

## **Nutrition**

### **Zone:**

#### Robb Wolf on Zone:

The studies looking at the Zone have been of short duration and typically take a hard training athlete, restrict the carbs and calcs and not surprisingly, the performance SUCKS. We typically see a period of adaptation to the lower carb content AND if the person is already lean we need to jump them into the Zone at a higher fat level. Barry Sears has done a peese-poor job of articulating how the athletes version of the zone differs from the fat loss version.

The Zone's main strength is that we know EXACTLY how much a person is eating and in what ratios...if a person says "I'm eating 2500cals of paleo foods we have no real idea what that means. If the person says "I'm eating 17 blocks at 5x fat with paleo foods" we have a pretty solid idea what that means AND we have the data to make adjustments based on goals.

The Zone is a pain in the arse to implement but the benefit is real. You just need to weigh if it is worth it for you. ALSO studies are nice to look at for guidance but your own experience is what counts...but what do I know, just a cancer researcher for 6 years...

*Posted: 3-8-2006 by: Joseph Blaire*

I started getting serious with CF and the Zone and stuck with 15 blocks a day (Per Nicole's suggestion; <http://www.crossfit.com/discus/messages/23/10413.html>). I got down to about 143 pounds, and didn't check my BF but it was lower then it had ever been. I felt weak though and I thought there was no way I didn't lose some lean muscle. So I went back up to 16 blocks and my weight's at 147 and going up, unfortunately so is my BF. I guess I should have just doubled my fat blocks at 143.3 pounds=65kg. So I'm thinking of going back to 15 blocks and doing it all over again.

Do you have to lose lean muscle as well as BF to get down to a certain weight (where body fat is low say 5%-7%)? Then we you start adding fat blocks do you ever start to gain your weight and lean muscle back, without the BF?

I'm not sure if I actually lost any lean muscle (when I got down to 143 pounds). My muscles looked and felt smaller, especially my arms and chest (I know we're not bodybuilders but I don't like losing hard earned muscle). Then again I didn't seem to lose any strength and got my first ring Muscle UP and banged out 30 MU"S for the WOD.

I think the average male CF weight is a lean 175 pounds, so being under 150 doesn't sound like a good idea to me.

I should also add that even with the Body Fat, I felt solid at 150 or higher, I'm a smaller guy (Height 5'7). My goal is to be a lean (under 10% BF, 5-7% would be outstanding) 160 pounds, but I realize this could take a while if I want to do it right.

*Robb Wolf Responded:*

Joseph-

Use that 15 block number again and like *you* mentioned start adding fat once you are as lean as you want. You wont loose muscle!

*Posted 3-12-2006 by: Steve Liberati*

According to Zone recommendations, I'm a "5 Blocker." I'm supposed to eat "5 Block" meals at breakfast, lunch, dinner and 2 snacks in between.

By the time I workout at night, there is usually one meal remaining at the end of the day. My question is, why does the meal following my workout look the same as say, my snack in the middle of the afternoon? Shouldn't my meal look different after 20 minutes of intense training than say in the middle of the afternoon when my glycogen tank is practically full and my blood sugar levels are stable? Doesn't it make sense to steal some carbs from my afternoon snack and move them to the my post-wokout meal when my body is primed for a large insulin spike?

In other words, does Crossfit workouts have not enough effect on glycogen levels to handle a larger insulin spike than the other 4-5 meals of the day?

I guess I'm just confused why the Zone does not seem to recognize the post workout window and glycogen replenishment.

If any can explain, that would be great.

*Response by Robb Wolf:*

Steve-

If you sift through the archives you will find some discussions on this topic. To take advantage of the post workout non-insulin mediated nutrient transport you can simply shift most of your carb blocks to that time.

If you stick to mainly veggies during your earlier meals you will get plenty of nutrition while leaving the majority of your blocks available for later. Its up to you as to whether you keep the PWO carb pretty nutritious (yams, sweet potatoes, fruit) or something like maltodextrin.

This is essentially what John Berardi recommends (as you know). This is also the topic of Loren Cordain's most recent book Paleo Diet For Athletes:

[http://www.thepaleodiet.com/paleo\\_bo...athletes.shtml](http://www.thepaleodiet.com/paleo_bo...athletes.shtml)

*Posted 4-24-2006 by: Nick Cummings*

Has anyone gained significant lean body mass (5-10+ pounds) while following Zone protocol? Specifically by dialing in your blocks and getting to 5% bodyfat and then increasing the fat blocks. I have read many threads saying things like basing zone will not provide the protein carbs etc. for lean mass gain. I have been following the zone ratios and loosely following paleo food choices but tinkering with the number of blocks I eat with the hopes of adding weight.

*Response by Robb Wolf*

The high fat block multiplier is perfect for maintenance but if you want to gain you will need to ratchet up the block count significantly. One can step these up say 2 blocks per week over a period of time keeping an eye on leanness. If you start smoothing out too much just ratchet back the fat blocks a bit but keep adding total blocks.

Use the flow chart from Mastering the Zone to manage carbohydrate levels and optimize that side of things. Once you have hit a desired weight you can likely dial back the total blocks until that matches your maintenance level and then add more fat.

*Posted 5-3-2006 by Mitchell Beers*

I've just started the zone diet but as an exchange student in a foreign country it has been a bit difficult for me for the following reasons:

- a) I don't have a permanent address
- b) I am on a budget
- c) I don't have access to a lot of foods
- d) Cannot read nutrition labels in Swedish

Not having a permanent address has meant I have not been able to read Dr Sears books, however I have tried to glean what I can off various message boards. However I was hoping I could post what I've eaten today and could be told if I am on the right track, or am falling short of the diet.

Breakfast: Handful of peanut (unsalted, encased), grapefruit, apple

Snack: Banana, more peanuts

Lunch: 200gm hamburger meat (fried in vegetable oil), boiled string beans, asparagus, snowpeas, 410gm kidney beans boiled

Snack: Pear, more peanuts

Dinner: Chicken fillet (fried in vegetable oil), asparagus, snowpeas, fried egg and mushrooms.

Am I more or less following along this diet? If it helps I am 5'11", 176 pounds with 11% body fat. My

workout today consisted of pushups, situps, pullups and chin ups training to fail. I have no equipment whatsoever, which is why I am not strictly following the WOD.

*Response by Robb Wolf*

Where in Sweden are you? We were in Marstrand 2 summers ago. Absolutely awesome. Sweden and topless beaches=good times!

You can find loads of inexpensive seafood depending on where you are. Smoked salmon, herring etc. Inexpensive, tasty and it will last a day or two if kept reasonably cool. Loads of veggie stands and if you get in a pinch the dairy in Sweden is pretty damn good. kefir and yogurt if you tolerate it.

*Posted 5-5-2006 by: David Stegman*

what are you doing to put on some weight? I'm also 6'4" but since being on the Zone for 6 months and doing the crossfits wod that I can at home I'm down to a lean 167ish. I think it's a bit too light for someone my height.

Are you just increasing your fat blocks and lifting more?

*Response by Robb Wolf*

David-

You will want to start upping your total blocks by 1-2 blocks every 1-2 weeks to add weight. You may get up as high as 30 blocks if you need to get up to the 180-200lb range. Then you will add in fat blocks for maintenance while dialing back the total block count to 18-24.

*Posted 5-8-2006 by: Travis Fehler*

Does anybody out there know what it comes in as for blocks/good/bad carbs in the zone. We don't eat bread per say but my wife sprouts buckwheat and uses it with carrot pulp (from our juicer), soaked flax seeds, olive oil and some other good stuff to make a fantastic raw flatbread(in our dehydrator). I'm addicted to the stuff and I was wondering how it works into my zone diet.

*Response by Robb Wolf*

Travis-

I suspect it is low-sh carb and likely good glycemic load wise. There are some similar products at most health food stores. Find one that looks close and use the nutrition information from that.

*Posted 5-8-2006 by: Eric Lester*

My dad does not like any fruits. He can eat some however by putting sugar on them (such as berries with sugar). He is wondering if overall it is better for him to not eat the fruits at all or eat the fruits with added sugar.

Also how about canned peaches, pineapple, etc that are in syrup?

*Response by Robb Wolf*

Eric- If he will eat veggies that is fine. Some yams and sweet potatoes (not sugar added!) might add a little variety.

*Posted 5-30-2006 by: Travis Ransom*

Alright. I was at 17 blocks and going along. Lost the weight I wanted and got my BF where I wanted it to be and now wanted to level out. I upped my block 20, 2 weeks ago. I pretty much maintained my weight over the two weeks. After this past weekend of eating typical holiday cookout food, being out of town and mostly at the mercy of others eating habits, I get on the scale today and have lost 2 pounds. I'm thinking of upping another 3 blocks to 23. Should I go higher than that? Or keep it at a few blocks at a time? I'm at 160lbs right now and would like to work my way back up to 170-175lbs range. I have cut out the cardio I so dearly love to do just to keep myself from burning up the extra calories. I'm doing WOD(MWF) and 5x5(T,TH). I follow what I consider a fairly strict zone diet so, hit me with your ideas and thoughts.

*Response by Robb Wolf*

Travis-

To halt the weight loss you can multiply the fat you are consuming anywhere from 2-5x, so if you are eating a 4 block meal that means 8-20 blocks of fat. Once weight has stabilized you can step up your

total blocks 2 blocks per week to start gaining muscle. Keep an eye on the mirror. If you start getting pudgy around the midsection cut the fat blocks back a bit as you continue to up your total blocks. If you are foggy headed between meals you are getting too many carbs so cut the carb blocks by 1/4 but make up the calories with more fat blocks.

Let me know if this makes sense!

*Posted 5-31-2006 by: Darrell E. White*

Any one have an experience like this? I've been increasingly strict on the zone since 1/1/06. I even dropped alcohol 10 days ago (not that big a deal; only 4-5/week bdfore that). Every day I get hungrier and hungrier, and tonight I just hit the wall. Two hours after supper I was ravenous, and it was only going to be carbs that did it. A handful of peanut-butter filled pretzels saved the day, but if there'd been ice cream or pecan pie around it could have been a blood bath!

I'm 155 lbs., 5'8 1/2", %fat 12ish. I've been 155 for years, but the mirror test tells me that my lean mass has increased since January. My blocks run something like 4-2-5-2-5, 1X fat, first meal 6:30 AM, end with dinner 7:30PM, bed by 10:30.

So, any thoughts? Seems like 18 blocks should be enough for my body and 5 WOD's per week. More fat? Cheat meals?

I get really cranky when I'm hungry and it seems like I'm more hungry each day.

*Response by Robb Wolf*

I've always found the base carb recomendations for the Zone to be too high for me. If I go about 3/4 and make up the difference with an added fat block things go pretty well. Mastering the Zone has a section on dialing in your "hormonal carbeurator".

The recomendation of less dense carb sources is a good one. There are some intermediate sources like onions, tomatoes and carrots that are more dense than leafy greens but not as dense as fruit.

*Posted 7-31-2006 by: Saul Jimenez*

I have been doing zone-ish and, more recently IF, for about a year or so. Since I can remember, I have had some sort of hay fever during the spring or summer (it mostly depends on where I live). However, this year it just never happened. I have a had a couple of accute bouts when running on trails surrounded by head-high weeds but it went away after direct contact. The only thing I can think of is my diet, I have always been big on carbs.

Has anyone had a similar experience with chronic health issues using either IF or low carb diets?

*Response by Robb Wolf*

Allergies have a strong linkage with inflammation. CLC and or IF should help with that imensely.

*Posted 8-14-2006 by: Cameron Hetzel*

Hey everyone, I just started the zone diet and have a few questions. I bought a couple of Sear's books this weekend and started to read them. What are your thoughts on him recomendation for only 1 gram of protein per pound of LBM?? Also it seems to me that getting all of the calories for my carb blocks is tough, unless i use beans or oats. Do you get most of your carbs from vegetables or do you supplement them with oats and/or beans? Do most of you use his block set up of 7 grams of protein per block, 9 grams of carbs, and 1.5 grams of fat? Or would you suggest something different to cut fat. One last question, how do you set up your meals i am used to eating 6-7 meals a day pretty much of the same size. When eating this many carbs is it better to down size my pre bed meal? Thanks for all of your help.

DEANO

*Response by Robb Wolf*

Deano-

Use the base Zone as prescribed until you are at a desired level of leanness, then add fat. Search for "Athletes Zone" or buy the Performance Menu issue 2 that covers this.

Stick with mainly fruits, veggies and the liek for your carbs. Its a lot of food that way. Make time to eat.

~1g protein/lb LBM=plenty. Really.

Break the meals into as many small feedings as you like.

*Posted 9-17-2006 by: Yael Grauer*

Just one more thing--I'm not sure where I stand on the six meals a day thing... I know that theoretically it improves metabolism, but I also know that eating snacks regularly makes me crave snacks and eventually get batty if I don't have my snacks (though that may just be because Zone is too low in fat and/or high in carbs for me--I started 6 meals a day when i started zoning so I have too many variables) but I found this on Art De Vany's website-- good food for thought.

[http://www.arthurdevany.com/archives...eals\\_a\\_da.html](http://www.arthurdevany.com/archives...eals_a_da.html)

I'm grasping at straws a bit here and I'm not really sure what the 'right' answer is... I'm done trying to figure it out though. :-) My new theory is that people should find their personal %s that will make them feel full and satisfied and eat snacks if they feel like it. Just get rid of all low quality foods, drink plenty of water, monitor the effect of your %s on workouts, mood, hunger level, cravings, etc. and eat whatever the heck you want.

If anybody else wants to get more scientific about it or tell me why I'm wrong, I'm all ears. :-)

*Response by Robb Wolf*

Yael-

I don't know that there is a "right" answer to all fo this other than certain approaches work better for certain situations. The Zone IS too low in fat, but you are not at that base level forever. In Mastering the Zone a flow chart is offered to dial the carbs down if necessary.

Food frequency is interesting...it can be great for a time with regards to recovery and repair but perhaps every 3-4 days a brief fast to allow the system to rest, enhance insulin sensitivity and promote hGH release.

Pericone (the "skin" doctor) recomends a very paleo esque diet with 4 meals per day and NO snacking. Reason? Provide adequate nutrition but allow the system to clear to minimize the inflammation ALL meals produce.

Larry was the one that cooked up this heirarchy:

Paleo foods, then Zone (id throw in CLC), then intermittnet fasting. If we tinker with that guideline...think about what Lights out has to say (seasonality, loads of probiotics)...consider how/when to modify carb and fat levels for specific situations...this is an amazingly detailed and powerful approach to nutrition.

*Posted 5-27-2007 by: Lauri Michelle Zucker*

I just went to DrSears.com and asked why I could be gaining weight on the Zone diet, but I thought I might also ask here to see if anyone else has had the same issue. I've been on the Zone for about a month now, and at first, I did the calculations in the book to calculate my protein requirement. It said 9 blocks when active. I lost some weight but was hungry. Then I went to DrSears.com and used their calculator, and it said I should consume 11 blocks per day. Then the weight gain began. I backed off to 11 blocks of fat and protein, but 8 blocks of carbs, and still I'm gaining weight. I do CrossFit 5 mornings a week for 45 minutes, and I thought this combined with the diet would make fat disappear. Has anyone else had this problem, or does anyone have any ideas of how to change the diet so that it can work for me?

*Response by Robb Wolf*

Lauri-

I found the Zone carb level to be a bit more than I do well on. I'm at 16 blocks but do very well on ~10-12 blocks. I just add 3 blocks of fat for every carb block I delete. This seems to stabilize the food cravings I had in the past which were SUPER annoying as I had nothing like this when following something like the anabolic diet.

In Mastering the Zone a flow chart is offered that can help one "fine tune the hormonal carburetor" as Dr. Sears puts it. That's that stuff. As to the weight gain...you could add muscle quite easily. It sounds like you are running at a pretty high level performance wise. Tinker with the above modifications and see if dialing in the carb level helps but the weight will follow your performance needs...not a preconceived notion of what you "should" weigh.

*Posted 6-1-2007 by: Emily Mattes*

I started the Zone diet last week. Going by the Crossfit guide to the Zone diet, I'm eating 10 blocks a day--I'm 5'6", 165, slightly muscular. I'm a medium-to-large-sized female but use the number of blocks for a small-sized female because I'm trying to lose fat.

I've also been keeping track of my calories using Fitday. On 10 blocks I'm only eating about 700 or 800 calories! This seems pretty darn low, especially since I'm working out two hours a day. Even I ~~was~~ small this seems low. I've heard you want to cut out 20% at most of your daily calorie needs to cut weight healthfully.

Should I increase the number of blocks? Can this be right? What do you recommend? I can deal with the hunger, but I don't want to cut so many calories my metabolism gets messed up.

*Response by Robb Wolf*

Emily-

You can certainly bump things up to 11 blocks. The Zone is absolutely calorie restricted in this early period...later you will ratchet up the fat to reach a stable calorie level. This is after you reach your desired level of leanness. EAT ALL YOUR FOOD! I can't tell you how many clients start the Zone and then fail to even get in the food they are supposed to eat. It is already calorie restricted, no need to add more.

Stay active, keep track of EVERYTHING, then if you need help you have precise information and no guessing. It will work..hang in there.

*Posted 5-30-2008 by: Andrew Lallo*

Giving the zone a go, and I did some searching for my question but I couldn't really find a definitive answer...

