, I guess you could work out your split so you could do it that way. I've always done them together but I don't see why you couldn't split them up

On the effects of calisthenics on recovery

How should I figure in the calisthenics we do at my units PT? They classify it as strength training, but with the short rest times and high reps, it seems to me that it would fall more under endurance/cardio. How would this type of work affect my weight training (i.e. should the push-ups count as chest work such that I need to cut back on my gym sessions so as not to overtrain? Also, would the twice weekly abs work included in the calisthenics be enough ab work or should I include it in my regular weight training schedule as well?)

for someone who weight trains heavy; push ups are not going to impact recover... it is more like endurance than it is strength

On workout effort:

Just wondering, do you put that much effort into every workout? I mean, you've set the benchmark now, will you be disappointed if you don't achieve at least these numbers on every subsequent workout now?

actually i cycle my training a bit so now that i've broken my max i'll lighten up my heavy days for a few weeks and build back up to 385 over about 6 weeks so by the time that lift comes up i'll be really jacked up for it

On front squat form:

Secondly, I see that when you do front squats you do the arms up/crossed. I am an athlete and we do front squats from the powerlifting setup of clean to squat. Now that season is over and I can do what I want, what do you recommend? Arms up and crossed or powerlifting style?

My wrists can't take the powerlifting style; however, if you like that better; then do it

On Total Body Training:

do you agree/support Chad Waterbury's style of total body training with a 3 day full body routines (M-W-F) focusing on 4 compounds and 2 isolation exercises while varying rep ranges throughout the week? Basically, any thoughts on these type of programs of full body - upper/lower - push/pull. I really enjoy these types of training but dont know if they be as effective as a body part split.

I haven't checked it out but I am a big fan of high frequency... think 2-3X week training each bodypart works well

On taking a week off from training:

What is your view on taking a week off? How long of training and at what intensity would require this? Would it be more of a mental break or would it also have physcial benefit as well?

honestly i think having a week or 2 where you go to the gym but just got at 60% of normal weight is much more beneficial than totally taking a week off

What are your thoughts on taking time off from the gym to prevent over training. One of my lifting partners will occasionally take a week off here and there, and I am now seeing that Eric(bodyfx) recommends taking time off as well. I train 5 days a week and love it, I hate having to even take the two days off a week! I do a very similar training style/split to your own and get adequate rest(8 hours), and am very conscious of getting proper nutrition/supps every day. I would like to train as much as possible as long it is beneficial and not detrimental to my gains. so what is your take on all of this?

i don't think more than 3-4 days off is a good idea, more than that and you can actually get atrophy from disuse. Rather, I think 1-2 weeks of deloading: do your normal routine but lift 60-70% of the weights you normally use. This is light enough to allow you to recover mentally & physically & give the joints a break but heavy enough to prevent atrophy

On training adaptation:

I am currently on Dave's diet at the moment and making great progress so I wouldn't want to change my training style. But come the winter months, I am thinking about giving high volume a shot since it worked for you, and I HAVE NEVER done high volume/frequency before, but I have a question. I read that you said after a few weeks you get used to the soreness/lethargy and actually feel alot better. Well would that "get used to it" mean your body is adapting to it, and the initial shock of a new training style has now lost its benefits? Also, your split is 3 on, 1 off split, and then hit the whole body again those next 3 days, right?

No, adaptation is a good thing during the first few weeks, it is a different sort of adaptation than your muscle no longer responding to a particular routine. I know that sounds strange, but honestly once you get through the first 3 weeks you will start noticing big time increases in fullness & strength

On Push/Pull/Legs routine:

Is Push/Pull/Legs, 1 day off, then repeat a good split for high volume?
yea that's a good split.

Layne from a guy who has worked his tail off to bring his quads up. What do you recommend to build the vastus medialis? I'm getting very good results to my outer sweep and thickness, but that tear drop is eluding me. Plus your tear drop is so sharp it almost looks doctored lol

i just recommend a full range of motion on all movements especially squats

On layne performing deadlifts with a trap bar:

I have seen a video where you are performing deadlifts with a trap bar, any reasons?

The trap bar allows me to pull in a straighter line instead of a diagonal line like you do with a straight bar. This allows more quad recruitment which I need since my lower back is already really good, but my quads need work. Thus I do them on leg day

. I've found that performing conventional deadlifts place a huge amount of stress on my lower back (I already have sciatic issues). Do you find doing them with a trap bar reduces the stress put on the lower back? Pros/cons?

absolutely, allows the quads to get more involved

On squat form:

I had this guy tell me yesterday in the gym that my form was wrong when I squated cause my knees were going over my toes, he said that doing that using heavy weights I could blow my knees out. does this have any validity? when you squat do you just go parallel or you got ass to heels?

As far as knees not going over toes, unless you have short legs your knees will probably have to go over your toes somewhat to keep your balance or you'll fall backwards

On Layne's workout scheme:

Did you use the same rep range and weight in both workouts? or did you do different things on different work outs? if i train each bodypart twice a week, would it be better in your opinion to keep to the same style of training ie. 3 sets, 5-8 reps? or doing 3sets, 5-8 reps on one workout, then maybe a 5x5 on the second, or maybe lowering the weight and doing 3 sets 12-15reps? roughly what did you do that got you the best results?

please see the third episode in my video series. It answers your question
<http://www.bodybuilding.com/fun/insidethelife3.htm>

On Training till failure:

I'm on an upper lower split kind of like yours, but my first 2 aren't a heavy day then the second 2 a lower, they are both the same except a few diff exercises... The question is, do i go to failure on each muscle every workout? I know if i was training on a 4 day split i would but weren't sure when training muscles twice? If you want to see the workout just let me know.

With high frequency high volume I wouldn't train to failure on every set to begin with. Maybe only half; as your body adjusts to it though you can increase the # of sets you take

to failure; you'll just have to give your body time to adapt

On hack squats:

O.k. Since you just posted a hack squat vid I figure this is a perfect time to ask. Where do you place your feet? I've got pretty long legs (34in inseam) and I move my feet so much on the platform you'd think I was on 'So you think you can dance'. You can't really tell from the current video, because that wall is right there.

i put them up as high as possible so i can push through my heels

doesn't that place more stress on the hams and less stress on the quads though??

I don't think so; and it's much better for the knees I believe.

On Glute ham raises (GHR) :

No one can understand how hard they are until they try them for themselves. My friend deadlifts about 585 lbs at 185 lbs so a strong dude and yesterday he asked what I was doing (when I was doing GHR) and he wanted to try. So I let him on there and WAM! Faceplant on the first one LOL

On workout duration:

I was just wondering, with your high volume workouts, how long does a session normally last for you? I'm thinking that unless you keep your rest to a bare minimum it must be well over an hour...

yea it's like 1:15-1:45 sometimes 2 hours

I thought it must be. Ever get sick of having to spend so long in the gym? You must be wasted after 2 hours.

eh... it's what it takes. I love lifting. After 10 years of doing it i still love it. I'm looking forward to just about every workout

are you ever worried about catabolic hormones coming in to play after working out for that long? or do you still feel that as long as pre and post workout nutrition is up to par, your set?

Not really. First pre & post workout nutrition helps mitigate it. Secondly, cortisol studies showing increases after 45 minutes of exercise are done in endurance athletes. There is a big difference between endurance exercise where you are going non-stop whereas weight lifting is short periods of work with long periods (relatively) of rest. Additionally cortisol is a long term acting hormone. short rises in cortisol really don't cause catabolism. Hell cortisol has been shown to rise after workouts... but we know that workouts make you grow. It is long term elevations in cortisol from stress that can be catabolic.

On laggin lats:

i seek some advice about lats...im only 6 months in so here is my problem i have.....my right side of my back is thicker and my lat is wider then the left side....i think because of my wrong lifting when i started out and/or because of my job im workin as a mover so i already lift al day long....but back to my point what exercises can i do to straighten my back out i already do dumbell rows...right around 10 kg and left up to 18 kg...any other sugestions

As for your lats; I suggest you do extra sets for your weak side. One arm dumbbell rows; one arm cable pulls, or any one arm back exercise. Try doing 2-3 extra sets each workout. Also, since that side is weaker you probably won't be able to use as much weight as you can for your strong side. But whatever weight you use for your weakside, you should also use that weight for your strong side so that your weak side can catch up.

On training methodology during the 2-3 week cut :

Question for you Layne in regard to your cyclitic method of eating when off season. Do you keep your exercise regime the same when doing the 2-3 weeks of dieting as when you are eating more?

My training is cyclic but independent of diet. 2-3 weeks of dieting really isn't enough to cause you to lose strength or energy. I do deload at least once every 12 weeks so i try to make that fall in with the 2-3 week cut

On vastus medialis training:

Layne, a question for a guy that has really brought up his quads. Is there anything specific that you have dome to work on your vastus medialis? Most of the things I have been doing have been doing a great job of building my abductors, upper and outer quads, but the tear drop is lacking. To give a idea of what my routine is like. I do legs 2 times a week (Mon and Fri. Saturday is cardio only and Sunday is a rest day).

Mondays routine:

- 1. free weight squats (just started doing these. I was doing Smith Machine squats)**
- 2. leg press. I put my feet just a bit wider that shoulder width and a little above the middle of the pad. Otherwise I really feel some weird stuff going on in my lower**

back on the negative.

3. Seated hamstring curls

4. lying hamstring curls. These are always tough after doing squats and seated .

5. leg extension.

Fridays routine

1. Hack squat. Foot position pretty much the same as leg press. I always go to the stops on this one. Seems like that's what they're there for lol

2. GHR's. Enough said

3. SLDL's. I normally take the bar to about mid shin or so. Any deeper than that and I tend to start rolling my lower back.

4. leg extension. This day I go a little lighter and increase the reps and negative movement.

Thoughts, suggestions?

how deep do you go on your movements?

On leg press until my knees are almost to my chest.

Squats I do in a squat rack similar to the one in your gym. I go about 6 inches about the stops on that. I'm 6' so that's well below parallel for me.

Hacks are to the stops.

Leg extensions all the way up for a squeeze and down till the stack almost touches.

What do you think?

honestly sounds like you are doing what you should be doing. you could try some heavy stretches like in DC training

On Sprints for quad sweeps:

Question for you. I have heard you mention sprints for fat burning and quad sweeps. What is the best way to perform them and for how long? My second cardio session is a fast pace walk at night around a local track. I feel like trying something more challenging and IF it doesn't burn muscle this seems like a killer workout!

Thanks Layne.

Hey tony. What I really like is 50 meter sprints up a hill. Try doing 10 sprints to start. Sprint up to the top and walk down slowly (should take about a minute) in between sprints but during each sprint hit it as hard as you possibly can. doesn't sound like much but if you hit it super hard i guarantee you'll be gased.

On Heavy/Light training :

Layne, I was curious what your thoughts are on Heavy/Light training as outlined here:

<http://www.bodybuilding.com/fun/xrep15.htm>

The basic concept being: a few days after your normal heavy workout, you do a light, "Pump only" workout, that will flush the muscle with glycogen and nutrients without going to the point of further muscle trauma. The reasoning sounds solid, do you think it holds up? Would it possibly increase growth & recovery?

sounds solid to me, kind of like what i do

On Volume training during dieting:

Do you decrease training volume when your energy starts to get really low from contest dieting?

slightly

On shoulders being stronger than chest:

Layne, if your shoulders over power your chest, is it a good idea to back off shoulder training? I've been thinking of backing off my shoulder training and back training and increase my leg and chest training to bring up my sweep and chest.. what do you think?

I think you may try pre-exhausting chest with flyes then move to presses

On nutrition after a sprint workout:

I was wondering what would you consume following a sprint type workout that you described.... such as how much protein/carbs or anything else.... i just dont feel like i need that many carbs after i do it i may be wrong though..... i do like 10-12 100 yard sprints.... basically sprinting the straight aways and walking the curves.... thanks man!

Depends... how many carbs do you have pre workout? are you cutting or bulking? how much do you weigh? what is your total carb intake for the day

On DC training:

I keep hearing about DC training.....but i don't know what it is?

I would check out the last few pages of the daily pump, there is some info about it there, also at <http://www.intensemuscle.com>

How do you feel about DC training?

i think it will get you a great base in terms of strength but pretty much the only variable that you can modulate is strength/overload and you simply can't get stronger forever. Most people don't realize volume and frequency are forms of overload, you can't always get stronger but you can always do an extra set or increase your frequency. I just feel like a program should take advantage of all the variables to modulate overload & muscle gain

What do you think of Doggcrapp training (not just the principles but following it as its outlined)? I tried but did not find any comments on this board or other boards by you on DC..

I like the rest-pause principle & i like the heavy stretching & training. However, what I don't like is they really only take advantage of overload purely through trying to add more weight and do not modulate other factors like frequency, volume, etc.

Yo Layne, have you ever attempted DOGG CRAP workout program? if so whats your take on it?

I use various componants of it like rest pause and hard stretching. However DC training only takes advantage of one form of overload which is the weight you use. You can't get stronger for ever. Eventually your strength plateaus and once its does you have no other way to make progress with traditional DC. So I think it's best to also regulate other variables like volume, time under tension, etc.

On Precontest training:

When you are precontest, do you train to failure? If so, on every set?

yes I do... no not on every set

On increasing weights on deadlifts:

layne, what i was saying earlier about deadlifts was what is the best way to continually increase poundages and get them high for deads like u did. I am currently doing 230 pounds with controlled slow form, i would love one day to deadlift 300 pounds and more but worry about injury.

I think wave training is the way to go. For example if you are currently doing 230 you would do this

week 1: 135
week 2: 170
week 3: 200

week 4: 225
week 5: 240
week 6: 245

then repeat the cycle this time you would do something like

week 1: 145
week 2: 180
week 3: 210
week 4: 235
week 5: 250
week 6: 255

etc etc etc

This has always worked for me and kept me maintaining consistent progress

Are you saying you should be able to increase your deadlift poundage by 110 pounds in 6 weeks?

He said he was at 230 right now. so in wave training you back off and build up to your max and then over it over 5-6 weeks then back off & do it again.

what is the rep range you working in the beginning weeks?
something like that? also are you doing multiple sets or is that your only working set?

week1: 10
week2: 8
week3: 6
week4: 4
weel5: 2
weel6: 1

nope rep range stays the same. i know it seems dumb to do that light of weight to start but trust me... powerlifters use this with GREAT success. you cannot constantly train to failure; you will plateau quickly

On Layne's preferred workout :

<http://forums.musculardevelopment.co...ad.php?t=13054>

- 1. Power Upper (Coupounds, low reps, heavy weight)**
- 2. Power Lower (Coupounds, low reps, heavy weight)**
- 3. Hypertrophy Chest/Arms (Higher reps, more sets)**
- 4. Hypertrophy Shoulders/Back (Higher reps, more sets)**
- 5. Hypertrophy Legs (Higher reps, more sets)**

Layne, how long do you do this routine before "switching it up", or do you continue

to do this routine all the time?

If/when you "switch it up" what type of routine do you use?

just depends on how things are going. This is my bread & butter but I always believe in variety and I am always changing exercises/volume/etc

On gauging working sets:

How do you gauge your working sets? When looking at the above weights/ reps it would appear that you werent close to 'failure' with the 315...so when do you start counting work sets vs. warm up?

failure or not... 315 feels heavy on front squats. LOL

a working set for me is when i'm using 80% or above of my personal record for that rep range.

trust me... you do that kind of workout starting like that and moving all the way up... you are exhausted by the end of it.

I dont doubt it.....just used to counting work sets as those that are near failure. For example...my Flat Dumbell worksets of 3 x 6 :

130 x 6

115 x 6

100 x 6

Maybe I have been doing way too many sets close to failure.

Not necessarily; this is just a specific squat protocol I use... similar to smolov training

On Dumbbell lateral raises:

Do you have a video of you doing dumbbell lat raises for shoulders, i don't know if i do them right i feel like i switch up how i do it each week. Well, ill try to explain, do you keep your arms more strait? i see a lot of guys do them with their arms bent like a most muscular then lifting up

I use a slight bend. it is very bad to keep them totally straight

On Caloric intake for lagging parts/ High intense cardio during bulking

1) My arms and lats are lagging big time. I was wondering should I up my calorie intake on the days I lift back and arms?? Say post workout should I up my carbs to say 75-100 grams? (currently 187 , beginning a bulk phase). I plan to have about 40-45 grams of proteing per meal and 10- 40 carbs except post workout ususally 50-60 , and 50-70 in the morning.

2) Is it ok to do high intense cardio during bulking??

I would say yes and yes but # 1 depends on how fast you are gaining weight right now?

On Deloading:

How often do you suggest take a "deloading" break. (ie after 4 weeks of training, 6 weeks, ect.?)

usually every 4-8 weeks, i let my body tell me when i need it

And also, how do you time your delaod and max-out weeks within this setup ? Do you deload during your cut-weeks ?

not nessecarily. i just deload when i need it. 2 weeks of cutting is not going to tire you out or anything like that, you can still lift heavy.

layne do you think a 2 week phase of going to the gym and doing "light weight" would be good for a rest or should i only take 1 week?

yea i think that would be good for a deload

On expanding the ribcage:

Layne do you recommend expanding the ribcage with pullovers? And if you recommend it why and when should I do them (with chest,back..etc.)

eh, i don't think that really works but i guess i could be wrong

On HIIT with weights:

I lift heavy (olympic, compound, complexes, etc...) on MWF. How many days of HIIT could I throw in there before it would start hurting me/having negative effect/overtraining. 3, 4, 5, days? Also, how do you feel about weights in the AM and HIIT in the PM? Would longer intervals of 1-2min sprint(as fast as I can go for that time) and 3-4 min light be helpful and complimentary to the shorter spints?

Appreciate it, I'm trying to increase my GPP and I enjoy doing high intensity stuff!

I think 3-4 days per week max. You cannot sprint for 1-2 minutes. A true sprint can only be maintained for about 30 seconds then you completely gas. I think weights in the am, sprints PM is a great idea

What do you think about work out mix like this. I starting to do this.. For example back,traps,rear delts day I do this

Deadlifts 5working sets 3reps

chin ups 5working sets 8reps

dumbel rows 5working sets 12reps

pull overs 3 working sets 12reps

dumbel rear delts raises 5working sets 12reps

barbel shrugs 5working sets 8reps

My idea is to mixed up heavy weights with moderate weights and high reps to gain strenghts and mass. What do you think about this?

thanks Daniel

I think that is a solid approach

On Knee height rack deadlifts:

What are your thoughts on knee height rack deadlifts for back development? I like deadlifts from the floor, but I am really trying to bring my back up and really want to isolate that area with heavy weight.

I think they are fine, just don't do that nonsense where you hyperextend and lean way back... that's so terrible for your lower back and I see so many guys do them.

On incorporating hang cleans and power cleans to workout routine:

I was curious as to your opinion (or anyone with an opinion on the matter) on hang cleans and / or power cleans within a training regimen. I'm currently bulking and follow a training split similar to yours'. Mondays are upper body with primarily compound lifts, and was curious as to whether or not hang or power cleans would be beneficial.

i think they are fine so long as they do not impede other lifts and you execute them with proper form

On abdominal training:

what is ure training philosophy for the abdominals...?? also how often do u practice ure posing...thanks again...

please see my article on abs on my webpage <http://www.bodybuilding.com/fun/layne.htm>

On Back width:

I know with tommy you had to work on getting his back wider, and I'm sure he is still working on that. Also, your back is fairly wide too.

Is there any way to grow a massive back without going to nuts with deads? I used to love deads, but over the years, I feel like it's risks are currently not out weighing the benefits. It's marginal cost is way to high I think.

What do you think? What would be a solid back day in your opinion?

well i work back 2x/week which i feel is a must. I think rack chins, weighted pullups, close grip pulldowns for width. Then barbell rows, dumbbell rows, dumbbell rows braced against an incline bench, etc. I mean there are no big secrets. Go heavy, use enough volume, and be consistent.

On MMA training

layne if you were training a mma fighter what would you reccomend for cardio to be in the best shape.

well MMA requires long term endurance capacity but also requires explosive strength. I think the closest to perfect MMA cardio I've seen is what sean sherk does. He does high intensity drills that get his heart rate way up and he maintains these for a period of time and then he 'rests' but while he is resting he is still doing low intensity cardio. Basically this will allow your body to be able to have long term endurance capacity but still be able to be explosve when need be.

On Max-OT training:

I don't recall anything regarding Max-OT training. If you get a few seconds, I would just like to know your opinion of this training protocol.

Check out my article here <http://www.bodybuilding.com/fun/layne45.htm> i think that should help

That all makes perfect sense...Thanks a lot! Now putting this info into practice, I have been doing all bodyparts twice a week, once in the 3-5 rep range, and once in the 8-10 range with a few "pump" sets to finish (15+). Even though I'm not hitting all the rep ranges in one workout, is this still an effective way to go about training?

