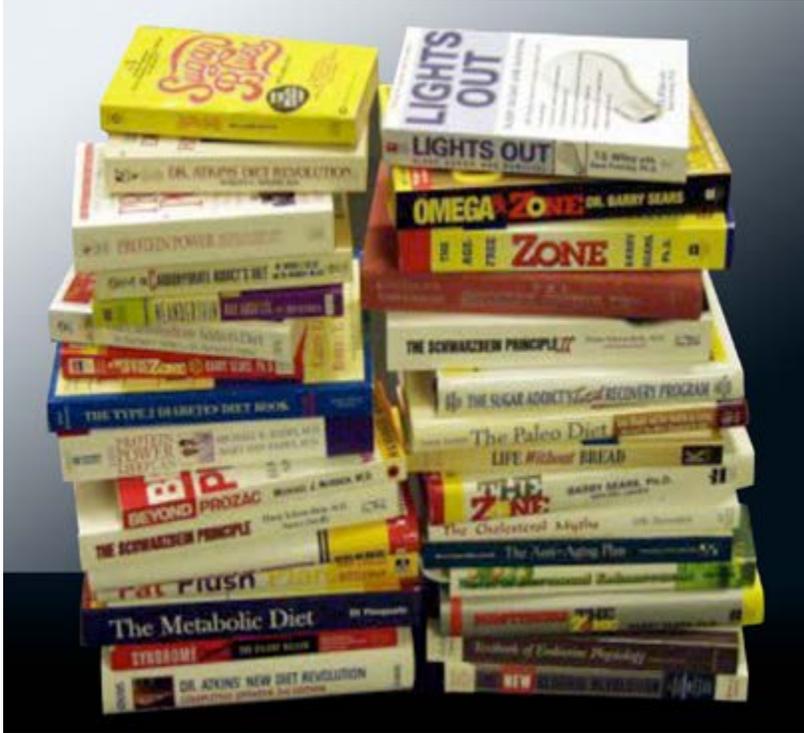


## Nutrition: Avoiding Disease and Optimizing Performance

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*Adapted from Coach Glassman's Sept. 9, 2007, L1 lecture in Quantico, Virginia, and Oct. 14, 2007, L1 lecture in Flagstaff, Arizona.*

The CrossFit message is contrarian. It is against the grain of what occurs at most commercial gyms. They have machines, we detest them. They use isolation movements, we use compound movements. They use low intensity, we use high intensity. Everything about this message is for many people antithetical to all they thought they knew. With nutrition, the theme continues: What most everyone thinks is wrong.

In July of 1989 in the Archives of Internal Medicine, Norman Kaplan wrote an absolutely breathtaking bit of research. It is an analysis that has gone completely unchallenged. He was able to demonstrate by an operative mechanism, through correlation, and more importantly causally, that hyperinsulinism is at the root of the "deadly quartet" (i.e., upper-body obesity, glucose intolerance, hypertriglyceridemia and hypertension). Hyperinsulinism—too much insulin—was the cause.

If you are healthy, insulin is the normal and essential response to the ingestion of carbohydrate. Insulin is a hormone produced by the pancreas, and you cannot live without it. You can either produce insulin through the pancreas, you can inject it, or you can die. Insulin is responsible for storage of energy in cells. (Glucagon is the counter-regulatory hormone

to insulin: It releases the energy out of the cells.) And one of the things that insulin puts into cells is fat.

You can see that the way to get your insulin level too high (hyperinsulinism) is to eat too much carbohydrate. How much carbohydrate is that? In the qualitative sense, your insulin level is “too high” if it is driving up your blood pressure, making you fat or reducing your ability to suppress blood sugar after eating carbohydrate. If you are glucose intolerant, hypertensive or your triglycerides are too high, you are getting too much insulin and thus too much carbohydrate. These are risk factors for heart disease, and the process by ... which we induce atherosclerotic disease—arteries paved over with plaque. This leads to thrombosis, occlusion, myocardial infarct and debilitation and death. But when physicians are polled “what is it that you do not want to get?": cancer and heart disease do not rate nearly so high as does Type 2 diabetes.

And I can tell how to get it. Type 2 diabetes is caused by a receptor downgrade phenomenon on the liver, muscle, and fat cells. They have a receptor site where insulin attaches. It is similar to a key fitting in a lock—specific shapes on each allow them to bind together. When insulin binds to the receptor, the cell can now receive all good things, including amino acids (proteins) and fat.

If you expose yourself to too much insulin, the cells and receptors become “blind” to it. The key does not work as well in the lock; i.e., receptor downgrade phenomenon. The mechanism is not really much different mechanically than staring at the sun. At first, your eyes see light, but if you do it for a few minutes, you will never see any light again. You just burned out the receptors. That is what happens in Type 2 diabetes.