How *strict* do you have to be when measuring your blocks? What I mean is...4 blocks of protein would be 28g of protein. Where is the high/low cut-off if you can't exactly hit 28g? Is 25g acceptable? Is 32% acceptable. I've been trying to not to exceed halfway to the next block level, i.e. 4 blocks is 28g of protein...5 blocks is 35g...so if I'm trying to stay 4 blocks, I wouldn't pass 31/32ish grams. Thoughts?

ALSO

I've done the calculations, and at 5'7" 146lbs (roughly around 11-13% bf), I am trying to add some muscle, not a lot of fat, so I figure 16 blocks will do the trick. This may sound weird but I used to be ~205lbs, lost my weight doing a lot of cardio and hiit on a rower but no real strength work. Whenever I try to up my calories to add some muscle my body always seems to want to add fat, and not muscle? Anyone ever experience this?

*Response by Robb Wolf*

The trick is to be consistent. You want both accuracy AND precision...but there are diminishing returns to how anal one wants to get about this. Be consistent so you can make reasonable decisions on your next course selection. The problem with an un-weighed nutritional approach is it's tough to really know what to change to affect change in a specific direction...it's all guess work. Imagine shooting free throws and never seeing if the basket ball went IN or out of the basket!

### **Paleo:**

*Posted: 3-8-2006 by: Tony Ferous*

Any suggestions for adult facial acne? I feel that acne must be diet related, I'm in good shape(~8% bodyfat), my diet has always been very tight, either paleo or paleo with some oats; fish oil, some supplements(occasionally I do whey protein for a few weeks at a time).

One enduring theme to my dietary habit has always been a high protein base - 30-40 of protein, ~4 times daily, as I train with weights 4 times weekly, I'm not looking to lose weight. I'm thinking the unthinkable - lowering my protein intake!

Anyone familiar with the [www.waisays.com](http://www.waisays.com) site?

It seems slightly crack-pot, but its very interesting.

It suggest's that cooked(ie damaged/maillard reaction) proteins are to blame, and thus to eat protein solely from raw egg yolks and raw tuna, a maximum of 100g per day plus olive oil and lots of fruit. - no grains(cause constipation apparently due to beta-carbolines?), no dairy(opioids therein causing constipation), no legumes, lots raw fruit.

Also, anyone know of any valid allergy tests with scientific backup?

Other Ideas?

*Robb Wolf Responded:*

Diet is absolutely to blame:

<http://www.thepaleodiet.com/articles...%20Article.pdf>

When you are writing a scientific paper everything needs to be speculation and maybe's. Proof scientificaly is very hard to come by.

As Cordain mentions in the article and others have noted related to sebacious gland activity, hyper keratosis and abnormal baterial activity ( all of which lead to the clinical manifistations of Acne Vulgaricus) you simply do not see acne in HG groups. With the adoption of agriculture you see some with the adoption of modern refined foods you see much more.

Some people no matter how bad their nutrition is will never develop acne, this is where genetic variation comes in. This is why hyperinsulinism is called Syndrom X. You can clinically define high levels of insulin but in person A this manifests as overt obesity. In person B they display no obesity but have uterine fibroids and depression. Same casuative factor but different manifestations.

Remove insulin spiking foods from the diet and I guarante the acne will go away. I'll desigen the diet, you have whomever you like actually follow it for a month and I'll bet you \$100 they are acne free at the end of the month.

I'll also guarantee you that compliance will be a monster and wresting every last insulin spiking food from the person will be very hard. Thats why its acutane, tetracycline and retin-a instead of "meats and veggies, nuts and seeds..."

*Posted: 3-8-2006 by: Ross Hunt*

I absolutely agree that facial acne is an index of insulin spike in diet. What do you think about non-facial acne, though? For instance, steroid users experience "backne," and it seems to me that what little acne I have (again, on the back around the shoulders) is proportional to my ZMA intake. (I DO still eat cottage cheese, but that is absolutely the only non-Paleo food in my diet now).

**No Response...valid Q??**

*Posted: 3-8-2006 by: Steve Liberati*

I have never in my life meet a group of people this loyal to a particular diet. Coach G. truly has a cult following here. If Coach told people to drink poisoned kool-aid, I really believe some of you guys would comply with no hesitation.

Of course I'm being facetious here, but it seems like whenever anything is suggested outside of the paleo/zone/crossfit parameters, most people have a cow.

or...whenever someone asks for advice pertaining to their diet or training, the only solution accepted in

the thread is zone/paleo/crossfit recommendation.

Now, I'm as big of a believer in Crossfit as the next person, but can we please (at least try) our best to keep things in perspective and just try to consider other suggestions that are outside of Crossfit worldview.

Yes diet may in fact account for up to 85% of a person's health and body composition...BUT it is by no means the answer to everything.

Why do some people think it is?

*Robb Wolf Responed:*  
Steve-

We are folks who do not get out much and make up for our forlorn existence by building personas on this message board that are bigger than life. I'm actually an accountant living in Ohio and I've made all this crap up.

That or folks around here recommend what they think is "best" based off personal experience, coaching and interpretation of not actual generation of the scientific data.

No offense but when I hear a person crying foul about paleo/zone nutrition the person inevitably has a Twinkie addiction and is looking for some way to justify their habit.

I just have to point out that Loren Cordain has a PhD in exercise phys. He has published papers on: Rheumatoid arthritis, acne, auto immunity, near sighted ness and cancer to name a few topics and not in back water research journal. They are published in Acta Dermatology, Ophthalmology, British Journal of medicine, British journal of nutrition. This is UNHEARD of in science. He publishes at the top of the field in subjects he has NO specialization in. This is like a molecular biologist contributing something to solid-state physics. It's not likely to happen. Do you know how he does this? In his words "When you know the answer it is easy to retro engineer the question".

Virtually no one else is even on the same planet with this guy. Nutritional Sciences forgot they are a science and they are mucking around with a false reductionism that doesn't produce any answers because they lack a theoretical framework from which to view it. Sorry if this makes me a Zealot but I am certainly all ears if you have a better suggestion.

**One more post by each w/ link & photos....Want it included???**

*Posted 3-11-2006 by: Neal Winkler*

What do you think would happen if a type 1 diabetic took on a paleo diet? Futhermore, is there any possibility for a type 1 diabetic on a paleo diet to do intermittent fasting?

*Response by Greg Battaglia:*

Neal, I think everyone who is human will benefit from a paleo diet. It's not really so much that the paleo diet has some sort of amazing healing power. It's simply the diet that humans were designed to eat and by removing inappropriate/harmful foods we can bring our bodies back to normal function and avoid all the damage that those foods cause. I think a paleo diet minus the fruit would be great for a type 1 diabetic.

*Response by Robb Wolf:*

Neal I think Greg is right on. Id be wary of IF until the person had very strict control of thier nutrition and blood sugar. That is messing with some powerful stuff.

*Posted 3-12-2006 by: Marissa Ray*

They say there's new evidence that we've continued genetic adaptation \*after\* the introduction of agriculture. I eat mostly along the lines of the Athlete's Zone, and also paleo a few days per week (some oatmeal etc on other days), so I found the article interesting. Any responses?

(New York Times)

March 7, 2006

Still Evolving, Human Genes Tell New Story

By NICHOLAS WADE

Providing the strongest evidence yet that humans are still evolving, researchers have detected some 700 regions of the human genome where genes appear to have been reshaped by natural selection, a principal force of evolution, within the last 5,000 to 15,000 years.

The genes that show this evolutionary change include some responsible for the senses of taste and smell, digestion, bone structure, skin color and brain function.

Many of these instances of selection may reflect the pressures that came to bear as people abandoned their hunting and gathering way of life for settlement and agriculture, a transition well under way in Europe and East Asia some 5,000 years ago.

Under natural selection, beneficial genes become more common in a population as their owners have more progeny.

Three populations were studied, Africans, East Asians and Europeans. In each, a mostly different set of genes had been favored by natural selection. The selected genes, which affect skin color, hair texture and bone structure, may underlie the present-day differences in racial appearance.

The study of selected genes may help reconstruct many crucial events in the human past. It may also help physical anthropologists explain why people over the world have such a variety of distinctive appearances, even though their genes are on the whole similar, said Dr. Spencer Wells, director of the Genographic Project of the National Geographic Society.

The finding adds substantially to the evidence that human evolution did not grind to a halt in the distant past, as is tacitly assumed by many social scientists. Even evolutionary psychologists, who interpret human behavior in terms of what the brain evolved to do, hold that the work of natural selection in shaping the human mind was completed in the pre-agricultural past, more than 10,000 years ago.

"There is ample evidence that selection has been a major driving point in our evolution during the last 10,000 years, and there is no reason to suppose that it has stopped," said Jonathan Pritchard, a population geneticist at the University of Chicago who headed the study.

Dr. Pritchard and his colleagues, Benjamin Voight, Sridhar Kudaravalli and Xiaoquan Wen, report their findings in today's issue of PLOS-Biology.

Their data is based on DNA changes in three populations gathered by the HapMap project, which built on the decoding of the human genome in 2003. The data, though collected to help identify variant genes that contribute to disease, also give evidence of evolutionary change.

The fingerprints of natural selection in DNA are hard to recognize. Just a handful of recently selected genes have previously been identified, like those that confer resistance to malaria or the ability to digest lactose in adulthood, an adaptation common in Northern Europeans whose ancestors thrived on cattle milk.

But the authors of the HapMap study released last October found many other regions where selection seemed to have occurred, as did an analysis published in December by Robert K. Moysis of the University of California, Irvine.

Dr. Pritchard's scan of the human genome differs from the previous two because he has developed a statistical test to identify just genes that have started to spread through populations in recent millennia and have not yet become universal, as many advantageous genes eventually do.

The selected genes he has detected fall into a handful of functional categories, as might be expected if people were adapting to specific changes in their environment. Some are genes involved in digesting particular foods like the lactose-digesting gene common in Europeans. Some are genes that mediate taste and smell as well as detoxify plant poisons, perhaps signaling a shift in diet from wild foods to domesticated plants and animals.

Dr. Pritchard estimates that the average point at which the selected genes started to become more common under the pressure of natural selection is 10,800 years ago in the African population and 6,600 years ago in the Asian and European populations.

Dr. Richard G. Klein, a paleoanthropologist at Stanford, said that it was hard to correlate the specific gene changes in the three populations with events in the archaeological record, but that the timing and nature of the changes in the East Asians and Europeans seemed compatible with the shift to agriculture. Rice farming became widespread in China 6,000 to 7,000 years ago, and agriculture reached Europe from the Near East around the same time.

Skeletons similar in form to modern Chinese are hard to find before that period, Dr. Klein said, and there are few European skeletons older than 10,000 years that look like modern Europeans.

That suggests that a change in bone structure occurred in the two populations, perhaps in connection with the

shift to agriculture. Dr. Pritchard's team found that several genes associated with embryonic development of the bones had been under selection in East Asians and Europeans, and these could be another sign of the forager-to-farmer transition, Dr. Klein said.

(deleted the rest of the article due to length- see NYT for more)

*Response by Robb Wolf:*

I just had a conversation with Prof. Cordain this afternoon and they have a complete mechanism figured out for the role of dietary lectins in most if not all autoimmune diseases. Publication pending. Those problematic lectins are found in the neolithic foods.

None of this stuff is a guarantee...almost everyone has a story of an Uncle Fred who smoked, drank, ate horribly and lived into advanced age. Many people also have a story of someone who died in their 30's or 40's from a heart attack or stroke.

In my mind it is a matter of taking available information and theory and making informed decisions (if you want to). Our genes have certainly changed a bit since agriculture but those adaptations have allowed people to tolerate certain things more than others, not thrive.

*Posted 3-20-2006 by: Marc Moffett*

Let me say first that I am pretty committed to a paleolithic eating program as outlined by Cordain. Evolutionary medicine generally, and evolutionary nutrition specifically, strikes me as the only theoretically sensible approach to take. There is a famous quip from the evolutionary biologist Theodosius Dobzhansky, "Nothing in biology makes sense except in the light of evolution." Dobzhansky's point, of course, is that evolutionary theory provides a framework within which disparate and seemingly unrelated snippets of information can be synthesized and explained. This theoretical framing is especially important when considering issues of nutrition and health, since it is generally unethical to do the sorts of controlled experiments on people that would give us definitive "proximate" answers, and where we must rely heavily on epidemiological, in vitro and animal model studies.

That said, current research in this area on the part of people who aren't themselves experts in evolutionary biology tends to be a little naive. Cordain, for instance, more or less assumes that the presence of an item on the menu of our paleolithic ancestors is necessary and sufficient for it being relatively benign nutritionally. But nothing in the evolutionary framework suggests that it is either necessary or sufficient.

A simple reason that something's being on the paleolithic menu isn't necessary for good nutrition is the existence of so-called preadaptations: characteristics which are adaptive in non-ancestral environments. Assuming that Cordain is right (I think he is), that grain wasn't on the paleo menu, humans clearly do exhibit a preadaptation for grain consumption--not particularly surprising considering the fact that we are extreme generalists nutritionally. Note: I am not saying that Cordain is wrong about cereal grains; just that it is incontrovertible that we can subsist fairly well even when grains make up a large part of our diet. (I will come back to this in a moment.)

Nor is it sufficient that something was on the paleo menu for it to be nutritionally benign. In fact, arguably, we would expect the opposite. Animals respond genetically to predation by becoming bigger or faster or better at hiding; plants respond genetically to predation by developing chemicals that discourage browsing. And this latter fact suggests that those plant materials that were most central to hominid evolution are likely also to have the best chemical defenses against hominid consumption. Of course, we would have evolved countermeasures of our own. But such countermeasures are unlikely to be anywhere near perfect. That would be like a lion evolving into such an efficient predator that it had effectively 100% success. (In fact, we know in other cases that plants typically do have very significant negative nutritional impacts on the organisms which feed heavily on them.)

So given that sort of background, here is the worry. Nothing in evolutionary theory makes it particularly likely that whatever preadaptation we have to a nonpaleo foods like grain make such foods less nutritionally adequate than those foods which have formed the core of our evolutionary diet. These

things will have to be settled on a case-by-case basis. But as noted above, this is difficult precisely because the kinds of studies involved are pretty marginal from an evidential perspective. And what worries me a little is that the naive adoption of an evolutionary perspective has tended to focus research on the pitfalls of the nonpaleo foods while ignoring the potential nutritional pitfalls of the paleofoods.

I personally wouldn't be surprised if 50 years from now we discover that *ALL* plants foods are a mixed bag nutritionally. If so, that wouldn't suggest that we should all be strict carnivores, just that we should consume a *highly* varied diet. In fact, maybe we should just chunk the whole idea of a "staple food" or a "base" on the food pyramid altogether. If you want good nutrition, eat whatever you want--just don't eat it for more than a month at a time!!

None of the above is meant to be definitive, just the sort of background thoughts/reservations that have had over the years.

*Response by Robb Wolf*

Marc-

Interesting stuff! There is no doubt that all plants have anti-predation mechanisms, Bruce Ames, developer of the Ames Test has written on this extensively:

<http://mcb.berkeley.edu/faculty/BMB/amesb.html>

Now within the framework of evolutionary biology the toxic load of plants is mitigated by seasonal consumption (eating the plants when toxins are lowest), preferential consumption (eating the least toxic plants and or least toxic portion of the plant) and also preparation (in the case of acorns and other plants sophisticated processing was employed to reduce toxicants such as tannins).

We note all of these strategies in the anthropological data. It is important to remember that indigenous peoples had an amazing understanding of their environment and how to extract a living form it.

Perhaps this is a logic fallacy but it appears the Hunter Gatherer lifeway was "as good as it gets" in many ways. The introduction of neolithic foods caused a marked change in health, that is very clear. The adoption of these foods meant a serious step down for the populations that ventured this direction, more for the agriculturalists than the pastoralists. I guess it is interesting to note what the toxicant characteristics of standard HG fare would be but for me it borders on a waste of time when I know how to employ some of the techniques mentioned above and also know from personal experience what foods do and do not work for me.

Re-reading your post I noticed that you touch on the variation concept but again, why introduce problematic foods? A person with gluten intolerance need only be exposed to an irritant once a month to keep the GI tract in a constant state of inflammation. There are certainly better and worse food choices to be made with regards to nutrient density and other factors such as GI irritation.

Good Stuff!

*Posted 3-20-2006 by: Marc Moffett*

Thanks for the response. (I should add that your post on metabolic typing on the PM was also quite interesting.)

My only quibble would be that I am worried that a large number of plant foods, whether paleo or not, might turn out to "problematic" to some extent or other: cereal grains today, nightshades tomorrow, cruciferous vegetables next week...

It would be interesting to quantify in some way the extent to which hunter-gatherers have "staple" foods. I know their diets are typically far more varied than ours, but does the variation also translate into reduced number of foods that are eaten nearly every day/week/month? (This, incidentally, is a potentially confounding variable wrt the observations concerning agriculturalists/pastoralists.) I know I personally end up eating four or five standard veggies over and over again all year--something which strikes me as unusual for HGs because of seasonally availability.

*Response by Robb Wolf:*

Marc-

I think that varied from group to group. The !Kung San had access to the monongo tree that dropped a fruit, which was consumed immediately. The seed was stored and eaten throughout the year and the seed had approximately the properties of a walnut. This provided a very stable food source but the !Kung are noted to have eaten their "favorite" plant food that were easily at hand first and then wandered in ever increasing circles about the camp. At a certain point "2nd favorite" plant foods that were easily available were eaten in preference to even farther trekking for the favorites. Once an area had been eaten out of the primary and secondary foods the group typically moved on...leaving many many edible plants that would be used in extreme events.