I think that is fine yes

On Rest days:

layne do you think it would be ok to do a split like you suggest but instead of taking a day off after the 2 heavy days to go straight back to lifting like

**monday-upper heavy
tuesday-lower heavy
wednesday-chest/back volume
thursday-shoulders/arms volume
friday-legs volume
saturday-off
sunday-off**

I don't think it would work as well; but it would still work

On Progressive overload / Variety:

1 What do you think is a single most factor among the two when it comes to making good strides in building muscle?

a) Progressive Overload or b) Variety

I think both are important but honestly I think consistancy is the most important things. too many people have a few good weeks then a few bad weeks and they just spin their wheels. Slow consistant progress is the most important thing.

Post contest training:

Also, after a contest, do you usually take the traditional week off or do you come

back on Monday and start it up again at a lower intensity to help get your body back in the groove?

Within a week you can certainly get detraining start to set in and disuse atrophy. Much more productive to go at 70% of normal to allow recovery but still maintain muscle.

Part I: Cardio

On Empty Stomach Cardio:

Layne, here is my question. Normally we drink whey, post-workout, and when we do cardio afterwards, it would be cool because we drink whey protein. But what about morning cardio? How long should we do it ? Is there a max. i mean cardio on an empty stomach, after waking up. I don't want to lose muscle so..

Empty stomach cardio is nonsense, it does not burn fat any better than high intensity cardio. read the cardio section of my article here

<http://www.bodybuilding.com/fun/layne36.htm> i think it will answer your question

On doing HIIT and low intensity cardio

Layne: I noticed on a recent thread you mentioned that you do a mixture of HIIT and lower intensity cardio. With all that HIIT has going for it, why do you keep the lower intensity stuff in there as well?

Answer: well simply because it's very taxing to do HIIT on a leg day or after a leg day

On performing cardio right after weight training:

my current goal is to lose fat, while retaining as much muscle as possible. i want to plan out my cardio accordingly. to best fit my schedule. usually it is easiest for me to do my cardio immediately following my weight training. with work and everything it is hard to get to the gym for 2 seperate sessions. How much of a disadvantage am i putting myself at, as far as losing muscle goes, by doing my weights and cardio at the same time? is it worth making drastic schedule changes to seperate the two, or can this way be effective? and finally if i continue to do cardio immediately following weights, should i use hit style, or stick with a longer low intensity? post

workout shake after weights, before cardio, or after the entire workout?

You are fine with what you are doing; cardio is not nearly as catabolic as people make it out to be. I think you are doing just fine. I would do it after weights; just have your post workout shake before cardio

On the “Fat burning Zone”

If we keep our cardio at the fat burning zone(130) for 30 minutes, is there an average amount of calories we should be looking to burn?I do cardio after my workout... should I drink my post-workout shake right after weights and before cardio or after both weights and cardio?

first off, ditch that 'fat burning zone' nonsense. If you are going to do cardio... then work hard at it. 30 minutes is a good time period; hit it hard make sure you burn about 300-400 kcals

On that note. I constantly see people going so slow on cardio trying to maintain 'the fat burning zone' b.s. Hell they're not even working working up a sweat. By the way most those people are over weight.

At a higher heart rate you do infact burn some carbs for fuel, but you also burn fat. If you look at the amount of calories burned at a higher heart rate, you'll see that you burn more fat calories in a shorter amount of time than strolling along. Also part of doing cardio is to stimulate your cardiovascular and central nervous systems. This happens at a much greater capacity at higher heart rates. Plus you get the added benefit of having your metabolism of overdrive for up to 24 hours (according to a study I read in Runners World Magazine).

On Cardio being catabolic:

when doing cardio is there a way to not burn muscle doing it slower using aminos or at when does it begin or is it not a serous concern sould i do it first thing in the morning or time meals

cardio is not catabolic, that is mythical nonsense. In fact, we find that in diet studies just walking 1 hour per day dramatically improves muscle retention. Now obviously these people dont' train with weights but still, it's obvious that cardio is NOT catabolic like these cardio phobic trainers would have you believe.

DON'T DO FASTED CARDIO! Please see the cardio section of my article here
<http://www.bodybuilding.com/fun/layne36.htm>

On Performing Cardio to reduce bodyfat during a cut:

My main goal (currently), as I mentioned before, is to cut bodyfat.

Should cardio be performed at low intensity or high intensity? I see Dave Palumbo's recommendations for long duration (45-90 mins), low intensity cardio on these boards a lot. However, if I read the fitness magazines (vice the bb'ing ones), they recommend doing short duration intervals (1 minute 90-95% max HR with 1-2 minutes rest between intervals, and 5-10 intervals).

I am also curious how you recommend calculating max HR? The most common method is to subtract your age from 220 and take a percentage of that number. I have a friend who is a triathlete who swears that finding your resting HR and using Karvonen's Method is more accurate since it takes into account individual variances and heart health rather than just a generic one size fits all calculation?

check out the cardio section of my article <http://www.bodybuilding.com/fun/layne36.htm>

HIIT is really the way to go, high intensity cardio causes long term metabolic adaptations that enable you to increase your capacity to burn fat even when you are just resting

HIIT vs Low intensity cardio

So I far I understand High intensity interval training is good, and use it on non weight lifting days. (Is that part at least right? Sorry, I'm kind of new to even considering nutrition important. I always just thought calories in - calories out = deficit = fat loss)

that's absolutely correct. Essentially high intensity exercise does 3 things that low intensity does not

- 1) it keeps your metabolic rate elevated for a longer period post cardio
- 2) it increases your mitochondrial production (mitochondria are the organelles in the cell where fat oxidation occurs)
- 3) it increases the activity of the enzymes in the mitochondria.

So because of 2 & 3 you actually increase your CAPACITY to burn fat, as well as the rate at which you burn fat; even at rest.

On Whether or not HIIT “burns muscle” or not:

Hey, I read somewhere that you argue that HIIT is better for higher carb diets. I'm a big fan of HIIT for fat loss and heart health--lots of literature support. But, a lot of people argue it burns muscle. If I've got this right, I would like to hear your rational. Include brief refs to citations if appropriate...

Quite simple. Aneorobic/glycolytic exercise like sprinting that you can only maintain for 10-20 seconds causes you to make very very fast rapid contractions. Now normally most people think stimulating muscle is just about the load you are using, however speed plays a very big part. Hell ask most powerlifters... most of them do a TON of speed work with light weights. That's because even though load is important, speed is also critically important. You can actually stimulate muscle fiber growth through speed contractions. Scientifically I hate analogies, but honestly the real life proof is in the pudding. Look at an endurance runner and look at a sprinter, even before steroids become prominent in sprinting sprinters were still pretty well built with big legs. That is not by accident

On an Effective HIIT Protocols:

What sorts of HIIT training time periods would you suggest if you were going to supplant the standard cardio for weight loss? How many?

I typically do spinning classes (40 min) that have several periods of max output. Also, I like to roll (wrestle/jiu jitsu). 3-5 min intervals.

here is my favorite protocol

I would do sprinting intervals

5 minute warmup

50 secs light jog/ 10 seconds sprint

48 secs light jog/12 sec sprint

46/14

44/16

42/18

40/20

40/20

42/18

44/16

46/14

48/12

50/10

5 minute cool down

you can do that protocol with anything that you can get your heart rate up high with wheter it is on a treadmill, outside track or swimming pool

layne could you post what a SOILD hiit training session would look like (or a few

check out the cardio section of this article

<http://www.bodybuilding.com/fun/layne36.htm>

is this basically all h.i.i.t. cardio is

<http://www.teenbodybuilding.com/justin6.htm>

yup

On Incorporating HIIT with a specific Weight lifting routine:

I want to incorporate the HIIT into my Upper/Lower routine: which day do you think it would be beneficial and not hinder recovery? My current routine is:

Day 1: Upper A (4 x 6-8)

A1: DB Chest Press

A2: Hammer Pull Down

B1: Incline Bench Press

B2: Seated Cable Row

C1: Pressdown

C2: Cable Cur

D1: Standing Military Press

D2: Swiss Ball Crunch

Day 2: Lower A (3 x 10-12)

A1: Back Squats

B1: SLDL

B2: DB Lunges

C1: Leg Press

D1: Calf Raises

D2: Leg Raises

Day 3: OFF

Day 4: Upper B (3 x 10-12)

A1: DB Decline Press

A2: Chin Ups

B1: Wide Grip Dips

B2: BB Row

C1: Close Grip Bench

C2: Hammer Curls

D1: Lateral Raise

D2: Cable Crunch

Day 5: Lower B (4 x 6-8)

A1: Front Squats

B1: Deadlifts

C1: Step Ups

C2: Glute Ham Raise/Leg Curl

D1: Oblique Ab exercise

Day 6 & 7: Off

I might place Lower B on day 6 depending on recovery rate. I have also seen you do the "Power Clean" cardio of 10 x 3 with little rest.....do you suggest that?

I did a split like that and i put HIIT on my offdays and it never hurt me. If i was sore i just stretched and warmed up really well

On Post HIIT Nutrition

what would you advise eating after HIIT? Same as weights or different?

same as weights IMO

On HIIT during a precontest cut:

Precontest - do you do HIT cardio ONLY on your off days and then lower intensity cardio on training days and after leg day?

That's pretty much it

On performing HIIT on a bike:

Is HIT ok to do on a bike? Also, is there anywhere that shows a decent protocol for HIT cardio? I was thinking like 1min sprint/30sec rest, that okay?

Yea it's ok on a bike. But you cannot sprint for 1 minute. A sprint should be ALL OUT, you cannot go all out for one minute. 20 seconds is probably around a max. I'm not talking simply about going faster than usually, i'm talking about going as hard as you possibly can; not looking at the clock, i'm talking about moving like your f**king life depends on it. Try starting out at 45 sec low intensity followed by 15 seconds of sprinting. If you go absolutely all out for those 15 seconds i guarantee after 10-15 intervals you will be toast.

On drinking a shake when doing HIIT:

By the way, while you do your HIT cardio, do you bring the shake and like sip it during the low intensity periods?

na bro, it's only 15 minutes long & 20 at max; you aren't going catabolic during that time, just have it afterwards

On the Effect of WMS after workout

Ok, I've been doing the cardio post workout in order to try to stay leaner this offseason, will the WMS complex interfere with this due to the insulin spike before cardio... or will it not matter?

Won't matter

On Max-OT cardio Inteval training / Post Cardio nutrition

What do you think of max-ot cardio? 16 minutes overall a session, 1 minute intervals going all out for 1 minute and easing up for a minute always working to beat your previous time? It's very intense.

Also post cardio nutrition, should you eat right after completing cardio? I always think that eating right after cardio might be cutting into an residual fat burning that might be taking place after a cardio session-sorry, I guess that's 2 questions.

Intervals are good, but you can't go 'all out' for one minute. You will pace yourself with that long. You are better off sprinting for 10-15 secs then resting for 45-50 secs then doing it again. A sprint by definition is ABSOLUTELY ALL OUT EVERYTHING YOU'VE GOT and you can't do that for 1 minute. Also, eat after cardio.

okay so i will train in the morning a Layne huge question for you. I started the max OT training progam if you are familiar with it, it calls for cardio at 16mins at a high intensity. They say to do this cardio 3-5 times a week. I was planning on doing this first thing in the morning before eating on my treadmill. Im planning on starting at 6.0mph then working on increasing my speed each session. Do you think this is effective for fat burning?

i think fasted state cardio is a terrible idea and one of the biggest myths out there. Please read the cardio section of my article here <http://www.bodybuilding.com/fun/layne36.htm>

nd then do max ot cardio in the nights 3-5 times per week at 16mins. do u think that will get the job done? Or do u tink it should be 30min sessions?

if it is true high intensity intervals 16 minutes should cut it

can u give me a example of what a 16min high intensity cardio session on a treadmill would look like for yourself?

such as mph intervals, inclines, etc.

i would warmup for about 5 minutes then do 16 one minute intervals. the first 45 seconds of the minute go easy then for the last 15 seconds of each minute go as hard as you can absolutely all out

On other forms of Cardio

I read somewhere that you sometimes do hill sprints for HIIT. What are some of the other types of cardio that you enjoy for HIIT? Just trying to get some more options to shake up cardio for my HIIT sessions. Also, how long do you usually go? I was thinking 15-20 minutes for around 1 min intervals (or as long as I can go at 100%, maybe only 15 seconds)!

- pushing a car in neutral
- sled pulling
- steep hill climbing (bend over and use your hands like a bear crawl)

those are some of my more unorthodox methods

Jog/sprint/jog for your cardio HIIT

Do you ever do jog/sprint/jog for your cardio HIIT? Myself, I like it, but just make sure I distance it from my direct leg training to maximize recovery. Would be interested to see if you incorporate it into your cardio.

Yup, I do a lot of sprints

On HIIT on a track

Would 10, 100yard sprints on a track (running straights and walking corners) be good HIIT? and do you consume bcaa's when doing hiit?

Definitely, try to work up over time. BCAAs during or after

General HIIT questions

How do you plan your eating around h.i.i.t.? how many times a week do you recommend h.i.i.t cardio for bulking/cutting? would you perform weights and h.i.i.t cardio in the same day or on separate days?

I do it on my offdays during bulking; I may increase it for cutting if need be. If I do it on the same day as weight training I try to separate them by a few hours if I can. In the offseason I treat HIIT just like a workout & eat accordingly.

On HIIT soreness

Ever since I switched my cardio sessions to the day after my leg sessions (2x per week), I've noticed a pronounced difference in soreness (much less sore). Even with H.I.I.T.

repeated bout effect, it's great.

On regulating carbs/calories on cardio when bulking

Hey layne, how much do u drop calories on cardio only days when bulking? If I lift 5 days a week and do cardio (30min LI walking at a incline) on 2 days, how much lower should calories/carbs be?

I would lower carbs by 10%

Opinion on the G-Flux from Berardi:

What is your opinion on the G-flux from Berardi - simplify: very high cal 3.500-5.000/day and weekly 10+ hours activity (3 weights, 2-3 HIIT, 2-3 low int. cardio etc.) the "secret formula" to be lean all year... I proved it but after 1-1,5 week I was very tired on the afternoons (I train in the early morning) and my weight went up with 2-2,5 kgs (and not all was muscle...) so I stopped.

Thanks

I think high activity is a good idea but I think low intensity cardio is a very bad idea. Low intensity cardio has no metabolic benefit. High intensity cardio does. It increases mitochondrial density and activity giving you a greater capacity to burn fat at rest and thus keeping you leaner even when calories are higher.

On Substrate Utilization during cardio

Talking with a guy at my gym, he told me about the way his trainer has him doing cardio at the moment. I've done it before, not for any specific reason but just to mix

things up. I was wondering if you had a scientific opinion of it.

-slight warm up

-10 or so minutes of very intense interval training (supposedly to free up and "mobilize" fat stores)

-then continue on with 20-30 minutes of low intensity steady cardio (typically referred to as fat burning (roughly 60-65%), to burn off what you freed up during the intervals)

Seems to make some sense, except that, at high intensities, the preferred source of fuel would be glycogen, no? Curious on what you think.

As much as people would like to have you believe that glycogen is the only fuel you use during high intensity that is non-sense. This is the problem with 'gurus' who know a little bit, they know just enough to be dangerous.

1) you only need oxygen to oxidize fat, you don't need it to liberate (lipolysis) from fat tissue. High intensity cardio causes a LARGE dumping of free fatty acids into the bloodstream

You see, for the brief part of the interval where you are oxygen deprived you will use glucose... but during the 40-50 seconds of low intensity of the interval where you are 'resting' your body will initiate a large scale oxidation of fatty acids in order to spare glucose. Your body is VERY stingy with glycogen and WILL NOT use muscle glycogen unless it absolutely has to. So you are burning glycogen yes, but you are also burning a ton of fat. The idea that you only burn one or the other is idiocy spewed by morons. (sorry guess i'm in a pissy mood today lol)

I actually have many clients who's legs have trouble getting lean do something similar to what you talked about (high intensity followed by low/moderate intensity)

BCAA's around low intensity cardio

When "bulking" how important is it to take in bcaas around cardio 30minutes of low intensity

That is not taxing. It won't really do jack

On Cardio during the 4 week Bulk/ 2 week Cut protocol

When doing the 4 week bulk, 2 week cut diet, is cardio performed just during the cut or throughout? |What is some good HIT to perform? Also, how often do you do perform it and for how long?

I perform High intensity throughout. My current favorite high intensity is doing sprints with my sprint parachute. It really depends, but I do 2 days per week for 10-15 minutes of intervals.

On the Wind/Parachute sprint:

Is this your protocol for wind/parachute sprints as well?

5 minute warmup

50 secs light jog/ 10 seconds sprint

48 secs light jog/12 sec sprint

46/14

44/16

42/18

40/20

40/20

42/18

44/16

46/14

48/12

50/10

5 minute cool down

No, I just do straight 50 meter uphill sprints for that

On carb intake according to different forms of Cardio

With respect to cardio and carbs Layne. would it differ depending on type of cardio? ie. high intensity would require more carbs compared to ss low intensity not really requiring carbs for the fuel? or is this a bb myth too??

That is true

I know you advocate quick switches between bulks and cuts, going from (for example) 2500kcal to 3500kcal one day to the next....but you advocate a very slow upward taper post contest, going up less than 500kcal a week.... why the different strategy?

Note: Answer Provided by Sporto:

Because there's a HUGE difference (metabolically, hormonally, etc...) between dieting for months and being 3-5% (not to mention way below setpoint) and dieting for 2 weeks

and being at or over setpoint.

Part J: Supplementation

On Arachidonic Acid

what are your thoughts on the 'anabolic' supplement Arachidonic acid?

AA tends to have a 50/50 reactions. some people love it... some get absolutely nothing from it. I believe what you are seeing in the people who have big results is you are looking at the correction of low AA levels in those people. Typically bodybuilding diets can be low in Omega 6's relatively due to all the emphasis placed on omega 3s. So I don't think AA will increase anabolism above normal in people with normal levels of AA, but in people who have low levels, it may correct a low level.

what do you think about x-factor and just wondering if you do presentations at school to help lead kids away from drugs i always thought that would be a cool idea being that you and other natural competitors dont use drugs or alcohol know what im saying

I am actually in the process of working something out with a gym teacher to come speak to his class here in champaign. As far as x-factor goes i have not used it; there seems to be some evidence that it may work for some people, my guess is that if you happen to be on the lowside/deficient in arachidonic acid then you would notice big time benefits; but if you have normal levels of AA you probably won't notice much

On Liquid aminos vs Powder aminos

Hi Layne, Quick question. What do you think about liquid aminos as opposed to powder form? Thanks.

no better no worse

On Vitamin B Supplementation

Layne, whats your thoughts on Vitamin B supplementation? If you recommend it what dose would you say per day and what vitamin B? (B12 or B Complex).

Thanks!

if you take a multi I don't see much reason for it. Maybe a little extra B6 but most likely not needed

On Banned Compounds/Supplements:

pretty much the only things you have to worry about are

- prohormones and loophole legal steroids like methyl-1D
- 7-keto DHEA (banned by INBF/NANBF)
- DHEA (banned by INBF/NANBF)
- ephedrine

most other stuff is kosher

On Estrogen Blockers

Hey layne does an estrogen blocker like Nolvadex XT by Gaspari nutrition have any water holding effects... or is it fine to take pre contest?

Jeff,

I'm not sure but even if it does it shouldn't be a problem until about 1 week out, then you can just stop taking it

On Whey Protein

i searched your thread and couldnt find this question or answer so sorry if it is a repeat but what is your favorite whey protein? or do you have a specific brand you have to say because of that sponsor u have?

well I am sponsored; but I'll still be straight up. I do like Primaforce WPI the grape & watermelon flavors are awesome and of course chocolate, however WPI is pricier than WPC and if you don't have any digestive issue or lactose sensitivities whey protein concentrate is probably more affordable & pretty much as good. I always used 100% whey from optimum before I was sponsored.

On Vitamin and Minerals

Thanks a lot Layne, I appreciate the help man. I saw that sample diet you had on bb.com and it said i believe your last meal you would take 3 fish oil caps. Are there any other vitamins or minerals you find to be essential to a bodybuilder? If so, when do you take them and what do you suggest for serving. Thanks again bro, you're a huge help.

actually most bodybuilders get plenty of vitamins/minerals in the foods they eat; if you take a multi you are more than covered

Supplements for Bulking to prevent excess Fat gain

What supplements do you recommend for bulking to prevent excessive fat gain. I bought sesamin and I am thinking about adding r-ala. What do you think?

i think those are both excellent choices

Hey Layne, when taking Vitargo post workout and carbs like oatmeal in morning meal, will it be counterproductive to take some fat burners? I know it is harder to gain muscle and lose fat at same time but could this work?