What was revolutionary about Kaplan’s work is that it disproved an accepted model. Traditionally, what was observed over tens of years was that individuals often first gained weight (obesity), then their cholesterol went up (hypercholesterolemia), then their blood pressure went up (hypertensive), and then they become diabetic. There was an assumption—and it is a classical logical fallacy—that the ordering suggested causality. That because this happened first, then this—it was the root cause of all the other conditions. This model is now understood to be fatally flawed (i.e., a post hoc, ergo propter hoc fallacy). Order of events does not necessitate causality.

Kaplan was able to demonstrate with powerful evidence that hyperinsulinism was the cause of all these conditions, the cause of atherosclerotic disease and cardiac death. All of this is collectively known as coronary heart disease (CHD).

There has been a very powerful shift and re-understanding that what is causing heart disease is not dietary-fat intake but excessive consumption of carbohydrate. Things like the French paradox is that there is no paradox. The paradigm was flawed. The French eat many times the fat that Americans do and yet have a much smaller frequency of the heart disease. They also consume just a little bit under 5 percent of the refined sugar we do. We are eating about 150 lb. of sugar per man, woman and child annually.

Nutrition: Avoiding Disease and Optimizing Performance, *continued*

It is amazing what efforts we will exert to consume sugar. Your interest in carbohydrates, and it is profound, is really no different than your interest in beer or opiates. Sugar tickles the brain and it feels good. And the excuses and things people will do to get to that high are unbelievable.

Now I tell you how to avoid all of that.

Eat a diet of meat and vegetables, nuts and seeds, some fruit, little starch and no sugar.

Do that and you are exempt.

Meat and vegetables, nuts and seeds, some fruit, little starch, no sugar—and no coronary heart disease.

It has nothing to do with genetics. The genetic part is an intolerance to excess amounts of carbohydrate. It is no different than having a genetic predisposition to alcoholism. Having the gene for alcoholism does not mean it will necessary be expressed. You would have to drink alcohol. If you do not drink alcohol, you probably will not suffer from alcoholism, at least not in the clinical manifestation of it.

It is no different with atherosclerotic disease. I do not care what your grandfather died of, your mother died of, your uncle died of, your brother died of. For example, Barry Sears, all his uncles and father died at 49 years old from atherosclerotic induced thrombosis, myocardial infarct, heart attack. All of them. He is not going to. He is not eating the carbohydrates they ate.

Eat meat and vegetables, nuts and seeds, some fruit, little starch, no sugar. To get to the same endpoint: these are effective nutritional strategies for avoiding heart disease, death and misery:

- 1) If you could not have harvested it out of your garden or farm and eaten it an hour later, it is not food.
- 2) Shop around the perimeter of the grocery store, and do not go down the aisles.
- 3) If it has (a) food label on it, it is not food. You do not see that on the chicken, it is not on the tomatoes. But it is on the chips and cookies.
- 4) If it is not perishable, if it says "Best if used before 2019," it is not food.

In 1995, we were delivering almost the same lecture with just less clinical experience. And people were like: "You are kidding me?" and "Fat makes you fat, right?" It is not true.

**Optimizing Performance**

The next layer to diet is about optimizing performance. Through a diet of meat and vegetables, nuts and seeds, some fruit, little starch, no sugar, you will not be so lucky as to optimize your output. To get a sub-three-minute Fran, you need to weigh and measure your meat and vegetables, nuts and seeds, ... fruit, ... starch, and eliminate sugar.

I wish it were not true. I wish the path of fitness was riding bicycles and drinking beer. I wished that is how we did it. It does not work. What you have to do is eat meat and vegetables, nuts and seeds, some fruit, little starch, no sugar, and then get a scale and measuring cup. You need accuracy and precision to your consumption or you will never get in a jet stream of elite performance.

If you want to have top-fuel-type performance, you need top fuel. I wish it were otherwise. What do I base this on? No one has ever demonstrated to me anything but inferior capacity on a diet where they did not weigh and measure.

I am not telling you that you have to weigh and measure your food. But I am telling is that you are not going to get anywhere in terms of optimizing your performance on a bad diet. And we have seen enough incidences now. I have worked with tens or thousands of people: No one has ever done it.

You need to weigh and measure your food. Not forever, but at least to start. It is also good to go back to weighing and measuring once in a while. What happens is that the portion requirements diminish for all the foods you do not like. "Yes, I only need one spear of asparagus. Ice cream? I think it was a pound." You will bias in the wrong direction.

I can take any cohort, get one of them to weigh and measure ... food, and he or she will pull away. There are very few things you can do short of doing more pull-ups that can get you more pull-ups other than eating the way we recommend it. There is a one-to-one correspondence between elite CrossFit performance and the accuracy and precision of their consumption.

