Provide a guide to the development of all athletes for healthy nutrition and give an overview of Zone calculations, reason for the zoning, and our human interaction with food.
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What are we about?

CrossFit’s philosophy about the way we should eat was instilled upon us by the Caveman and Dr. Sears. There are 2 main focuses - What we eat - the Paleolithic Diet (Paleo) and How we eat - The Zone. It breaks down to this: If you eat organic foods that the cavemen had access to thousands of years ago in correct portions as to ensure hormonal balance, then your body will run more efficiently, you will have more energy and many medical problems prevalent in the typical Western diet will be held at bay.

What I am calling version 2 of this philosophy, is from Whole9life.com. Essentially this program is taking the basic concepts from Paleo & Zone & Sears, and adding these important conditions:

1. Look at the quality of your proteins/carbs/fat. (Hormonal Free / Grass Fed / Organic)
2. Ease up on the fruits and increase your vegetables
3. Increase your Fat Intake from Healthy Fat as to ensure a more “Fat Adaptive” energy source. (Body Prefers Carbs if always feeding carbs)
4. Quit measuring, use guidelines for qty of food and your internal hunger mechanism (with some stipulations)
5. Everything is revolving around inflammation of the body and what causes it.

Paleo Meal Plan: Eat lean meats and vegetables, nuts and seeds, some fruit, little starch and no sugar. If man has his fingers in it or it has a label, stay away.

The Whole 9 Pitch:

I eat “real” food – fresh, natural food like meat, vegetables and fruit. I choose foods that are nutrient dense, with lots of naturally-occurring vitamins and minerals, over foods that have more calories but less nutrition. And food quality is important – I’m careful about where my meat comes from, and buy produce locally and organically as often as possible.

It’s not a low calorie “diet” – I eat as much as I need to maintain strength, energy and a healthy weight. In fact, my diet is probably much higher in fat than you’d imagine. Fat isn’t the enemy – it’s a great energy source when it comes from high quality foods like avocado, coconut and nuts. And I’m not trying to do a “low carb” thing, but since I’m eating vegetables and fruits instead of bread, cereal and pasta, it just happens to work out that way.

Eating like this is good for maintaining a healthy metabolism, and reducing inflammation within the body. It’s been doing great things for my energy levels, body composition and performance in the gym. It also helps to minimize my risk for a whole host of lifestyle diseases and conditions, like diabetes, heart attack and stroke.
What is Food? Fuel, Food or Drug

Typically, we think of food as fuel. We don’t eat food as a source of fuel, but more for other emotional, social, convenience reasons without thinking about it. But we still think of food as fuel. We should be thinking of it as a drug. This is because food affects our bodies and hormones the same as if we introduced drugs into our system. We need to take food in the right doses and times. As in the zone, get into a hormonal balance with our body controlling our insulin spikes as a result of high-glycemic carbohydrate intake.

Break It Down
Macro Nutrient – something that is of significant source of calories in a diet.

**Protein (Muscle Recovery / Joints / Skin)**
Essentially anything that comes from an animal will be considered a protein, you should only eat lean proteins and only consider products from grass fed animals if plausible. For simplicity and our accounting, we will only consider animal meats as sources.

**Carbohydrates (Energy for Brain / Muscles)**
Carbohydrates are your body’s main source of energy. You couldn’t live or work without them. Your body needs a lot of carbohydrates.

Carbohydrates are built up of simple sugars linked together including glucose. Most people say Carbs are sweets and pastas, what about vegetables or fruit (they are too)? The body requires a continual intake of carbohydrates to feed the brain, which uses glucose (a form of sugar) as its primary energy source.

**Fat (Energy Source / Fat Adapptive)**
Good fats are what we are searching for that includes monosaturated. These types can include avocados, coconut flakes/milk, and olives.

---Always ask yourself in choosing what makes me healthy? (Paradox)
Quality Vs. Quantity

Quality – We tie this to the Paleo Diet and eating quality foods in any amounts. If a caveman could eat it, we eat it. You can do this by remembering these points.