Thanks

actually many fat burners are more effective at preventing fat gain in the face of caloric excess than they are at losing additional fat in a caloric deficit

With fat burners, do you recommend that people use them on bulking cycles since they keep fat gain to a minimum? Is there any explanation you can give as to why fat burners are better at keeping fat gain off when bulking rather than increasing fat loss when on a cut? Finally, do you follow any protocol when you are gaining mass such as gaining at 1 pound a week etc....essentially, how fast do you allow yourself to gain?

probably because during bulking your metabolism is already elevated in the offseason whereas in a caloric deficit it's likely to be very depressed. I dunno, it's more of a theory of me. Also many of the ingredients in these fat burners have been tested not by looking at how well they got subjects to drop weight, but how well they prevented weight gain when subjects were fed a high calorie diet.

I don't like to gain more than 0.5-1 lb per week

So for bulking your would recommend a non stim fat burner?

It depends if you are doing it for a compositional purpose; a stim fat burning is fine so long as you cycle it... if you are doing stims to get 'jacked up' the more frequently you use them, the less effective they become

On Diuretics

The theory:

Moderate use of diuretics (i.e. caffeine, particularly "cutting supplements") will not detract from the use of creatine. Why? Because diuretics act on interstitial H₂O, that is, the water between the cells. Creatine pulls water into the muscle cells, thereby rendering it unaffected by said diuretics. As long as you maintain adequate hydration, creatine will have "enough water to volumize the muscle cell" and not be affected negatively by diuresis. Yes or No? I value your advice as a Biochemistry degree holder, working on mine right now.

well you can't completely separate one layer from the other, if you remove interstitial water, most likely other compartments will 'leak' in order to equilibrate the pools

On MCT (Medium Chain Triglycerides) Supplementation

Layne, you don't know me but I know you from way back at a couple of other forums and I have always considered your word gospel. I also lurk at other forums where you write so that I can learn as much as I can from your writings, BUT.....lol, help me out bro; isn't the fat in muscle milk good fats (MCTs) that help keep you lean? Like fish and oil and flax oil?

so the theory on MCTs is that since they are preferentially oxidized they won't be stored as fat... ok that's all fine and good; but the fact that they are being oxidized means your body will just simply store other things preferably. It's still calories

Most EAA supps don't have high amounts of BCAA's in them, and so long as you're intaking enough protein you'll be getting enough EAA's.

Layne, correct me if I'm wrong on either of these

On BODY OCTANE by MAN Sports:

Body octane has to be taken on offdays because, similar to creatine, you want to keep muscle carnosine levels saturated.

I wouldn't bother supplementing with Taurine as I believe supplementation has not been shown to raise muscle cell levels of taurine.

On Steroids

I suppose we have all thought about it at some point but have I seriously considered it? No. I have done very well without it and to me the risks (health, legal, emotional, and monetary) associated with it simply outweigh the possible benefits. I all kinds of bodybuilding, tested and untested and you'll see me attend both and very rarely will I criticize someone on steroids, unless they use them as a crutch for poor training and diet.

As far as fantasizing what I would look like on the sauce; everyone responds to steroids differently, some respond very well, others not so well; so I guess I could end up at the national/pro level or I could very easily end up being a regional competitor. That's why I like natural bodybuilding, sure genetics come into play; but it's not about the amount of hormones you take and how you respond to them, it's about you and you alone. In the end I do this to compete against myself; to try and ascend to the next level. That is what keeps me pushing myself harder in the gym everyday.

On Supplements that Layne Takes

Layne, what supplements do you take?

Well, the only ones i take religiously are a multi, creatine, protein powder, BCAAs, fish oil, glucosamine, and an anti-oxidant

On Omega 3 / 6 Supplementation:

Hi Layne

I currently take capsules that are 500mg omega 3(salmon oil) and 500mg omega 6(evening primrose oil), and I was wondering if there was any need for the omega 6, and if there is any particular ratio that you should be having the different omegas in?

Omega 6 is very prevalent in the diet and may be pro-inflammatory, not sure if there is much need to supplement with it as if you eat meat you are most likely getting plenty. The ratio you want in your diet is 4:1 of omega 6:3. Most Americans get 10:1 .

On Recovery Enzymes:

What is your opinion on the supplements for DOMS? (enzymes)

i have not heard of enzymes for reducing DOMS, not quite sure of the delivery system they'd use though since enzymes are typical proteins and whole proteins are destroyed by the gut during digested & broken down to amino acids so I'm not sure how they'd get into circulation

Layne, basically Dr. Mark J. Tallon, (based on some positive studies) developed an various proteolytic enzyme (primary proteases) product combined with some Beta-sitosterol and glucosides to help one recover from immune system suppression caused by intense training and can help mitigate excess inflammation from muscle damage (DOMS).

Mark claims there are definite powerful synergies, when varying enzymes are combined. So he formulated a product called "sorenzyme" and I have been using it with much appraise. I have increased my workload to 2 times weekly now as you know. I was just wondering your thoughts here as well. As a natty' and the extreme workload, I find this intriguing and maybe help aid in my supplement protocol if it works.

Info can be found here: <http://www.labrada.com/index.php?section=131>

I know Mark, met him at experimental biology 2 weeks ago. I'm assuming it's exerting it's effects on the immune system via the small intestine and so then i could see how it would work, though admittedly, I don't know much about that stuff

On Caffeine Use

Layne I got a problem with caffeine, I used in the past (the past week) hydroxycut hardcore, and everything was right on track but now the stuff is over and I don't drink caffeine by any means (I don't drink coffee nor soda) The Problem is that I feel drowsy all day long with a very potent headache, I don't take painkillers so I endure the shit all day long. The headache I can take the problem is the drowsiness, I'm really sleepy sometimes I sit on a couch or lie on the floor and fall asleep without even noticing it. It really puts me down in the gym but I can take it, can you recommend me anything to knock away this caffeine dependence of mine? please?

I would slowly try to wean yourself off of it. Give yourself some caffeine and over time try to taper it down

On MyAlli OTC fat loss aid

Layne, have you seen the new ads for myAlli weight lose? If so, any opinion? it isbasically Olean Chips (remember those) which was pulled for causing pernicious lesions on the colon. Well, GlaxcoSmithKlein is putting it out again and tclaim it is the only FDA Approved weight lose aid OTC. Plus the word out on the street is it receiving presales in the millions. www.myalli.com : It's 60 mgs of Orlistat.
lol, wow that's shadier than most supp companies

On 7-Keto DHEA legality

Also, I heard you mention that 7-keto dhea is banned by natural federations? Why?

7-keto was banned by the INBF because they are really restrictive, however the ban was just recently lifted. Now it is not banned anywhere. Conditioning is more important for the most part in natural shows.

On recovery Supplements

Layne what are your top 3 supplement choices for inter-set and inter-session recovery?

I'm thinking bcaa's, creatine, and beta-alanine maybe?

yea those are real good, citrulline malate is another one

Last time I asked you about WMS you hadn't used it or formed an opinion on WMS. How do you like it? Is it just carb slam your using? Why just 3g of CrM over 5g?

3g is plenty... especially since I take vasoxplode preworkout which has 2.5g. still have no opinion about WMS... only been using it 3 days (Posted on July 4th, 2007, 04:49 PM)

On Cissus:

I've seen you recommend the use of Cissus. how much do you recommend and when

etc?

Depends upon how potent the extract is

I was thinking about picking up some powder from tp.com. You know anything about their stuff?

Afraid not, but most of their stuff seems solid, probably pretty good

On Antioxidants:

What antioxidants do you feel combat free radicals most productively? What kind of doses do you recommend?

I would just stick with lipoic acid, NAC, or EGCG at 300mg of one alone or 100mg of each would do the trick

On Liver pills:

Layne, what is your take on desiccated liver tablets??

Not needed & no point. a bodybuilding 'old wives' tale

What do you think of liver pills?

Not much use for them if you use a multi-vitamin & you take in enough protein

Can you explain why you think it's a waste in more detail if you have time? please

Well, what will you get out of them? aminos & vitamins? if you are eating a high protein diet and taking a multi then there is no need for them. Additionally, the liver is the 'trash filter' of the body. Not quite sure why you'd want to isolate that and eat it

What is the reasoning you have that desiccated liver tabs are useless? Just curious, I have used them for a long time as a cheap source of aminos.

You can just eat more protein to get aminos. You can just take vitamins to get the vitamins... much cheaper

Would Universal's Uni-Liver :

<http://www.bodybuilding.com/store/univ/liver.html> Would it serve the same purpose as Xtend as far as BCAA's go? Is there some kind of a catch with the amino acid profile?

Liver tabs have a bunch of other crap in there... bcaas are what you want

On Leucine supplementation with BCAA's

Hey Layne, I had a question about supplemental leucine and BCAA's. I currently take Scivation Xtend BCAA's, I was wondering, what if I supplemented with l-leucine powder on top of that? I heard that the ratio of leucine to isoleucine and valine has to be balanced somewhat. Would it still be beneficial to take straight leucine w/ BCAA's if it threw the ratios out of whack?

If you are taking bcaas, I see little reason to take leucine on top of it

On Guggelsterones

guggelsterones supplement for a nattie endomorph tryna get lean as possible. What is your opinion? is it worth it? or considering the price is it better just going without it. would it make much of a difference or not really?

Honestly I don't think they are worth it

On Abdominal fat reduction:

What supplements would benefit someone who has done a good job in reducing total body weight but wants to reduce belly fat ?

Honestly diet and cardio are going to be the overall determinants of progress on a diet. As for fat burners, i'm going to tell you straight up that I am biased because I helped design Dialene-4 for Scivation but I honest to god think it is a very good fat burner compared to the others out there. I think Sesamin is another good non-stimulant fat burner. Dave Palumbo's fat burner is also pretty solid however; Usnic acid still scares me, though I know he uses a lower dose.

On Usinic ACID:

Usnic acid scares me because it is an uncoupler.

Essentially uncouplers make energy production 'inefficient' making your body spend more energy to get energy (ATP) and thus you lose fat because your body has to burn more calories to get the same amount of energy, the problem is the excess energy is given off as heat and there have been people who have straight up cooked themselves to death from the inside with uncouplers like DNP. Now usnic acid isn't as strong as DNP, but it still worries me some. I would be very careful with it.

Layne, so..... usinic acid = lipolyze = worries?

probably not; i'm probably just over cautious

On How to take Fat Burners + When to do cardio

I am used to taking fat burners before cardio on an empty stomach but this says to take before meals. Do I still do cardio on an empty stomach and then take dialene before the meal after cardio? Or am I just screwed up.

I would take it with your meal and I would ditch the empty stomach cardio

On Fat burners administration

Speaking of dieting, do you use a "fat-burner" throughout your diet or do you save it until later on down the road? Personally, I like to get myself in 'fat-loss mode' and save the thermogenics for the last 4-6 weeks (depending on where I am at).

.

Yea, that's usually how I do it.

On Bolus Protein dosing

Layne, do you think that 8lbs in 12 weeks is *partly* down to that new bolus protein dosing your doing?

I certainly think spacing my meals out more has kept me leaner. I've also been running dialene-4 & sesamin while bulking and that worked very well at keeping fat off. I think a lot of fat burners are actually more useful for preventing fat gain while in a caloric surplus rather than accelerating fat loss in a caloric deficit

Creatine and Ketogenic diets

When on ketogenic diet like dave's, is it ok to take creatine monohydrate with no sugar? or will this diminish the effectiveness of the creatine?

Creatine will still work and IMO will be very important as it will help pull fluid into the muscle cell which will likely have reduced fluid content due to the reduction in glycogen from the ketogenic diet

On Fish Oils

Question bout fish oils, I noticed on the Bodybuilding.Com video that you supplement w/ them. Now there's millions of different potencies, and I'm not quite sure what to use. I'm using a supplement w/ 180 EPA 120 DHA and 25 GLA per capsule, I'm taking about 5 a day, 1 w/ each meal. Does this seem about right, or should I get a higher potency supplement?

What you are doing sounds fine

On DL-Phenylalanine Supplementation

What do you think of taking a small dose of free form "DL-Phenylalanine" with the BCAA/WHEY shake PWO? I see many supplements add this MT's Anator or Biotest's Surge. Is it just placebo or anything to back up the anabolic benefit of doing that?

Apparently, phenylalanine can increase insulin secretion; however, I think that arginine is actually a stronger stimulator of insulin release.

On phenylalanine and arginine and their effects on insulin secretion

-

Can phenylalanine and arginine actually stimulate insulin secretion all by themselves? That would not make sense...do they just help secretion?

Yes they cause the body to secrete stored insulin. It is different from a carb induced secretion however as carbohydrates cause a biphasic release. 1st the dumping of stored insulin and then the pancreas manufactures insulin until the glucose is cleared.

arginine, phenylalanine, & leucine only cause a monophasic response of dumping of stored insulin, but no increase in pancreatic production of insulin like carbs do

You think its only for insulin because the above products(MT's Anator or Biotest's Surge) I thought included it for some reason to influence protein synthesis (or some other function I don't know of). Its werid because they DO include carbs with those.

Well, insulin has a synergistic effect with amino acids on protein synthesis so yea i think they included it for the insulin

On Window of Opportunity

Do you believe in the popular "window of opportunity" that many advocate or do you believe it's horse dung?

Certainly, insulin sensitivity is heightened, so yes

On Glycerol Supplementation

Layne - what's your take on glycerol supplementation?

Not sure if it will cause intracellular swelling, but it does seem to force more fluid into the vascular system which may be useful to a bodybuilder on contest day. Not sure of the timing or dosage as of now though.

On Fat loss capsule administration

for fat loss capsules do you think it will have the same affect if i was to open the capsule up and pour it in to a drink

I would think so

you should wait for Layne's response but I just wanted to suggest being careful with that because some fat burners have capsaicin in them which tastes really bad and or can be hot(spicy).

Yup that too LOL

On Arms shaking during training

First off, I'm not what you'd call a bodybuilder as of yet, I've just started training

with a buddy of mine last week after being away for quite a while. Anyway, my question-or problem is this-when I used to wrestle in high school we did a very limited amount of weight training, and although I did gain strength, I did have a persisting thing with my arms shaking. I went from benching 125 to 165 for sets of 8 fairly quickly, weighing 155 during preseason. Anyway, we really did not focus on strength, mostly endurance-but I was wondering if this problem had anything to do with any deficiency of anything vital. I have to force myself to drink water, but I try to keep that up, and food for me is a very uh, erratic thing... I'm getting good amounts of food, I don't count everything up but I make sure protein is a main priority in all my meals.

Hope I'm not too vague or anything, just wanted to ask before I forgot my question! I'm a weakling to begin with, just wanted to know if I have any nutritional things to worry about.

Thanks for all the stuff you've written and researched yourself, it sure clears up a lot of muddle that I've been reading, been reading all the mags for quite a bit too...

Only kind of nutritional deficiencies I can think of would be something that has to do with cell turnover since the CNS turnover relatively fast... something like folate or something like that or possibly a neurotransmitter issue but if you are getting enough protein you should have ample substrate for neurotransmitters.

On CLA

What is your opinion on CLA? Is it worth considering? If so what dose would be the most beneficial?

I believe you have to get the right isomer. There is a 9,11 & a 10,12 isomer. I forget which one is the good one. One has very good benefits, the other can actually cause insulin resistance

On Acetyl-L-Carnitine

Layne what are your thoughts on the usefulness of Acetyl-L-Carnitine supplementation during the Offseason and pre contest?

offseason it might not be a bad idea to take with high carb meals. in season probably less use

Im curious layne as into you thinking to this answer, could you explain a bit more please?As far as i am aware i thought Acetyl-L-Carnitine was involved in transportation of fatty acids across the mitochondria membrane to allow the oxidation of the fats? How would this be beneficial to take with a high carb meal? I think the traditional use of it is to take it during exercise to allow more fatty acids to be burned, hence helping fat loss.

Because insulin has been shown to facilitate the transport of ALCAR into the cell

On NO supplements:

What do u think of NO supps?

<http://www.bodybuilding.com/fun/layne35.htm>

What do you think of NO supplements before workouts two questions

<http://www.bodybuilding.com/fun/layne35.htm>

still not convinced whether or not it is anabolic, but that's how to properly use an NO product if you do

Creatine with WMS vs Dextrose

What is your opinion about Nutrex VITARGO CGL v/s Regular Creatine Mono with Dextrose.??

I'm not convinced yet that waxy maize is better, but I'm not convinced it's not either LOL

On Primal N20

Do you use pre workout supps such as primal n20?

I love primal n20 lol.

Do you use anything like eaa's or bcaa's immediately before you workout? I know you don't do anything during.

I have some bcaas pre & post

L-Arginine Absorption

Do you know anything about the absorption of L-Arginine?

Can the free form version of this amino acid be taken up when mixed with food? I dont see why not but some say it needs to be taken on an empty stomach.

it certainly can

Vasocharge Vs Primal N20

Is there a difference between Vasocharge and Primal N20?

nope

L-Arginine and GH levels

Is it true that Arginine significantly raises growth hormone levels?

I know I've seen research showing it raises it... but i'm skeptical as to whether it raises it high enough to make a difference; I kind of doubt it

On Glucose Disposal Agents (GDAs)

What are your thoughts on Glucose Disposal Agents (Vanadyl, Chromium..etc).I want to see if they May help bring more nutrients into the muscles.

Thx

Well, chromium is garbage; vanadyl may increase basal glucose uptake but i'm not sure you'd want that. Lipoic acid is probably the best as it increases insulin stimulated glucose uptake into the muscle cell. Check out my article here:

<http://www.bodybuilding.com/fun/layne25.htm>

On Red Wine/Grape phytonutrient benefits:

I am looking for the benefits of red wine without the alcohol/carbs ?

You might look at grape seed extract.

Does Grape seed have enough ethyl acetate to induce benefits?

No, but it does have the resveratrol as well as many other anti-oxidants

On Vanadyl Sulfate (GDA)

I was wondering if you have any idea of why Vanadyl gives me a bad headache even when taken with plenty of carbs? Also do you think it could possible pull more creatine into the muscle?

No, I don't think it will pull more creatine into the cell; not sure about the headaches.

I would think you would get other symptoms other than just headache if blood sugar was dropping, nausea being first, though I could be wrong. Also, Vanadyl only increases basal glucose uptake and not insulin stimulated glucose uptake from what I've read; and I believe he was taking it with a meal unless I'm mistaken, so in my opinion, I'm not sure it would cause blood glucose to fall, especially in the face of a meal. But getting a blood glucose test would certainly tell for sure.

Could you elaborate?

My point is that if he was taking it with his meal Vanadyl has not been shown to increase insulin mediated glucose uptake... only basal. If he was getting these headaches between meals that would make sense; but not with meals

On Prohormones

Can u give me a good supplement stack thats all legal but could include prohormones etc. and dosage for them. thanks.

Bro, I've never taken prohormones and just don't know much about them honestly

Layne,

My name is Terrence. I want to remain natural. I'm new to modern supplements. People have been suggesting I need to use steroids to get big. Thanks to you, Skip La Cour & Chris Faldo I know that's not true. I'll never ever use gear!

So now people are suggesting pro-hormones, specifically Finigenx Magnum by Pharmagenx & SUS500 by Genetic Edge Technologies. Would these be considered wrong for a natural body builder to use? If so, what alternatives would you suggest?

Thanks for you time!

Many prohormones are just as bad as steroids in terms of side effects per dose. I would stay away

On Creatine While Cutting

If taking creatine while cutting... what effect will this have? Possibly even gain muscle? or just fuller muscles?

As far as creatine while cutting it will help maintain your fullness & cell volumization which very well may be anti-catabolic.

On Stimulant use and its association with cortisol levels

Don't you think that Stimulants may increase cortisol too much? I would think that stimulants may be more effective when used to a bare minimum. I know too many people that seem to rely on stimulants far too much. This used to be the case with me when I would use ECA 2x day everyday for a few months. I definitely lost some muscle.

The less frequently you use stims is almost always better.

On Oil supplements:

From your research, would 2 grams of fish oil (maybe 1 tsp of flaxseed oil) with 20 G of whey at bedtime behind to compare to 20 G of plain casein in terms of absorption rates.

i don't think 2g of fat would be enough to significantly slow absorption

I know you take three scoops of xtend post workout, I was wondering if 1scoop of primal eaa and 1 scoop xtend would also be suffecient?

Probably would work

On mixing whey with carbonated water:

is there any problem that you know of...mixing whey powder with carbonated drinks?any problem with absorption or the carbonation degrading the whey? is it gonna blow up in my stomach like soda and pop rocks?