And what you are going to find is performance improvement after performance improvement, but at some point you will want stop the athlete from leaning further out. It is possible you will get too lean to perform well. You may find a plateau in your output, and then you need to ratchet it up. (I do the same thing for a hard gainer; I increase their intake as I do not need them to lean out.) The first step: When you get you as lean as you want to be and before there is a diminution in performance, double the fat blocks. Increase to two times the fat. If you do not feel a whole lot better, maybe try three times the fat. And if that does not feel a whole lot better, and instead you just get thicker, then go back to two times the fat. But I would let performance tell me what to do. In making modifications, I want to see any kind of chance in physiognomy. I have more room to play with when someone has extra padding; I have to be more careful with someone who is already ripped.

The formula for calculating what is relevant and pertinent to your prescription is lean body

Nutrition: Avoiding Disease and Optimizing Performance, *continued*

mass and activity level. Done. There is not an inherent difference for men versus women, for young versus old. I want to know how active you are and I want to know what your lean body mass is. And everything else is not germane, not pertinent, not relevant. It is extraneous information. Even if you are lactating or pregnant, you would get an insignificant increase in activity level.

In the vagaries and contingencies of everyday living, such as schedules and appetite, there are fluctuations in intake that will occur without weighing and measuring. Following these normal fluctuations put you on a coarser path versus the fine path required for optimized performance. And that is why you will not get there by luck. Is it also possible an average CrossFitter becomes extraordinary this way. Commitment and focus are going to overcome genetic limitations. If you commit to the effort, you stand a much better chance. We have had this fantastic experience of playing with this. In any cohort, one of them pulls away when they are weighing and measuring their food in this 40-30-30 milieu of macronutrient intake. ■

## Fitness, Luck and Health

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*Adapted from Coach Glassman's Feb. 27, 2016, L1 lecture in San Jose, California; March 27, 2016, L1 lecture in Aromas, California; and April 24, 2016 L1 lecture in Oakland, California*

In 2002, we observed that almost any health parameter sits well ordered on a continuum of values that ranged from sick to well to fit. High-density lipoproteins (HDL cholesterol), for instance: At less than 35 mg/dL, you have a problem, 50 mg/dL is nice, and 75 mg/dL is a whole lot better. Blood pressure: 195/115 mm/Hg you have a problem, 120/70 mm/Hg is healthy, and 105/50 mm/Hg looks more like an athlete. Triglycerides, bone density, muscle mass, body fat, hemoglobin A1c (ha1c, aka glycated hemoglobin)—all can be plotted relative to these three values.

The significance is that these are the predictors, the cause, and the manifestation of chronic disease. Chronic diseases include obesity, coronary heart disease, Type 2 diabetes, stroke, cancer (to include breast, colon and lung, but my theory is this will include all the PET-positive cancers (positron emission tomography) eventually, which is 95 percent of all cancers), Alzheimer's, peripheral artery disease, advanced biological aging, drug addiction, among others.

It is very likely that if you have any chronic disease, you have deranged markers. If you have Alzheimer's, you would see your HDL suppressed, your blood pressure up, your triglycerides up, your body fat up, your muscle mass down, your bone density down, your hA1c high, etc. The same is true with diabetes. The same is true with most cancers.

Medicine has no effective treatment for chronic disease: It is symptomatic only. The doctor gives you a drug to bring your cholesterol down, a different drug to raise your bone density. You might need bariatric surgery if you have morbid obesity. If you have paved-over coronary arteries, they can do bypass surgery. If you become glucose intolerant, the doctor can put you on insulin. But all of these are not fixes. They are masking the problem. If you have persistent malignant hypertension, you should take an antihypertensive if you cannot get your blood pressure down otherwise. But how would you get it down otherwise?

CrossFit, Inc., holds a uniquely elegant solution to the greatest problem facing the world today. It is not global warming or climate change, it is not the worst two choices imaginable for president, it is chronic disease. The CrossFit stimulus—which is constantly varied, high-intensity functional movement coupled with meat and vegetables, nuts and seeds, some fruit, little starch and no sugar—can give you a pass on chronic disease. It is elegant in the mathematical sense of being marked by simplicity and efficacy. It is so simple.

Seventy percent of deaths in the United States are attributable to chronic disease. Of the 2.6 million people who died in the United States in 2014, 1.8 million died from chronic disease. This pattern of increasing deaths due to chronic diseases also holds in countries that are ravaged by infectious disease. The numbers are rising, and when we finally add

the PET-positive cancers in, the number might be 80-85 percent in the United States. It is estimated by Centers for Disease Control (CDC) that the United States could have up to a hundred million diabetics in 2050. That will affect everyone. You will not go into the emergency room for something as simple as a broken arm: You will be seeing heart attacks on every corner. Medicine has no solution; you do. CrossFit, with meat and vegetables, nuts and seeds, some fruit, little starch and no sugar will help you avoid all of this.