Other groups did not have a primary food source like the monongo and showed a generally increased variety. Neither group seemed to suffer until neolithic foods are added to the mix.

If one tries to eat local and in season (what on sale in the store, what's available at the farmers market) I think any potential problems are solved.

People already consider the level of nutritional refinement I am talking about here to be cultish and extreme...taken another level and I think people will be checking out of the program...if they were ever in.

*Posted 5-14-2006 by: Julie Scoville*

Just a question about this website

<http://www.dadamo.com/typebase4/typeindexer.htm>

I was looking at this site. Does anyone have any experience with this type of food control? I am type O and tried a quick experiment this weekend with the food listed to avoid for my blood type.

I noticed a significant difference in how I felt after eating the foods marked as "avoid". I spent one week eating the neutral and beneficial foods and felt great. More energy, feeling lighter and more alert. The "avoid" foods made me feel sluggish and tired.

The list for my blood type (including foods I would eat and like) is rather short now. The list is a good mix of meat, veggies and fruit with very limited nuts and only one dairy (mozzarella cheese made with whole milk and its neutral at best) selection.

With my limited research, I've found that the foods on the short list are beneficial to my metabolism and digestion processes.

Does anyone have any experience or knowledge about this typing of food and its reaction on the body as a whole?

As a result of my experiment I am going to be moving toward a more paleo type of diet for an extended amount of time and see what benefits I can achieve.

*Response by Robb Wolf*

Sorry but if the blood type diet takes root here I'm jumping ship! The "o" diet is more or less paleo and what everyone should be eating. His point about lectins has merit but unfortunately it does not fit the blood type theory. The ABO blood types are found in all primates, including new world species which means those markers are several million years old. That pretty well shoots his theory from the get go.

The Eades (Protein Power Lifeplan) were excited about this many years ago and tried implementing it into their program. It did not work.

Buyer beware.

*Posted 5-17-2006 by: Julie Scoville*

Thanks for all of the input. I was diagnosed with IgA Nephropathy a year ago and was interested in the

information in terms of this disease being precipitated/worsened by the food I am/was eating. The blood type eating and information that a more paleo type diet is beneficial is really helpful for my goal of avoiding the dangers of this disease.

*Response by Robb Wolf*

Julie-

put IgA Nephropathy and Hyperinsulinemia in pubmed. A dietary lectin may in fact be the problem but I suspect elevated insulin may be a co-conspirator.

*Posted 5-13-2006 by: Neal Winkler*

I did a search of the board and found virtually no discussion of the site <http://theomnivore.com>

It's a pro-Paleo, anti-saturated-fat-and-cholesterol-are-bad-for-the-heart site by a man named Anthony Colpo. He had a little debate with Cordain through an intermediary [here](#).

*Response by Robb Wolf*

Cordain's point is that beyond a certain % of fats consumed too much sat. fat opens the door to POTENTIAL problems. The bottom line is that sat fat was rarely in high concentrations in the ancestral diet and was always within certain percentages because of the accompanying poly's and monos.

Colpo is like Fallon and Enig in my opinion in that they have lots of good information but have chosen to take what Cordain says completely out of context. Cordain has never said excess sat. fat absolutely will cause pathology but he has made the point that it can open some doors to problems especially if other nutritional and environmental irritants are present.

*Posted 5-17-2006 by: Brandon Beggs*

I've just now found CrossFit while deployed here in Iraq (very sore after the last 2 WOD's, by the way) and have tried to implement every aspect of the training I can, to include diet (Zone and Paleo Diet books on order and on the way). I just have two initial questions:

- 1) Is V8 juice a viable sub for my veggies when the real deal is not readily available? Any glaring negatives in drinking the juice with respect to the Paleo diet?
- 2) Is there a particular brand of turkey/beef jerky I could have sent over here to give me another protein option that is more "Paleo" than others (i.e., no sugar or corn syrup)?

Yours in The Suck,  
Brandon

*Response by Robb Wolf*

Brandon-

If you can get the low sodium V8 its actually a prett good alternative, if not the regular is fine. With regards to Jerky I think the brand Costco stocks is actually pretty clean. The bottom line for you IMO is to get as much quality food as you can to off-set those periods when it is scarce or low quality.

*Posted 5-26-2006 by: Frank Menendez*

I'm slowly dropping the dairy and the wheat from my diet, and I've noticed almost all Zone recipes include wheat and dairy somehow. I'm assuming by removing the dairy and wheat I'm following more of a Paleo diet using the Zone "block" ideas, yes?

*Response by Robb Wolf*

Frank-

thats it! Meat & veggies, nuts & seeds, some fruit, little starch no sugar...in Zone ratios.

*Posted 6-5-2006 by Brendan Fournier*

I'm becoming more and more intrigued by the Paleo stuff I'm reading about, both here and on some of the linked websites. I had a couple of questions that I haven't really seen addressed yet:

1. I understand that the standard paleo recommendation is no dairy at all. On the other hand, I've read about how the Masai tribe of Africa are a good example of how healthy the Paleo lifestyle is. But the first thing I read about them was how much cow's milk they drink! Is that right? Does the no-milk rule come from another Paleo group, or is it just considered healthier because of other reasons?

2. And it seems like a general recommendation with Paleo is to cook your food as little as possible, which makes sense. But I've noticed from some posts that a lot of people on Paleo use their microwaves to cook. That seems to go against the basic recommendations, as well as the general spirit of the Paleo philosophy. What are your guys' thoughts on microwaving?

*Response by Robb Wolf*

The Masi are technically "pastoralists" since they raise animals as their main economic strategy vs a foraging based economy with hunter gatherers. The Masi are generally very healthy and are a striking contrast with their agriculturalist neighbors. Nice anthropology lesson but it does not answer the question of whether or not you should eat dairy, right? Tinker with it and see how you feel. Some people do fine on dairy. Others not so well. If you have any type of autoimmune disease in your family I'd really think about eliminating it at least for a while to see if you notice any improvements in systemic inflammation. As with any of this stuff you can be a purist or just a 80% complier. Use the information to make informed choices to support your lifestyle and goals.

Regarding the Microwave: Keep all bodyparts out of the oven while its on. If you follow that one rule, you should be fine.

*Posted 6-6-2006 by: Joe Murphy*

does anyone know of a good source of info on zone/paleo for kids? something not too technical? I'm actually trying to convert my wife (without much success), but I think approaching it as a health issue for the kids would be an easier route. and better for them too, of course. thoughts?

*Response by Robb Wolf*

What exactly are you looking for? Generally with kids its recommended to just have good food options available. making the meals overly regimented can create some problems. Loren Cordain talks about this either in a news letter or somewhere on his site: [www.thepaleodiet.com](http://www.thepaleodiet.com)

Now if its just a matter of convincign your wife...that could be challenging! Approaching things from the health perspective is tough to argue with. Just following paleo food recommendations is much less regimented than the Zone and may be an easier sell.

*Posted 6-28-2006 by: Doug Sunshine*

I've been searching the posts for an answer to this question but then thought I might just make my own post.

Recently I have decided that I will give up eating meat because I feel it is unethical. I am intrigued by the Paleo diet and think there is a lot of merit to it. Is there any modification I can make to reconcile the two ideas and provide for my own fitness/nutrition?

If not, does the Zone diet have an option for veg?

I am attempting to do right by my body without sacrificing my morals.

Note: I believe it is permissible to eat dairy, but not meats including fish, fowl, or red meat.

*Response by Robb Wolf*

Joseph Campbell made the observation (paraphrasing here...original quote is in the Joseph Campbell companion) "Vegetarianism is the first turning away, the first separation of Man from the world of which he is a part. It is from this point that Man assumes the knowledge of right and wrong, life and death and we observe the phenomena of war and the death penalty."

This was an observation about the differences between Hunter Gatherer societies in which vegetarianism does not exist and agrarian societies where we start to see these phenomena.

Yoga and the Vedic teachings hold vegetarianism in high regard yet these same teachings advocated female infanticide and the practice of burning the widow in her husband's funeral pyre. I wonder how popular that stuff would be if people knew how it was practiced in the old country.

The morality issue does not hold water. Farming kills millions of small mammals, reptiles, birds and unimaginable amounts of biomass in the form of insects and invertebrates. I guess we can close our eyes to that when we carve into our Tofurky.

Sorry if I am being a jerk here, but the morality argument just does not fly. You will take a hit with regards to health limiting yourself to dairy and soy. If you want to stick to this however the Soy Miracle Zone should get you where you need to go. The protein Power lifeplan folks have a message board with a subsection devoted to vegetarians..I think at [www.eatprotein.com](http://www.eatprotein.com). A little known protein source is Seitan (wheat gluten) and it typifies all the health promoting benefits of a vegetarian diet: <http://www.celiac.org/>

*Posted 6-29-2006 by: Michael Forge*  
Doug,

As you can see, just mention the word vegetarianism and the usual cast of characters on this board will quickly pop up to bash the notion and rattle off their "expert" opinions and psuedo-scientific sources to counter its validity.

Perhaps a better way to state your motivation than calling it unethical is to say that it violates YOUR ethics, as it does mine. Taking another sentient creature's life strictly for my sensual pleasure or because I think it can increase my athletic performance makes me feel bad, period. So I don't do it.

As for the health/fitness limitations it involves, you say that you are comfortable eating dairy (a point that Garrett invariably ignores in his routine anti-vegetarian screeds), and I'm assuming egg. Given that, you will have absolutely no problem being healthy and achieving your fitness goals. I've been a lacto-ovo vegetarian for 20 years and at 39 I run a sub five-minute mile, bench 280, squat 375, and can post respectable performances in all Crossfit workouts. My body fat level is 6-8% and I very rarely get sick or injured.

So don't let the paleo zealots around here scare you. You can indeed be perfectly healthy and exceptionally fit without killing animals to do it.

*Response by Robb Wolf*

Michael-

So Michael, We "Zealots" are guilty of advocating a natural, unprocessed health promoting diet. Shame on us.

If it's all pseudo science who don't you eat the way Ron is suggesting? Eat only vegetable sourced foods with no processing. No protein powders, no tofu, no tempeh, milk etc. In essence a whole food diet based around plant foods as they actually occur in nature. Are you willing to take that bullet for your morality? What you are doing right now is emulating a meat-based diet with concentrated plant sources. Your first post was a trumpeting declaration that vegetarianism is just as good as a mixed diet. Why don't you approach it the way the zealots around here approach the paleo/zone: Natural foods with little or no processing? Give it a go for two months and lets see where your numbers are.

Michael-

This can't be done in a way different than what I'm advocating for many people. Stick all these folks on a grain, legume, dairy, and egg diet and watch the fun:

<http://www.glutenfreeforum.com/>

These folks express a susceptibility to these Neolithic foods the same way everyone else does, simply to a greater degree. They are literally the canaries in the coalmine.

My old roommate had a 2.2xbw bench press, could do a planch pushup his first try and when he did standing back flips he did a gainer nearly 7 feet in front of where he started. His diet? Vegetarian...in that he did not eat meat but his supper frequently consisted of jalapeno poppers from jack-in-the-box, Arizona ice tea and popcorn. He has about 5% body fat and the beginnings of cardiomyopathy due to his constantly elevated insulin levels. He is 28. His father had his first heart attack at the age of 32. Second at age 45. I know this in no way emulates your diet but my point is that sometimes genetics can mask a diet that is at odds with health.

Who invited me? Doug did when he asked if it was possible to do right by his health and be vegetarian.

Because YOU have no overt signs of pathology is an anecdotally valid point but you seem to imply that my experience, both as a researcher and someone with celiac gives me no insight into this. Additionally you have absolutely no basis to judge what you are doing compared to a paleo approach until you DO the paleo approach. Would your blood lipids improve? Inflammatory cytokines? Recovery? You dismiss this and say what you are doing is "good enough" but that skirts the issue of what's "best".

We have some hard, factual ways to assess this but you bow out on this. Fine, but don't claim a better product unless you have proof. This is the essence of CrossFit, free markets and many other things most everyone here holds near and dear. This is the point that's bugging me. You won't do a comparison; yet claim to have the same thing. And for some reason because I advocate this as a superior nutritional approach, and base it not only on my own experience but also on the foundations of evolutionary biology and genetics...you can dismiss it all with your sample of one...and no direct comparison. What I've always advocated is try both approaches, have an objective set of criteria, and see which one delivers.

I know that since you are an unswayable rugged individual this will carry no weight for you but Keith Thomas was vegetarian for 15+ years and fit, strong and healthy. He went paleo and became more so. Give it a read if you like:

<http://www.evfit.com/>

He even has an interesting look at vegetarianism:

<http://www.evfit.com/vegetarian.htm>

Now that all addressed, very specifically, if a paleo diet is a better option than vegetarian. You refuse to play that game and so fall back on the morality card as a validation of your stance. The conversation now grinds to a halt. When we start bringing in morality all kinds of fun stuff happens. Case in point: The teenage birthrate is near zero in Germany due in large part to a fairly non-religious population and the adoption of vigorous sex-ed and condom distribution. Now in Ireland things are a bit different. Highly religious population, virtually no sex ed, poor access to condoms by teenagers and a teen birthrate that is nothing short of remarkable. Now, by your argument I cannot assail the Irish for their belief system that guarantees suffering and destitution for many, despite the fact that a close European neighbor has a far better system...because the Irish (like you) FEEL they have the right answer despite facts to the contrary.

Michael, you are trying to make two points: 1-vegetarianism is=paleo diet. It's not. You are also trying to make the point that vegetarianism is a moral high ground. Again, it is not. As both Mark and I have pointed out you choose to distance yourself from the carnage and call it a day.

I know this is \*\*\*\*ing away an enormous amount of time and if I have stepped over the line and made this personal I apologize, but there are hundreds if not thousands of websites devoted to vegetarianism, Triathalon, yoga and the like. There is ONE site where you can find the best in elite athletics and nutrition and I'll be damned if I'm going to roll over on this. If the act of basing my arguments on fact, personal experience, epistemology and the foundations of logic places me in the category "Zealot", I guess I'm ok with that.

*Posted 7-7-2006 by: Garrett Smith*

I've been asked to help design a menu plan for a young men's "therapeutic" boarding school. The person who contacted me eats in the general Paleo manner and both of us feel that moving the nutrition plan more in this direction will have impressive effects. I have a dietician who is a relative who I'm sure I can get to sign off on the diet I create.

The difficulties, as we see them, will be in the chef's willingness to leave the old starchy grain ways and in creating foodservice-style dishes that will appeal to young men (whose diets may or may not be linked to their issues).

As there are 50-60 boys attending at any one time, I want to come up with a good meal plan that will be prepared on that scale with relative ease. The food choices by the young men will have to come with time.

Anyone with experience in foodservice, your comments/thoughts/ideas will be greatly appreciated. Basically, what foods lean towards this approach within the meat/fruit/veg/nuts/seeds framework. I figured the military guys would have some insight here...

*Response by Robb Wolf*

I helped to write a grant for a program like this last year for an "at risk" boys home in Nevada. It went very well and they should get funding again. If you want help with meal plans I can do that but the main problem appears to be the chef. If it's their job they need to do what is asked of them. If they can't/won't, fire them and get someone who will.

*Posted 7-10-2006 by: Josh Brehm*

Any of you grow your own fruits and/or veggies? Any of you hunt for your meat? I've been doing some thinking, and it seems to me, that if I want to be as healthy as my hunter/gatherer ancestors, I shouldn't just eat like they did, I should collect my food as they did. Growing food and hunting seem to keep a lot of people alive longer, and just seems like an overall better idea than buying food from a store. Anyone have any idea how realistic it is to grow the majority of your own carbs and hunt all of your meat (deer, elk, moose, turkey, fish, anything else that tastes good), and use a portion of the money saved to purchase quality fats?

*Response by Robb Wolf*

I hit the farmers market and buy what's in season. Keep in mind that a HG's "work day" provided food, clothing shelter etc. If you are working a full day it may be a bit of a push to forage all for your food.

*Posted 7-9-2006 by: Pierre Auge*

Hey Rob,

I'm looking for some thoughts and ideas related to providing an adaptive meal plan for families and individuals. I keep getting pressed by folks with families about how they can implement a change toward healthier eating habits while still having making food that their kids will eat. Most folks have just shrugged at me when I suggest reading the zone or paleo, and say "can't you just tell me what to make and what to eat?"

My brother Raymond had the great idea of developing an adaptive framework that would provide people with a way to incrementally delve into the better parts of the zone and paleo. Without shocking them psychologically and socially into eating habits that most find alien. This would be a 12 stage adaptation (1 stage per month) which would allow just about anybody to advance and understand and remember what they are doing to the point of it becoming natural.

Any ideas, thoughts or comments you have would be appreciated. I would also want you to feel free to share this with anyone you think might be interested in helping. I see this as a long term project on my part and it may play a role in my thesis work. Thanks for reading this far Rob, have a gooder.

*Response by Robb Wolf*

It sounds...complex. John Berardi has his "7 habits of effective eaters" or something like that. As has already been mentioned getting people to focus on food quality is a good start. Not to be defeatist but people can be pretty clueless!

Some people at least cook. Many these days do not so you have to figure out how to address that. Charge a LOT of money. That is the only way people will take it seriously and listen, if they will at all.