I think that's fine probably

On Cissus:

Ive read reports on everything from joint pain riddance to superpumps to test booster.Whats your take? Im buying it this weekend and will test it out. All my joints hurt. Do you think it is a miracle suppelement?

I think cissus is pretty good... but not a miracle supplement to be sure

On DHEA

DHEA.Whats up with this stuff...will I get bitch tits or something?Ive read cancer and the like.Dave says to try 100mg to 300mg for men.You ever try DHEA?What about 7-Keto?

I've never tried either, but I don't think they are dangerous

WMS vs Vitargo:

Layne do u prefer WMS or Vitargo?

WMS.

On what to extrapolate leucine dosing to

does height and weight have any bearing on leucine dosage in your opinion?

Lean body mass possibly.

On Citrulline Malate

Why do you take Citrulline Malate ? The only thing Ive seen it talked about online is for NO2 (which doesnt really have any solid sciecne behind it). Can you name other reasons why this would be a good supplement beyond that? BCAA, Beta-Alaine, Creatine Mono but where does Citrulline Malate place in this stack?

There is quite a bit of evidence that citrulline enhances fatigue resistance.

On Glutamine as a glycogen Resynthesis agent

I know u don't like L-Glutamine as improving Protein Snythesis or being anti-cataolic. But I'm curious have your feelings taken any consideration to it as a gylcogen resnythesis agent PWO? Some seem to use it as substitute other than carbs for those with higher body fat %.

That's a possibility; i would like to see it compared to glucose in terms of how much energy it takes and how effective the glycogen resynthesis is.

Comments on this study:

Effect of oral glutamine on whole body carbohydrate storage during recovery from exhaustive exercise

J. L. Bowtell¹, K. Gelly¹, M. L. Jackman¹, A. Patel¹, M. Simeoni², and M. J. Rennie¹ ¹ Department of Anatomy and Physiology, University of Dundee, Dundee, United Kingdom DD1 4HN; and ² Department of Electronics and Informatics, University of Padua, 35131 Padua, Italy

ABSTRACT

The purpose of this study was to determine the efficacy of glutamine in promoting whole body carbohydrate storage and muscle glycogen resynthesis during recovery from exhaustive exercise. Postabsorptive subjects completed a glycogen-depleting exercise protocol, then consumed 330 ml of one of three drinks, 18.5% (wt/vol) glucose polymer solution, 8 g glutamine in 330 ml glucose polymer solution, or 8 g glutamine in 330 ml placebo, and also received a primed constant infusion of [1-¹³C]glucose for 2 h. Plasma glutamine concentration was increased after consumption of the glutamine drinks (0.7-1.1 mM, $P < 0.05$). In the second hour of recovery, whole body nonoxidative glucose disposal was increased by 25% after consumption of glutamine in addition to the glucose polymer (4.48 ± 0.61 vs. 3.59 ± 0.18 mmol/kg, $P < 0.05$). Oral glutamine alone promoted storage of muscle glycogen to an extent similar to oral glucose polymer. Ingestion of glutamine and glucose polymer together promoted the storage of carbohydrate outside of skeletal muscle, the most feasible site being the liver.

What do you make of this. From what I understand, Glutamine in a traditional post w/o shake with carbs leads to storage outside of the skeletal muscle system, which we DO NOT want. glutamine only allows storage in the muscle, but glucose only does this as well, with the added benefit of an insulin spike which could possibly enhance nutrient uptake.

One problem with that study is the tracer they used to measure glycogen resynthesis was C-13 glucose. meaning even in the glutamine 'only' group they were still receiving a constant infusion of glucose. So how are you to know whether or not the glycogen resynthesis would occur in the absence of the infusion of glucose? That would be my issue with that study; but not quite sure how you'd get around it

On Beta-Alanine

Do u take beta alanine if so do u cycle it?

Yes & no

do you think it is better to take beta alanine or carnosine. I read that carnosine breaks down into beta alanine and another amino. Just wondering which one you think is better? Also, do you take it pre AND post workout?

Carnosine is made from beta-alanine & histidine, since on a high protein diet you'll have an excess of histidine, taking beta alanine is just as good as carnosine and it's about 10x cheaper than carnosine

On natural t-boosting supplements:

Question: since your natural do you take any type of natural booster or that's against the rules also what other supplements do you take?

Answer: natural test boosters are not banned... most of them are just plant extracts. some may help normalize your testosterone if it is low, but I very much doubt any of them will increase it above normal

On Nettle root Extract:

Comments on http://www.designersupps.com/static_site/activatex.php ?

Would probably be great if it indeed works

So this is still considered usable by natural bbs?

I do not believe it is banned as the ingredient is stinging nettle root which is naturally occurring

General supplement information:

Is there anything that you would suggest that may help as far as supps or diet?

Well as for diet I talk a lot about my theories in this thread and in my webcast I would check that out. as far as supplements

- bcaas
- creatine
- beta-alanine
- sesamin
- fish oil
- anti-oxidants
- citrulline malate

On Primaforce BCAA dosing :

How many scoops of primaforce bcaa should i take right before lifting and right after? thats easier

I'd have 2 preworkout & 3 post workout.

On Arginine and Ornithine Combo

What do you think about an Arginine and Ornithine combo like NOW's

Never was really big on the combo. i assume for GH? i don't think it's that effective

On Arginine absorption with other aminos

Is it true that Arginine competes for absorption with other aminos? if this is the truth if my pre work out meal is 1 hour before the workout and its just whey isolate and 1/2 cup oatmeal and i take Arginine 20 min pre workout with creatine and EAAs and BCAAS am i totally wasting my time/money since they "compete" for absorption...do u have any articles on your amino research or anything of that nature.

Even if some aminos compete with others, the transporters are present in excess, it should not be an issue. People make way too much of it

On Anabolic Pump and Yellow Gold

Do you think there is any validity to substances such as anabolic pump, or yellow gold?

I haven't really looked into them enough to be honest with you

On Xtend during cardio and post workout

Do you sip on Xtend during both cardio and your workouts, or do you keep it to during cardio and post workout. I'm thinking about making it a major part of my cut over the next 28 weeks.

I take a serving preworkout/precardio & 3 servings post workout

On Tyrosine Dangers:

Thoughts on the potential dangers of tyrosine?

probably not.

On K-R-ALA :

Thoughts on K-R-ALA?

haven't researched it enough to say anything on it

On Xtend Ingredients:

Does XTEND have both EAA's and BCAA's ???

BCAA

On Dialene 4 flushing :

Ok, I took 3 pills of dialene 4 the other day, 30 minutes later I looked like a lobster LOL! I'm assuming its from the niacin.. so i have been taking 2 now im actually kind of nervous to take 3 again because i don't want to look like a lobster.. is there anyway to avoid this?

Try taking it with a meal

On ALA

I posted this in the GDA somebody suggested I ask you about it since you have written about ALA before. Here goes....

Can somebody clear this up on the use of ALA as a GDA. I do know it does work to drop blood sugar levels however there is an issue which I've read conflicting info from articles.

CASE #1 <http://www.t-nation.com/tmagnum/readTopic.do?id=1604392>

David Barr claims that research shows ALA can activate not only the muscle cell insulin receptor but the fat cells as well. He went on there is alot we don't know about its use (could be at that time and outdated now from when over at T-Nation forums he wrote it) but basically it might store in fat cells as well which is what we are trying to avoid as an GDA.

CASE#2

On the other hand in a recent issue of Natural Bodybuilding & Fitness Magazine there is an article on r-ALA and it mentions it does not activate fat cells.

I'm on the fence here and I would like to know if anybody can show some stuff to clear this up. I think maybe it is plausible because ALA is fat and water soluble so it having some affinity for fat cells I could see.

Then again doesn't the sugar have to be converted by some process outside the cell into fat or does that process take place in fat cells.

**The issue basically is while we know it does drop blood sugar levels does ALA only move it to muscle cells and not fat is the question.
Is r-ALA different in this respect?**

please read my article on ALA The Lipoic Acid project on bodybuilding.com

i address these concerns

Comments on a Specific Supplement Stack:

I wanted you to check out my supplement stack and let me know what i should dump/add and if you could check out the doses , not sure if im taking to much/ to little or need to add/drop

optimum nutrition multi-vit for men

fish oil concentrate - 8 grams a day

vit c - 2-3 grams a day

vit e - 800 iu's a day

green tea extract - take as label recomends , about 600mg total

msm - 1000mg a day

glucosamine - 1500mg a day

coral calcium - 2000 mg a day

creatine mono - 5 grams daily

whey protein - as needed

way too much C; at that level you can develop uric acid stones 500mg is MORE than enough... more than 400 IU vitamin E per day has been associated with increased all cause mortality; and that is too much calcium

MORE IS NOT BETTER, BETTER IS BETTER

On ALA supplementation during the 2 week cut protocol

Layne I am currently doing the 2 week mini cut. (thanks again for the help) I'm also using an ala supp (insulean-k) I read your article, and since we don't yet know exactly what ALA is doing. Would you recommend NOT taking ALA on the day of the carb up?

I would take it

On Vitamin E toxicity:

Hey Layne I do agree with not taking massive doses But the whole Vit E causes death thing was from a study review and very flawed but it somehow made its way into the media and now even MDs are telling people Vit E kills when thats just not the case. It was WAY over exaggerated. I had to show the facts to my own medical

provider who after hearing that too at a conference was telling patients (dont take Vit E supps). Me and him had good standing where we shared info like that all the time. Too bad he left the practice

A simple google I found a good review of the real facts that that announcement was way over the top.

http://findarticles.com/p/articles/m...0/ai_n10299312

That announcement made headlines "Vitamin E kills!" lol I do agree though 400Uis is all you need (but be sure to get d- form and mixed) not just massive

While I agree with that; there are other studies also corroborating that too much E will enhance the progression of some diseases... like lung cancer

On an effective supplement stack

Wow! Ok. Well what supplement stack would you suggest instead?

Well, it really depends but for building muscle on a budget i'd go

- BCAAs, I use xtend
- creatine monohydrate
- beta-alanine
- fish oil

Thanks again Layne. I'm already using all them. What would you use if \$\$\$ wasn't an issue or you made a lot of cash...

i'd add glucosamine, chondroitin, MSM, sesamin, a fatburner like dialene if you are cutting, lipoic acid; that'd probably be it... maybe cissus as well

On WMS:

Waxy Maize is a highly branched polymer starch which has a high molecular weight and is very rapidly digested and released into the bloodstream; faster than dextrose. Whether or not this will impact body composition i'm not sure yet.

On Digestive enzyme supplementation

Layne what's your take on enzyme supplementation? Effective or unnecessary?

if your digestive system is healthy there is no need for enzymes.

On Sesamin/ALA/Chromium/GDA during Bulking:

From what Ive read in your article it seems like I a need a huge break from dieting. Its been like a year and I just need to relax and up my calories and build some muscle. What's crazy is that last time I did this my love handles started to shrink. Strength went thru the roof also. I see you recommend Sesamin. I have some kidney issues and insulin resistance so this looks like it may be very helpful for me. Plus it raises leptin levels which I feel are very low in my body from too long of dieting. Can I take Sesamin while bulking?

Sure, I think it works better while bulking honestly

Great!! What about GDA's? Right now I am eating 6 meals and using 10mg VS and 200mcg chromium polynicotinate per meal .I've read that you recommend ALA instead.

Do you think that 100mg ALA/200mcg Chromium at six times per day is toxic to body? I really do respond well to GDA's. Woke up today very full and lean!!

Thanks....

I'm just a not a big fan of chromium, I have yet to see any evidence it works in non-diabetics

On N-Acetyl Cysteine

Layne- what's your take on supplementing with n-acetyl cysteine?

I think it's a pretty good anti-oxidant. It is definitely up there with ala

On Peptopro "Hydrolysed Casein"

Have you ever heard of 'Peptopro' which is a hydrolysed casein - <http://www.bodybuilding.com/store/pfac/pepto.html>

Gimmick

On Multivitamins

Do have any recommendations for a good multi vitamin...ive used animal pak before...a friend of mine is trying to talk me into a organic multi...what are your thoughts...do u have a specific brand you recommend?

None are really that superior. Some forms are more absorb able than others but to be honest most bodybuilders OVERCONSUME vitamins and minerals

What do you think about high potency multivitamins like opt-men by optimum nutrition, do you think they overload the body with to many vitamins and minerals? Am I better off with a basic men's multivitamin?

Too much of anything is bad. Just get the recommended

On Beta-Alanine dosing:

I know you recommend taking CMono just on your workout days post workout. What about beta-alanine? Should you take it everyday or just on days you workout?

I would take 2-3g on workout days; 1g on offdays

Specific Supplementation Part 1:
Creatine:

On Creatine:

I just started using creatine mono! I was wondering what you feel is an appropriate way of taking it: how much, how often, what time etc?

3-5g/post workout per day is plenty

Creatine during fat loss phases

would you recommend creatine for muscle retention during a fat loss period??

Absolutely

On Kre-alkalyn

What do you think of Kre-alkalyn:

kre-alkalyn is overpriced bullshit! <http://www.bodybuilding.com/fun/tallon8.htm>

Creatine and contest day:

I have heard some people talk bad about taking creatine all the way up to a contest. They say because it will cause you to hold water. I'll hold as much water as I can if it is not 'under the skin'. Thoughts??

This is my rebut to that argument.

<http://forums.musculardevelopment.com/showthread.php?t=4226&page=27> 523

I took creatine all the way up to this show and even took it the day of the show. Water retention?

On Caffeine and Creatine:

Layne, do you know what the effect caffeine has on creatine absorption?

No effect on absorption that I know of

If it were you, would you consume caffeine and creatine not "together" but in the same day, so to speak? Do you think it makes a difference?

I honestly don't think it makes a big difference

I was wondering why it is not recommended to consume caffeine with creatine.

There was a study a while back showing caffeine negatively affects the ergogenic effects of creatine, but I'm pretty sure the later studies showed the consensus is they are fine to take together

On Regular Creatine Monohydrate vs micronized Creatine Monohydrate?

Is micronized creatine mono better or easily absorbed than regular creatine mono?

no, just mixes in solution better

Is sugar required for creatine?

Hey Layne, I am carb and sugar sensitive.....Is it true that you need to take Creatine Mono with a simple sugar? No, you don't need sugar

On Creatine Brands

Do you think creatine is creatine, or do you prefer a specific brand? Thoughts on CEE, CM, KA ?

Well, I'm sponsored by primaforce/scivation so I use the primaforce brand but they have an independent lab test their stuff so I trust them.

As far as CEE vs. CM vs. all the other kinds... monohydrate. Period

On Creatine Loading:

Do you believe in Creatine loading?

it saturates the muscle cell faster; but 5g/day will also saturate it; it just takes longer. Loading may cause GI distress for some

On Creatine Stability :

Does creatine degraded after being in water for a while? I always thought that you only had like 5-10 minutes to drink it before it breaks its bond...and become creatinine.

Oh heavens no, monohydrate is stable for a few weeks

On How much does Layne Personally consume Creatine?

How many times u take creatine mono a day?

5g/day just take it post workout

On Cycling Creatine:

What do you think is the affective stop time and off period? I was thinking stop at somewhere between 8-12 weeks. But not sure how long off for the body to recover.

At least a month

Why is it recommended to cycle off creatine?

It seems that the creatine receptor downregulates over time and intracellular levels of creatine start to decline

On Creatine during last week of contest prep:

What's your take on creatine in the last week of prep?

Creatine is fine... the water retention is intracellular. Nothing wrong with that

Creatine and Glutamine consumption:

I was looking for your article on creatine and glutamine consumption. I know you said it was in a protein myths article in end. I cant seem to find it, do you have a link?

It is part of the protein myths... I talk about it in there

Specific Supplementation Part 2 :
Scivation Products

Xtend and WPI:

Should I take Xtend by it's self or can I mix it with my WPI ?

you can mix it with wpi or take it by itself.

On Dialene 4:

So tell me why I want to get Dialene 4

All the info is here <http://www.dialene4.com>

It's a fatburner/energy booster. I'm not going to sit here and try and sell you on it. Diet and training make more of a difference than any supplement ever can. But if you are looking for a little extra boost, then I believe this will be one of the most effective fat burners available. I would not have brought the ideas for some of the ingredients if I didn't think it would be something effective. Money is just money, you only get one reputation.

Layne, would you recommend using Dialene and Amp if you were trying to bulk?

So long as you aren't overly sensitive to caffeine, I'd do 2 caps of each preworkout, but I would start out with 1 of each just to be safe

.

Regarding Dialene4, it says to take the second serving 6 hours after the first one.

However, I don't go to the gym for another 3 hours. Will it affect my workout like that (I mean by come down off it) or could I just wait for another 2 hours(8 hours in between each dose) and take it closer to work out?

I would take one serving in the morning and then the other 45 minutes preworkout

Hey Layne I'm looking forward to trying Dialene 4. I was using a product called Synergist but they quit making it, I was heart broken because I have never had a fatburner - energy supplement work as well as Synergist, even the old effedra products. It was one of those products that if you just looked at the label you wouldn't very impressed but once you tried it you were like, Holy Shit this stuff is great. And you only had to take 2 a day 1 in the morning one in the afternoon.

I think this Dialene 4 might be a good replacement . I was wondering how well it works on the apatite suppression end? I hear great things on the energy it gives you.

it was not designed as an appetite suppressant but seems to be somewhat decent at it. Some people get very powerful suppression from it others have found little difference... probably a 6 on a scale of 10

One question on the Dialene4. When I take it before my first meal with water, I get some heart burn for a few minutes. I don't get it when I take it before my workout though(I take it with NO Xplode though)is this normal for it cause it does not really have anything for it to absorb in to?

Just take it with food in the morning. won't reduce it's effectiveness... the heart burn is probably from the cayenne.

Layne I just got my new shipment of supps out here and both my containers of VasoXplode are like hard as a rock and I have to scrap off stuff to get it is that normal for it?

Yes, several ingredients are very hydroscopic. Take a knife to it and then keep it in the freezer if you can; it will stay broken up much better that way.

Hey Layne, I have been looking a lot lately at Dialene 4. I have taken just about every fat burner and nothing ever seems to produce results. Seeing you had a heavy had in its production, how has it been working since its release?

Honestly I was surprised at how good the feedback has been. Typically your feedback is about 70/30 from a good product. Out of the 70% that like it half of them are kissing your ass and the other half actually like it; same thing out of the 30% that don't like it... half of them just don't like you or your company and the other half genuinely don't like it. We really haven't gotten that much negative feedback on it. The only thing we get is people saying that they get flushes from it which is to be expected from the niacin & the thermos in it. To prevent flushes just take it after a meal; not before it. Other than that, only a few

scattered people here and there saying they don't like it. Obviously I'm biased however, so I encourage you to do your research and ask other people as well.

My Question is, should I take the Dialene 4 all the way up to the show or cut it out a few weeks out

You can take it all the way through

Part K: Ketogenic Diets

On Ketogenic diets:

What do you think about Ketogenic diets for naturals, would they come in to flat, would they be able to still put on muscle and get pumps?

Ketogenic diets have always been thought of as 'protein sparing' because ketones spare blood glucose which will reduce gluconeogenesis (conversion of amino acids to glucose) and ketones can be used as fuel, however ketones can only be used by aerobic metabolism. Weightlifting is quite anaerobic and studies have shown performance is very closely correlated to levels of muscle glycogen & glucose availability. Is keto a good way to lose fat very quickly? yes. But if you give yourself ample time... why not have carbs? They are not evil and are quite useful. Also keto diets will make it more difficult to fill out when it comes time to do so, it takes weeks to adapt to a ketogenic diet, so when you come off of keto it will take weeks to adapt to carbohydrates back in the diet and so if you are trying to carb up a few days before the show after you did keto for 12 + weeks I'm afraid you will have very little idea what to expect as you will essentially be challenging your body with something it isn't accustomed to. If you choose to do a ketogenic diet and not re-introduce carbohydrates, I would do a moderate protein/fat load and only increase carbs very slightly.

Finally, I think some people are better with keto diets than others. I think the mental aspect cannot be discounted. Some people just mentally cannot handle carbs. That's fine, keto is probably better for them, but in my opinion, if you don't absolutely have to do keto, you are better off not doing it as it really complicated trying to properly fill someone out for a show and has not been shown to be superior to an isocaloric high protein non-ketogenic diet in peer review studies.

On Dave Palumbo's Diet

I keep hearing about Dave Palumbos diet, anyone got any info on it at all or links

From what I can see it is similar to a CKD (cyclic ketogenic diet)

What is your opinion on Dave Palumbos diet for natural bodybuilders?

Dave's diet is pretty much just a keto diet from what I understand. I think it will work just

fine, but you won't be able to do a standard carb up for your show and you will probably be dry; but I'm not sure it's possible to fill out correctly.