The other 30 percent are dying from accidents that come in four “-ic” variants: kinetic, genetic, toxic and microbic. Kinetic: physical trauma, car crash, hit on a bike. Toxic: environmental toxins, such as lead poisoning. Genetic: genetic disorder like cystic fibrosis, you are born with it. Microbic: virus, bacteria, prions. This is where treatment can be symptomatic. This is where the miracles of medicine are. If you have got a genetic disorder that is making you sick, you need a doctor. If you have been poisoned, you need a doctor. If you caught a nasty virus or a flesh eating bacteria, you need a doctor. You do not need to go to the gym, you do not need burpees. Doctors are like lifeguards; CrossFit trainers are like swim coaches. When you are drowning, you do not need a swim coach. You needed one, and you did not get one. What you need is a lifeguard. We will teach people how to swim, and when they do not pay attention, and they go under, the doctors take care of it.

Accidents are largely stuff you can do nothing about, but there is one exception. Be fit. Kinetic: We hear stories from war of CrossFitters surviving things that people have not survived previously. Toxicity: Someone who is fitter is more likely to survive the same poisoning than someone that is not. Genetic: There are genes you have inherited that will or will not express because of your behavior through diet and exercise. Microbic: Who is most vulnerable to viral pneumonia? The frail, the feeble. So fitness offers a protection here.

But assume there is no protection from fitness because what you need in terms of preventing accidents largely is luck. Luck—there is no “good luck” versus “bad luck”—looks like not having these things happen to you. Seventy percent of what kills people can be addressed by what CrossFit trainers do, and the other 30 percent of deaths occur based on luck, so get fit and do not think about luck. If you stand around worried about germs, worried about the tire that is going to come through the windshield, worried about breathing toxic air, and worried about your genes, you are wasting your time. It will not make you happy. It will not make you better. It will not make you safer. You are not going to live any longer.

This sums to my “kinetic theory of health.” The singular focus on kinematics—increasing work capacity, increasing your fitness—is how to avoid chronic disease. Just get a better Fran time, better deadlift, better Diane time, and do all the things that would support a better Fran time—like eating meat and vegetables, nuts and seeds, some fruit, little starch and no sugar, get plenty of sleep, and maybe take some fish oil. After that, we are out of stuff that matters. With that singular focus on work capacity, we can avoid chronic disease and there is nothing really to worry about. You have the lifestyle answer. Make it to the gym, eat like we tell you, and enjoy yourself. We have hacked health. Here is the magic formula for you:

Fitness + Luck (bad) = Health.

It is the part you can do something about, plus the part you can do nothing about, which sums to your outcome. So make the most out of fitness and you will not be part of the seven out of 10 that die unnecessarily due to lifestyle. In the end, chronic disease is a deficiency syndrome. It is sedentation with malnutrition.

The cost of chronic disease is such that U.S. medical expenditure is now about \$4 trillion a year. In 2008, Price Waterhouse Cooper estimated that roughly half of all U.S. medical expenditure was wasted on unnecessary procedures, administrative inefficiencies, treatment of preventable conditions and so on. Add in [fraud and abuse](#) and we are wasting well more than a trillion dollars. We also know 86 percent of overall health-care spending goes to treating the chronically diseased ineffectively. Of the remaining 14 percent, half goes to the stuff that medicine can actually do something about. That means seven percent of health-care spending is not wasted. The amount spent on chronic disease is a waste.

What CrossFit trainers are providing is non-medical health care. When doctors treat those affected by accidents (the 30 percent), that is medical health care. If you are confused about the two, it is easy to distinguish by methods and tools. If someone is cut open, given radiation, prescribed pills, injected with syringes, it is medicine. It is treatment by a doctor.

On our side, it looks like CrossFit. We have rings, dumbbells, pull-up bars, our own bodies—and the prescription is universal. It is not to treat disease. It does not matter where you fall on this continuum: You get put on the same program. If the prescription is universal, it cannot be medicine. If it is something everyone needs—like air or oxygen—that is not medicine. Without vitamin C, you can get scurvy. Should physicians control orange and lemon groves, onion and kale production because they have vitamin C that you cannot live without? We do not want them doing that to food. We cannot let them do that exercise, and there is a powerful movement with a lot of funding afoot to do exactly that. Millions of dollars are being spent to bring exercise into the purview of the medical arena, so that it falls under the Affordable Care Act.

We have 13,000 gyms with 2 to 4 million people safe from chronic disease right now. This community is doing a lot of good things on a lot of fronts. Yet our gyms are thriving not because of our impact on chronic disease. They are thriving because the end users, the customers, are extremely happy with the transformation. And it is part physical, part emotional, part health markers, part relationships. That is the miracle of CrossFit: people are getting something that they did not even know they wanted or needed. ■

## Zone Meal Plans

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Originally [published](#) in May 2004

Our recommendation to “eat meat and vegetables, nuts and seeds, some fruit, little starch, and no sugar” is adequate to the task of preventing the scourges of diet-induced disease, but a more accurate and precise prescription is necessary to optimize physical performance.