1. Shop on the outside areas of the supermarket
2. If man has his fingers in it, then probably not good
3. Your food should be perishable
4. If it comes from a window, then avoid it!

The concern with just eating quality foods in any amount is eating too many calories throughout the day; it will turn to fat. We are looking at roughly 500 calories per meal. So an elite level athlete would need 3000 calories per day eating in 5 to 6 meals. Remember: Calories in = Calories out. Too much you gain weight; too little, you lose weight.

Quantity – The Zone Diet approach use the quantity and quality for your diet. We want to eat enough high quality calories per day to feed our lean body mass and not the excess fat that may be accumulated. Most importantly, we want to ensure a timely introduction of glucose into the body.

How to Get Started

Nice and Easy - Go Paleo: Eliminate all refined foods from your diet / Cokes / Sugars / Grains / Dairy. Base your diet on garden vegetables, especially greens, lean meats, nuts and seeds, little starch.

Challenge ME - Go Paleo: Eliminate all refined foods from your diet. Base your diet on garden vegetables, especially greens, lean meats, nuts and seeds, little starch, and no sugar. Skip bread, rice, potatoes and other carb-heavy foods. Don’t eat anything that originated in a factory. If a cave man wouldn’t have had access to it, don’t eat it.

I am Hard Core / Whole 30 – Eat real food – meat, fish, eggs, tons of vegetables, some fruit, and plenty of good fats. Eat foods with very few ingredients, all pronounceable ingredients, or better yet, no ingredients listed at all because they’re natural and unprocessed.

- Do not consume added sugar of any kind, real or artificial. No maple syrup, honey, agave nectar, Splenda, Equal, Nutrasweet, xylitol, stevia, etc. Read your labels, because companies sneak sugar into products in all kinds of ways.
- Do not eat processed foods. This includes protein shakes, pre-packaged snacks/meals, protein bars, milk substitutes, etc.
- Do not drink alcohol, in any form.
- Do not eat grains. This includes (but is not limited to) wheat, rye, barley, millet, oats, corn, rice, sprouted grains and all of those gluten-free pseudo-grains like quinoa. (Yes, we said corn!) This also includes all the ways we add wheat, corn and rice into our foods in the form of bran, germ, starch and so on. Again, read your labels.
- Do not eat legumes. This includes beans (black, kidney, lima, etc.), peas, lentils, and peanuts or peanut butter. This also includes all forms of soy – soy sauce, miso, tofu, tempeh, edamame, and all the ways we sneak soy into foods (like lecithin).
- Do not eat dairy. This includes all cow, goat or sheep’s milk, cream, butter, cheese, yogurt, whey, ice cream, etc.
- Do not eat white potatoes. It’s arbitrary, but they are carbohydrate-dense and nutrient poor, and also a nightshade.

A few concessions, these are less than optimal foods that we are okay with you including during your I am hardcore. Including these foods in moderation should not negatively impact the results.

- Fruit juice as a sweetener. Some products will use orange or apple juice as a sweetener. We have to draw the line somewhere, so we’re okay with a small amount of fruit juice as an added ingredient during your Whole30… but this doesn’t mean a cup of fruit juice is okay!
- Processed Meat. On occasion, we are okay with organic chicken sausage (those that are nitrate, dairy, gluten and dairy-free), and high quality deli meat, packaged fish (like tuna or smoked salmon) or jerky. Read your labels carefully, because Whole30-approved processed meats, especially jerky, are hard to find.
- Certain legumes. We’re fine with green beans, sugar snap peas and snow peas. While they’re technically a legume, they’re far more “pod” than “bean”, and we want you to eat your greens.
- Processed goods. We’re okay with cans or jars of olives, coconut milk, sauces and spice mixtures like tomato sauce or curry, or vegetables like sweet potato or butternut squash, but only if the labels prove they’re “clean”.