On Efficacy of Ketogenic Diets:

Ketogenic diets work for fat loss; there is little doubt of that. However, I have a few issues with them. I mean if you are eating sub 50g carbs per day and you hit a wall in terms of fat loss you have very little of anything else to drop other than dietary fat. Additionally, it can be difficult to fill out on a keto diet

Comments on a specific ketogenic protocol

Layne, if you don't mind, I'm prepping for a few shows this fall and I'm doing a keto diet (60% protein/30% fat/10% carbs - green veggies/incidentals from fat sources). I started by multiplying my bodyweight by 15 (181). The first week I lost 5 pounds and refigured by multiplying 15 by 175. Days 1 and 2 I use that number (2625). Days 3/4 I use 2325. Days 5/6/7 I use 2025. Do you think I'm cutting calcs enough for my body weight? (2 days on 1 off, 3 days on 1 off training w/ 5 days of 40-min cardio)

I think it looks reasonable

On artificial Sweeteners and Ketogenic diets:

On a ketogenic diet, would you count artificial sweetener as a carb or not, ie, would it would it bring you out of ketosis if you ate enough of it?

You'd have to eat a ton of it to affect ketosis

So technically it counts as a carb as opposed to protein or fat?

Well, it has a bit of sugar as a filler but it's very small

On methods to deliver creatine more effectively during Ketogenic diets

Layne, do feel 4-hydroxyisoleucine, Taurine, & BCAA's taken with creatine would help the delivery since there are no carbs on the keto diet? Also, what about sodium...couldn't it theoretically increase delivery as well?

Isn't the whole point of a keto diet to keep insulin low? That's what all those guys seem to say (not that I agree that insulin is so evil) but if you were doing keto to keep insulin low... why take something that raises insulin

Also, increasing insulin would drop your blood glucose and since according to the ketogenic people out there, insulin is this evil hormone that causes you to store massive amounts of fat... you wouldn't want that.

That said.. insulin isn't as evil as everyone thinks.

In a nutshell:

oversecretion of insulin= very bad

normal modulation of insulin= optimal

On Peanut Butter and Protein Isolate Post workout

Layne, got a question on ketogenic diets. I noticed that Palumbo will take in Whey Protein Isolate w/ a shitload of peanut butter postworkout. What's the point of PB postworkout? Doesn't that slow the absorption of the protein?

I would think so yes, honestly you'd have to ask him, i'd rather not speak for him

Hitting the wall with Keto: 2 cases

Case 1:

Hey Layne I'm having a problem. I've been on Dave's diet for 4 months it's worked great. I have actually stayed very strong I've only lost a rep here and there. But lately I'm not feeling right, I've been thinking of cutting my fats back and replacing them with carbs staying at the same amount of calories that I'm at now. I'm losing 2 pounds a week, my is show is Oct 13 8 weeks away. If I start eating carbs will I get some kind of rebound, or will my weight lose slow down.

For both of your cases, if you are at a sticking point it's always good to try something & see if it works. I would slowly add in carbs and reduce fat and you may gain some weight simply from filling back out with glycogen/fluid; but it won't be fat. But I would not increase carbs more than 15-25g/week

Case 2:

I, right now, am kinda depressed, to use an euphemism, due to the fact I seem to be stuck with every aspect of my diet.

Some infos about me:

I've been on Dave Palumbo's diet for 6 weeks now. I diet for personal reasons, not for a contest, so no date set in stone, which is an important factor. Yet despite this no time constraint, I'm trying to diet for the shortest possible time (while preserving maximum amount of muscle), since gettin up in lean mass is bodybuilding's purpose actually, at least in my case, by the way, I'm 29 yo, two years of training, endo-meso, 170 cm and 75 kg at ~10-11% BF.

My first problem, is I may have gotten too excited when I began the diet and did too much cardio right from the start, like two hours a day (1h am, 1h pm). At first, of course, it worked wonders and I shed fat like dead skin, feeling tighter by the day; but now I'm completely burnt out.

I must specify, even if I never felt very good while in ketosis, (which makes me ask myself if this really is the right diet for me, I maybe am not someone who does very well without carbs....), that my strength, even right now, never decreased in the gym. No progress, but no loss. The diet is not excessively low, between 1800 and 2000 Kcal, but with all the cardio, I sometimes got far below the 1000 kcals deficit daily barrier...I can easily guess I've got a snail's metabolism right now, with totally annihilated leptin levels.

My symptoms? As I wrote I was getting leaner on a regular basis, waist tightening, skin thinning down etc... when all of a sudden, like a week ago, I seemed to stop losing fat, even worse, at one point I seemed to begin to get softer and watery each day. And tired as hell. Always feeling cold (it's summer goddammit), cold hands with violet fingernails, sometimes feeling dizzy. Not good.

I think you get the picture by now...

I'd like to know if you think it would be wise, if I broke the diet for a week and ate slightly above maintenance level (which is now lower than it should), with a high carb ratio (since leptin is more reactive to carbs, e.g. 1g proteins 0.5g fats and 4g carbs per pound of bw), in order to restore my leptin levels?

I would also slowly taper down the cardio, like no more pm cardio and a decrease of 5mn each other day to finish at 40-45 mn per am session.

(My problem is I actually have no idea how long it takes to reset cardio tolerance and efficiency.)

And then at the end of the week I get straight back to Dave's diet but with a smarter cardio and calorie deficit protocol.

Does it look appropriate or am I gonna screw it up even more and gorge my hardly drained fat cells with this sudden change?

I'd greatly appreciate your guidance, since I quiet feel at loss right now...

Paul

Paul, I would not eat at maintenance... with your metabolism as slow as it is you'd put back on fat pretty quickly. I would slowly increase your carb intake by about 15-20g/week until you get to about 125-150 with a corresponding decrease in calories from fat. I think you'll feel better and fill out better. You might put on a little bit of weight, but it will just be water/glycogen.

Layne, thank you for your answer. I'll do what you wrote and keep you updated.

And just out of curiosity, am I biased or does water like to fill places where you usually store fat (belly, glutes, chest...) when you suffer from water retention? If it's the case, what are the mechanisms behind this?

Thanks again for your time, it's really been appreciated.

Paul.

no, I think that fat likes to hide in those places so it looks like more water lol, I know what you mean. my lower back is like ham!

Gluconeogenesis and Ketogenic diets

This person from my gym had a very similar opinion such as yourself towards ketogenic diet. Here is the info behind what he said...curious as to ur opinion:

I asked a very knowledgeable nutritionist and bodybuilder I know (not some retard im talking experienced and with a PRO-CARD worthy physique and prepared many for contests with success) and he said about ketogenic diet the problem is when protein is over 20 % on ketogenic diet ur body performs process of gluconeogenesis.

Ur opinion on this? does this ruin the precepts of the diet, or is the gluconeogenesis ok?

It doesn't ruin it. your body only has a finite capacity to produce glucose from gluconeogenesis... about 5g per hour max. That ends up being about 100g/day. If you aren't eating any carbs this will still put you in ketogenesis

Solute Load on Kidneys during ketogenic diets:

hey Layne, someone posted your comment about 'solute load' and the kidneys, as well as eating too much fat over a long period of time can cause problems with the kidneys.

Does that mean following a high fat diet (like ketogenic diet) can cause kidney problems (eg- if u eat in that style for ur entire life from 20's and onwards). U have me curious?

I think what i said was probably taken out of context... anything that is too high is bad; but if you are eating super high fat in a caloric deficit i doubt your kidneys will be negatively affected

Debate on No Bull Radio:

Hey Layne why aren't you an advocate of Keto diets?

Please listen to my debate with Dave Palumbo. I'm not against them... I just don't think they are optimal in many cases

<http://www.musculardevelopment.com/content/view/888/140/>

<http://www.musculardevelopment.com/content/view/889/140/>

On Cardio while on Keto:

Hey Layne, I'm on a keto diet, I was thinking of bringing up the intensity of my cardio. Right now I'm walking 1 - 2 hours a day. I was going to start walking up and down the stairs at work for 30 min in the morning. On the Keto diet do you think I'll burn too much muscle doing this?

I think you'll be ok

On Training during Ketogenic Diets:

While on a ketogenic diet like Dave Palumbos, would there be limits in which one trains? Would less volume higher intensity coincide with this diet or does it not matter at all

On keto your stamina would be reduced so you won't be able to do as much

NOTE: Post by EL_SPIKO:

“Dave advocates less volume, doing about 2 working sets per exercise and stopping just short of failure”

BCAA's and Ketogenic diets

What are your thoughts on that supplementing with free form BCAA isn't needed? There are opinions that suggest that while on a high protein diet, you are already consuming all the BCAA's that you need, thus the unnecessary use of Free form BCAA = waste.

This is from an article I wrote:

Despite the numerous positive benefits to BCAA supplementation, there are many skeptics who suggest that BCAAs are overpriced and that one can just increase their consumption of whey protein which is rich in BCAAs. Unfortunately this is not the case. The BCAAs in whey are peptide bound to other amino acids and must be liberated through digestion & absorbed into the bloodstream to exert their effects. Even though whey protein is relatively fast digesting, it still takes several hours for all the amino acids to be liberated & absorbed into the bloodstream. BCAAs in supplement form however, are free form BCAAs and require no digestion and are therefore rapidly absorbed into the bloodstream, spiking blood amino acids to a much greater extent than peptide bound amino acids. Even a few grams of BCAAs will spike plasma levels of BCAAs to a much greater extent than a 30g dose of whey protein, impacting protein synthesis and protein degradation to a much greater degree. The reason a supplement has such a powerful effect on blood levels of BCAAs is that unlike other amino acids, BCAAs are not metabolized to a significant extent by the small intestine or the liver, therefore an oral supplement is more like a BCAA injection since it reaches the bloodstream so rapidly.

<http://www.strengthandscience.com/january/article5.htm>

Part L: Dieting

On maintaining fat loss after a low calorie diet:

I've been on a pretty low calorie diet and when I'm finished would like to maintain this new level of body fat. I've been slowly chopping calories down over the course of about 5 months. As of right now, according to the Harris Benedict formula, I'm approximately 700 cals under maintenance for 6 days a week, 7th day is a refeed. Are there any guidelines for how fast I can increase calories back up to maintenance so as to avoid any fat gain?

I would basically start slow. Add in 25g of CHO & 5g of fat per day and wait to see how much weight you gain... likely it will be around a half pound simply from water & glycogen, once you plateau for a few days, increase it again by the same amount... and so on and so forth.

On research that studies the effect of fat gain when returning to maintenance from a restrictive caloric cut.

I was hoping there might have been some specific research on this but I suspected it would be a case of trial and error, as most things are.

Oh no, I'm afraid nothing that specific has been done in research

It would be quite an interesting study. I wonder whether it's possible to get fat by jumping straight back up to maintenance calories after a restricted diet? As far as I understand, all the fat storage mechanisms become super sensitive when the body

loses a significant amount of adipose tissue (and I've lost about 22lbs). Given this, I guess getting fat wouldn't be out of the question, though it seems unlikely from just maintenance calories (calculated using the Harris Benedict formula for the *new* weight).

How would you conduct that as a controlled study? There are so many variables it would be mind boggling to conduct... not to mention nobody would fund it.

One of the big pitfalls of diets for many people seems to be regaining weight afterwards. Coupled with that seems to be a scarcity of information on how to come off diets and maintain fat loss if you've been very low calorie (at least I've seen little written about it).

Got to come off very slowly

On Joint Pain during Dieting

Hey layne, do you feel your joints are a little more fragile while dieting? For instance, my knees give me problems when dieted down on things like lunges, and close stance squats. Also I have little things pop like my elbows when I stand of a chair or I can crack my back and neck when low in bodyfat. I'm going to start jumping on the glucosamine wagon soon but I just wonder if others who get low in bodyfat also get this stuff. Also, as you might guess my normal body type is kind of chunky status so my body is not happy at low bodyfat. So maybe that has something to do with it, eh maybe not.

Yes my joints ache when dieting, when I got to 3% on calipers I had to drastically reduce weights b/c I could hardly balance them at all. Glucosamine and cissus would be helpful

On the Cut Diet:

Layne, what do you think of the cut diet? I know you were an author in the second

edition. Thanks

Overall it is much different than what I do... that said I do think there is more than one way to skin a cat, I tend to not be as carb phobic as chuck, and while cutting carbs may be the best way to lose fat quickly, I prefer to keep all aspects of muscle retention, performance, how the diet makes you feel, etc in mind as well. That's what I love about Scivation though, they don't mind that my opinion doesn't necessarily always agree with theirs and I think that's good for the company, makes me examine their points of view, and they examine my points of view.

Just a quick question for you, do you adhere pretty close to the "Cut diet"? I just printed off a copy and have been reading it while on the treadmill. Basically, I'm working my way down to 12% BF (as suggested, currently 15.7%) and then I was thinking about actually starting the real 'contest' diet.

Actually I don't. The cut diet is the brain child of chuck Rudolph I only wrote the BCAA section. My philosophy is here <http://www.bodybuilding.com/fun/layne36.htm>

On Dave Palumbo's diet:

Hey Layne I was wondering. what are your views on Dave Palumbo's diet which is a you probably already know high protein, mod-high on fats, and no carbs with a refeed every 6 or 7 days? Do you think this dieting strategy would work with natural athletes?

Only if you are extremely insulin insensitive. Will you lose fat? Absolutely. But it will flatten you out big time and you will not feel good at all, you will feel like absolute crap. Again, the knock on natural bodybuilders is always that they look like 'swimmers' or 'anorexic' so you want to maintain as much fullness as possible. My philosophy is to keep as many carbs as possible while still maintaining the appropriate rate of fat loss... what that carb level ends up being varies for the individual

On the Body fat Setpoint:

The bodyfat setpoint. Can it change in a good way or getting worse with age?

There is very little anecdotal and no scientific evidence to suggest that you can lower it, but you can certainly make it higher if you let your bodyfat get too high (only if you go significantly over your normal bodyfat).

-Layne

Layne how much creatine would you recommend for me? I'm currently 230lbs. Also, I'd like to start eating up to about 300 grams of protein a day. How do you think I could accomplish that when I already eat around 40 grams of protein per meal, every 3 hours. 5 times a day. By my 5th meal i'm going to bed, and that's usually a protein shake. So I don't know where to fit another meal in without eating

less than every 3 hours. Would increasing my intake to 50 grams per meal be a good start or even worth it?

I don't think you need to go as high as 300. 250 is plenty. 40g every 3 hours is fine. If you wake up at night slam a protein shake or something. 5g/creatine per day is plenty for you. Nothing crazy, nothing radical. Often the best things are the most moderate & logical. 2 words not often well understood in the bodybuilding community

On the Metabolic Diet:

Its basically like palumbos diet which high protein and moderate fats. But u carb up for 2 straight days after 5 days of zero carbs. Heres the link:

www.metabolicdiet.com

IMO that's a good way to lose fat, but I think you maintain muscle better with keeping carbs more moderate and I've always used the mentality that you should keep as many carbs in as possible while still allowing you to drop fat at the appropriate weight. Carbs aren't evil, any thing out of moderation is most often never good

On the book sliced:

Layne, was wondering your thoughts on an old school diet method from the old Sliced book? The 3 days down three days up carb cycling at the end of the book? Are you familiar with that and what is your opinion on it? Thanks

sliced is a good book for a beginner, very comprehensive. And for people with a fast metabolism, 3 on 3 off might be a good idea, however, I think for most people you are forcing their body to adapt to huge metabolic swings by going low carb for 3 days followed by 3 higher days, essentially challenging your body to dispose of those carbohydrates right after you have somewhat adapted your body to low carb (takes weeks for full adaptation but some will occur in 3 days) and so I'm more of a fan of doing 2-3 lower (read not super low) carb days followed by one semi-high day to refuel. I think in 3 days of higher carbs you can certainly add significant bodyfat, and so I think 3 high carb days is kind of risky

On calculating macros:

Layne, is there a specific reason you prefer to use total bodyweight when calculating macros instead of lean body mass?

just easier and it works fine unless someone is super lean, or obese

On Episode #5 from webcast: <http://www.bodybuilding.com/fun/insidethelife5.htm>

DAMN, Nick eats really little...that has got to be way under his maintenance, even without all the cardio...how does he manage to add muscle?

he doesn't. He looks pretty much the same as he did at 19 years old. This is why i've been trying to convince him to allow himself to eat more but he just won't do it. Apparently he thinks I'm obese in the off season

What's his strength like compared to yours Layne? I'm amazed he can even get through a workout on that caloric intake.

I don't really know, even though the series says we are workout partners, we don't workout together all that often. I'm stronger than him but I also weigh more... comparatively I really don't know who's stronger lb for lb. Nick lifts hard but our styles would clash too much to be partners.

Layne what are your thoughts on cheat meals and what would you normally have? a "bulking" diet of 3,500 cals doesn't seem like much of a bulk unless your metabolic rate is slower than average and Nick's 2,000 cals a day is crazy, lol.

It's what allows me to gain at the appropriate rate. I'm not one of these people who goes crazy with 5000 kcals because I want to see the scale move.

Cheat meals are ok, so long as they don't turn into cheat days and one can have a cheat meal so long as they fit it into their macro goals for the day. that said I cheat very little in terms of pizza, sweets, and the like

On Intermittent Fasting:

Any thoughts on Intermittent Fasting, Layne? (<http://www.leangains.blogspot.com/>)

typically not a big fan. I actually was asked the same questions as him by Jamie Hale. I'm suprised he posted it in his blog... it was supposed to go in Jamie's book.

On counting Fiber during dieting:

Hey Layne. I was dredging through a few old threads and came across this: I didn't know that. Does this mean that you count fiber as a carb in your diet?

Yes, I do count all fiber just to make it easy & be safe. As far as nutrition counters they are probably all accurate. You see within the same food there is a large variability in how much protein carbs fats it can contain (usually at least + or - 5%) so they are probably all right lol. The key is to just use ONE source for your macros so that you will be consistant. That is the most important thing.

On Bulk Cycling:

Question about your bulk cycling. Do you up the cardio for the 2-3 week cut part?

or do you pretty much leave your training the same and let the food do the work, just talking the 2-3 week cut not for a show, im sure for a show you bump up the cardio. You do about 500 cals over maintenance for 4-8 weeks during the bulk and 500 lower maintenance for 2-3 weeks during a cut? how do you find out your maintenance calories?

for the bulk cut i keep most things the same, I up cardio slightly; but mostly via food. Maintenance calories are best found through trial and error but taking your bodyweight times 14-16 should get you close

In one of your bodybuilding.com videos (I think the first) you talk about how u train as a natural. It was something along the lines of 1 week gain 2 next week cut 1 lb = net gain 1 lb lean mass. he lbs may be off from what u said but thats the idea as I understood it. How often do you cycle these bulk vs cut weeks like 1 week bulk vs 1 week cut *repeat*? Most curiously does your training stay the same on both as far as weight lifting.? Im thinking low-carb = u should not do heavy compound moves like deadlifts and squats but i could be wrong. I assume more cardio on the cut days as well as a drop in cals (esp carbs)?

It is a 4-8 week bulk followed by a 2-3 week cut

i have a question about the 4 weeks bulk 2 weeks cut i heard you talk about on no bull radio. ive been following daves cutting diet and just finished up there 2 weeks ago and got great results, but i really want to stay lean now all year round, my diet at the moment is 300g protein 200g carbs and 140g of fat, im 200lb 8%bf ish. so if i stay eating like that for 4 weeks, how would the diet look in the 2 week cut, hardly worth my while dropping the carbs out for 2 weeks. im also doing 50mins cardio 5 days per week before breakfast, should i up this on the 2 week cut.

Honestly, I'm not sure how it would work out using a ketogenic approach during dieting. I'm not quite sure how I'd approach it. You see the whole point of the 4 week bulk 2 week cut is to keep your body constantly insulin sensitive but on a ketogenic diet/bulk insulin is not really much of a player

been trying your rotating bulk, cut model. my question is how much does your weight fluctuate during the cut phase?

the scale doesnt look like its moved during the first week but i think i do see some signs of increased vascularity. i am happy enough with the strength, just not sure if i expected too much out of the cut phase.

what was your pro/carb fat intake during the bulk and what is it during the cut?

i am no longer sure what my maintenance intake is, i dieted for 26 weeks for my show then stayed on for another 6 weeks while waiting for a photoshoot. i expected 200/200/60 to be my cut and i was planning on going to 200/250/75 for my bulk. but i

actually hit my offseason weight cap doing the 200/200/60 i will admit it wasn't a clean cut but i also haven't been sleeping very well.

since i was already at my weight cap i cut down to 200/125/60. i also increased the intensity of the post workout cardio, adding a series of sprints every few minutes. got some quality sleep last night and looks like im down a couple of lbs for the week... which is what i expected.

so i am guessing my metabolism is still a bit weird after the long diet coupled with the post diet food party?? but im sure my sleeplessness isnt helping any either. have to find that brain 'off' switch.

try cutting fat to 45-50 & carbs to 110 and i'm betting that will jump start it

1. When doing the 2 week cut cycle, is it necessary to have the refeed day(s)?
2. When bulking, on off-days (no cardio and no workout), is eating 200 calories above maintenance a good idea? Or is it better to bring it down to maintenance on that day? I eat an avg of 500 above maintenance throughout the week.