Finely tuned, a good diet will increase energy, sense of well-being, and acumen, while simultaneously flensing fat and packing on muscle. When properly composed, the right diet can nudge every important quantifiable marker for health in the right direction.

Diet is critical to optimizing human function, and our clinical experience leads us to believe that Barry Sears’s Zone Diet closely models optimal nutrition.

CrossFit’s best performers are Zone eaters. When our second-tier athletes commit to strict adherence to the Zone parameters, they generally become top-tier performers quickly. It seems that the Zone Diet accelerates and amplifies the effects of the CrossFit regimen.

Unfortunately, the full benefit of the Zone Diet is largely limited to those who have at least at first weighed and measured their food.

For a decade, we experimented with sizing and portioning strategies that avoid scales, and

measuring cups and spoons, only to conclude that natural variances in caloric intake and macronutrient composition without measurement are greater than the resolution required to turn good performance to great. Life would be much easier for us were this not so!

The “meal plans” and “block chart” (on the following pages) have been our most expedient approach for eliciting athletes’ best performances and optimal health.

Even discounting any theoretical or technical content, this portal to sound nutrition still requires some basic arithmetic and weighing and measuring portions for the first weeks.

Too many athletes, after supposedly reading Sears’ book “Enter the Zone” still ask, “So what do I eat for dinner?” They get meal plans and block charts. We can make the Zone more complicated or simpler, but not more effective.

We encourage everyone to weigh and measure portions for a couple weeks because it is supremely worth the effort, not because it is fun. If you choose to “guesstimate” portions, you will have the result of CrossFit’s top performers only if and when you are lucky.

Within a couple weeks of weighing and measuring, you will have developed an uncanny ability to estimate the mass of common food portions, but, more importantly, you will have formed a keen visual sense of your nutritional needs. This is a profound awareness.

In the Zone scheme, all of humanity calculates to either 2-, 3-, 4-, or 5-block meals at breakfast, lunch, and dinner, with either 1- or 2-block snacks between lunch and dinner and again between dinner and bedtime. We have simplified the process for determining which of the four meal sizes and two snack sizes best suits your needs. We assume that you are CrossFitters; i.e., active.

Being a “4-blocker,” for instance, means that you eat three meals each day where each meal is composed of 4 blocks of protein, 4 blocks of carbohydrate, and 4 blocks of fat. Whether you are a “smallish” medium-sized guy or a “largish” medium-sized guy would determine whether you will need snacks of 1 or 2-blocks twice a day.

The “meal plans” we give stand as examples of 2-, 3-, 4-, or 5-block meals, and the “block chart” gives quantities of common foods equivalent to 1 block of protein, carbohydrate, or fat.

Once you determine that you need, say, 4-block meals, it is simple to use the block chart and select four times something from the protein list, four times something from the carbohydrate list, and four times something from the fat list every meal.

One-block snacks are chosen from the block chart at face value for a single snack of protein, carbohydrates, and fat, whereas 2-block snacks are, naturally, chosen composed of twice something from the carbohydrates list combined with twice something from the protein list, and twice something from the fats.

Every meal, every snack, must contain equivalent blocks of protein, carbohydrate, and fat.

If the protein source is specifically labeled “non-fat,” then double the usual fat blocks for that meal. Read “Enter the Zone” to learn why.

For those eating according to Zone parameters, body fat comes off fast. When our men fall below 10 percent body fat and start approaching 5 percent, we kick up the fat intake. The majority of our best athletes end up at X blocks of protein, X blocks of carbohydrate, and 4X or 5X blocks of fat. Learn to modulate fat intake to produce a level of leanness that optimizes performance.

The Zone Diet neither prohibits nor requires any particular food. It can accommodate paleo or vegan, organic or kosher, fast food or fine dining, while delivering the benefits of high-performance nutrition. ■

### What is a Block?

A block is a unit of measure used to simplify the process of making balanced meals.

- 7 grams of protein = 1 block of protein
- 9 grams of carbohydrate = 1 block of carbohydrate
- 3 grams of fat = 1 block of fat

Since most protein sources contain fat (e.g., meat), individuals should only add 1.5 grams for each fat block when constructing meals. The block chart on the following pages outlines an amount of each item to achieve 1.5 grams of fat.

When a meal is composed of equal blocks of protein, carbohydrate, and fat, 40% of its calories are from carbohydrate, 30% from protein and 30% from fat.

The following pages contain common foods in their macronutrient category (protein, carbohydrate, or fat), along with a conversion of measurements to blocks.