*Posted 1-16-2008 by: David Fuhrer*

I have extreme sugar sensitivities (recovering sugar addict) that prevent me from eating any real quantity of starches, simple sugars, and even fructose. So...as you might imagine...Paleo is PERFECT! That said...after a month or so of severely restricting carbs and still doing quality (high intensity) workouts my body seems to tell me to do a carb replenishment. The thing is....when I try to do it with traditional carb dense sources (whole grain bread, pumpkin, tubers)....the all too familiar trigger from my sugar addiction days goes off and....well....it ain't pretty. Binging on carbs up to the point of a 10k calorie day is not uncommon (really)....and along with it comes the incredibly rotten feelings and additional cravings for days afterward.

Can you recommend a carb source that might work well for a once a month replenishment of glycogen but is less likely to "throw the trigger"?

*Response by Robb Wolf*

David-

I had this issue for years and it is why I gravitated towards a cyclic low carb diet. I wrote a piece for the Performance Menu: 42 ways to skin the Zone. Essentially you shift a bit of carbs to a post workout meal. Start small and slowly titrate up (say 2-4 blocks of yam at first, then see how you do). Then use intermediate vegetable sources like asparagus, avocado, tomato etc. for the rest of your meals. They are carbier than spinach but not as dense as fruit. Increase your fat a bit if you can not get in all your carb blocks. Take your fish oil 2-10g/day.

*Posted 2-20-2008 by: Jeff Evans*

Without getting too much into my personal situation... is it conceivable someone may be eating too much to burn any body fat, but at the same time, too little to allow noticeable strength gains, while following a strength program (like SS)?

Also note I don't mean to completely discount the macro-nutrient ratio as an important factor (of course it **is**), but I'm more interested in looking at total energy intake.

*Response by Robb Wolf*

One can certainly be hypo-caloric AND not loose much bodyfat. this is the hyperinsulinemic state described in Good Calories, Bad Calories that trainers see everyday but befuddles academics and the chubby among us. On the opposite side of this is a shift towards a paleo/zone diet can increase muscle mass despite a caloric deficit...not forever of course but during the leaning out process. Keep in mind this is in contrast to your original question...it's not an issue of how much, it's an issue of WHAT.

Tough to emphasize enough the need for food quality (paleo) and keeping track of amounts (Zone). Once folks actually DO this we just get an "ahhhHA!" instead of how-to questions.

### **Diet and Supplements:**

*Posted 3-10-2006 by: Kurt Mueller*

Any brain foods out there that help increase cognition, memory, concentration?

*Response:*

Sardines are great. DHA/EPA and a nifty little molecule DMAE.

*Posted 3-13-2006 by: David Stegman*

Ok I have a question or better yet a "dilema" when it comes to post work out nutrition.

On the nights that I train jiu-jitsu I train really hard. Typically I train 3 nights a week and one day (sunday). After class I normally drink a bit of gatorade and then a protein shake (normally muscle milk). After reading quite a bit on this forum I really want to get away from the pre-mixed or powdered supplements i.e. "muscle milk".

So my question is: What kind of simple portable and easy to consume food should I eat after my workouts? What do you guys suggest? I'm all about convenience though, thus the main reason I liked the muscle milk etc. However, I'm needing help getting away from that stuff!!!

*Response by: Robb Wolf*

Some folks around here rave about the muscle milk...it seems like a pretty good option but mashed yams (tsp. of cinnamon-helps flavor and enhances absorption) with a small piece of chicken is pretty easy as well.

Convenience is a tough one. If you are wrapping up later in the evening and then driving home you may need to be flexible with things. something as simple as fruit and meat PWO may also work however.

*Posted 3-12-2006 by: Kevin McKay*

Is this something to worry about? Is there a way to get safe canned tuna?

*Response by Robb Wolf:*

Sardines are a way better option than tuna. Lower on the food chain and loads more n-3 fatty acids. My favorite:

<http://www.mybela.com/>

Available at TJ's and better supermarkets. The King Oscar sardines Dr. G recommends are awesome as well.

Don't forget the wild Alaskan salmon!

*Posted 3-24-2006 by Josh Everett*

What brand of fish oil do you recommend and how much should I be taking?

*Response by Robb Wolf*

I am still using the Kirkland brand and about 9g/day.

*Posted 4-29-2006 by: Neal Winkler*

According to these authors, an increase in the consumption of meat is responsible for the increase in type 1 diabetes.

What are your thoughts?

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=16276070&query\\_hl=12&itool=pubmed\\_doc\\_sum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=16276070&query_hl=12&itool=pubmed_doc_sum)

*Response by Robb Wolf*

Type 1 Diabetes is typically an autoimmune issue although beta cell burnout can occur and has actually been noted in type 2 diabetics who are not only insulin resistant but also shut down beta cell function.

I'm not sure what to say...I'm obviously a shill for the pro-meat paleo stance! One key point in epidemiology = correlation and correlation does not = causation. Read

<http://www.ravnskov.nu/cholesterol.htm> for more on that. There is no suggested mechanism here and the >90% meat eating cultures like the Inuit and Ache are not even mentioned. If someone is putting forward some kind of theory it seems important to mention/be aware of a situation that COMPLETELY flies against the information you are presenting.

Typically as meat consumption increases, so does sugar consumption but I don't see how that would directly affect this.

*Posted 5-4-2006 by: Ryan Kirk*

I've been tweaking my caffeine intake to fit my new CrossFit lifestyle. I find that the more I get into the WOD (and the Zone) the less I depend on caffeine to get a lift. In fact, I had several WOD's where I felt better without it. Am I saying I am going to give up caffeine? NOOOOO! I just don't feel the need to use it all the time now. Thanks CrossFit!

For those that have not seen this useful tidbit of information:

<http://www.garynull.com/Documents/CaffeineEffects.htm>

Here is the abstract for the linked article.

#### ABSTRACT

*Caffeine, probably the most widely used drug, affects the psychological state of those who consume it. Abuse results in symptoms of caffeinism which include agitation, disorientation and a syndrome which may be mistaken for anxiety/neurosis. It is a habit-forming drug in which tolerance develops. It affects sleep in a dose related manner which is dependent on the daily caffeine intake, i.e., high users have less effect. Its central nervous system stimulation can cause pleasant effects with improved attention and concentration at lower doses. At high doses, the reverse may occur. Used judiciously, it may be a useful therapy in the treatment of hyperkinetic children. These and other effects of caffeine are discussed in this review article.*

*Response by Robb Wolf*

Ryan-

It has been the experience of many around the board that Zoning, the WOD and intermittent fasting

can decrease the need/tolerance for caffeine. Several years ago a "self help" book was released called *The Caffeine Advantage*. The take home message of the book was that there is a therapeutic dose for caffeine and beyond that benefits decline rapidly.

*Posted 5-19-2006 by: Charlie Jackson*

"Now research suggests that too much saturated fat may be problematic, even if your cholesterol isn't high, because of its possible effects on insulin functions, potentially raising the risk of diabetes, cancer, ovarian disorders and other health problems."

<http://msnbc.msn.com/id/12867692/>

*Response by Robb Wolf*

One point to consider is membrane fluidity. If a cell membrane has too much sat. fatty acids it CAN impact insulin sensitivity. Again this is more an issue of ratios than any set absolute amount. So long as adequate monos and poly's are added to the mix things will be fine.

Related but at an oblique angle...a fantastic way to screw with the fatty acid balance in cell membranes is to INCREASE carbohydrate consumption. This will increase sat. fatty acid production, triglyceride levels, inflammation etc.

So...I think the ratio of sat. fat in the diet is important up to a point (see the thread about Cordain's sat. fat recommendations)but I would not be surprised if the research damming sat fat is neglecting the fact that the fat is FROM CARBOHYDRATES!!!

This is a perfect example of the non-linearity and multi-dimensionality of metabolism and if you do not have a good frame work from which to view and evaluate things it can get pretty confusing. Unfortunately the real story is not very news-worthy.

*Posted 5-27-2006 by: John Daniel*

I have started getting stomach pains (generalized, about the same intensity as severe hunger pains) that seem to go away when I drink high carb liquid. Sprite (which I would rarely ever drink) definitely helps, but juice also helps.

Any ideas? I currently follow a zonish diet. I am not strict and not paleo - I am prepared for these suggestions. But any ideas what might be happening? Any other remedies?

*Response by Robb Wolf*

John-

I try eliminating the biggies like wheat and dairy for a few weeks and re-introduce those foods to see if that is the problem. GERD (gastro-esophageal reflux disease) is likely caused by high insulin levels. Things like sprite and other insulin spikers may need to go!

*Posted 6-3-2006 by: Kevin McKay*

Seems to me like drinking a lot of water with a meal usually slows digestion. If this is true it would lower the rate of the sugars entering the blood stream and effect insulin levels less. Anybody got any data on this?

*Response by Robb Wolf*

I'm not sure about the insulin response but if one dilutes the digestive enzymes it will hamper digestion. This could allow for more large, intact proteins making their way deeper into the system...this is a potential mechanism for food allergy development.

*Posted 6-9-2006 by: Charlie Jackson*

*because we didn't have access to food X during the vast majority of our evolution, we're not physiologically suited to deal with food X--grains, legumes and dairy are the three best examples of this.*

the problem with that argument is that if the food is similar enough to food we evolved to eat, there is no reason it can't be eaten.

if we evolved eating food A and  $A = B$ , then we can eat food B.

*If I remember correctly, there are two papers in the literature which show that although milk has a low glycemic index, it nevertheless stimulates a strong insulinemic response.*

Beef stimulates a stronger insulinemic response than white pasta under certain conditions.

[http://www.mendosa.com/insulin\\_index.htm](http://www.mendosa.com/insulin_index.htm)

*Response by Robb Wolf*

Yes charlie, but pasta elicits NO glucagon response. one will not develop insulin resistance as a consequence of eating high lysine content protein sources like beef. White pasta on the other hand...

The point that if a food is "similar enough" to a paleolithic food that it will not be problematic seems pretty obvious. Olive oil is a prime example. Some purists don't eat it. It makes perfect sense to me TO eat it.

The research Heather referenced, along with Frank Booth's paper and others are absolutely foundational to understanding this Whole thing (not to say that its the gospel, but it is where these theories are based from). If you have not at least read that stuff you're not even in the conversation yet. The main point in those papers, again and again deals with trends and potentialities...like all of life.

*Posted 6-16-2006 by: Mike Minium*

I'm curious about how trans fat ends up in the grass-fed ground beef at Trader Joe's. It's something to the order of 1.5 g of trans fat per 4-ounce serving of ground beef. Yet curiously, the hamburger patties have no trans fat (I assume they're made from ground beef as well).

Can someone enlighten me?

*Response by Robb Wolf*

Fermentive bacteria in ruminant guts make some short chain trans fats. When I worked at the Fred Hutch and used my blood as a control for calibration purposes I always had a spike of 12-14 carbon trans fatty acids. They appear to be harmless.

*Posted 6-16-2006 by: Theron Mathis*

My mother has been diagnosed with "Slow Stomach". Anyone out there know if there are changes in diet that could help? Do you know if exercise has an impact on the problem as well?

*Response by Robb Wolf*

Theron-

Exercise can speed gastric emptying...not much that does not benefit from some exercise! Foods with a slightly bitter taste, chickory and espresso can stimulate digestion. I think bitters are still sold in some health food stores and they may be helpful. A bit of sliced ginger may also be helpful.

*Posted 7-12-2006 by: Greg Battaglia*

What is everyone's opinions on fruit? I know that wild fruit is completely healthy and low in total sugar and contains much higher levels of nutrients and antioxidants. But what about modern fruits? They're sugary, much larger, and really don't seem to contain much nutrient content compared to vegetables. Not to even mention the high fructose content of fruits, which increases serum triglyceride levels, interferes with liver function, and is much more likely to cause the formation of AGE's. They also seem to halt the fat-burning process. What has been everyone's experience with fruit these days? Is there anyway to obtain wild fruits from any health food stores?

*Response by Robb Wolf*

Greg-

I think seasonal and regional eating solves this problem fairly well. Seasonal eating will however make it very difficult to keep up the level of met-cons in a typical CF-WOD schedule. This could be an opportunity to cycle both eating and training with a greater strength emphasis some parts of the year. I believe Scotty Hagnas does this.

*Posted 7-28-2006 by: Nick Cummings*

How would a vegan (meat free) diet help with diabetes? By what mechanism does meat effect insulin production and resistance? Aren't carbohydrates the culprit in diabetes and insulin related problems?

*Response by Robb Wolf*

If its approached "smart" one is removing all the processed carbs from the diet...loads of veggies, nuts and fruit are consumed along with things like pearled barley and oatmeal.

A pretty good improvement from the standard Doritos and 74oz Cokes that seem to pass for supper these days but as was mentioned in the critique of Dean Ornish's Reversing Heart disease paper, a vegetarian diet as is commonly proacticed, is an improvement over a crappy american diet but it is still a diet that increases triglycerides over time. This is an indicator of insulin resistance and serious problems brewing.

Now if one is using vegetarian sources of dense protein and does the Zone or something along that line we are not going to see these problems. Most vegetarians and NONE of the veg-Doc's advocate this approach BTW.

Robb

*Posted 2-25-2008 by: Jeff Conklin*

I just had my annual physical (age 40). My Chol was 138, but my triglycerides were about 240. I have a lowfat diet and I'm currently working hard to drop weight. I follow the WODs like religion the last 3 months. (I'm 6'0 Medium build , 210lbs - eating 2000 calories day) I've lost about 15lbs in the last 2.5 months and I think that may be what spiked my Tri-g's. My body must be using body fat as fuel while I lose weight.

Any valid basis for my theory?

*Response by Robb Wolf*

High triglycerides are indicative of one thing: insulin resistance. If you look at some inflammatory markers such as H1Bac (glycated hemoglobin), C-reactive protein and apo-a you will find high numbers. If you recently lost weight you have likely DECREASED the TAG's (triglycerides) from an even higher level. This is not a blood profile to go after!

*Posted 3-18-2008 by: Ryan Jones*

It would be helpful if crossfit had more to say than 'Eat meat, veggies, some fruit, little starch, no sugar, nuts, seeds etc...' I'm having trouble keeping up and making heads or tails of everything I should be doing in terms of nutrition.

Paleo or zone? Paleo says no milk or oatmeal, zone says milk is great and oatmeal providing GLA makes up for its other shortcomings. I've also recently heard that milk is bad for asthmatics (of which I'm one) and that milk can exacerbate most people's already out of whack omega-3 to omega-6 proportion. I love milk and its an easy source of calories, fat, protein, and carbs but depending on which side of the fence I'm on its either a great source or bad. This would make me lean towards doing the zone but all the measuring is prohibitive.

How much fish oil? In my searching of the forums I've seen 1.25g a day suggested, 5g, 10g, 20g, and 30g. How much should we be taking and is that just counting the EPA and DHA? I think it is but some people refer to the actual grams of the capsule of which only 30% is EPA/DHA.

What other supplements should we be taking? I've heard mention of creatine, but that it only does you any good as long as you're on it, and beyond that I've seen no dosages suggested. I've heard mention of extra vitamin E because the fish oil depletes it, but again, how much? Magnesium and potassium are good for asthmatics I've heard, but again, how much?

Block management. If one is not losing as much fat as they like, should they decrease their number of blocks, decrease their fat blocks, or increase their fat blocks? I've seen all three recommended. And if one wants to gain weight, should they up their number of blocks, or just protein blocks, or just fat blocks? Even if one's not zoning it's relevant.

In short, I'm overwhelmed, I've poured through this board absorbing things, changing my lifestyle, but every step I take seems to lead to two more, or a number of steps back to change a change! We have a WOD that tells us what we need to do in terms of exercise. We have videos and articles to tell us how to do each move and demonstrating progressions to train us to do harder moves. And while we are told nutrition is at least as important as exercise we don't have anywhere near as much information on it. It would be very nice to have some sort of worksheet to list what we should be doing nutrition wise. Granted most things would have to be in ranges or functions of statistics like LBM, or ranges of functions. If we want to dial in specifics on those ranges maybe we'd have to black box it or visit a doctor for bloodwork, but at least we'd have something all-encompassing even if vague. So are there any nutrition gurus who can put their years of knowledge gathering and experience together to create something like this? Do we all differ too much for this to even be feasible? My head's spinning and I hate not knowing whether I'm doing something wrong or right and to what degree!

*Response by Robb Wolf*

Paleo ( meat & veggies, nutys & seeds) covers food quality and addresses most food allergies, acid base balance and a host of other nutritional concerns.

The Zone just deals with proportions and is a refinement to bring performance and body-comp to optimum levels. Use it IF/WHEN you are ready for it.

Fish oil: 2-5g/day. it's the total amount of EPA/DHA...I really like the costoco variety and that translates into 8-16 caps per day.

Don't stress, keep it simple!

*Posted 5-5-2008 by: Nathan Holiday*

I'm thoroughly objective. I've been a meat eater, and I'm currently vegan. Every ounce of my reasoning resides on health and performance. I don't care about anything else; just overall health, and supporting high/elite performance.

Those of you who have read the Protein Debate, are probably with me when I say it's a confusing issue. Campbell and Cordain have interesting points, but I have to give it to Campbell in the end; although I would really like to give it to Cordain, because I do want to eat meat. I'm vegan because the data supports it, not because I like the way vegetables taste, or because I have a moral issue.

What I'm interested in is hearing from strict vegans or vegetarians, who didn't eat cakes and crumpets as the mainstay in their diets. People that pursued athletic endeavors, and ate fairly balanced vegan meals that were geared toward performance. Out of these individuals, the ones that switched to meat, while maintaining strict diets and high performance, and registered an OBJECTIVE and noticeable increase in performance when meat was added.

I want to meet these parameters as closely as possible. If you were a non-athlete vegetarian/vegan, whose meat eating coincided with starting Crossfit, your results aren't useful to me.