What is right for you?
You will not make any progress to wellness or fitness if you don’t make these adjustments in nutrition.

Variations
As we discuss variations, each of our body types and metabolism rates are different. Some of us can eat and eat sugars and still not put on fat, but doesn’t mean it is not having a drastic effect on our internal organs through insulin spiking. It just means I am burning through those calories faster than some with a lower metabolic rate.

Depending on your need, we can adjust your intake to accomplish your goals. For elite athletes, we can also dial in our diet as per our needs for our athletic activity.
Meal Plan (Simplified)

Eat 3 Meal per day.
- Protein (Size of the palm of your hand) – Constantly Vary Protein (no pork)
- Vegetables (Carbs) – The rest of your plate with a min of two.
- Fat - @ min:
  - ½-1 Avocado
  - Olives/Coconut Flakes=handful
  - Oils/butter 1-2 thumbs
  - Nuts/seeds=closed handful
  - Coconut milk < 1/3 Can
- Fruit 1-2 Servings per day (fist) use as dessert

Eat One to Two Snacks a day depending on hunger/energy/activity levels
- Protein ½ of meal
- Vegetables 1 serving (fist)
- Fat – Meal Size

Pre-Workout
- Protein ½ of meal
- Fat – ½ Meal Size
- No CARBS

Post Work Out (Doesn’t Replace Meal/Snack)
- Easily digestible Protein – Meal Sized (chicken/egg whites / salmon)
- Carb-dense Vegetable – Do not eat fruit
- Do not add fat to your PWO meal unless your wod was strength only. Then small amt.
Resources

How our body Reacts?

Any carbohydrate not immediately used by will be stored in the form of glycogen, as long string of glucose molecules. Remember that carbohydrates are converted into glucose. The body has two storage sites for glycogen, the liver and muscles. The glycogen in the muscles are inaccessible to the brain and only glycogen in the liver can be broken down and sent back to the blood stream as glucose.

The liver’s capacity to store carbohydrates is limited and depleted in 10 to 12 hours. Our body’s total ability to store carbohydrates is quite limited. 300 to 400 grams of carbohydrates in the muscles and 60 to 90 grams in the liver. That is equivalent to 2 cups of pasta or 3 candy bars. This is the total reserve amount to keep the brain working properly.

Excess carbohydrates just have one fate, to be converted into fat and stored in fatty tissue. The big problem is that any meal or snack high in carbohydrates will generate a rapid rise in blood glucose. To adjust to this, the pancreas secretes the hormone insulin into the blood stream. Insulin is created by the pancreas as a storage hormone to lower the blood glucose and put aside excess carbohydrate calories in form of fat in case of future famine.

Too many carbohydrates tell the body to store fat and also not to release any fat already stored in fatty tissue. So we just get fatter and fatter. The key to all of this is the speed at which carbohydrates are entered into the bloodstream which will control the rate of insulin secretion.

(Summary)

Both sugars and starches are broken down by the body into the simple sugar, glucose. Glucose molecules then circulate in the bloodstream, supplying cells with fuel on an as-needed basis. Extra glucose is converted into glycogen, which is stored in muscles and the liver. If the body is already storing enough glycogen, glucose gets changed into fat. Your body prefers to burn glucose or glycogen for energy, but when these reserves are depleted it draws on fat, the reserve fuel. Carbohydrates are an important part of the diet, since your body needs energy to grow, to work, and to repair itself.

The Deadly Quartet

1. Hyperinsulism
2. Hyper Triglycerides
3. Obesity
4. Hypertension (bp)

The cluster of hypertriglyceridemia, hyperinsulinemia, obesity, and hypertension markedly increases the risk of coronary artery disease. Although no treatments target this
syndrome specifically, treatment of each aspect of the cluster is important. Prevention-weight loss and physical activity- is key.