This “block chart” is a convenient tool for making balanced meals. Simply choose 1 item from the protein list, 1 item from the carbohydrate list, and 1 item from the fat list to compose a 1-block meal. Or choose 2 items from each column to compose a 2-block meal, and so on.

Here is a sample 4-block meal:

- 4 oz. chicken breast
- 1 artichoke
- 1 cup of steamed vegetables with 24 crushed peanuts
- 1 sliced apple

This meals contains 28 grams of protein, 36 grams of carbohydrate, and 12 grams of fat. It is simpler, though, to think of it as a 4-block meal.

### Block Prescription Based on Sex and Body Type

Body Type	Breakfast	Lunch	Snack	Dinner	Snack	Total Blocks
Small female	2	2	2	2	2	10
Medium female	3	3	1	3	1	11
Large female	3	3	2	3	2	13
Athletic, well muscled female	4	4	1	4	1	14
Small male	4	4	2	4	2	16
Medium male	5	5	1	5	1	17
Large male	5	5	2	5	2	19
X-Large male	4	4	4	4	4	20
Hard gainer	5	5	3	5	3	21
Large hard gainer	5	5	4	5	4	23
Athletic, well muscled male	5	5	5	5	5	25

### Sample 1 Day Block Requirements for Small (16-Block) Male

	Breakfast	Lunch	Snack	Dinner	Snack
Protein	4	4	2	4	2
Carbohydrate	4	4	2	4	2
Fat	4	4	2	4	2

### Block Chart For Protein, Fat, and Carbohydrates

PROTEINS			
Food	Eyeball	Exact Cooked (grams)	Exact Uncooked (grams)
beef	1 oz.	26	34
beef, ground, 80% lean	1-1/2 oz.	27	41
calamari	1-1/2 oz.	39	45
Canadian bacon	1 oz.	25	35
catfish	1-1/2 oz.	38	46
cheese, cheddar	1 oz	—	29
cheese, cottage	1/4 cup	—	63
cheese, feta	1-1/2 oz.	—	49
cheese, ricotta	2 oz.	—	62
chicken, breast	1 oz	23	33
clams	1-1/2 oz.	27	48
crabmeat	1-1/2 oz.	39	39
duck	1-1/2 oz.	30	38
egg substitute, liquid	1/4 cup	—	70
egg, white	2 large	64	64
egg, whole	1 large	52	56
flounder/sole	1-1/2 oz.	46	56
ham	1 oz.	37	34
lamb, loin	1 oz.	24	34
lamb, ground	1-1/2 oz.	28	42
lobster	1-1/2 oz	37	42
pork, loin chop	1 oz.	27	33
pork, ground	1-1/2 oz.	27	41
pork, bacon	1 oz.	20	56
protein powder, whey	1 oz.	12	—
salmon	1-1/2 oz.	28	34
sardines	1 oz.	28	—
scallops	1-1/2 oz.	34	58
shrimp	1-1/2 oz.	29	51
soy burgers	1/2 patty	45	—
soy cheese	1 oz.	56	—
soy sausage, links	2 links	37	—
swordfish	1-1/2 oz	30	36
tofu, firm	2 oz.	86	—
tofu, soft	3 oz.	107	—
tuna steak	1-1/2 oz.	24	29
tuna, canned in water	1 oz.	36	—
turkey, breast	1 oz.	23	30
turkey, ground	1-1/2 oz.	26	36
turkey, deli meat	1-1/2 oz.	32	—

FATS		
Food	Eyeball	Exact Cooked (grams)
NUTS & SEEDS		
almonds	~ 3	3
almond butter	1/3 tsp	3
cashews	~ 3	3
macadamia nuts	~ 1	2
peanut butter	1/2 tsp	3
peanuts	~ 6	3
sunflower seeds	1/4 tsp	3
walnuts	1 tsp	2
OTHER		
almond milk, unsweetened	1/2 cup	1/2 cup
avocado	1 tbsp.	10
butter	1/3 tsp	2
coconut milk	1/2 tbsp.	7
coconut oil	1/3 tsp	2
cream cheese	1 tsp	5
cream, heavy	1/3 tsp	4
cream, light	1/2 tsp	8
half and half	1 tbsp.	13
lard	1/3 tsp	2
mayo, light	1 tsp	5
mayonnaise	1/3 tsp	2
olive oil	1/3 tsp	2
olives	~ 5	14
sour cream	1 tsp	8
tahini	1/3 tsp	3
tartar sauce	1/2 tsp	9

**Notes:**

- 1) The amount for each item is to obtain 7 grams of protein, 9 grams of carbohydrate, or 1.5 grams of fat.
- 2) Exact data rounded to nearest whole gram.
- 3) Exact data from [here](#) unless not available therein.
- 4) Fiber in carbohydrate sources is subtracted to determine a block.
- 5) Tbsp. = tablespoon.
- 6) \* mean virtually “unlimited.” Over 5 cups to accumulate a block.