Lets keep all non-objective debate out of this. I DON'T want opinions. Opinions don't matter. Facts and data matters. I want to treat this as a case study. Real results, and real people. But the parameters need to be met in order for this to happen.

*Response by Robb Wolf*

Well...a whole foods based vegatarin diet nearly killed me. Beans, rice, whole grains had me laid out with colitis, high blood pressure and depression...at the ripe old age of 26. I switched to a paleo diet and my blood pressure plummeted, GI symptoms disappeared and have not had a problem with what had been up to that point a lifelong problem with depression.

I'm the person who organized the protein debate and every scientist who has read the piece is EMBARRASSED by the almost infantile effort that was put into the project by Dr. Campbell. I have immense respect for the man but his work offers no mechanisms, no predictive models and that is ALL that Cordain puts forward. Here is a reality: hunter gatherers had no: cancer, diabetes, or heart disease. None. This is ignored, misunderstood and outright ignored by the vegetarian camp. Read EVERY peer reviewed article offered at [www.thepaleodiet.com](http://www.thepaleodiet.com). Read the FAQ...then propose some mechanisms whereby vegetarianism trumps a basic paleo diet.

Additionally...make YOUR vegetarian diet whole foodss...no protein powder, no tofu...it's all processed. Beans, rice, whole grains, nuts, seeds fruit...see how you do on that. All you are doing with the concentrated protein sources is trying to emulate a paleo diet using sources of protein that look a bit more "humane".

*Posted 7-11-2008 by: Caitlin McDonald*

I've read conflicting advice. Some zone stuff lists these two (watermelon and honeydew) as favorable, and some list them as not. Any thoughts?

*Response by Robb Wolf*

Glycemic load is absolutely critical to all this...yes, if you eat a whole water mellon the point is moot I guess.

Glycemic index is how much a given serving of food (I think 50g) raises blood GLUCOSE. Not very helpful for high fructose items...Glycemic Load measures how much carbohydrate is actually in something. It's almost laughable as the recommendation is to keep glycemic load "low" yet low carb diets are "bad" yet a low glycemic load diet is, by denition, a low carb diet.

More work/family safe, (can you tell I love adding that disclaimer?) wholesome great learning to be had from here:

<http://www.thepaleodiet.com/nutritio...ls/carbs.shtml>

*Posted 11-18-2008 by: Holly Skinner*

I have a client who has only been training with me for a couple of months. He is 27 and has just been diagnosed with Acute Rheumatoid arthritis is both knees and feet, his mobility has quickly become limited. He is even struggling to make it up stairs. We are looking closely at his diet and supplements such EPA, I have recommended swimming and said we will try and put together some workouts he can do to try and keep some mobility and strength. If anyone has any suggestion for wods or anything else we would be very grateful.

*Response by Robb Wolf*

RA has a significant dietary component...a gluten free/dairy free paleo diet with 15-20g of fish oil has done wonders with folks I've worked with. Sleep, decreased stress etc. are also quite important to push the condition into remission.

### **Inter. Fasting**

*Posted 4-5-2006 by: Jamila Bey*

I just wonder how 890 calories a day would fly with folks crossfitting.

Anyone here doing caloric restriction?

*Posted 4-6-2006 by: Greg Battaglia*

Cool stuff, but I doubt 890 calories could sustain a crossfit lifestyle. I don't think restrictions of that magnitude are required to recieve the life extending benefits of CR. I think this is where IF fits nicely into the equations. In animals studies, IF mice saw greater longeivty that CR mice despite the fact that they actually ate more calories than the CR mice. If this applies to humans it would be very cool stuff. I personally use IF and not CR because it allows me to maintain a high level of performance and higher body weight, but still get the health benefits. Art D. has some cool stuff on this.

*Response by Robb Wolf*

The intermittent fasting seems to confer ALL the benefits of CRAN but one is not lethargic, cold and without a sex drive.

Most of the age associated decline was pushed back to the very end of the life cycle. In essence the critters were functioning at full youthful capacity until very near the end and then just expired. If you have to go that seems like a fairly good scenario to do it!

Its not all that hard. Fit your meals into a 4-6 hour window...skip all or part of a day here and there. I'm getting 3,500-4k calories/day on this schedule and REALLY like it.

*Posted 4-6-2006 by Scott Kustes*

Robb, you restrict all of your eating to 3-6 hours? How do you eat all that Paleo food in that timeframe? I have trouble eating 4 full Paleo meals in 8 or 9 hours.

*Response by Robb Wolf*

Well...I am certainly NOT staying at Zone recommendations! I do tend to separate protein carb/protein fat meals and I cycle those macronutrient portions a bit. Some days less carbs some days more. It is still pretty easy to get in both large amounts of greenery AND calories if you are using loads of nuts, nut butters olive oil etc. It took a little getting used to but I am liking the abbreviated eating schedule, body comp and performance.

I think its the goods! I'm not sure if one could build a 300lb bodybuilder on this...but I don't think many here are aspiring to that.

*Posted 4-12-2006 by: Jeremy Jones*

I have been incorporating IF about 3 times a week (the 16hr version), and I have not had any adverse problems.

Is it really worth it? I mean, should I be doing it every day to get results?

*Response by Robb Wolf*

No one knows. I suspect doing this 1-2 time per week would have SOME benefit. The original IF studies have the animals eat one day, fast one day. On the eat day the animals eat as much as they would normally eat in 2 days. No studies have been done yet of eat 2 days fast one day or even just this compressed window of eating. We have some interesting anecdotal information but nothing beyond that yet.

*Posted 4-14-2006 by: Mathew Townsend*

I don't understand the conclusion of that journal abstract, namely: "This experiment is the first in humans to show that intermittent fasting increases insulin-mediated glucose uptake rates, and the findings are compatible with the thrifty gene concept."

What does it mean, in lay terms?

Greg, you nearly had me. But staying active on the fasting day? It essentially means that I can only fast on the weekend as I have a sedentary job. And on the weekend, I spend much of my time in the company of people at mealtimes, so it doesn't seem so workable.

*Response by Robb Wolf*

Mathew-

Cordain has a paper on the thrifty gene thing...it gets dicey but the prevailing wisdom says that we store bodyfat easily because our ancestors experienced periods of starvation and those with the "thriftiest" genes survived. It sounds good but there is no evidence of episodic starvation and Cordains argument is that there really is no "thrifty" gene or genes...just disease that arise when we live a lifestyle at odds with our genetics. It is a subtle but important distinction.

*Posted 5-19-2006 by Daniel Doiron*

Possibly a useless question, as green tea does not have any calories, but I am looking to get the impression of people who have or are following a IF regiment.

Would consuming green tea during the fastin period affect the process?

*Response by Robb Wolf*

Many are finding their need/tolerance for caffeine is decreased on IF but other than that, coffee and green tea should help the process.

*Posted 5-24-2006 by: Thomas Beasley*

I downloaded the past crossfit live on June 5, 2005 with Robb Wolf. I was very interested in the 15-hour fast that was discussed. How many have played around with it and how did it work? While I do not follow the Zone or the Paleo, I keep a very clean diet- close to a raw food diet. But I tried the fast yesterday and just felt worthless all day. I take it the body adapts to this and after a couple weeks this

wouldn't be a problem. but again i was just wondering what type of results people had with this. thanks

*Response by Robb Wolf*

Thomas-

I may be wrong here but when I hear "raw food" that usually means low protein and low fat...and that usually means insulin resistance. If one is insulin resistant the transition to IF could be VERY rough. Caveat Emptor!

*Posted 5-25-2006 by: Andrew Steeves*

It seems that IF has become a really hot topic. I have a question regarding it and sleep. We all know the benefits of sleep and getting to sleep early ie before 12. But I am in university and I find there is a definite skewing towards late nights and late mornings. I still try to get 8 hours and then go another three hours before eating to get to 15 hours of fasting.

But say I can sleep for 10,11 or even 12, is this better?, I know lights out said something like 9.5 is ideal but is more better? what if someone got more hours a night is there anything wrong with this?

Secondly, if I sleep longer should I still wait the three hours and push the fasting to 17 or 18 hours or eat sooner after waking and keep it around 15?

*Response by Robb Wolf*

Andrew-

Sleep what you can: 9-10 hours is great and its no problem to shift the fast durations from as little as 12 hrs to as much as 18 or 24. Just keep an eye on your performance, make sure you eat "enough" when you do eat. It appears that these short fasts are really benefitting people but no need to be super rigid with the implementation.

*Posted 5-26-2006 by: Rolando Maldonado*

After doing some light research I decided that I wanted to try the WD (Warrior Diet). I just don't know if it's a good idea because of my schedule.

I work Fri-Sun. 3 days from 7pm-7am. I was thinking about doing the undereating phase from the around 8am to around 5pm and the overeating from 5pm-9pm Mon-Thur. But what about on my work days? How should I go about it?

Should I still do the overeating at the same time on the weekends and not eat all night while I'm at work? I don't think I can do my overeating while I'm at work.

I really want to try this diet but I just need some help on this issue. Any feedback on this is appreciated.

Oh and Sat-Mon I get home around 8am and go straight to sleep. I wake up around 2pm. During the week I usually fall asleep around 11pm. Again, thanks for any help.

*Response by Robb Wolf*

The only issue I see with the WD is that it recommends only one meal per day (neglecting the post WO meal). If one is very active and or interested in adding muscle mass one meal may not cut it. Just take those good basic principles and tweak them to your goals.

*Posted 5-23-2006 by: Hollis Petri (Also under training)*

Hi, do you think it's possible to do a daily 15hr fast from 5:00pm to 8:00am. with a 60-90 minute morning workout at 5:30am. Same as several people seem to be doing but my workouts will be more endurance based and longer. The 15 hr fasts are easy to do but it's suited more for shorter, more intense workouts ala xfit and i'm worried I won't recover from the longer workouts. Any thoughts? Any people doing longer workouts on a 15hr fast?

*Response by Robb Wolf*

Hollis-

If you are doing a more endurance based activity it should go even better. We are looking at a paper this month that discusses aspects of ketosis. One of the features is ketone bodies enhance cardiac output at all work levels.

I've been unsure if intermittent fasting is appropriate for a strength athlete and it is looking like it is. For the dedicated endurance athlete however I think one would be nuts to NOT do IF. (also under training!!)

*Posted 6-21-2006 by: Elliot Royce*

I've been reading a little about the IF but it seems like an impossible approach for me. First, I sit in an office all day so having my stomach growling for most of that is not going to be nice. Second, I play hockey or take boxing in the evenings -- won't I run out of gas? Also, I think I'm pretty sensitive to insulin already. It was never diagnosed but when I was younger, I used to feel hypoglycemic (dizziness cured by a small intake of sugar). Even now, I feel the need for some glucose during the hockey.

Also, given my desire to add a bit of muscle (10lbs), I figure I should probably be at around 4500 calories per day. How on earth would I ingest 4500 high quality calories in a 4 hour period? I guess I could follow Anthony B's prescription of Big Macs -- around 6 of them would do it, right?

I have to confess I haven't studied this fully but those were my initial concerns.

*Response by Robb Wolf*

Elliot-

If you have hypoglycemia its a sign of too much insulin. Between meals we should be fine running on bodyfat and experience no dip in mental clarity or energy. If one needs a glucose drip to maintain energy levels you may be getting a few too many carbs.

Many people have reported adding muscle on the IF program. If you are highly insulin sensitive you will partition more nutrients to muscle and less to fat...also you will have lower systemic inflammation and thus recover from activity faster. Its hard to pack those meals into a smaller timeframe but it can be done. Even if IF does not work for your efforts to gain weight it may be a good maintenance option.

*Posted 6-27-2006 by: Greg Battaglia*

Ok, so after some time and experience with IF I think it is safe to say that I've observed some interesting effects that IF has on appetite and how that can effect the way that I feel and perform. One thing that I've really noticed up to this point is that my craving for fibrous vegetables has completely diminished. After a good fast I find that my body is only craving calorie dense foods, which makes complete sense, since the body would likely want to fill its caloric debt as quickly as possible. Now my question is, since we know with almost absolute certainty that H/G's would have followed cycles of under- and overeating wouldn't it make sense that they too would seek out the most calorie dense foods as possible? I'm thinking things like the meat and fat of animals, nuts and seeds, starchy tubers, and fruit when it's available. When you think about it, it doesn't seem logical that H/G's would waste any time whatsoever attempting to eat low calorie vegetables in order to fill caloric needs. They would go right for the gold, the calorie dense foods. With this in mind, it also seems to be no wonder why most people really can't stand vegetables, they just don't taste good, further indicating that we probably didn't evolve to eat much of them. The only time veggies are actually palatable is when they are steamed to the point where the starch becomes much more accessible and easily absorbed, and we know that H/G's obviously didn't have steaming pots. I know that some will say that studies show that vegetables improve health and mortality rates, but if you really think about it for a moment it makes sense because vegetables tend to blunt the appetite and make people eat less food. We know that calorie restriction increases life span, so it could be possible that vegetables actually possess little nutritional power beyond decreasing appetite and therefore calories also. Now this sounds all good, but for IFer's like us we already have the life extending stimulus created by IF (as H/G's would) and require high calorie foods (once again as H/G's would) to get the calories we need. I think that the appetite suppressing ability of veggies is great for jump starting a weight loss program for someone who seriously needs to lose weight, but when we're talking about a CFer/IFer that is already quite lean and really needs to push performance, veggies kind of fall out of the picture and in my opinion interfere with obtaining enough calories. I've really noticed that when I cut the veggies out of my IF routine and replace them with tubers my digestion is much better and my overall well-being and performance are much improved. Plus, I feel more satisfied with my meals because I can pack in more of the calories I need in a small volume of food. The only problem is that I've been hesitant to permanently eliminate fibrous veggies from my diet in fear of the loss of important nutrients, but at the same time some intuition tells me that veggies are over hyped and not what they are cracked up to be. I mean, you

need to cook veggies to get most of the nutrients from them due to anti-nutrients and such, but then when you cook them you destroy most of the nutrients anyway, so it kind of defeats the purpose. Anyway, sorry for the long rambling message, but I was just wondering what all of your opinions were on my little theory that humans didn't evolve to eat vegetables? I'm really interested to hear your opinions and would appreciate your comments.

*Response by Robb Wolf*

What you are talking about here is something called "optimum foraging theory". Essentially what should I go for with regards to food that provides the greatest return on my efforts? Its pretty obvious that Nutrient density goes something like: Meat, nuts/seeds, fruit/tubers, and other vegetables.

Now, here is an interesting thing: The reality is actually just about the opposite of what Charlie describes. Modern HG's do and did pass up easy available food in favor of harder to obtain but more valued alternatives. Robert Lee describes this at length in the book !Kung San: Men, Women and Work in a Foraging Society. When a new camp was established the favorite foods were quickly consumed from the area and then ever larger circles of foraging were necessary to keep a supply of those favorable foods...while literally stepping over other foods that were only selected when food was scarce. What were these more desirable foods? Meat, nuts, mellons, berries and tubers. Easily obtained greens are frequently added for flavor...and are preferred steamed (HG's have some very sophisticated cooking methods!).

The Clovis peoples and their descendants ate to extinction nearly every variety of mega-fauna in the Americas in the period of a few thousand years. Bison, elk, deer...that's about all that's left. One of Cordains papers details the fact that as an animal increases in size the %of fat tends to increase. Bigger animal=higherbodyfat%. The effort involved with hunting a rabbit is minimal compared to that of a mammoth but the return from the mammoth was...well, mammoth! Great stuff.

*Posted 6-30-2006 by: Jeremy Jones*

Has any of the 'fasters' noticed a drop in body temp during your fasts?

I always can tell when I am getting to the end of a fast because I seem to be a lot more sensitive to the cold. I feel like my body is producing less heat (which makes sense).

On the other side of the salmon burger patty, when I have a large (calorie dense) meal, I begin to feel very hot and this can make it difficult for me to sleep.

Could this be an indicator of something horomonal going on, or just pure input/output energy physics?

*Response by Robb Wolf*

Jeremy-

I certainly notice this and I know Scotty Hagnas has mentione dsomehting to this effect. Its a boon in the summer whne chico is still over 100°F at 8pm...not so nice in the dead of winter.

I think its a bit of both. Hormonal action and simply burning some calories from food digestion.

*Posted 7-31-2006 by: Saul Jimenez*

I have been doing zone-ish and, more recently IF, for about a year or so. Since I can remember, I have had some sort of hay fever during the spring or summer (it mostly depends on where I live). However, this year it just never happened. I have a had a couple of accute bouts when running on trails surrounded by head-high weeds but it went away after direct contact. The only thing I can think of is my diet, I have always been big on carbs.

Has anyone had a similar experience with chronic health issues using either IF or low carb diets?

*Response by Robb Wolf*

Allergies have a strong linkage with inflammation. CLC and or IF should help with that imensely.

*Posted 8-28-2006 by: Yael Grauer*

Okay, just to throw a bunch of things out there on this topic:

I was trying to figure out the whole connection to cortisol to see if IF could lead to excess cortisol increase (over time) which would be a bad thing--I've looked at studies that showed negative effects of IF during, say, Ramadan (but they were all outdated with low sample sizes--I need to dig deeper.) But I read that IF causes increased insulin resistance, which should ideally keep the cortisol in check, only I was trying to figure out what was released when.