What is the cause? Eating too much dietary carbs causes elevated insulin levels. An example would be perfume. When you walk into a perfume store, the smell can be overwhelming, if you stay for a while, you get accustomed to it and after a while you can’t smell it at all. If you then leave the store and come back you can smell it again. When you lose the ability to smell perfume your olfactory receptors perform a down regulation in response to the external variable- in this case, the perfume.

A similar process with insulin can happen within your body. The insulin receptors, which can be found in every cell within your body, have the task of receiving insulin. If we get exposed to too much insulin, over time, we lose the sensitivity to the insulin as it is released into our body. The body’s ability to combat high blood sugar decreases which leads to storing excess glucose as fats in our body. If we can minimize our exposure to these blood sugar spikes and insulin response releases, then our bodies maintain the ability to regulate it efficiently.

Obesity is one of the biggest generators of silent inflammation (which we will talk about later). Since nearly two-thirds of Americans are now overweight, this means that the epidemic of silent inflammation is also out of control. By the same token, America’s diabetes epidemic has grown by 33 percent in the last decade. These diseases are connected with a condition known as insulin resistance which occurs when your cells become less responsive to the actions of insulin, forcing your pancreas to continuously produce more insulin to drive glucose into cells.

Almost all diseases can be traced back to hyperinsulism.

**Sugars**

Sugar is a drug. You can teach the body to get its glucose from other sources besides refined sugars or high glycemic carbs which is a huge step towards being and staying healthy.

There is a singular measure of carbohydrate called the glycemic index. Glycemic index is simply a measure of a food’s propensity to raise blood sugar. Avoid high-glycemic-index foods and you’ll avoid many, if not most, of the ills associated with diet.

Excessive consumption of high-glycemic carbohydrates is the primary culprit in nutritionally caused health problems. High glycemic carbohydrates are those that raise blood sugar too rapidly. They include rice, bread, candy, potato, sweets, sodas, and most processed carbohydrates. Processing can include bleaching, baking, grinding, and refining. Processing of carbohydrates greatly increases their glycemic index, a measure of their propensity to elevate blood sugar.

**Affects of different Carbohydrates in our Bloodstream**
High threshold values of glucose and insulin have a negative effect on the walls of the blood vessels leading to vascular disease. We can avoid this with low glycemic index foods.

Glucagon – is an important hormone involved in carbohydrate metabolism. It is released by the pancreas in response to low glucose levels. It has the opposite effect of insulin which instructs the body’s cells to take in glucose from the blood. It is also release into the body when we eat protein. So if we eat protein with are carbs, glucagon also stimulates the release of insulin, which helps reduce the toxic effects of the high sugar peaks.

Another study shows that kids eating high carb, low protein and fat breakfast such as bowls of cereal get hungry faster, snack more often and ingest more calories through the course of the day.

Just eating Carbohydrates causes your glucose to go up and down. A symptom of low glucose is hunger. When we are hungry, we want to eat again to satiate the appetite, giving us a pattern of blood sugar spiking. By choosing to eat Paleo in Zoned proportions, we are looking to balance our meals throughout the day in order to control those levels of blood sugar spiking and insulin response.

**Fish Oils**

Inflammation is the body ways to tell us something is wrong and it usually hurts. There is another kind; Silent inflammation (systemic inflammation) is a condition that occurs when the body's natural immune response goes down and can lead to a continual attack on the heart, brain and immune system. Obesity is one the biggest generators of silent
inflammation. Signs of chronic inflammation include being fatigued, being groggy when waking up, brittle fingernails, cravings for carbohydrates, being overweight, needing drugs for lowering cholesterol and needing hypertensive drugs like diuretics or beta-blockers.

The moment one of these invaders slips into our bloodstream; inflammation coordinates an all-out attack that destroys the enemy and any tissue it may have infected. Inflammation is also the way the body responds to trauma and injury in order to repair itself. Once the healing process begins, inflammation immediately vanishes and the body resumes its normal functioning. Without inflammation, we would be sitting ducks for opportunistic organisms and injuries to our bodies that would never heal.