Zone Meal Plans, *continued*

VEGETABLES			
Food	Eyeball	Exact Cooked (grams)	Exact Uncooked (grams)
acorn squash	3/8 cup	89	100
artichoke	1 small	270	177
arugula	*	—	439
asparagus	12 spears	425	500
bean sprouts	3 cups	265	217
beet green	1-1/4 cups	351	1450
beets	1/2 cup	112	135
black beans	1/4 cup	60	19
bok choy	3 cups	1155	761
broccoli	1-1/4 cups	232	223
Brussels sprouts	3/4 cup	200	174
butternut squash	1/3 cup	123	93
cabbage	1-1/3 cups	250	272
carrots	1/2 cup	173	132
cauliflower	1-1/4 cups	500	304
celery	2 cups	375	657
chickpeas	1/4 cup	45	18
collard greens	1-1/4 cups	545	635
corn	1/4 cup	48	54
cucumber	1 (9 inch)	—	285
dill pickles	3 (3 inch)	—	639
eggplant	1-1/2 cups	144	313
fava beans	1/3 cup	63	27
green beans	1 cup	193	211
kale	1-1/4 cups	247	175
kidney beans	1/4 cup	55	26
leeks	1 cup	137	73
lentils	1/4 cup	74	17
lettuce, iceberg	1 head	—	508
lettuce, romaine	6 cups	—	760
lima beans	1/4 cup	65	21
mushrooms	3 cups	291	399
Napa cabbage	5 cups	405	300
okra	3/4 cup	448	212
onion	1/2 cup	103	118
parsnips	1/3 (9 inch)	67	68
peas	1/3 cup	250	180
peppers, red	1-1/4 cups	165	230
pinto beans	1/4 cup	52	19
potato, white	1/3 cup	48	68

VEGETABLES			
Food	Eyeball	Exact Cooked (grams)	Exact Uncooked (grams)
radicchio	5 cups	—	250
radishes	2 cups	493	500
salsa	1/2 cup	—	190
sauerkraut	1 cup	650	—
snow peas	3/4 cup	211	182
spaghetti squash	1 cup	178	167
spinach	1-1/3 cups	667	628
summer squash, all	3 cups	309	400
sweet potato	1/3 (5 inch)	52	53
Swiss chard	1-1/4 cups	443	423
tomato	1 cup	273	335
tomato sauce	1/2 cup	235	—
turnip	3/4 cup	295	195
watercress	*	—	1140
zucchini	3 cups	536	428

**Notes:**

- 1) The amount for each item is to obtain 7 grams of protein, 9 grams of carbohydrate, or 1.5 grams of fat.
- 2) Exact data rounded to nearest whole gram.
- 3) Exact data from [here](#) unless not available therein.
- 4) Fiber in carbohydrate sources is subtracted to determine a block.
- 5) Tbsp. = tablespoon.
- 6) \* mean virtually “unlimited.” Over 5 cups to accumulate a block.

Zone Meal Plans, *continued*

FRUITS		
Food	Eyeball	Exact Uncooked (grams)
apple	1/2	79
applesauce, unsweetened	3/8 cup	89
apricots	3 small	99
banana	1/3 (9 inch)	45
blackberries	1/2 cup	210
blueberries	1/2 cup	75
cantaloupe	1/4	125
cherries	7	65
cranberries, raw	1/4 cup	117
dates	1	13
figs	3/4	55
grapefruit	1/2	140
grapes	1/2 cup	53
guava	1/2 cup	100
honeydew	1/2	110
kiwi	1	75
kumquat	3	96
mango	1/3 cup	67
nectarine	1/2	102
orange	1/2	99
papaya	2/3 cup	99
peach	1	112
pear	1/2	75
pineapple	1/2 cup	77
plum	1	89
raisins	1 tbsp.	12
raspberries	2/3 cup	167
strawberries	1 cup	160
tangerine	1	78
watermelon	1/2 cup	125

PROCESSED CARBOHYDRATES		
Food	Eyeball	Exact Cooked (grams)
bagel	1/4	17
biscuit	1/4	19
bread	1/2 slice	20
bread crumbs	1/2 oz.	20
cereal	1/2 oz.	14
chocolate bar	1/2 oz.	15
corn bread	1 inch square	14
cornstarch	4 tsp	10
croissant	1/4	21
crouton	1/2 oz.	13
donut	1/4	20
English muffin	1/4	21
flour	1-1/2 tsp	12
French fries	5	37
graham crackers	1-1/2	12
granola	1/2 oz.	20
grits	1/3 cup	63
ice cream	1/4 cup	39
melba toast	1/2 oz.	13
oatmeal	1/3 cup	90
pancake	1/2 (4 inch)	32
pasta, cooked	1/4 cup	38
pita bread	1/4	17
popcorn	2 cups	19
potato chips	1/2 cup	18
pretzels	1/2 oz	12
refried beans	1/4 cup	90
rice	3 tbsp.	32
rice cake	1	12
roll (dinner)	1/2	18
roll (hamburger, hot dog)	1/4	18
saltine crackers	4	13
taco shell	1	16
tortilla (corn)	1 (6 inch)	23
tortilla (flour)	1/2 (6 inch)	20
tortilla chips	1/2 oz	15
waffle	1/2	27