Then I found this article which indicated that the decrease in corticosteroid receptors reduces the effect of cortisol impact on the brain. So there's more cortisol but less effect on the brain. I need to find the original study (this guy's selling a book and diet) but his version of it is here:

<http://chetday.com/warriordietantiaging.htm>

I'll look in the archives again, but I'm curious at the exact #'s for people reporting lower BF, increased performance, etc. and whether they are relatively sure this is occurring due to IF and there aren't other variables. And also how long it took/takes.

The Warrior Diet (which I'm not recommending, btw--I hear you burn fat as well as muscle) is all about undereating during the day (light snacking on fruits and veg) and overeating at night (mostly protein), but this seems counterintuitive and not what cavemen would be doing. I just am guessing that since your cortisol is already highest in the morning, it would seem that this would be the best time to eat, work out, etc.

There's another book that recommends a feast/fasting cycle, which is called Natural Hormonal Enhancement by Rob Faigin. Cycling in this is more like weekly.

Also I was curious about moods for people doing IF. If I'm not eating regularly I get pretty spacey and irritable. I'm guessing people having positive effects from IF'ing aren't getting that reaction?

(There's an awesome article with a list of contraindications for IF'ing in the latest PMenu which just makes this SO much easier to sort through.)

*Response by Robb Wolf*

Wholly Hyper-analysis Bat Man!

Yael, this is in both P-menu articles and has been hashed around here a bunch:

1-Establish a baseline of fitness that involves a Paleo/Zone or cyclic low carb nutritional approach. You should be lean, have excellent performance and have a handle on how to feed yourself. If terms like "rice" and "bread" still make up a part of your vocabulary, you have NOT established #1!!!

2-Attempt Intermittent Fasting in one of two ways:

i-alternate day fast. ii-compressed feeding schedule.

3-One MUST consume as many if not more calories as on the standard multi-meal schedule. If you fail in this area you will have problems.

4-How do you gauge if this is "right" for you? Performance and body comp will either improve or remain the same. Virtually everyone doing this has reported an improvement unless they botched step 1 or 3.

5-How do you know if you are producing too much cortisol? See #4.

Yael, if you "need" to eat regularly to avoid mood alterations you have some blood sugar "stuff" to get nailed down. You need to get your food quality dialed in. I'd try a cyclic low carb approach with your carb day being at the carb level for a normal Zone eating day. Get 4-6 small protein/veggie/fat meals, get your body comp dialed in and then come back to this stuff.

*Posted by Yael Grauer*

Darn, I guess that means nobody wants to see this great study I found while researching something else about how caloric restriction in fruit flies increases life span.

I'm not researching this for myself--and yes I read the articles and I know about wheat and about good food quality and getting my own diet etc. squared away.

I'm just trying to figure out how this would fit into some bigger issues (cortisol etc.) and even diet typologies (glandular and metabolic types), for "fun" I guess you could say. I know about blood sugar "stuff" and I've been reading on the pathophysiology of insulin resistance and how stress, sleep debt, autonomic nervous system issues, constitution and all that tie into it. I get the hint though, I'll save it for the herb lists.

*Response by Robb Wolf*

Yael-

That was not a slap down! It was however a plea to focus on the most impactful elements of nutrition and lifestyle AND a framework for monitoring progress/results that allow one to bypass the minutiae of endocrinology and see the "whole" person.

Like you mentioned above, the basic elements are: insulin control and mitigation of food allergies via some kind of sound nutritional approach (Paleo/Zone, CLC etc.), adequate sleep and exercise as a "must have" baseline. This will bring most people to a pretty high level, but if we want to we can focus on adequate probiotics, and give some thought to simplifying meals to optimize digestion (think Lights out and Body Ecology). You could take this a step further and look at specific conditions (through the chinese medicine perspective) like "spleen chi deficiency". None of the previous "must haves" are removed, in fact there is obviously some breakdown in the foundation (too much studying? Bad sleep? allergenic foods?) So all of this foundational elements must be in place with perhaps the additional refinement of little or no raw foods, with a preference for soups and stews, and many small meals to facilitate digestion. I'd say most deficiency (Xu) conditions are not good candidates for intermittent fasting. By contrast something like liver chi stagnation (in western terms this is elevated estrogen due to hyperinsulinism) will greatly benefit from intermittent fasting...assuming the foundations are in place.

Again if my tone was cranky I apologize but if you get these foundational elements in place, and really understand their importance, the special cases are really just perturbations from those base elements.

*Posted 7-14-2008 by: Carla Tremblay*

I'm considering intermittent fasting but I'm concerned about getting tired and feeling hungry. I was wondering who does IF and how you time this around your workouts.

I workout everyday except Mondays and Fridays... I do CrossFit workouts on Saturday, Tuesday, Wednesday, and Thursday. I'm training for a marathon so I'm going to be doing long runs (1 to 3.5 hours) on Sunday. I will also plan on running a couple days a week in the evenings for about an hour (Tuesday or Thursday). I always get so hungry after a workout so I don't know if this is right for me. Plus, I like to eat! 😊

Thoughts?

*Response by Robb Wolf*

Carla-

Get a solid paleo/zone diet dialed in. THEN add a day or two of IF/week. Start with 12 hrs and work up a bit. You should not feel hungry, your energy should be good. If your sleep is dicey, if your daily stress is high don't mess with it...stick w/paleo/zone.

*Posted 7-28-2008 by: Trygve Lunde*

First off i just want to say that i really love this forum and i really believe that IF and Paleo low carb is the way.

Im 22 years old and a professional soccer player, i also do weight lifting 2-3 times a week. im 180 cm, 84 kg and around 14 % BF. Ive bin following the Paleo low carb for some months now. During this time ive been trying different approches when it comes to calories and nutrition setup ( fat, protein and carb). My goal is to loose weight as in bodyfat % and to look better. I want to get under 10 at least so that i can run even longer and faster when i play soccer. As i said, my goal is fat loss and not loose the muscles i have now. I dont want to be any big body builder because i want gain anything on the soccer field. I want to have a body like brad pitt in Troja or some guys from the movie 300. Just so you get a picture what im aiming for. During this period its also important that my performance dont drop to

much (causing to low calories). Ive been trying 1600-1800 calories for some time, splitting in 100g fat, 120g protein and 40g carb. My energi level and everything has been really poor. Its like my legs dont want to stand up and walk, maybe thats because of the low carb im not sure. But im really hoping for much help regarding my food and my training. So my questions are

I train Monday - Friday at 10:00 in the morning. The sessions is for 1-2 hours. Saturday is a day off, and Sunday is match day.

So i think my eating pattern should be. Eating starts after the soccer sessions, so around 12-1 a clock? and stops 8-9 a clock? ive been doing this for 3 days now. i have now problem working out on empty stomach. Monday, Wednesday and Friday i do weight lifting sessions. Ive been doing different routines. But the question is, what is the best routine for me when you know my goals. Fat loss, better soccer player and of course look better. In terms of exercises, reps and sets.

Also how should my eating window look like in calories and how much from fat, protein and carb? what about PWO? is it better to wait for an hour and then just eat a fat, protein and carb meal? or is the best to have a protein+carb shake right after training? of course i find it much better to eat real food since it taste a lot better, but its the goal that matters. So what do you think is the best?

When it comes to the meals, isnt it best to always start to eat the fat first? Not eating it all up, but lets say you have nuts, carrots and chicken for lunch. Its best to start with some nuts and then mix it up as you like? since the main goal for Paleo low carb is to keep the insulin under control and fat doesnt do anything about it. Or doesnt it matter?

So how much should i be eating in calories and how much from fat, carb and protein. As you know soccer is a glycogen sport so i cant do too much carb, but i want fat as my main fuel since i know thats the way to go.

About fruit, ive heard that fructose isnt good at all. And from experience eating apples i feel kind of sick after eating one. I dont know why this is, i think apple tastes lovely but i think my stomach doesnt like it.

Should i have a carb day every week? or a carb meal?

On sundays my match is at 6 a clock. So how should my eating pattern look like on this day to perform my best?

I think what was that, if ive forgotten something im going to add it here or in my replies

*Response by Robb Wolf*

I really don't think a low carb IF program is the best way to jump in here...if you are playing soccer at a professional level it will likely kill your performance. Get a solid paleo/paleo zone diet established...1-2 days per week maximum wait to have breakfast till noon. That's the most I'd mess with that!

## **Training**

*Posted 3-17-2006 by Mark Garcia*

What do you guys think of combining CF WODs with HIIT?

*Response by Robb Wolf:*

It's all good! One might benefit from 3 days per week of OL, PL or gymnastics work with 1-3 days of HIIT (running, rowing, swimming...boxing perhaps?).

It is true that segmented training produces segmented results but it is not a bad thing to get in and really work those individual elements like max strength or sprinting.

I've been reading on fiber type conversion and training...talked to RUTMAN about it also. Bathe a muscle in lactate and you tend to convert type 2b fibers (very explosive, low endurance) to type 2A fibers (mod explosive, good endurance).

This, to steal a phrase from Art Devany, "alactic" form of intervals might be an interesting means of conditioning for sprinters, american football players or anyone who will not be facing serious lactate in the course of their "game".

This might be a nice way to switch things up for any population but for MMA, police, fire and soldiers hammering that lactate pathway is suuuper important.

*Posted 3-24-2006 by: Dan Colson*

I often have clients go to jumping pull-ups when they can't get 5 at a time, but then I will double the reps. Negatives are helpful as well. Note how much you jump, full squat, a little toe etc.

*Response by Robb Wolf*

Just be cautious of how much eccentric loading you throw at folks. NEg's should not be swapped out 1-1 in a WOD IMO...big problems with rhabdo-esque issues. Time to switch to body rows or cut the numbers. With the jumpers just make sure there is about 120\*° in the elbow at full extension to prevent bombouts.

Bomb-out is when the person is overly fatigued in a jumping pull-up/negative situation and they essentially hyper extend the elbow.

It is important to note that ANY level of activity can induce rhabdo in an individual depending upon their situation (medications, illness...Mercury in retrograde...) this being the case ramp up is super important and the jumping pull-up has a unique situation of allowing for enormous loading (almost the whole bodyweight) yet the move can be almost completely eccentric (as Rene pointed out eccentrics cause far more tissue damage than concentrics).

Think about it...you can not do jumping pushups and you might be able to assist your squat a bit by hanging onto something but obviously for most people the upper body is going to fatigue far sooner than the lower body. I guess perhaps a jump to support/jumping dip might come close.

We have tinkered programming such that negatives are used in the same way a power movement is trained (10 x2, 8 x3 etc) and jumping PU's are reserved for people we are fairly certain can perform the movement safely even when they are near red-line in a WOD. For everyone else it is body rows...and an insistence on controlled eccentrics even in these movements.

None of this is rocket science but there have been some "aha!" moments for us in how to bring these movements safely and effectively to our clients.

*Posted 4-8-2006 by: Kevin Kaeating*

hi there im trying to maintain as much muscle as possible while doing the wod , i follow bodybuilding and zone principles mostly shooting for 1 gram protein per body pound , 6 meals a day,,,any thing special i should about this wod program that i should change in my diet?

*Response by Robb Wolf*

Kevin-

Many people ratchet up the fat content of their diet to cover calories while keeping to Zone protein/carb recommendations. Some go as high as 50/60% fat at a maintaince level. For most they gain muscle doing CF WOD's. A few people come to the game with A BUNCH of muscle and may loose a little as they adapt to the workload (relative strength tends to increase...absolute strength may suffer a bit).

You look like a BIG dude so you may fall into that later category. If you want to post a few days of food logs we will have a better understanding of where you are at.

Many people worry they will look like a marathon runner after doing CF! You won't be a bean-pole from this stuff. You obviously have a system that works. Tweaking the fat content and a few things like that will produce the results you want IMO.

*Posted 4-13-2006 by: Mark Garcia*

Something that popped into my mind:

The JKD motto goes

"Absorb what is useful, reject what is useless, add what is specifically your own"

Coincidentally, this is how we also design our CF WODS and all exercises done are something relevant to our needs...

opinions?

*Response by Robb Wolf*

Mark-

The distinction works for me but (just my opinion here) the JKD crowd forgot the competitive, quantitative factor for a very long time. Endless sinwales, box patterns and 4 count drills without enough sparring and accessible progressions.

Check out [www.straightblastgym.com](http://www.straightblastgym.com) for more on that line of thinking.

Many schools have a heavy emphasis on sensitivity and other drills/patterns. MMA has changed this quite a bit in the past 10 years which was when I had my JKD exposure. I ended up focusing on Thai boxing instead of the full Thai/JKD/Kali curriculum offered at IMB and the Inosanto Academy's. If you look at the curriculum now it is heavily BJJ influenced and much less chi-sau and drills of that nature. Again...just my observation.

*Posted 4-26-2006 by: Chris Goodrich*

Tony gave me a short version of the new seminar formats at the CrossFit seminar, but I was hoping he or someone else at HQ could give us a rundown here on the message board. What I'm getting is that after the may cert the 2-day certifications will be focused on core concepts and workouts, and the extra stuff (kettlebells, parkour, martial arts, etc) will be moved to the training seminars, which will be less structured and allow participants to try different disciplines kind of a la carte. Have I got that pretty much right? Is the idea now that you attend one certification for the fundamentals and then training seminars to expand your knowledge base instead of multiple certs?

*Response by Robb Wolf*

Chris-

I believe that is correct and if one desires a level 2 or 3 certification one must come to subsequent certifications and demonstrate proficiency/mastery in the curriculum by helping to train the newer folks.

*Posted 5-1-2006 by: Bill Fox*

I was a dead hang only type when the original 40 PU challenge happened and missed out on Eugene's B-Day challenge. I read that thread this morning and found a bunch of people did 50. Between James' post today and the Martin family vid I'm looking for 50 now.

I did 31 kipping today, a PR for any kind of pullup. I had 25 dead hangs, but until today my kip was so weak my dead hang was stronger. I can see 40 coming pretty smoothly by the end of summer.

It seems to me 50 is as much a fitness challenge as a strength challenge. Obviously step 1 seems to be keep getting better at the skill. I wouldn't mind getting back in the low 180's either (190lb today).

What worked for the crew got from the 30s to 50. Was it pullup volume, technique....what? I have this feeling most didn't do much "special" training, which of course would be the CF way. I feel like getting "stronger" wouldn't do much. Explosiveness, skill and fitness?

*Response by Robb Wolf*

Bill-

I certainly did some special training which consisted of sets of 10 throughout the day. Grip seems to be a limiting factor for me so I worked my practice PU's to the sternum or stomach (big fat PU) to force explosiveness and ROM. Then when I test I am just going for chin over the bar. Numbers went from 30-41-62 at last count at a measly 169lbs. Ahhh...to be 190...

This is a move that responds well to volume IMO. Avoid fatigue and all that but you can really throw some numbers at this and it will tend to balance and strengthen the whole shoulder girdle.

*Posted 5-2-2006 by: Jennifer Conlin*

Does anyone here at Crossfit have any ideas about doing Cf with Special Populations.

I have been working with Paraplegics and stroke survivors for years.

I think it would be so cool to try to do some CF with Paraplegics and others.

*Response by Robb Wolf*

Jennifer-

CF-NorCal has a DVD series in the works regarding both rehab and scalability for special populations.

We will also be covering this in future Performance Menu issues. It is an important and underutilized arena for CrossFit programming.

*Posted 5-2-2006 by: Mathew Nielson*

Tricep work?

*Response by Robb Wolf*

Matthew-

The tricep extends the fore-arm at the elbow AND extends the humerus at the shoulder (think pinching the shoulder blades together/rear elbowstrike/chicken pose thing). On a max PU effort it is not odd to feel the upper rear arm being recruited.

*Posted 5-7-2006 by: Erik Preston*

Which is more functional? Who swears by either, and why? I'm not looking for glimpses into the black box, I'm more interested in inputs and outputs, as tested by the Crossfit Community.

I would gather that more Crossfit worthy movements, under load, can come out of the kettlebell hopper than the dumbbell one.--thus, fulfilling the "functionality" tenet with more economy. The permutations of movement seem more three dimensional, vs. dumbbells.

There's nothing like a dumbbell squat or DL, though.

Am I correct? Where does everybody fall on this divide, if there is one?

*Response by Robb Wolf*

Don't forget free things like tires (big ones for flipping and smaller ones for throwing), cheap things like sledghamemrs and sand bags. We made rings out of dog-chew toys (chicken flavored) and some climbing webbing. I think costco has a rubber hex DB set for like \$150!! You can have a kick-\*\*\* facility for pennies if you allocate the fundage correctly.

*Posted 5-8-2006 by: Bill Fox*

In particular I like the kipping with the vest, which I hadn't thought of. I tend to thing pure weighted dead hangs won't do much for me.I did one last year with 144lbs added and could only do like 10 kippers. I think ,as you said, that kipping is very much a skill, and that combined with volume and fitness is the key.

What do you think of this. It seems to me explosiveness is also important. I think things like tuck jumps and plyo jumps, where the legs are raised explosively, like in the kip, will be really good for me. Coming off a few years of mostly slow grinds I feel like that will really help.

I noticed Greg kipping his ring dips. A year ago I would have thought that was cheating, now i can't imagine not using my whole body. It would be like doing KB snatches without bending your knees. As the lights slowly come on....

*Response by Robb Wolf*

Bill-

Great observation regarding the explosiveness. I like knee to elbows done in a kipping fashion. Punch the chest forward with the legs trailing behind in the bottom and explode the knees up. Awesome kip practice and really opens/works the shoulder girdle. You will feel like you did a hard bench/push WOD because the chest must fire to prevent the arms from ripping off. It will cook the abbs and really add pop to the kip.