Btw I'm seeing very good results after bringing down my protein intake to just above 1 gram/lb, starting to train everything twice a week with crazy intensity thanks to your inspirational videos, and taking 30 g BCAAs daily.

1. probably not but i have them on my leg days b/c i need all the help i can get with them
2. i think slightly above maintenance is fine

just wondering with your cycle of bulk for 6-8 weeks then 2 weeks of cut, when you go back to bulk do you raise calories right back up or introduce slowly again? going on previous conversations on this thread if you raised them right back up you would raise the possibility of storing fat. interested in your thoughts again?

my previous conversations were regarding a long contest prep diet which is totally different than a 2 week cut **TOTALLY** different. In this case you are taking advantage of a metabolic swing. You'd want to increase them quickly

2) I have been trying your 4-6 week bulk/ 2-3 week lean gain plan. I had been bulking at around 2800-2850 calories for 6 weeks and did not put on much size, I then cut at about 2500-2600 calories for 2.5 weeks now, and feel like my strength is beginning to go down, Do you think my body is ready to start bulking again?

2) I think your calories are too close together. there is very little metabolic difference as your calories are only 200 apart from cutting to bulking. I'd try doing 3000 bulk & 2000-2200 cut

I noticed that during your bulking phase you take 3500-4000 calories, and during your cut you take in around 2250(250g pro/200g carb/50g fat)

In your video you suggest taking cutting 1000 calories or more out right away when going from bulk to cut, aren't you worried about losing a significant amount of muscle?

no, the whole 'don't cut calories fast after a bulk you'll lose muscle' is nonsense in my opinion. Due to the hormonal milieu and metabolic situation that occurs while bulking, immediately post bulk is the best time to drop calories fast if you are going to do it. Especially considering you are only doing this for 2 weeks.. you are trying to TAKE ADVANTAGE OF METABOLIC SWINGS, if you drop calories super slow you won't do that.

Hey Layne, speaking of your 2-3 week cutting phases, do you carb cycle during these or just keep carbs constant?

mostly constant with 2 refeed days per week

On Fat calories:

Layne , what % of total calories do you feel should come from fat so you don't have a deficiency over load in your diet?

I don't like %s because they don't hold up over many different calorie ranges. For example. If you are doing 10% of your kcals from fat I'm sure everyone would say that is deficient. But if you are taking in 4000 kcal/day that's about 45g of fat which is certainly not deficient, especially because you have so many total calories to spare fatty acids. However, if you are on 1800 kcal/day that ends up being only 20g of fat which is less than optimal; especially at such low calories (unless you are a 100 lb figure girl, then you're probably ok) So I don't think there is a % you can put on it. It depends on weight, age, activity level, bodytype, caloric intake and other factors. I think for your average sized adult male bodybuilder with a mesomorphic bodytype who's in a caloric deficit, 45-60g of fat does the trick. When bulking you can actually go with the same amounts or less due to the increased kcals; however, that means you have to eat a ton of carbs as energy fillers and I like a balance so I suggest 55-75g of fat. These are just general guidelines, I hope they made sense.

I see what your saying , cause if your getting like 30% fat on a 4000 cal diet thats like 135 grams of fat , i would have to eat alot of oil to get that in my day. in other words from watching the vid and listening to no bull radio , with protein , when bulking 1 gram per pound , if your older 1.2 grams peround would do the trick , when cutting keep the protein a little higher than 1 gram per pound to make sure no catabolic issues occur/curve appatite.

fat - as stated above

carbs - just a filler to reach caloric intake.

right now I'm a 220lb male , about 9-10% bf , say meso/ecto (put on mass easy but always stay lean) bulk i would stay around 3500-3700 cal (70-80 grams fat bulking) when bulkiing , cutting 2600-2800 (fat around 50-60 grams)

would this look like a good start?

you nailed it bro

anyway just thought i'd tell you that i was going to give that model a try. im a little leery of going up 500 cal above maintenance for the bulk phase so i will start off with a more conservative 200 above and below. sometimes its can be just interesting to find new ways to grow.

I think 200 kcals might be too little over... try 300 i think that would do it. If you add weight too fast then back off a little.

On Leucine during dieting:

Hi Layne. I am getting ready to do my first INBF show. This will be my third show ever. My last 2 shows I dieted for 16 weeks and went from about 235lb down to 197ish both times and still came in smooth. I dropped steady and tried not to loose too fast because they say loosing too fast will cause muscle to be burned. This time I cut way harder, my carbs went down to 100-150g, I left my fat at 35g and pro. at 400g. I lost extremely fast (around 6lb per week) I am currently 5'10 210 and leaner than I was when I weighed 197. I still have 10 weeks to go. The only supplement change I made was adding leucine to my preworkout meal. Do you think its the leucine or does my body do better with loosing weight quickly?? I get fat EASY!!! Thanks bro.

leucine can help but if you are an endomorph then you may do better with a more aggressive diet. I still prefer longer diets... you just might not have been dieting aggressively enough during the long diet

On Refeeds:

I think refeed days where you have a bit more carbs in order to replenish & give yourself a mental break are a good idea; but I don't think 'loading' would be a good idea

Tomorrow is my re-feed day (excited about that). Even though it is a day off from lifting, since I train first thing in the morning, I thought this would be best done the day before a leg day so Friday morning I have a 'full tank of gas'. When doing HIIT, I know you do a PWO shake like lifting, but do you do a pre workout? I am going to

have a solid meal in me at least an hour before.

I would try to make it so your refeeds fall on days where you work a bodypart you consider a weakpoint. Preworkout HIIT I just eat a whole food meal, i do the same thing for workouts with weights

As I'm enjoying my refeed day, was wondering if you have seen or heard any studies about increasing Leptin/T3 with on large meal verses spreading the extra carbs out over a whole day? I would think that spreading it out is more effective as you are less likely to add bodyfat, plus replenishing glycogen would also be hampered I would think too. Just curious if you have seen anything or have an opinion of a day long refeed verses one or two big carb meals.

i think it is absolutely better to spread them out yes

When do you think it is optimal to introduce any kind of weekly refeeds? If so what body fat you think would be ideal to start them?

around 15-18% or so probably

On carbs during the night:

Do you think it would be beneficial for me to have some extra carbs tonight before bed since I train early or should I just have the increased carbs for the rest of the day after I lift? I am moving my refeed day for tomorrow (leg day).

You could add in a bit more late tonight and just take it out of tomorrow's totals

On PWO shakes during 2-3 week cut:

is it a good idea to leave dextrose in your whey shakes when you are on your 2-3 week cut? i have cleaned up my diet but have kept 15g preworkout and 35 pw of dex. i only take on weight training days 5 times a week.

I think it's ok so long as your total pro/carb/fat intake are on point

On training during dieting:

when you are deep in your diet do you still train everything 2 a week or move to once a week since your carbs are reduced?

I still train everything 2x/week

On Carbs during bulking:

Hey Layne, I was wondering when you are bulking do you eat carbs with every meal. I usually have breakfast, train 90 minutes later, have a shake with whey and waximaize postworkout, eat a whole food meal an hour later and then still eat 3 or 4 more times throughout the day. Would you suggest having carbs with every one of those meals and even the shake right before bed or would you say to cut them out of the last 1-2 meals when I am just basically just sitting around on the computer. Thanks for your time!

i have the majority of my carbs within the 8 hours pre/post workout but i still have carbs at every meal. no need to taper carbs either. nothing about night time changes the laws of thermodynamics

On Carb timing:

I've heard you say this before. I agree that if you do evening training or cardio (HIIT esp) you need to replenish the glycogen with some carbs. My question is though if you do no training in the evening, wouldn't you want to minimize the carbs (veggies at best)? My thoughts are to keep insulin levels low during this time period. Granted, if I worked out in the evening I would take in carbs up until bedtime. This is in the cutting phase verses the bulk phase. Bulk phase, carbs all day baby!

yes but by that same token if you train at night, i would minimize carbs earlier in the day... it has nothing to do with the time of day.

What about if you train first thing in the morning? should you have carbs the night before??

probably not a bad idea

On breakfast before training:

Hey Layne, I just started college and I usually train after breakfast, which I now eat at the dining hall. My question is do you think that it would be bad to eat a plain bagel with my breakfast, which also contains protein and fats(eggs), or would that be okay.

It would be fine

On cheating during dieting:

baked lays and low fat ice cream.. i think your being naughty layne! LOL

ha! most bodybuilders consider that 'cheating' as well, but these are the guys that eat totally strict all the time, never go out to eat, but then invariably once every week or so they binge on pizza, peanut butter, fried chicken, etc. I hit my protein/carb/fat goals everyday... regardless of what I eat. Not many can say the same

So do you believe as long as you're hitting your macros you can pretty much eat whatever u want?

I put a premium on hitting my macros but that doesn't mean I eat pizza, etc everyday. Normally I eat like the typical bodybuilder for the most part; but I don't kill myself if I have a slice of pizza here or there because I NEVER binge which is far far far more damaging

On metabolism slowing during dieting:

When going on a cut, do you think it would be wise for a trainee to start carb cycling or adding in refeeds immediately or would it be better to just drop the cals week to week. I was told by someone that if you immediately start carb cycling, your body will adapt to carb cycling in a few weeks...and when you plateau, you have no other alternatives. However, I was under the impression that carb cycling keeps you from plateauing and even prevents your metabolism from slowing due to the high calorie/carb days.

Metabolism slowing is just something that happens regardless of what you do, but refeeding and high intensity cardio can help prevent it to a certain extent

On Leptin

Joel Marion of "The Cheat to Lose Diet" stated that leptin levels drop after about a week of caloric restriction BUT it only takes 1 day of refeeding/cheating to restore leptin levels. If this is the case, I think that people who are trying to get ready for a competition would not really have to lower their caloric intake as much because they could avoid the body plateauing and therefore....having to recover from a contest would not have to take as long. Do you agree with this?

what he doesn't tell you is that it only restores leptin for about 6-12 hours

On Offseason bulking

Since the palumbo layne debates I've been looking at both your guys' diet plans and nutritional styles and comparing contrasting etc....and I can see merit to both

contest prep plans, and they both are well thought out...but in terms of offseason diets I am curious on your thoughts since I am only familiar with your contest prep techniques...and to be clear I am not looking for an individualized plan and I certainly hope this isnt info that youve put out there before...I am just looking for your thoughts on Palumbo's off season methods.

Palumbo advocates a 1.25-1.5g/lb protein, 1-1.5g/lb cho, and .75g/lb fat diet with an emphasis on healthy fats and quality protein for an offseason growth phase with minimal fat gains, also keeping the majority of carbs around the workout...what do you think of this? If still in a sufficient caloric surplus, and getting enough cho to fuel workouts and replenish glycogen stores, is there any downside to keeping cho this low on a bulk, and why?

it really depends on a lot of factors. I don't think there is 'one diet' for anyone.' for example, I think your first priority is protein; 1g/lb-1.3 g/lb should work fine... for younger more insulin sensitive people choose the lower end; for older less insulin sensitive choose the higher range. Then I would look at how many calories you need to gain weight at the appropriate rate and fill in with carbs/fat. Again for younger, more insulin sensitive people I would keep fat lower and keep carbs higher as carbs will actually have an anabolic effect in younger (<18) people. For people aged 20-40; I think you can fill it in more liberally in terms of putting in how much fat/carbs you want so long as you hit your calorie goals. for people older than that I would go with more fat/protein & less carbs.

Let's be clear on a few things as well. I don't like a LOT of fat while bulking as regardless of carbs intake if you have calories high enough you are going to store fat and regardless of what some people say, fat does NOT need insulin to be stored in adipose tissue; it has carrier proteins that are insulin independant that can bring it in just fine. Also, fat is more satisfying on a PER GRAM basis. HOWEVER, fat also has over 2x the caloric density of carbs and if you break satiety down to a PER CALORIE, what you find is carbs are actually MORE SATISFYING per calorie than fat. Think about it. 180 calories from peanut butter is only 2 tablespoons (32g weight) of peanut butter, whereas if you look at 180 calories from rice, that's over a cup of cooked rice (over 100g cooked, over 50g uncooked).

People don't think about these things in the proper context many times.

Layne, besides the insulin sensitivity, age and satisfaction per gram factor, do you think adjusting carbs intake in regards to the volume one's training would be wise? I mean, obviously you need more carbs when performing Arnold's routines, than for example a DC two day split. And if this statement comes out to be relevant, what would you in this case recommend in terms of macros breakdown for low volume trainers with average/low insulin sensitivity?

I think that if you were training lower volume and had poor insulin sensitivity trying to gain muscle I would probably not go over 250-300g carbs & fill in extra calories with fat.

On Eggs:

I consume a lot of eggs, especially the whites, first because I like them but also cause they're cheap. And I know why the cheap ones are cheap; mass production of eggs is done in horrendous conditions, and the animals producing those eggs are totally debilitated. So do you know how much their condition affects the quality of the eggs?

And are there any theories (I'm just making an hypothesis here, and maybe splitting already splitted hairs, lol) that show that the toxins/anti-biotics/etc... are found more in the yolks, or more in the whites or equally dispersed?

as far as eggs go, I don't think the stress that the chicken's are under would affect the quality of egg protein

On Females following the <http://www.bodybuilding.com/fun/layne36.htm> guidelines:

Layne, I'm reading this article...<http://www.bodybuilding.com/fun/layn...lculator...and> I'm wondering if a woman can use those same calculations/values or would I need something different? Do you work with women? In your opinion, do you need to alter your plans to accomodate women? Thanks a bunch. By the way, I love the video series on bbing.com. Good job!

I've had quite a few women tell me that they used that article with great success so I think it will work, but it should only be used as a guideline for pro/carb/fat intake and you'll have to adjust it according to the rate at which you lose bodyfat.

On dropping calories for contest prep:

In your webcast, you say that you drop from 3500 calories right down to 2500 when you are doing your 4 week bulk/2 week cut. However, when you are dieting for a longer time getting ready for a contest, do you still drop from 3500 right down to 2500 or do you do it gradually?

i'll drop pretty quick usually

Really? Don't you run the risk of plateauing and getting stuck doing that?

not in my experience... it's still high enough that you don't get a large plummet

On spreading carbs during a lean bulk:

hey layne ive been eating my carbs at just breakfast / pre-workout / post-workout, 1.5cups of oatmeal each time, do you think i would get better results if i just did same amount just stretched out over all my meals? im trying to lean bulk btw

well i think all your meals should probably have some carbs, but I think you definately should have more at pre/post workout

On counting fiber:

quick simple (probably stupid) question. When tracking macronutrient intake, should the insoluble fiber content be added? Doesn't this stuff just get pushed straight through the body anyway? Do you recommend fiber supplementation?

Probably doesn't need to be, but many foods do not differentiate insoluble vs. soluble fiber so I just count all of it

On Caloric cycling:

**What is your opinion of calorie cycling when bulking to stay lean?
ie, high day, med, med,low,high then repeat.**

I'm not a big fan of huge fluctuations of carbs/calories from day to day. it doesn't give your metabolism enough time to adapt.

On layne's Bulking article: <http://bodybuilding.com/fun/layne2.htm>

Is this still your theory on bulking?

my theory is elaborated on in depth in my webcasts. that is an old article but still has some value. I've also talked about it quite a bit in this thread

On adding weight:

I am a hardgainer, so I consume a ton of calories in efforts to grow. I went from 207-221 in like 9 weeks i think

Well I think that putting on 14 lbs in 9 weeks is just too fast. you can only synthesize muscle tissue so fast. Max rate of fractional protein synthesis in humans is around 0.5%

per day; so even if protein degradation is minimal that means a person who has 150 lbs of skeletal muscle tissue is going to have a hard time putting on more than 1/2 lb muscle per week max.

On the setpoint theory:

Layne what do you think about the setpoint theory?

Lately I've been mini cutting/bulking and trying to keep myself around 10-12% bodyfat, but I notice my metabolism likes to slow down right when I get to the 12-14% mark, and when I begin a bulk, I tend to add a good chunk of fat and can easily get into the 14-16% range...and then all of a sudden I'm always hot, sweat and get my HR up a lot more during exercise and basically shows signs of my metabolism speeding up....

point being it seems that my "set point" (if this theory is valid) is around 12-15%....am I spinning my wheels trying to stay 10-12% in the offseason, and spending too much time cutting when I could be bulking in the 14-16% bodyfat range?

I'm down to about 12% after a good month and a week of cutting, and I'm going to keep cutting for about another week or so and then try a solid, moderate carb bulk with sesamin, ala, and some other "keep fat at bay" supps trying to gain .5lbs/week in attempt to gain mostly lean body mass...maybe my lack of diligence and willpower is making me think my set point is higher than it is...well we'll find out after a little while into my lean bulk

this will seem out of left field but humor me. How bad did you binge after your show and how much weight did you gain in the first 2 weeks?

pretty damn bad I had periods of control and periods of lack of control that lasted probably a good month, after the water subsided I was up 20lbs a month after my show....after two weeks, first thing in the morning without water retention I was up by about 12-14lbs....so I gained like a pound a day after my show....yeah....a crap ton too fast

honestly you may have reset your metabolism in a bad spot, higher than before. Unless you want to go through a prolonged offseason cutting phase to fix it I don't know if there is much you can do at this point other than making sure you are doing HIIT 2-3 days per week

well...i'm in the middle of a prolonged offseason cutting phase...coming up on 6 weeks...I'm about 12% I'd guess, and I'm doing hiit once a week, could probably up that....but I've been fatter in the past....I bulked up to 220 about 2 years into training...and back then I probably had about 175lbs of LBM as opposed to 185lbs of LBM that i have now...so yeah I was fat....but i've got a very lean mass gain plan coming up and I'll do hiit 2x a week...or would you suggest getting the BF a little

lower before trying to grow again? thanks for the advice

i'd try to get to 8% then very gradually start increasing calories to re-set the metabolism. I don't mind giving out most info, but that technique is something I will guard because it is kind of proprietary and something I don't think most people have a knack for.

On stimulants during dieting

In your opinion, how long of a break is needed from pre workout stims? Do I need to lower calories when not on a pre workout stim?

probably 2-4 weeks

Bulking on a budget:

Hey Layne,

I am 5'7" 165 lbs. I have been at the same weight for a while now. I know I need to eat more, but I am having trouble taking in the amount I need to. I currently take in about 180 grams of protein and about 3000 calories. I am very lean naturally, I am just trying to get as big as possible right now. I am on a limited budget and it's hard to find the food I need. What meals would help me to get the nutrients I need

Thanks

might try checking out my article here <http://www.bodybuilding.com/fun/layne6.htm> it was written for college students but will be useful for anyone on a budget

On liver/kidney support supplements:

What's up Layne, wanted to know if you thought someone who takes btw 2-3 shakes a day would need stuff like milk thistle or sesamin for all the protein going through system, ex. kidneys, liver.

no, unless your protein is ungodly high I would not worry about it, there is no evidence high protein is damaging to healthy liver/kidneys.

On choosing a diet for contest prep:

i have used different diets during my short competitive career...i used a diet last year with carbs protein fat and got descent results i noticed though that i get tired at work about 10 min after some of my meals...i never went over 30 grams carbs i was

dieting down from 210 hoping to make middleweight...when i used a ketogenic diet toward the last few weeks of my prep i felt really good and got great results...my question is since u like to keep carbs in precontest what would u recommend to someone who seems to be sensitive to insulin...

honestly to answer that I'd really have to work with you for a long period of time to eliminate several variables. But I'd say if you felt better on keto... do keto

On dieting books:

Have you ever read a book called Militant Bodyopus by Dan Duchaine? If you have what are your thoughts on how he formulates the diet/training protocol? The 2nd question is based on the a book by Ellington Darden: Hit training (I shortened the title). Would you recommend this style of training?

I just started this week doing giant sets to break-up the pace and add some intensity. I felt like I was in a sticking point in my training. How long would you reccomend doing this type of training for? I am doing 5days week of this type of training. I will do my primary group then add maybe a few sets of weak point on another part. Thanks

I honestly haven't read either book, i know lyle does some good stuff, but I don't agree with the huge swings for carb cycling

On type of foods during dieting:

Layne, when dieting, do you think the type of food your eating doesnt matter as long as your hitting the macros you have laid out for the day?

more or less, though I don't think you should be eating junk food to hit those as it is lower fiber and fiber increases thermogenesis and additionally high fiber foods are more filling than junk food.