Sometimes, however, the inflammatory process doesn’t shut down when it’s supposed to. Inflammation becomes chronic rather than transitory, but now it maintains itself below our ability to perceive it as pain. Chronic silent inflammation is dangerous. This constant generation of silent inflammation may be due to a genetic predisposition or a lifestyle factor like obesity, poor diet, or smoking. Whatever the cause, an increased level of silent inflammation becomes a long-term war that decimates healthy blood vessels, tissues, and cells and sets the state for chronic illness.

Silent inflammation harms the body in a number of ways. Studies have found that it destabilizes cholesterol deposits on coronary arteries. It also attacks nerve cells in the brains and triggers rapid cell division.

How do we combat it? Take your fish oil and a lot of it. The Omega 3 fatty acids found in fish oils has profound anti inflammatory affect. Primarily it reduces/dilutes out any excess toxic fat in the body. Oddly enough, accumulation of excess body fat is your body’s initial attempt at protecting you, by encapsulating or trapping the toxic fat in your fat cells. The problem is that the toxic fat doesn’t stay trapped forever and starts to spill into the blood stream.

The epidemic of inflammation driven by increasing levels of toxic fat in the blood is a result of the American diet over the past 20 years: increased consumption of refined carbohydrates and vegetable oil along with the decreased consumption of healthy Omega-3 fish oil.

Consume ultra-refined EPA/DHA concentrate (super fish oil) as you can. His scale of recommended dosage refers solely to pharmaceutical grade oil. CONSULT YOUR DR.

Fish Oil Calculator -- http://whole9life.com/fish-oil/

Fish Oil Facts -- http://whole9life.com/fish-oil-faq/


Harvard Study – Two groups of pigs. Both on bad diets, but one had lots of fish oil. Both Groups of pigs dies. The first group of pig’s heart looked horrible and the other with fish oil was clean and no buildup.
NUTRITION WORKSHOP RESOURCES: WEB SITES

Whole9 (http://whole9life.com/9-blog)
An integrated system for health and fitness - check The 9 Blog for original articles
The Whole30 Program (http://whole9life.com/2010/05/whole-30-v2/)
The original Whole9 nutrition program designed to “change your life in 30 days”
Robb Wolf (http://robbwolf.com)
Intermittent fasting, fitness and Paleolithic nutrition, by Robb Wolf
The Paleo Diet (http://thepaleodiet.com)
The official Paleo site, by Dr. Loren Cordain (author of The Paleo Diet)
Whole Health Source (http://wholehealthsource.blogspot.com)
A blog about health, food, and wholesome living by Steven Guyenet. (Caution: pretty science-y stuff.)
PāNu (http://www.paleonu.com)
Paleolithic Nutrition, by Dr. Kurt Harris. (Caution: pretty science-y stuff.)

NUTRITION WORKSHOP RESOURCES: FOOD AND RECIPES

Whole9 (http://whole9life.com/category/recipes/)
Whole30-approved recipes from Whole9 and our readers
Performance Menu (http://www.cathletics.com/recipes/)
Free recipes from Scott Hagnas, Robb Wolf, Nicki Violetti and others
The Clothes Make the Girl (http://theclothesmakethegirl.blogspot.com/2010/02/dino-chowpaleo-recipes.html)
 Delicious and original “Dino-Chow” recipes from the kitchen of Melissa Joulwan.
Whole Life Eating (http://wholelifeeating.com)
Whole30 participant Tom Denham serves up a new Whole30 friendly dish each week.
Everyday Paleo (http://everydaypaleo.com)
Sarah Fragoso - busy mother of three, wife, CrossFit coach, and Paleo recipe guru.
Seafood Watch (http://www.montereybayaquarium.org/cr/seafoodwatch.aspx)
The Monterey Bay Aquarium’s guide to seafood recommendations. (Includes a sushi guide.)