*Posted 5-14-2006 by: Mike Hom*

I know there's this beef between t-nation and crossfit but Eric Cressey has written an article called Shoulder Savers Parts I and II, which I find to be excellent for those who may/are experiencing shoulder problems and for those who just want some good knowledge on how to preemptively avoid shoulder problems.

<http://www.t-nation.com/readTopic.do;jsessionid=8FB12E2FD81291077D15005576FDB319.hydra?id=1053531>

<http://www.t-nation.com/readTopic.do;jsessionid=8FB12E2FD81291077D15005576FDB319.hydra?id=1055409>

You may have to copy and paste the links.

*Response by Robb Wolf*

I think this is where gymnastics fits nicely into strength and conditioning. P-bar work, circle on a mushroom etc. No plane of action is overlooked. Eric Cressey is a stud BTW both athletically and intellectually.

*Posted 5-17-2006 by: Michael Forge*

Let me start off by saying I do indeed love Crossfit-style training. I discovered the site last December and it has truly changed the way I think about fitness, and has reignited my enthusiasm for working out.

However, my initial almost euphoric reaction to Crossfit as my fitness true calling has begun to mellow. I think no less highly of it than I ever did, but I no longer see it as THE way to train, replacing my previous weight and cardio activities.

After many years of body-building-style weight training and running, I had pretty much reached the limit of my body's ability to advance. Working out had lost its challenge and sense of accomplishment.

But Crossfit presented a whole new world of challenge and room for improvement. It still does, but as my body has adjusted after five months of training this way, I'm now realizing that I will eventually reach a point where I'll have advanced pretty much as far as I'm capable of advancing here too. There will always be room for improvement, of course. But it will be incremental rather than monumental.

My point? When something is new and different, it's easy to get so caught up in it that you cast aside everything else as unimportant or inferior. But, eventually, the novelty wears off and you can put things in better perspective.

I've recently started reintegrating traditional weight lifting, running and boxing back into my training, and now only do one or two WODs a week. I find the variety refreshing and the variability of intensity makes it much easier for me to keep from getting burned out and chronically exhausted, physically and psychologically.

I'm curious how many others have transitioned over time from a CrossFit-exclusive training plan, to a more integrated approach?

*Response by Robb Wolf*

Nothing earthshaking here IMO. the CF style WOD's are awesome. Doing 1 day of Olifts, 1 day of gymnastics and 1 day of classic track sprint work (then a day or two off...repeat) is great as well (what I'm currently doing).

End-all-be-all's may or may not actually exist but complete perceptual shifts can leave one with the feeling that they have always done things "this way" when in reality they have been forever changed.

If that last piece makes no sense try saying it again in a Yoda-esque voice and things will click.

*Posted 5-18-2006 by: Bob Haskin*

I have been doing the static holds for about 3 weeks now. I am on the advanced tuck and I have been able to hold it for 40 seconds thus far.

I have not attempted any pullups in that position.

A guy I work with was at the gym so I went to show him my goal which is the front lever straddle pull up.

I got up on the bars and did 2 perfect full front lever straddle pull ups fairly easily. Shoulders at 45 degree angle and pulling hands towards my hips. I just about crapped my pants. I could barely hold a straddle position 3 weeks ago.

My question is should I progress to work on holding a front lever straddle static position for 60 seconds or should I go right into doing the pullup exercises at this point?

*Response by Robb Wolf*

I would tinker with both as each presents a different stimulus.

*Posted 5-23-2006 by: Hollis Petri*

Hi, do you think it's possible to do a daily 15hr fast from 5:00pm to 8:00am. with a 60-90 minute morning workout at 5:30am. Same as several people seem to be doing but my workouts will be more endurance based and longer. The 15 hr fasts are easy to do but it's suited more for shorter, more intense workouts ala xfit and i'm worried I won't recover from the longer workouts. Any thoughts? Any people doing longer workouts on a 15hr fast?

*Response by Robb Wolf*

Hollis-

If you are doing a more endurance based activity it should go even better. We are looking at a paper this month that discusses aspects of ketosis. One of the features is ketone bodies enhance cardiac output at all work levels.

I've been unsure if intermittent fasting is appropriate for a strength athlete and it is looking like it is. For the dedicated endurance athlete however I think one would be nuts to NOT do IF.

*Posted 5-29-2006 by: Jeff Haas*

All Right! i know that the XFit community is the most fit community that i know of, but? Saw a documentary last nite that got me thinking. How many pullups do we have in us? Will our bodies start to deteriorate do to the stress we put it through? What is actually harder on the knees, our hips, doing 100 body squats quickly or doing 3 sets of 12 with 200 lbs? Can we wear out and if so what causes it, I know the old saw, I'd rather wear out than rust out .What are your thoughts?

*Response by Robb Wolf*

This is something I think about a lot and we try to give some voice to in the Performance Menu. What is the intersection between Performance , Health and Longevity?

I think about it like a phase diagram:

<http://www.uh.edu/~jbutler/petrography/phase.html>

All of these elements interact and movement along one line will, at the extremes, compromise other elements (for example the performance necessary to win the Tour is likely at odds with health and longevity).

Back to the original question: Is CF at odds with health and longevity? Depends on how you approach it. The WOD's as written will kill ANYONE if approached with 100% intensity every day. You have to find your own sweet spot and run with that.

Bill Fox has a great article along this line in this months PM as well.  
Great question!

*Posted 6-6-2006 by: Kristina Kelly*

I know that one of crossfits ideal athletes is a gymnast combining strength & flexibility.

However, I have noticed my flexibility has suffered in the last several weeks. I am a regular yoga student as well as a new CF-er and my body has tightened up dramatically (not all bad but not all good either)

Is there a "stretching" program associated with crossfit? I understand that certain CF exercises require a certain amount of flexibility (like squats)but what am I doing wrong? Is there something I am missing?

*Response by Robb Wolf*

Cf has a lot of hamstring and spinal erector work...after a month or two of training, combined with smart flex. you should feel more integrated. Keep in mind that an intensive stretching session can cause as much muscular damage as a strength training session! This can greatly effect recovery.

*Posted 6-9-2006 by: Bobby A. Smith*

I am preparing for a tournament, when should I stop Xfitting to be ready to go?

*Response by Robb Wolf*

Taper one week out. Half volume days 5-3 days out then active recovery and positional work to remain active the remaining days. Train quite hard the week prior to this. Practice the taper occasionally as you would cutting weight so you know exactly how you respond.

*Posted 6-14-2006 by: Garrett Smith*

So, I just started using my rings at home.

As is supremely easy to notice, they are "unstable surfaces" for the upper extremities to grip. This makes it much harder to express high levels of strength without the accompanying stability--as in the approximate 3:1 ratio of ring dips to fixed bar dips.

So I get to thinking, aren't nearly all the same things true for upper body exercises performed on rings as they are for lower extremity exercises performed on, for example, an Indo Board? If you don't believe me, go try replicating your Tabata Squat score, with full-range squats, on an Indo Board and I think you'll get it.

The "general" feeling I get from around this board is that rings are great and lower body instability devices (of any sort) are suspect or worthless. I didn't agree with that when I first heard it and I still don't, especially after my new ring experience.

*Response by Robb Wolf*

The rings and slackline are not unstable, they are however "frictionless" surfaces that greatly amplify any noise present in the nervous system. This is very different training than that found on a wobbleboard or similar, legitimately unstable device.

*Posted 6-15-2006 by Kalen Meine*

Garrett- the reason the rings and slackline are usually characterized as "frictionless" rather than unstable has to do with the fact that the apparatus, being suspended, is in a stable configuration rather than trying to tip. In other words, the rings, just hanging there, or with a sandbag strapped on, just hangs there, just as it would if you were on it and in control. Same with the slackline.

That being said, I'm not sure if I buy it. The argument for rings being inherently stable starts to come apart when one examines the reality of putting six feet and 180 pounds of meat jointed in about 25 places in a handstand above them and trying to rotate to under them. Ditto for the slackline.

The real answer might be simply that when we examine the spectrum of loading to instability, with stand-on-a-greased-Swiss-ball-one-leg-one-arm-blindfold shotputting on one end, and four-point harness leg extensions on the other, most things that develop both in useful quantities seem to look mostly like, say, putting weight above your head, on your feet, and, say, walking with it. Since most of the stabilization with rings come from the strength to keep them from rocketing out into a cross, maybe they have some special stuff going for them. Maybe the ability to walk around and actually cover ground on a slackline makes them a bit broader utility. Who knows. All we know for sure is that some instability work and gear is useful, but not quite in the manner the whole PT-crossover swiss ball madness has led folks to believe.

*Response by Robb Wolf*

Kalen-

Great post. The interesting thing with slacklines and rings is that when things start going badly and or there is some inherent "noise" in the nervous system a wild jack-hammering type movement is created. The nervous system is trying to right a falling object (you) but is out of phase such that the problem is made worse. You do not see this with wobble boards, and the like. Something very different is happening at a neurological level.

The real question here is do these things have application for improved athleticism, pre/rehab etc and I think thats obviously "yes" but with caveats. I dont know how many PT's I've seen using Bosus and similar items with people to improve balance...when the people where a mile away from a full depth air squat. Balance has much to do with strength...so does injury prevention. Keep your grandparents at a level such that they can do 10-12 on tabata squats and they WILL NOT fall, they are not going to break a hip. Most injuries happen when fatigued and one can not adequately respond to external demands. Again, if you want to prevent a rolled ankle be strong and fit. this si going to pay much greated dividends than trying to get specific balance training.

Gymnastics training creates a phenomenal strength and conditioning base before launching into these adjunctive devices. The rings are obviously a foundational element fo gymnastics but much preparatory work is done to be ready for ring work, not the other way around.

*Posted 7-8-2006 by: Rich Krauss*

what are the feelings here on arms not going below parallel? Reason for asking is I'm having pain in shoulder and not sure if I'm putting too much strain on rotator cuff going all the way down to chest with bar.

*Response by Robb Wolf*

Rich-

slightly narrow, more tricep emphasis movement (look at some of the westside BB bench stuff) tends to be a bit more forgiving on the shoulders. This is more PL specific than a classic BB chest emphasis movement. Use accessory moves like weighted ring dips that allow normal scapular movment while giving your shoulders a rest.

*Posted 8-14-2006 by: Gregory Spilson*

I recall that some time ago Robb Wolf (I think in a Performance Menu issue) had made the comment that Sledgehammer work was inferior in overall scalability to a hammer throw. Just curious what the reasoning would be? Not saying that it's wrong, but that I don't know. I thought that part of sledge work was essentially the adaptive response to the impact, whereas there is none in a hammer throw. Thanks for any input.

*Response by Robb Wolf*

Gregory-

Was that in the piece on Multi-dimensionality? Ohh! I think it may have been that when you swing a sledge and hit a tire you really do not know how hard you are hitting the target and thus have no real gauge for power output. In the case of a hammer throw you have a pretty fair idea of power/work output because of the distance traveled (neglects flight path variables but pretty darn close).

I think this may have been when we looked at boxing/kickboxing and the difficulty in quantifying work output while hitting and kicking something. Even D-ball slams are difficult in this respect as one can loaf on the slam portion and still have a rapid cycle time.

*Posted 1-25-2008 by: James Neuman*

I ask because I wonder whether I should go out of way to bulk up somewhat, purely for health reasons.

In my case, I'm 44 years old and - after losing weight for a few months - I'm now reasonably slim. (I'm a little under 5'10", about 162 pounds, and my vague calculations about body fat are like 14-15%).

Since slimming down, I've gradually learned the basic weight lifting moves. But while I may appear somewhat toned, I am far from strong. So I find myself wondering whether I should start consuming

some more calories in an effort to bulk up. The SOLE reason for this is just to become healthier and fitter, as I am satisfied with my appearance.

Note, I don't think that the answer will really change my exercise routine. (I am slowly trying to learn the exercises here and to be a true Crossfitter one day.) But if I'm told that adding a certain amount of bulk should be a goal, then don't I need to consume more calories than I was while trying to lose weight?

And if adding bulk is good in my case, then how much bulk is right? Is this totally subjective, if general fitness is truly the only consideration?

*Response by Robb Wolf*

James-

I think it's a really interesting question. I've tinkered with some anthropometrics looking at elite performance among OL'ers, gymnasts, sprinters...and now the pool of top-o-the food chain crossfitters...and my pointy-headed answer is, I'm not sure. In the case of an OL'er I think we need some pretty good bodyweight compared to our height. Josh Everett mentioned to me that he is a bit lite at 5'9" and ~185 but he obviously has great general athleticism at this BMI.

Looking at some of the crossfit elite what i see is more a need for strength/bodyweight. Lean and STRONG. going back to some of our Cf elite I think Josh Everett has something like a 6.1 x BW CFT, OPT is around 5.4, speal 5.4...I think Brendan was around 5.2 when he was 170lbs but has recently bumped his weight up to 195 lbs. His absolute and relative strength has improved and his metcons have caught up as well.

My sense is that one should strive to have some numbers like a 2xBW BS, 2.5 BW DL, BW press...maybe .75BW weighted pull-up. Take that engine and graft on some serious metcon and things are getting close to optimization. From there one may assess do I need to be heavier or lighter for specific goals.  
Just my \$0.02

### **O-Lifting**

*Posted 3-17-2006 by: Gregory Spilson*

Alright, I know what the difference is between the two. However, I was just curious as to what functional benefits one has over the other. I could see where the power versions actually make you exert more force on the bar, I would think this probably comes into play particularly with throwing. Am I also correct that the squat variations are more demanding in terms of flexibility? Also, when learned, the squat variations allow for a heavier load. Don't want to answer my own question, but just wanted to see that for overall sport applicability, which might have more utility. Thanks!

*Response 3-17-2006 by Russ Greene:*

If you do squat cleans well and do no power cleans, you can do power cleans well.

If you can do power cleans well and do no squat cleans, you've might have even made it harder for yourself to learn to squat clean by drilling incorrect technique.

*Response by Robb Wolf:*

Russ-

Right on! We buggared ourselves by training far too many power movements. It has been a challenge to get good squat technique back.

*Posted 3-17-2006 by David Wood*

OK, I was doing the pullups WOD from the other day, and during the first rounds of 1 or 2 pullups, there's a lot of time to kill.

So I was doing deep unweighted squats, and observed that I could hold a good arch all the way down to about the last 2 or 3 inches (below parallel) . . . but when I truly went \*\*\*-to-ankles, my pelvis would "rotate under" and my lumbar region would round out.

It was completely involuntary . . . it just "happened". If I really clenched by back and stuck my butt out hard to prevent it . . . I didn't go down the last 3 inches.

Tight hamstrings, I presume?

Worth working on? (i.e., will getting deeper with better form, which looks like it means a lot of stretching) improve my lifts?

*Response by Robb Wolf:*

That is a particularly important range of movement to obtain IMO. It illustrates an area of potential injury as the posterior chain (glutes, hammies) are not being loaded throughout the full ROM.

It is not then surprising when a tear happens high up near the hip at the origin. The Starting Strength book as well as Dan John's recommendations of the goblet squat, bag-o-potatoes and the squat stand w/bar ala CF HQ are awesome tools to chase this movement.

*Posted 3-19-2006 by: Kevin McKay*

I have a weird hip problem, maybe one of you guys can shed some light. When I squat just before upper legs are parallel to the floor something gets pinched in the front of my left hip joint very painful and I need to lose the lordotic arch to go any lower... I get the same thing when I do any type of knees to chest stretch. Any idea what this might be and how to correct it? When I squat below the pinch point I sometimes get back pain and numbness in my leg. Any info would be greatly appreciated.

*Response by Robb Wolf:*

Kevin-

Sounds like your hip flexor is getting impinged. Loads of lunge stretches should help. A good PT or ART practitioner can work wonders also.

*Posted 4-9-2006 by: Patrick Schoudt Jr.*

Is there a certain level of base strength one would recommend having as far as lifting is concerned. What I mean is should I concentrate or add in a powerlifting day with the cf workouts. Just to get my bench/dead/squat strength up. Will this make me more proficient at the workouts. I do cf for fun and bc I do bjj. I just realize how weak I am looking at The Linda. Thanks in advance

*Response by Robb Wolf*

Virtually all athletic characteristics, power, reaction time, strength endurance are predicated upon absolute strength. The analogy is that one can not shoot a cannon from a canoe and similarly one will have a limited run of success with metabolic conditioning unless one is "strong".

What constitutes strong? A nice place to start is do you (males) have an EASY 2x BW DL? 75-100% bw standing press? 75% of BW weighted pull-up?

The numbers are a bit arbitrary but I think you get the idea. If one wants to excell in this strength/endurance realm a significant strength base MUST be built.

### **Strength Training**

*Posted 3-20-2006 by: Roman Ryckman*

Dear Coach Sommer,

I was wondering what your opinion is on the following article dealing with fundamental strength training in gymnastics, and if you could outline your opinion on the fine line of strength training versus endurance training, in terms of Number of sets (do i limit my sets in advance?), reps, and execution (slow reps to failure versus explosive power to failure).

Here is the link for the article:

<http://cis.squirring.net/category/gymnastics/63/>

*Response by Robb Wolf*

Not Coach Sommer but I have found the following paper to be very interesting and addresses the issues of maximizing relative strength very well.

<http://www.usa-gymnastics.org/publications/technique/1996/8/strength-training.ht ml>

*Posted 3-20-2006 by: Roman Ryckman*

Oh, actually I'm already familiar with that specific article, but it doesn't go into too much detail to the whole subject of sets and reps. I feel my biggest problem is overtraining, and I want to gain a deeper understanding of what that is exactly.. because I'm addicted to working very hard, but my strength gains are erratic.