On Fat storage

if the liver and muscle glycogen are full, there will be nowhere else to put the glucose and your body will want to remove it from the blood as fast as possible so if repair and growth is needed it will go toward that but if not, it will be stored as fat. Is this true?

mostly true, but far more complex than that and something like that... it's very difficult to accurately simplify and have everything hold true.

On introducing carbs while on Keto/low carb diets:

I've already started keto, how do you recommend i phase back into carbs?

part 2: I'm going to start applying your 4/2 bulk/cut concept, its obviously effective for you, I'll give it a shot.. do you think it matter what my starting point is? (I'm far from these guys like tommy,etc, I've never competed nor am i close to being able to)? or would you recommend more of a long term bulk?

I would just gradually increase carbs week to week, probably 10-20g per week until you are back up to a normal intake

Hey layne, I've been doing this low carb thing for a while but i want to reintroduce carbs back into the diet. I was thinking of maybe doing like two carbs meals and the rest low-carb meals with fats added for energy. The only thing i'm afraid of is that my sugar-grain addiction would be horrendous and i'd just get fat. I want to change up the diet so I don't stagnate and I think carbs would do the trick. I don't really know I suppose, what would you recommend I do?

<http://www.bodybuilding.com/fun/insidethelife14.htm>

check it

On carbs around cardio:

Chris Aceto says it is best to have no carbs at a post-cardio meal to eliminate the accompanying insulin spikes and its negative effect on fat loss. Comments? Second thing is, I know you aren't a fan of fasted state cardio. What about either upon waking or post workout, consuming 10g or so of BCAA's and then performing the cardio. Does this change things at all?

lol the ol' no carbs around cardio because you want to burn the fat. What a simplistic view of metabolism. If anything it's better to have carbs around cardio... THIS IS THE TIME YOU ARE MOST INSULIN SENSITIVE AND BEST ABLE TO DISPOSE OF CARBS... GLUT-4 is upregulated... other times of the day when you are resting is when you are less able to properly dispose of carbohydrates... so by that logic we should never eat carbs ever. Nonsense

Cereal during dieting:

You can have cheerios while dieting?!?!?! I've just never heard of that. iv always thought the only carbs on a diet allowed were rice n oats.

that's what so many 'guru's' would like to brainwash you into believing

On why cereal during dieting:

is there a specific reason why you recommend that tommy (Sporto) eat cheerios pre and post workout? faster insulin spike??? or was it just trial and error, and you found out that carb source works best with him. I'm beginning to think that maybe oatmeal may not be a good primary carb source for my body. i get major gas from eating oatmeal, which could mean that i am allergic to it. any thoughts?

I didn't tell him to eat cheerios. I don't do meal plans. I give people protein/carb/fat targets as well as info about timing, frequency, etc and let them choose from various foods to fill those in. There are no 'magic' foods like so many people seem to think

layne, should fiber be avoided on refeed days? and from my understand High GI - non traditional bb foods are ok to use...i.e. lucky charms

i would not say avoid it but you will get more of it just as a by product of grain intake

On carb types around cardio:

What kinds of carbs do you suggest to surround cardio sessions?

same as around workouts

On being an author of "Scivations, Showtime Cut Diet"

I didn't write the book, those are not my theories necessarily. chuck rudolph wrote the book, I only wrote the BCAA chapter

On maintaining muscle mass during a cut.

I am interested in losing fat gradually without Sacrificing muscle mass. To do so, how much protein should I take in through the day and what should I eat? What do you suggest for carbs as well while i'm trying to cut

Hey buddy, have you read my article here:

<http://www.bodybuilding.com/fun/layne36.htm>

It was written as a precontest prep article but will work great for anyone wanting to drop bodyfat.

On Cardio: Timing / Intensity

What cardio to you prefer when you're cutting down? High or low intensity? Also, do you do it in the morning on an empty stomach, or post workout? Thanks bro, hope the training is coming along well.

Read cardio section <http://www.bodybuilding.com/fun/layne36.htm>

Note: <http://www.musculardevelopment.com/forums/showthread.php?t=5686>

On Keeping Fat gains to a minimum during a bulk

Hey Layne, Im wanting to keep fat gains to a minimum, I plan on throwing in the cut cycles throughout the year which I think they'll work well for me. But are there any supps you suggest to help keep fat gain low and that are easy on the wallet? And how much cardio do you recommend during the bulk/cut phases? Thanks.

Please watch my webcast (<http://www.bodybuilding.com/fun/insidethelife0.htm>). I cover this extensively in my webcast episodes. As for a supplement, I think sesamin is a good supplement to keep fat gains to a minimum.

Part M: Contest Prep

Layne's Contest Prep article:

Layne, I was wondering if you (or someone on here) could link me to some of your writing(s) on your views concerning the final week before a show.

<http://www.bodybuilding.com/fun/layne36.htm> I wrote that article 4 years ago; but most of the stuff i still very much believe in, though some views have somewhat changed.

Mega props for everything you do. Quick question, I have read this article that you wrote: <http://www.bodybuilding.com/fun/layne36.htm>. My question is, do you still follow this (not sure how long ago it was published)? I know how science and things evolve and I was wondering if there was a more current article or if this one still holds your beliefs (specifically the last week). I'm with you that you don't want to do anything crazy, but a gradual carb up on Fri & Sat along with a mild Na reduction seems to make sense as you've outlined in this article. The only change i know of is 2 carb ups a week (on both his leg days)

Yea, some other minor changes but that's really it

I was just about to ask the same thing, Layne. I'm starting a 12-week cut tomorrow and thought I'd try out your approach. Anything different from then (when you wrote the article) to now?

I probably wouldn't deplete sodium at all. that's what i'd change. I'd also be a tad more aggressive on carbing up

Layne, great work with the thread, you've got some good knowledge and it really helps us guys out that aren't in scientific/health fields. And on that note, as a natural would you recommend 'slow cardio' or HIT / fast cardio for stripping fat whilst maintaining muscle? And if you suggest fast cardio is there types of foods u should have before and after cardio to maintain muscle size, ie simple or complex carbs after cardio...? also what's your thoughts on doing cardio after 45 min weight session? do you eat something after weights and before cardio? do you take ur protein shake in between the weights and cardio?thanks for the help

The precontest article should cover it; let me know if you have any questions beyond that

**Layne, do you outline your diet like Dave does. I remember reading that you feel ketosis is not necessary for getting ripped. If possible could you put a sample plan of how you have your clients eat? I am doing Dave's plan but to be honest with you, I don't think it works well for someone with a physical job. My biceps and back and legs are so depleted by midweek from the all day heavy lifting that I suffer in gym. Just now I crawled into the gym wondering wtf is wrong with me
I did feel better when doing pro/carb meals in relation to the whole working out with my job**

not sure i can outline things without making it totally free which would not be fair to me... i have put a ton of free info out there in my webcast, my blogs
<http://www.biolayne.com> and my article <http://www.bodybuilding.com/fun/layne36.htm>

On performing HIIT and low intensity cardio:

Layne, I read somewhere that you do moderate intensity cardio at other times during the week as well, is this true or do you stick only with HIT? I Want to minimize muscle wasting .

I do both forms of cardio... HIIT for the lipolytic & metabolic effects and Low intensity for a pure calorie burn

On Layne's previous articles regarding low intensity and HIIT cardio:

I have been reading several of your article on bb.com (a couple more than once to try and digest the information). I have a question, as I noticed in one article (<http://www.bodybuilding.com/fun/layne1.htm>) you recommend doing low intensity cardio for cutting bf, but in a different article (<http://www.bodybuilding.com/fun/layne36.htm>) you recommend using HIIT. I think it may be my fault and these articles may be attempting to reach different goals, or I am missing a key point, or maybe they were just written at different times after gaining some experience. Can you help me out and tell me what I am missing? Thanks a lot, by the way for the excellent articles, I have read them, reviewed my nutrition log and think maybe I am giving myself fewer calories than I should be.

The first article was written when i was 19 & stupid, the other was written some time later, and it what i would recommend

On the Cut diet:

One more question on the cut diet, if i have been cycling carbs for the past 8 weeks and have about a month till my competition do you believe it would be good to give the diet a chance. I believe i have hit a stickijng point in fat loss. Thanks again.

Well what is your macronutrient breakdown right now?

Here is my seven day break down for carbs and protein. day1-156 g carbs 296g protein. day 2-3 117g carbs 332 g protein day4-5 97.5 g carbs 351 g protein. day6 65 g carbs 370 g protein. Day7 429 g carbs 234g protein. My weight when i started was about 203 with 10-13 percent bodyfat. I'm 188 now around 6 percent bodyfat. Thanks for your help

To be honest unless you weigh 250 I think your protein is way too high. Protein is not a freebie macronutrient like many people seem to think... it has calories and can be stored as bodyfat. I think you could knock your protein down by at least 50g. How much fat are you taking in?

Fat was around 50g tops and that is being generous. Since this last saturday i have been trying the cut diet and it is going good. I'm following the 2500 calorie version. I am also using xtend with the substance wpi. I go to school at isu. If you have any tips for dorm dieting it would be appreciated. Thanks and what is your honest opinoin on switching diet strategies this late in the game.

It's fine so long as you can stick with it and get lean enough. any pics so we can see if you are on track?

Thoughts on a pre contest diet:

I am a natural bb and I am getting ready for a show. My current weight is 225 @ 4.5-5%bf, 5'11. I am doing a typical bb diet. I am eating about 300g pro/150-160 carb/ 100g fat/. I have been dropping my carbs little by little while adding fats at those meals. Do you prefer this type of diet where you are keeping enough muscle glycogen and water in the muscle or do you like doing the high pro, mod fat, no carb method? I would think that your muscle would not be as full and hard on the no carb diet. Being natural is a struggle in its self when trying to prepare for a show making sure to preserve all the muscle.

Here's a sample of my current diet. feel free to give some feed back and what has worked for you.

**meal1: 1 cup oats, 6 egg whites, 1-2 whole
meal2: 2 scoops whey w/water, 2 tblspn pb
meal3: 6oz chick, 1 cup brown rice
meal4: 6oz chick, 1/2 cup brown rice, 30 almonds
meal5: 6oz flank or chick or fish, greens
meal6: 2 scoops whey w/water, 2 tblspn pb**

You sound like a monster man. My best reply to this would be to check out my precontest article <http://www.bodybuilding.com/fun/layne36.htm> my whole philosophy is in there. If you still have questions after reading that please let me know!

On avoiding certain foods before contest:

Before contest should I stop (and when) eating, drinking:

- fat free C.Cheese (200g/day)
- eggs
- sweeteners, light cola etc. ?

Unless you have an allergy to eggs there is no reason to cut them out. sweeteners are probably fine, I'd cut cola out just a few days beforehand as the carbonation can make your stomach fill up slightly and I'd cut dairy out a few days before just to be safe in case you have a slight allergy

On nutrition during contest day :

layne what do you eat right before you go on stage? i hear lots of crazy things alcohol, candy, ricecakes, jelly, salt, etc... whats really good thanks bro

<http://www.bodybuilding.com/fun/layne33.htm>

candy or sugar/fat/sodium can make you quite vascular if you've done the proper preparation leading up to the show, but it's only going to work if you are completely shredded. Nothing is funnier than sitting backstage watching guys who are 9% bodyfat and

smooth as hell carb up like crazy. Like it's going to frigging matter when you come bringing your B game.

On Last week of Contest Prep:

I'm curious on your last week prep ... How do you go about it? I would like to know how you do your water, carb up, deplete, etc, etc...Can you give us a brief rundown on your last week?

For articles that discuss the last week of contest prep I would read the:

<http://www.bodybuilding.com/fun/layne18.htm>

<http://www.bodybuilding.com/fun/layne33.htm>

<http://www.bodybuilding.com/fun/layne36.htm> Especially the final week section

On Sodium Loading:

Is it wise for a first time competitor to stay away from sodium loading? I heard if you don't get it just right it will ruin your show entirely. Is there any adjustments I can make to your pre-contest diet on the bodybuilding.com page in regards to sodium loading that i could make depending on my body type, ability to hold water etc.?

I think a smaller more controlled sodium load is ok... but not doing crazy stuff like 10,000mg per day or anything like that.

I think my article at bodybuilding.com has different calculations for different bodytypes.

On counting sodium/ applying preparation H:

I currently sit about 26 days out from my show, I was having some issues. With the whole carb up phase. I would like to come in hard and dry. I was also having some issues with sodium/carb manipulation, you say that you go up to 4000mg of sodium, how do count the all sodium? I was also wondering if you rub the preparation H all over your body? Thanks for the help

Sodium counts are listed on the sides of most foods; just like protein/carbs/fats. I don't really use prep H anymore, i don't think it honestly ever did anything

On readjusting the contest prep diet while on it for a while:

I finished reading the first part of prep article for bb.com and will be setting up my diet for next week to begin. I was wondering though if you should remanipulate the diet as you loose weight? and if you count crystal lite, sugar free gum, and supplement calories? and last about cheat meals my cousins say you need them i don't think they are needed? or is that along the refeeding line or is refeeding a "carb day"? And last what is your take on distilled water going in to a competition

Yes you will have to manipulate the diet simply because your body will start fighting weight loss as you get leaner so you'll need to lower calories. I do count all calories always. I don't believe in cheat days, but targeted refeeds or higher carb days can satisfy your hunger and give you metabolic advantages.

Distilled water is simply not needed... regular water just doesn't have that much sodium in it anyway

<http://www.bodybuilding.com/fun/layne1.htm>

On veggies during contest prep:

what are some good veggies to eat during prep and what sould i put in my salad?

you mean like what kind of dressing? As for veggies, I like an asian stir fry blend. Sprinkle splenda & soy sauce over them... damn good!

On HIIT during contest prep:

hey layne im about 15-16 weeks out now ill have to check the calendar but ive been doing 15-21 mins intervals 1min very hard 2mins easy repeating is this the kind you cardio you were talking about in your article also i read you had a celbratory meal

after a show when you had a show the next week i now have a show 2 weeks after can i sneak in a celebratory meal after the show and if so something small or nothing to crazy thanks man

yea with 2 weeks in between shows you'd be fine

for intervals, I'd really shorten them up. you can't really go all out for 1 minute, that's about 400 meters and you would have to pace yourself. Intervals work much better if you shorten them up to 10-20 seconds and just go all out in an absolute sprint. by the time you are done with 10-15 of them you should be almost completely exhausted & ready to collapse

On starting a keto diet:

I have my first natural comp coming up on 9/22. I was wondering if you could look at this link and tell me when you think I should start my diet.

<http://forums.musculardevelopment.com/threads/starting-a-keto-diet-7900>. I would like to start it as soon as possible, do you think that 20 weeks out would be too soon to start Dave's diet. Thanks.

IMO it's never too soon. The absolute best i've ever gotten a client in condition was when i had him ready 6 weeks out and starting adding calories and carbs back in and he filled out and get even leaner in those six weeks. Just absurdly shredded & full

Thanks Layne. Im going to start the diet tomorrow. My question is should I continue to have post workout carbs? And if so what kind? Also, can I update you when I'm about 6 weeks out and maybe you can tell me how many cal and carbs to add? Your the best ... thanks.

in my opinion yes, but i know you are on dave's diet so i'm not sure how that fits in

On differences for training/dieting between natural and steroid using bodybuilders:

Should a natural bodybuilder train and eat differently than someone using steroids? If so what are some of the differences that should be considered/incorporated?

I think there is actually less difference than people think. Steroids just add another gear to shift into.

On staying dry from pre-judging till evening show:

Layne whats the best method of mainting your crisp dry look from pre-judging all the way to the evening show? I have this problem of spilling later in the evening. perhaps i do not know what to eat or drink between prejudg and evening. Steak and

rice after prejudging and no water throughout the day. Speaking of water, how much do u think a natural competitor should drink the day before the show?

drink water. That is your problem. If you don't have water it does not matter how much carbs you consume... you won't fill out.

how do you typically look the day after the show?

On counting food during Offseason and precontest:

Do you not count your food intake in the offseason/precont and go by feel like what nick does , found that to be interesting

No i count everything

On Carbonated water / Drinking soda during contest prep:

Layne, what are you thoughts on drinking carbonated water or diet soda during contest prep?

Perfectly fine; i just cut them out a few days before the show

On max amount of carbs while dieting:

layne having work with several natural bodybuilders what was the most carbs you heard someone dieting on.

probably my guy Ben who I helped prep. He never got lower than 170, only did cardio 2x week for 17 minutes (high intensity intervals), and by the week before the contest he was up to 235g Carbs. He was so lean at 6 weeks out I started increasing his carbs and he started filling out and still kept getting leaner at the same time. Thing is, he isn't an ectomorph or anything, 4 years ago he was 260 lbs and had over a 40" waist.

On different approaches for contest prep:

I switched because when I showed him(prepare coach) the diet (Dave's) I was on he said that it wouldnt work and that I should use the one he was going to give me. I know it does seem like I'm mixing oil and water but somehow it works for this guy and others he has trained. He also changed my lifting regiment which was very high volume before to 5 x a week taking the weekend off. Split is Back-Abs/Quads-Calves/Chest-Triceps-Abs/Hams-Bi's-Calves/Delts-Abs/Rest/Rest. He has me doing only 9 total sets for each bodypart and 4-6 reps per set. So basically low volume high

intensity stuff with heavier weights than what I used before.

I think something you need to realize is many people achieve great results for themselves IN SPITE of what they do... not because what they do is optimal. You need to look for reproducible results; not just results in themselves. That said I like Earl but my opinion is the same as spike; if you put yourself in middle ground of teeter tottering on the edge of keto but not quite there then you are going to be hungry & tired. Either go into keto or put more carbs in and drop protein. Personally, i'm a carb guy, especially during contest prep because if you want to fill out properly carbs are your best bet; and that's difficult to do if you've been doing keto for months.

I agree, I did feel pretty good on Dave's diet. I don't think he was too caught up on other diet's. He said it was too much fat and "peanut butter should never ever be in a diet." Plus, this guy is the one the promoter of the show. I just feel so small right now, like I'm losing muscle. Don't know if that is mental or not. Ya I am pretty much stuck for 12 more weeks with this. The only thing that saves me is coffee and thats only for an hour after I drink it haha.

well you will feel small from being depleted no matter what diet you are one.

but any time you hear the words

-never

-always

-only

essentially any kind of superlative; you can be sure that one's understanding metabolism is rudimentary or they are trying to simplify it to make it sound nice.

On Master's over 50 contest prep:

Hi Layne, I just want to see if you can help me out here. My dad is doing his second show on september 22nd (the mid atlantic grand prix) He's doing the master's 50 and over division. I've been doing his diet for him and this is his second week on it. I'm happy with how he looks already, in one weeks time i can already see a difference. Here's the thing, his stomach is flat, however he does have some thick skin around the midsection from being 54 years old and from having a bit of a gut in the past, and with about 6 weeks to go, what do you recommend i have him do to get his stomach tighter and his abs to pop out. You seem like the perfect person to ask because of your knowledge and being natural like myself and my dad, your a great example for this sport and i appreciate you taking the time to answer questions. Keep up the great work Layne!

in all honesty there is not much you can do other than getting him as lean as possible and then in the offseason keep him as lean as possible to give his skin time to shrink up again.

On Potassium:

hey layne i following your diet and will be sodium loading soon. i didnt read anything about potassium sould i add any potassium to my diet besides trace amounts in food. also im doing a second show 2 weeks later would i count the day of the first show as day 14? and sould the carbloding for the second show remain the same?

i would not add potassium, if you get it too high it can actually cause you to retain water as well

notle... have you read my article here <http://www.bodybuilding.com/fun/layne36.htm> I think it will answer most of your questions

Comments on sodium loading from layne's contest prep article:

hi layne thanks your time and replying to my question.

i have just read your article.it may not have anything specific as to regards of "weight loss" or "making the weight" but i have gathered certain info which may pertain to that. here is an excrept:

By increasing sodium intake during the "sodium loading" phase, your cells' sodium pumps will become up-regulated (working harder than normal) and pump Na⁺ ions out of the cell to maintain the equilibrium ion gradient.

When you begin to drop sodium intake, your cells' pumps will still be up-regulated, but since sodium intake is low it will pump out more sodium than normal and with it, a lot of water will be excreted (water levels fluctuate in relation to ion concentrations).

During this time (5 days out up until the day before the show) you will begin to flatten out and look smaller than normal due to less water being held. Don't fret, as the final days of this program will fill you out nicely.

So im guessing that to my first question: yes, the lowering of sodium will help to excrete more water than usual and thus help with my weight loss further. as for my second question : I guess I should follow your protocol and deplete sodium gradually over 5 days and not drastically over 2 days.

correct? Also, there is no mention of water loading in your article...thats what i have been doing so far. its said that it puts the body in a "releasing" state and helps it excrete more water then usual. this is what i have experience over the night. correct me if i'm wrong. what is your take on this for my situation?

That is correct about the sodium. I really don't load water.... I just keep it the same all the way through for the most part

On indulging after the show:

I'm doing 2 shows separated but 13 days. I'm following your prep diet only with less carbs. will i be able to fit a cheat/celebration meal in after the first show i don't plan to go very crazy but would like to indulge a bit.

I would be careful... you will already be carbing up for the show and then indulging afterwards will be even more carbs and let's be real... once you decide to indulge, it is tough to stop yourself. If you want to go out afterwards and have like some chicken or steak with a potato/rice & a salad then I think that's fine. But if you go off & eat pizza & cookies, you will be in bad shape to try and be ready for your 2nd show.

Questions regarding the cut diet:

i just read a book: GAME OVER vol. 2 by scivation team. It is the CUT DIET which talks about dieting down for a comp. there are certainly some interesting points in there! I would like to ask u on a couple of them.

1. The book claims that post workout carbs are detrimental to fat loss as it spikes insulin. do u agree with this?

2. Also it says that carbs SHOULD be consumed with fats and NOT CONSUMED with protein. i must say i find this piece of info surprising, as i always thought that fat and carbs should never be consumed together. wads your take on this?

3. It also advocates carbing-up with your last meal at night. shouldnt ur largest quantities of carbs be consumed in e evening?

The book is great with loads of new and interesting information. but it has seemed to raise more questions in me than answers haha....

check out my article here: <http://www.bodybuilding.com/fun/layne36.htm> it contains many of my thoughts

On getting more vascular

**What do you recommend for someone to bring out their vascularity out more?
Supplement wise.**

Get leaner

On carbing up 11 days before a show:

Layne, I have been on a 50-60 carb per day diet for awhile now and have had only 2 or 3 higher carb days throughout my 18 week prep. My show is 11 days away, would you suggest a high carb day anytime before this or would it mess me up? Fat has been minimal except for one eye of round steak meal per week for the last 3 weeks. Protein is around 300-350 grams a day.

Honestly, i wouldn't mess around with a big carb up.

On cutting water:

I saw you posted that natty bodybuilders shouldn't cut water leading into a show i was wondering what the reasoning was for this.

<http://www.bodybuilding.com/fun/layne36.htm>

On Carb Loading / cutting water

have show this sat, it will be my second in row. I was thinking about cutting back my water starting Wed with a gallon, Thurs 1/2 gallon , Fri around 25oz or so then cut the water by 6pm on Friday night. I would like to come in a bit dryer than the last show. I have noticed I been holding more water this week than last,

So I also Cut out crabs starting today wed. I was thinking about carbing up, much later than i have in past. usually I start to carbing up around Thurs and until SAT. I try to get a full 72 hours of carb loading in and that might have been my down fall.

If I can wake up tight on Friday morning, I would like to start the process then. I do have a fast metabolism and was wondering if I could away with carb up later, rather than sooner. Maybe the reason I was a as tight for the last show, was do to over carbing ?

DO NOT CUT WATER! <http://www.bodybuilding.com/fun/layne36.htm> please read the final week water section to see my explanation

unless you are on anabolics which make you retain lots of extracellular water, cutting water is severely counterproductive

<http://www.bodybuilding.com/fun/layne9.htm>

On dropping water and sodium before a show:

I was wondering your views on dropping my sodium and water before my show. My trainer has had me sodium loading until Thurs.(my show is on Sat.) as of Thursday no more protein shakes, just low sodium chicken for protein and brown rice for carbs. 100g spread through out the day, I've been 0 carbs since Sunday. Friday at noon, I am supposed to cut water except for what is needed to swallow my aminos and EFA's. After weigh-ins Friday night I am supposed to go out for a nice steak dinner with some potatoes. How does this sound to you? Thanks in advance.

let me guess.. he also told you to stop training on wednesday right?

Yeah , bad idea ?

i'm sorry but this is the typical peak week crap that every 'trainer' gives their client... it's like they take it off a cookie cutter conveyer belt.

1) if you stop training on wednesday your body has NO REASON TO HOLD ONTO ALL THAT GLUCOSE THAT YOU ARE GOING TO BE LOADING ON THURSDAY AND FRIDAY AND IT ENDS UP IN THE SUBCUTANEOUS TISSUE.

2) if you are going to load at all, the loading should be done when you are working out hard, earlier in the week,

3) you should never stop working out, light circuit training on thursday and friday will not impair your recovery or make you sore but will help retain the glucose within the cell

4) cutting sodium is just flat out dumb, listen to part one of my debate with Dave palumbo on MD radio. Essentially cutting sodium does nothing to help you. Your body is perfect at conserving sodium. If you cut it out totally your body will just stop excreting it and reabsorb everything. Only to reabsorb sodium it needs to also reabsorb water, but now since your blood pressure is reduced from sodium depletion, you don't have the pressure to keep the reabsorbed water in the vascular system and it goes where? the subcutaneous layer.

don't even get me started on the idiocy of cutting water.

I hate to sound like i'm ripping on your trainer but he is just giving you the same regurgitated crap that 99% of 'trainers' give their people. It's the reason you hear 99% of people at shows say "I looked so much better the week before or the day after"

On cutting water a few days before the show:

Hey Layne. I agree with you on the whole concept of pre-contest dieting, but i was wondering what your thoughts were on why every bodybuilder out there does the typical carb up and water depletion. I mean I have the pre-contest bible and most of the pro's in there say they cut their water a few days before. I read that johnny jackson cuts his water the tuesday before and has diet coke from wednesday till the day of the show, lol. Some of those diets and tricks in there are crazy! but they ARE pros and they still look good even though they cut water and all this other crazy stuff. Do think they can get away with cutting water so much because of all the chemicals they take compensates for the water loss?? Do you think bodybuilders really cut water or do they just say they do on paper?? I'm just curious to see what your thoughts are. Thanks

steroids allow you to retain more water within the cell so even if you deplete the hell out of yourself you still have some fullness. What is the knock on natural bodybuilders... they look 'stringy' onstage.

Just because everyone does it doesn't mean it's right. 600 years ago everyone knew the world was flat save the exclusive few who actually knew science.

On peaking for multiple contests:

Any advice you can give for peaking for multiple contests. I have a nice spread of 4 shows that run consecutively never done that many before. Any help would be appreciated.

Yea, don't pig out after any of the shows... it will screw you up for the following week. Also, don't cut water (this is a given anyway) but having multiple contests makes it even more pertinent. But if you are someone who cuts water you are probably so brainwashed at this point there is nothing I can do for you

HAHA no no...my string of shows goes from April 27th to May 17 that 4 weeks...i actually start dieting for the shows on Sunday Nov. 25th...that give me 20 weeks or so...last year i dieted at 16 weeks out i didn't like what i saw so i told my self next year ill do a string of shows and add another month to the prep...hopefully this Formula works...Ne comments on my way of thinking Layne??

longer is almost always better

Part N: Body Fat measurements:

On Skinfold Calipers:

What is the proper method to determine bodyfat % using a skinfold calipers ?

You have to pinch as much as you possibly can, not lightly pinch but get as much as you can. And then when you get your reading... at 2-3% to that and you are near your actual bodyfat.

Do you do your own readings with caliper or does somebody else do it? I want to do it myself but don't know how exactly.

I do it myself

I heard that this would give a false reading by including too much connective tissue in the measurement.

They measure low to begin with, besides adipose tissue contains connective tissue; thus it's part of the adipose... the same way that connective tissue in muscle is part of muscle

Where do you draw the line? To take it to the extreme: if you measured the ab skinfold whilst sitting you'd probably get a higher reading. Does that mean it's more accurate?

Actually, if you pinch hard as you can it should be about the same.

On caliper types:

Can you recommend a caliper where you can measure your body fat by yourself which isn't too expensive but is accurate. Because there are a lot of calipers and the prices differ enormously and I know that not every caliper gives an accurate reading.

Usually it is the person performing the test that is the reason for inaccurate calipers... not the calipers themselves. I use the digital ones.

On converting mm to %

I'm after a bit of help trying to find a body fat calculation chart. I have a set of metal calipers and I can't seem to find anywhere to convert the mm into %. I once saw a pro bb for a consultation and he pulled out a chart that converted the mm's over. Do u no of any on the net? I'm not after the ones that you input your measures as I find they're out by a bit

No, I don't but I'm sure a Google search will yield results

ON DXA (DEXA):

DXA is the most accurate test available and it put me 3% higher than I was on calipers when I was pinching as hard as I possibly could

Hey layne my contest prep is going good (20 weeks to go). But I would like to get my bf % checked so I know if I'm on the right track what is DXA and average cost. Also, what kind of place does it? For example, if I was looking in the yellow pages what would I look under?

It's not affordable. It's usually done by doctors or at clinics for bone density and i believe it's around \$700/scan

Part O: Post Contest

On training post contest:

How long should I wait after a contest till i can start training again? also what do you think about detox diets like 3 days of just fruits and veggies?

you can start training immediately after, in fact it's not a good idea to take a week off like so many people do

'detox' diets are gimmicks and bullshit

On bloating post contest:

After my binging fest of a couple days after my show I have noticed alot of bloating.. is this normal? Is it bc of the dairy products and refined sugars that I am not used to?

yea bro... if you've been binging for a few days you are going to be bloated... especially after a keto diet. I've seen people eat themselves into offseason condition in under a week

On transition to offseason from competition:

Do you give your body time to adjust after a contest before you start your first bulk cycle? Even though I'm not quite 8 weeks out, want to start planning (failure to plan is planning to fail!) I was thinking a gradual increase (maybe 150 per week?) would be wise until I'm 300 Kcals above maintenance, then hold that for the 6-8 week bulk cycle. Your thoughts on that?

I just wrote something about this on another forum

Post contest is a very difficult situation and if you go on a full out bulk post contest you are going to do nothing but get fat. Usually what I do is take the carb amount that the person was taking in before the show and add 50g to it, while keeping protein & fat the same, maybe slightly higher on fat. After they stop gaining weight from this; I add in another 20g of carbs & 5g of fat, when they stop gaining weight on that; I add another 25g of carbs and so on and so forth. typically it takes about 10-16 weeks to get back into a full blown offseason; but done right, the fat gain can be kept to a minimum

this was also posted by madman911 on my forum and I thought it was right on target

"We've all heard of the anabolic rebound after contest prep, and many gurus advocate eating like a horse immediately after a contest to take advantage of the huge lean gains possible during this period, but I gotta agree with Layne that it doesn't work that way. The body wants to get back to its baseline body fat levels ASAP, that will always be the body's first order of business when your body fat is literally at starvation levels. I don't agree with the assertion that the body tends toward lean mass gains when body fat is low, I believe that the body likely gains lean mass most efficiently when a threshold level of body fat is achieved. When the body is satisfied that it is no longer in immediate danger of starvation, then an environment promoting lean mass gains is created. The ultimate goal should be to gradually bring the body up to that threshold level of body fat in a slow, controlled way without exceeding what is necessary to promote muscle growth. Many bodybuilders no doubt believe they are gaining tons of lean mass post-contest (not saying that's you quelly, you seem smarter than that), when, in reality, they are adding 2 points to their body fat each week. Going from 5% to 10% bodyfat in the first 2-3 weeks post-contest seems very common and I'm sure most guys think they're packing on slabs of muscle and they are just 'holding water' post-contest and that's why they're looking smooth again.... Nope, you're just 5% fatter."

Interesting thought but isn't it just that? a speculation? Couldn't it also be said that since your muscles were in a starvation type period for so long (heavy workouts + restricted calories) that they would be readily available to absorb nutrients and supercompensate if you will for the lack of food available while dieting? also you will be able to work out with more intensity, etc. Just playing devils advocate i don't know if one way is right or the other

long dieting = low leptin, low T3, reduced metabolic rate = primed to store fat. Sure it's speculation but it's based on years of research on my part and also years of experimentation with myself and people I work with

On resetting metabolism:

Does the body typically need 10 to 16 weeks to reset its metabolism? Because a cutting diet is catabolic per se, even the most thought out carb cycle, will lead to a metabolic drop, right?

Let's imagine you cut on 12 Kcal/lbs of BW a day. Usually (or theoretically here) if you want to maintain fat loss the longer you're in the diet, the lower the calories fall, even if you cycle and try to minimize this effect.

So in reality even if you make your calories go progressively lower and lower, you constantly stay on 12 Kcal/lbs BW/day BUT BASED on your CONSTANTLY DECREASING BMR. Which leads to another question, or maybe a way to

evaluate/calculate your current BMR at different times into the diet. Which would actually be a quiet useful tool, I think. I'd be really interested to hear what you think about this.

The more of a caloric deficit you go into the more your metabolism slows. And yes, it takes that long to 'reset' your metabolism

On hunger post contest:

After contest how many days does it take normaly to feel no hunger at all or it is only happen when I rich my bodyfat setpoint?

Thanks

alot of this is physiological but much of it is also psychological. Studies have found that it can take weeks and even months to properly recover from a diet that includes your appetite regulation. What you DO NOT want to do is gorge yourself post contest. Basically I take whatever number of carbohydrates I was eating during my contest and I add 75 to that, with my protein starting at 225 and my fat starting at 60. once my weight stabalizes I add another 25g of carbs and wait til my weight stabalizes. Then I add 25g of carbs again , and keep repeating, this way you add weight slowly so you don't overshoot your bodyfat setpoint.

On offseason post contest:

As far as offseason goes , is it basically like your pre-contest article on bodybuilding.com , find you protein need , find your fat need , then subtract it from your calorie totals and the left over calories would carbs ? for example : I'm 220 pound male body builder about 8% bf age 21. I take in 220 grams of protein, 15 -20 % fat which would be 78 grams of fat . As for carbs that would make it about 440 grams carbs Does this sound like I'm on the right track for nutrition ratios?

That is exactly what i recommend

awesome , and then with the competition stage you adjust the protein to 1.2 gramsper pound , and adjust the fat to no more then 30% and left over once again goes to carbs , also one other thing , do ou still do your pre contest dieting as stated in your article at bb.com

slightly different but the principles are very similar still

Part P: Miscellaneous

On creating custom diets:

Hey Layne, are you willing to create custom diets for clients?

yes I do offer it for a fee. If you are interested PM me

On spot reduction:

It appears spot reducing may indeed be possible, however IMO possibly the best way to do it would be to do some abs first to get lipolysis going in that area & your abdominal fat releasing free fatty acids and then do some cardio after that in order to increase the oxidation of those free fatty acids so they are not re-stored.

Good gyms by the U of Illinois Urbana/Champaign

What's a good gym by the U of Illinois Urbana/Champaign?

there are a few options

-Refinery is well equipped & open 24 hours but is pretty expensive and is kind of occupied by yuppies and they would never tolerate someone like me.

-Golds Gym in Champaign or in Urbana: not as well equipped as the refinery and not open 24 hours but has a good atmosphere with a lot of competitors, and the regular people tolerate someone like me

-Cardinal fitness is an ok gym, mostly beginners & frat boys, dumbbells not over 100

-Mettler Fitness center: same as cardinal

On purchasing supplements:

I was wondering if you have a gold card from GNC and do you shop there?

troy i am very fortunate in that I have had multiple sponsors for the last 3 years the main ones being scivation & bodybuilding.com. I honestly can't remember the last time i paid for supplements. I am quite lucky in that regard

Offseason/contest stats:

What are the #s you use and how much LBM do you have. June 17th, 2007, 05:45 PM

i'm about 200 lbs LBM and in the offseason I do about 250g protein/day with anywhere from 400-500g CHO & about 60-70g fat

So you compete at 200 and get that hard with 4 to 500 grams carbs? THATS AWESOME!!!!

WOW! You must eat just enough protein to fill a cavity at each sitting in order to keep it at 250 with 4 to 500 carbs.....

A 200 gram piece of chicken has 46.8 grams protein and that cooks down to a piece smaller than the palm of my hand

oh no, that' offseason bro sorry.

precontest i take in around 250g protein, 200g carbs, 50-60g fat

Abs visible during offseason:

Hey Layne, do you think its possible for a natural that ISNT an ecto to have abs while putting on mass in the offseason?

certainly. i'm not an ecto by any means

On natural testosterone production:

Do believe working out alot makes and/or helps the body to produce more test? And how long do natural bodybuilders compete for?? Only reason I ask is because everything you see now a days is about the guys in IFFB. I just turned 24 and am easily the strongest of my life and I feel better vs even when I was teen, but I cant help but wonder if my own natural test is declining even still...

Some of the best natural bodybuilders are in their late 30s and several are even in their late 40s

Natural Federations:

Hey layne I'm competing in my first show next year. Whats a good amateur natty federation to get my feet wet in. I live in San Diego by the way.

<http://www.ocbbodybuilding.com>

<http://www.unbainc.com/>

Future competition plans:

What are your plans for competition in the future? Are you doing any guest posings? do you do seminars?

Not competing until 2009 most likely. Probably no guest posings... not at least until I start prepping. I've had a few offers but I want to come in really really good shape... if you come in not great shape you run the risk of never getting hired again. I will be doing some seminars. Have one tentatively planned for early 2008 in michigan.

On competing in the NPC

Layne, someone asked me a question which got me thinking, have you ever competed in the NPC? If not, got any plans to one day; maybe team universe?

I have competed twice. I got 4th in the LHW division at the 2004 Tampa bay classic & did not place at the caveman in 2004. I was a little discouraged because I felt like I should have done better at both. I'm just not sure I'm a good NPC type physique.

I may do one in the future, just nothing planned right now.

I'm not sure how well I would do in the Team U. Honestly at this point I think I'd get my ass handed to me

NGA posing duration:

How long do the NGA judges usually have you hold poses? I have been holding for 30 seconds in my practice to prep for the show. Now im just trying to get used to the real thing.

30 seconds is more than enough time

Layne's DVD:

For your video, will you be showing us what you are eating and when on the typical day? That would be awesome.

there will be detailed diet info. however, i'm not going to do the typical bodybuilder thing and show people just what I eat... i don't have the same body as everyone. I am going to show everyone how to construct a basic program based on their particular physique & goals. It won't be extremely detailed in that aspect as it would take 10 hours

to go through everything, but it will be more informative than anything else out there in that aspect

Career highlights:

I was just wondering if you mind telling me what you're highest bodybuilding achievements have been to date and any particular goals you might have along the same lines?

well I guess my career highlights are

- 2004 ABA Mr. Indiana & Mr. Illinois Overall Winner
- 2006 OCB Great Lakes states men's overall champion (pro qualified)
- 2006 NGA Heart of America Natural Classic men's open overall champion (pro qualified)

On smoking/drinking:

Do you smoke? Do you drink? Do you feel doing these would make you not be a "natural" bodybuilder? Not trying to instigate, but if AAS abstinence is justified by its ill effects, wouldn't drug use be looked down upon as well.

I do not smoke save the occasional cigar (maybe once every 4-6 months) and I may have 'a' drink every couple of weeks; however alcohol in small doses is actually quite good for you. That said I agree with you that many naturals are hypocrites in that many of them cut water (probably more dangerous and damaging than a lot of steroids) and smoke which is definitely worse.

On taking Prohormones/Prosteroids/banned Substances:

Layne, I made a stupid mistake, because i pigged out after my contest and summer was near and I got desperate to in get in shape for summer, so i bought havoc and did a cycle during the summer, will I ever be able to compete as a natural again? I never did a ph before nor touch any kind of performance enhancing drugs. How long should I wait before I do a tested show? 2 years? Would I only be limited NPC? Could I do OCB? If you were in my shoes what would you do?

If you took a banned substance then you will be relegated to NPC for a bit. ABA drug free length is 3 years, OCB is 5 years and INBF/NANBF is 7 years; some orgs like muscle mania & USBF only require you to pass a urine test the day of the show so if it is out of your system you are good to go.

On Training while sick:

Hey Layne, do you train when your sick? I've got shoulders to train today, and I'm not sure if I should tough it out, or take the day off. I felt a cold coming on about 36 hours ago, I'm kinda congested right now, and just feeling a little lethargic and lightheaded. I've been worse, but I just want to know if training would be counter productive at this point. Can you build muscle while being sick if you back it up with solid nutrition and sleep?

If you don't have a fever training moderately will actually help but I would not go super hard & heavy

On future plans:

Do you have a time frame for the next time you will be competing? I remember you saying you were taking off some time to let your body rest and put on some size but I dont remember for how long.

no not really, probably late 09 i guess

Why '09?

- getting married in 08
- working on my PhD
- writing a book
- filming the video series
- filming my DVD
- working with about as many clients as I can handle; getting about 100-150 emails per day.

Interview with Layne:

<http://www.bodybuilding.com/fun/weik75.htm>