For instance I usually do 10-12 Sets of 7-10 reps for handstand pushups on parallel bars, but the article I posted clearly states that you should limit yourself to 4-6 sets. So I wanted to know if that was my problem.

Thanks for your input in any case! I do appreciate it! :-)

*Response by Robb Wolf*

My pleasure...this may also be of interest:  
<http://www.99shadesofgrey.com/fitness/prilepin.php>

One can do both high volume AND high intensity training, but not for very long. This is referred to as "shock" programs and can be used to peak or in an attempt to push performance to a new level.

*Posted 3-21-2006 by: Michael Forge*

What do those of you without access to a GHD or leg curl machine do to avoid developing an imbalance in hamstring/quad development with Crossfit?

There seem to be many more WODs involving squats than hamstring stressors. I was thinking of investing in a GHD for that purpose, but if other routinely Rx'd exercises are sufficient, I'd much rather devote my dough and limited gym space to other things.

*Response by: Robb Wolf*

I think GHD are AWESOME and if you have the resource I'd certainly buy one. That said I do think that proper squatting form AND smart programming (inclusion of the OL's, swings, lunges and sprint work) will provide for balanced fore/aft hip musculature.

The starting strength book goes into great detail describing how the posterior chain contributes to squatting...a very worthwhile read.

*Posted 8-29-2006 by: Jason Smith*

Everytime I put in an all out effort I get a headache. Any idea what may cause this?

*Response by Robb Wolf*

Hypoglycemia is the main precipitating factor for migraines. This may be part of the issue.

*Posted 9-8-2006 by: Matthew Albanese*

Not sure if I've ever heard this issue addressed either in the Journal or on this board, though I'm sure it's come up before.

There is some clinical evidence to suggest that certain portions of the population are more prone to shoulder impingement problems due to what is referred to as a "beaked" or "hooked" acromion. That is, the portion of the collarbone that makes up the roof of the shoulder joint is shaped in such a way as to limit the amount of space within the joint, hence making these people more prone to impingement issues, especially when involved in a great deal of overhead activities.

I'm certainly not trying to debate the effectiveness or functionality of overhead movements, but for Crossfitters who exhibit this type of structural "disadvantage," what are we to do?

*Response by Robb Wolf*

Matthew-

I have suffered impingement syndrome a bunch in the past. Both overhead pressing and weighted pull-ups have been major contributors. The best thing I have found for my shoulder is to have some amount of kipped pull-ups on a nearly daily basis. Coach Rutherford has mentioned something similar. This is only a sample of 2 but I think it's compelling. I can overhead press with little/no problem however weighted pullups must remain a rarity in my program. Tinker and see what works.

## **MMA Stuff**

*Posted 3-21-2006 by: Joseph Elberti*

I was searching around the net a few weeks ago, and I came across a PDF that had some drills for practicing takedowns and throws. It mentioned 'body cleans', but for the life of me, I cant find it- even googleing 'sandbag' 'body clean' 'throw' etc...

If anyone happens to know what I am talking about, or if anyone has any good drills for practising takedowns etc with sandbags, Id be very interested.

*Response by Robb Wolf*

Joseph-

I think the drill is to basicly suplex the bag. Bag is on the ground, squat, encircle arms (body to body) chest pressed to the bag and then heave. One can actually perform the suplex or just stand tall or try to transition the bag to the shoulder in one movement. One can then push press the bag over head and then transition it to the other shoulder and repeat on the other side.

Damn good times!

*Posted 4-5-2006 by: Bobby Smith*

Is Xfit enough conditioning for a grappler, thai fighter or MMA athlete?

This is besides the specific sparring and technical work.

*Response by Robb Wolf*

Yes! I'd like to see some focus towards building and or maintaining a sound absolute strength level (sqwuats, DL, OL's gymnastics) with the "right" amount of metabolic conditioning ala CF WODS.

Keep an eye out for overtraining and ramp up slowly. Tapper WO's one week out form an event to taper and peek for the competition.

Mix skill work from your fightiing into the conditioning (500m row, 2min thai pads stuff like that.)

*Posted 4-10-2006 by: Anthony Bainbridge*

I know it's not the healthiest thing to do. Honestly I would prefer to have weigh ins the day of the fight to avoid this aspect, but what can ya do.

My question is simple. How do fighters dehydrate/rehydrate in the safest manner possible? I'm looking for very detailed plans. If you need numbers, use a lean 180 cutting down to 165 with at least 17 hours to rehydrate.

*Response by Robb Wolf*

How I would approach this will depend completely upon when weigh-in occurs. With the UFC type rules you have more than a day beofre the fight to re-hydrate/replace glycogen. If one must weigh in the morning of then you may need a differnt apporach.

In the first scenario I would start a program of hyper hydrosis 5-6 days out from the event that looks like this:

5 days out from the event consume 4 liters water.

4 days out/4 liters

3 days/3

2/1-nil

1/nil

The heavy consumption of water early will inhibit antidiuretic hormone (vasopresson)production. When you drop the water intake you will shed a water very easily but it tends to be healthy as you will derange electrolytes much less than say hours in the sauna.

After weigh in use a ballanced electorlyte formula like pedalyte or one of the non-calorie electrolyte sports drinks to come back to normal.

If you have a lot of weight to loose and day before weigh-ins you can also go 20-30g of carbs per day for the last 2 days to get a loss of water that associates with glycogen. Glycogen replacement whould then commence after the weigh-in with 300-400g of low GI carbs like yams or sweet potatoes being consumed throughout the day.

If you weigh in the day of and or do not have a load of weight to loose then just rely on the hyper hydrosis.

It goes without saying that one must limit sodium intake during the HH process!

You MUST do this whole process at least once and at least one month prior to competition to get a sense of how your body responds. Set it up just like an event with sparring and the whole deal.

It works and I think it involves a bit less suffering than other methods.

*Posted 5-4-2006 by: Anthony Bainbridge*

I prefer GNP, but it would be nice to feel more comfortable standing against a striker with good take down defense. I'll be happy with learning enough standup to stay out of trouble and work my way inside for a clean take down.

Based on this approach, do you suggest kickboxing or boxing? Pros/cons to each? Unfortunately, there are no muay thai clubs around here.

*Response by Robb Wolf*

Anthony-

Just my experience (or bias) but KB schools have tended to NOT have good hand skills, they lack the whole clinch game and do not incorporate knees and elbows into the mix. It seems to lack much and offer little.

In contrast finding a decent amateur boxer and working hard with them will make you a good boxer fairly quickly. If you ever run across a thai coach at some point that game will integrate fairly seamlessly into your boxing/MMA game.

All that said it sounds like the guy at the KB school IS a good boxer. Id work straight boxing skill with him if I could and look around the highschoools and JC's for someone who does grecco and work the grecco clinch. This is such an under utilized resource for many people.

Again just my \$0.02

*Posted 6-4-2006 by: Andrew Cattermole*

Its an article for MMA Conditioning but the Talk is spreading.

The Lactic Acid Controversy

As I already mentioned, anaerobic glycolysis is responsible for the production of lactic acid. As you probably remember from your college physiology courses, anaerobic means "without oxygen." Because there's no oxygen, the cell converts pyruvate to lactate. This causes an accumulation of lactate that — for the last century — has been linked to decreased performance.

You see, it's been purported that lactate is detrimental to athletes because it impedes force production (1). A lower pH slows the rate at which muscle can hydrolyze ATP during contractions — or so scientists thought.

Currently, that hypothesis is being refuted.

As recently reported in the NY Times, it appears that lactate might actually fuel your muscles, not

impair them (2). Regarding the notion that lactic acid decreases force production and, thus, is a key player in the accumulation of fatigue, Dr. George A. Brooks from the University of California Berkeley stated, "It's one of the classic mistakes in the history of science." (2)

<http://www.t-nation.com/readTopic.do?id=1083869>

*Response by Robb Wolf*

For sure different goals. The DeVany approach to training is super compelling for me. Much closer to the training of a 100-200m sprinter, high jumper or long jumper than say a wrestler which I think is what CF is so good at doing.

*Posted 6-8-2006 by: Marc Moffett*

Robb, I think it is important to step back and ask about the "meaning" of the lactate shuttle if you are an advocate of evolutionary fitness. The lactate shuttle is no accident, its an adaptation. Brooks' results IMO strongly suggest that the glycolytic pathway is the one that played the largest role in our evolutionary history. I should say, it adds support to that view--which is independently confirmed by looking at HG activity patterns. Devaney seems to model paleo activity (from the armchair) after predators like the big cats--ambush predators who kill things in quick alactic strikes. But that is just wrong. Human hunting activity doesn't resemble the behavior of "natural" predators (not even coursers like wolves) very much at all, because it is all mediated by technology.

So the logic of evolutionary medicine (which Devaney is exploiting to promote his view) suggests that health and longevity are going to be better served by more lactic training than alactic training. Higher amounts of alactic training may well provide the results you suggest, it is just that it ain't evolutionary.

Maybe Devaney should call his site "What evolutionary fitness would be if we were leopards"!!:wink:

*Response by Robb Wolf*

Marc-

That is a great point. I was talking to someone just last week about this and then forgot about it. This metabolic pathway is certainly not there by accident.

There are a few observations here:

1- If a muscle is unused it will revert back to a 2b fiber type. If this occurs as part of a tapering scheme this may be hugely beneficial for speed and power. This is not however an adaptation that will make one an effective CF'er, MMA'ist, LEO/MIL.

2-It is interesting to note that fiber shift from 2b->2a happens almost instantly with the correct stimulus. 2a->2b conversion as a consequence of training is very hard to do. I think we are seeing some of the reasons for this.

3-the individual with loads of 2a fibers may not be elite in power, strength and speed but they can be pretty good at those things and have crushing levels of endurance.

4-CF+ additional strength and power work=monsters.

5-Liek RUTMAN said: " I want as much of ALL of this stuff as I can get".

This goes along with Coach's definition of "Fitness" that the wrestler could perform fairly well at both the sprinting and marathoning. The sprinters (100-200m...800m might be a slightly different story) would likely explode during a WOD due to a lack of lactate tolerance and the marathonner would struggle to do any of the WOD's as prescribed due to a lack of power. From this perspective the wrestler/CF'er is the fittest.

Devaney's is however a minimalist approach. Minimum input, maximum output and with a bias towards the extreme power end of the spectrum. If one is not a fighter, LEO/MIL or just trying to hang with CF standards the Devaney approach is VERY appealing.

CF certainly values that strength endurance pathway. I think one of the posts on the front page a year or so ago said something to the effect: "We are the Lords of Lactate. Discuss in comments". There is no right answer here other than what your specific goals and needs are.

## Category X

*Posted 3-20-2006 by: Joseph Hart*

When can you catch a cold or flu from someone. The first 24hrs, the whole time they have the cold, or some time between the beginning and the end?

*Response by Robb Wolf*

Depending upon the condition the person can be shedding virus (contagious) for several days. Keep in mind that recently getting over a cold or the flu can GREATLY increase an individuals susceptibility to Rhabdo. Ease back in very carefully.

*Posted 4-12-2006 by: Peter Borden*

In the last three months, I finally got the zone dialed in. What a wonderful feeling. However, during that time, my body weight has jumped from 165 (my low point) to just under 180. Now, part of this is due to the fact that, not only is 165 really low for me, but while trying to get my energy levels straightened out, I pushed up to 20 blocks for a short time. I'm 6'4", btw.

This weight is almost all muscle. However, being a climber, I'd like to bring it down a bit without doing anything to completely sap my training. Any suggestions on losing a bit of muscle mass?

If I've left anything out, please give me a heads up.

*Response by Robb Wolf*

Rob Miller is a phenomenal climber and about 5'9" and 180! Jut hammer your gymnastics moves. Check out the thread on "size vs strength" and check this out from USA gymnastics:

<http://www.usa-gymnastics.org/publications/technique/1996/8/strength-training.ht ml>

*Posted 4-22-2006 by: Daniel Miller*

I was going to post on the past PWO nutrition thread but decided to start a new one. First I'll just say that I've been through most of the abstracts on pubmed regarding fasting. I have not read the entire studies.

To say that it is supportive of one's goals to do a fasted workout and wait an hour before eating in interest of "gene expression" seems extremely vague.

What precisly is meant by gene expression?

Can't gene expression be for all of the enzymes that end in -ase that catabolize muscle tissue? Can't gene expression be for extremely elevated cortisol?

To me, gene expression has no qualitative element to it whatsoever. I'd call gene expression transcription and translation yielding polypeptides that end up being packaged into different type of proteins that end up doing every single thing in the body.

Tumor cells, telomere shortening, and waste products created by all thousands of cellular reactions all fit under the category of "gene expression".

I'm not criticizing just hoping to have a more precise reason why it is a good DAILY practice to fast and why it would help an athlete. (I would confidently define any person doing the WOD as an athlete...for crossfit is a sport within itself).

For in light of almost every person coming out of a masters or PhD program in nutrition not encouraging people to undertake such activities of daily fasting, I'm skeptical.

*Response by Robb Wolf*

It has to do with CORRECT gene expression...if health is yuor goal:

<http://jp.physoc.org/cgi/content/full/543/2/399>

That paper deals with exercise primarilly but the point is living counter to ones genetics is where the problem arrises and it is looking like intermittent fasting was certainly what our ancestors did/experienced. In the past exercise and food procurement were inseperable. The implementation is neither as extreme nor as odd as what it might first appear.

*Posted 5-3-2006 by: Craig Howard*

25+ yrs of lifting, running & triathlons and I never heard this until yesterday: excess lactic acid in muscles can contribute to increased feelings of anxiety including panic attacks.

I personally feel like I have more anxiety than the average individual (incl. 1 panic attack yrs ago), but

I've always credited my busy lifestyle, coffee and Mom's genes. Could lactic acid be the culprit??

*Response by Robb Wolf*

Craig-

I think a net acid load in the diet might be something to think about but Lactate specifically...sounds fishy.

*Posted 5-17-2006 by: Erik Preston*

Nowhere near even thinking about certification--I'm still young in Crossfit, but I'm curious as to who is going to certification--can one certify for their own edification, or is it mainly geared towards those that wish to affiliate or coach Crossfit. This is a distant goal of mine. Last, is Crossfit exploring National Accreditation, along the lines of say, the multitude of personal training certifications that make up the dominant fitness paradigm? (note: not an endorsement...)

*Response by Robb Wolf*

Erik-

People have attended the certifications for a variety of reasons. With the shift towards separated seminars and certifications one can decide to go to a seminar and get loads of information regarding CF and learn an enormous amount.

The certifications will focus solely upon how to coach movements, programming, modifications for special populations etc.

In this way folks who have no interest in teaching the movements or starting an affiliate will be able to get all of their specific needs addressed and meet many of the CF coaches and superstars.

Contact Tony Budding for more information on the distinctions between the two events.  
[tony@crossfit.com](mailto:tony@crossfit.com)

*Posted 7-10-2006 by: Albert Clayton*

What if someone in their seventies ( or sixties for that matter) decided to use some type of Testosterone or HGH enhancer under a doctor's supervision. Prostate issues aside.

If it enhances this individuals quality of life what is the problem.

*Response by Robb Wolf*

Albert-

Interesting question...also interesting is the fact that the main treatment for prostate cancer is chemical castration with megadoses of estrogen...which appears to accelerate the downturn of the PC. A few studies have shown VERY favorable results with testosterone REPLACEMENT. The cancer industry is a circus.

*Posted 7-10-2006 by: Barry Cooper*

"Fast food: More dangerous than steroids  
Snack or "comfort" foods: More dangerous than steroids  
Alcohol: More dangerous than steroids  
Tobacco: More dangerous than steroids  
Adultery: More dangerous than steroids  
Stress at work: More dangerous than steroids  
Aspirin: More dangerous than steroids  
Having a doctor prescribe you a drug: More dangerous than steroids."

How do we gauge the danger of steroids, since as an illegal group of drugs, no long term, controlled studies on their use as anabolic agents has been done? I could likely kill myself by overconsuming water, but that doesn't make it dangerous. All of the above should read "potentially", and how close they are is an open question. Anecdotally, it seems clear that use, at some level, of "gear" has killed a lot of people. Obviously, consumption of alcohol, at some level, is currently being argued by many as

healthful. Whether or not there is a healthful level of steroid use for normal people trying only to get stronger, is an open question.

*Response by Robb Wolf*

I forget the title of the book...something like "built to survive" that was about AAS as a treatment for HIV/Aids. A few doctors made the observation that many of the characteristics of AIDS is that of a wasting disease. They put some endstage patients on AAS, started them on some resistance training and lo-and behold...their viral loads decreased and the people gained weight and improved in health.

AAS are a tiny fraction the toxicity that the protease cocktail is and not too surprisingly a fraction the price. This practice was hammered by the FDA because AAS have never been approved for this use (although they are approved for the wasting associated with burns and other conditions) and all promising research in this area has been stopped.

Now this does not address the moral considerations of if someone is using and not being forthcoming but IMO if we were to compare risks driving a car is far riskier than having a drink or two per day (so long as the two activities are not done at the same time ) and the drink or two every day is a bit riskier than a therapeutic regimen of say dianabol say 2 x per year for 6 weeks each cycle.

The one main reason I have never ventured down that path is that I am super interested in what I can get my body to do and if I did just one cycle I'd always wonder if what I had achieved was from a pill or my own efforts.