**Notes:**

- 1) The amount for each item is to obtain 7 grams of protein, 9 grams of carbohydrate, or 1.5 grams of fat.
- 2) Exact data rounded to nearest whole gram.
- 3) Exact data from [here](#) unless not available therein.
- 4) Fiber in carbohydrate sources is subtracted to determine a block.
- 5) Tbsp. = tablespoon.
- 6) \* mean virtually "unlimited." Over 5 cups to accumulate a block.

Zone Meal Plans, *continued*

## Sample Zone Meals and Snacks

### 2-Block Menus

#### Breakfast

##### Breakfast Quesadilla

1 corn tortilla  
1/4 cup black beans  
1 egg (scrambled or fried)  
1 oz. cheese  
2 tbsp avocado

##### Breakfast Sandwich

1/2 pita bread  
1 egg (scrambled or fried)  
1 oz. cheese  
*Served with 2 macadamia nuts*

##### Fruit Salad

1/2 cup cottage cheese mixed with  
1/4 cantaloupe, cubed  
1/2 cup strawberries  
1/4 cup grapes  
*Sprinkled with 6 chopped almonds*

##### Smoothie

*Blend together:*  
1 cup milk  
1 tbsp protein powder  
1 cup frozen strawberries  
6 cashews

##### Oatmeal

1/3 cup cooked oatmeal (slightly watery)  
1/2 cup grapes  
1/4 cup cottage cheese  
2 tsp walnuts, chopped  
1 tbsp protein powder  
*Spice with vanilla extract and cinnamon*

##### Easy Breakfast

1/2 cantaloupe, cubed  
1/2 cup cottage cheese  
6 almonds

##### Steak and Eggs

1 oz. steak, grilled  
1 fried egg  
1 slice toast with  
2/3 tsp butter

#### Lunch

##### Tuna Sandwich

2 oz. canned tuna  
2 tsp light mayo  
1 slice bread

##### Tacos

1 corn tortilla  
3 oz. seasoned ground meat  
1/2 cup tomato, cubed  
1/3 cup onion (raw), chopped  
Lettuce (as garnish), chopped  
10 olives, chopped  
*Served with Tabasco to taste*

##### Deli Sandwich

1 slice bread  
3 oz. sliced deli meat  
2 tbsp avocado

##### Quesadilla

1 corn tortilla  
2 oz. cheese  
2 tbsp guacamole  
Jalapenos and salsa as garnish  
*Serve with 1/2 orange*

##### Grilled Chicken Salad

2 oz. chicken, grilled  
2 cups lettuce  
1/4 cup tomato, chopped  
1/4 cucumber, chopped  
1/4 cup green pepper (raw), chopped  
1/4 cup black beans  
2 tbsp avocado

##### Easy Lunch

3 oz. deli meat  
1 apple  
2 macadamia nuts

#### Dinner

##### Fresh Fish

3 oz. fresh fish, grilled  
1-1/3 cups zucchini (cooked), with herbs  
*Serve with large salad with 1 tbsp salad dressing of choice*

##### Beef Stew

*Saute:*  
2/3 tsp olive oil  
1/3 cup onion (raw), chopped  
5/8 green pepper (raw), chopped  
~4 oz. beef (raw), cubed  
*Add:*  
1-1/2 cups mushrooms (raw), chopped  
1/4 cup tomato sauce  
*Seasoned with garlic, Worcestershire sauce, salt and pepper*

##### Chili (serves 3)

*Saute:*  
1/3 cup onion (raw), chopped  
5/8 cup green pepper (raw), chopped  
in garlic, cumin, chili powder, and crushed red peppers  
*Add:*  
9 oz. ground beef, browned  
1 cup tomato sauce  
1/2 cup black beans  
1/4 cup kidney beans  
30 olives, chopped  
*Add fresh cilantro to taste*

##### Turkey and Greens

2 oz. turkey breast, roasted  
1-1/4 cups kale, chopped and steamed  
*Saute garlic and crushed red peppers in 2/3 tsp olive oil, add the steamed kale and mix.*  
*Serve with 1 peach, sliced*

##### Easy Chicken Dinner

2 oz. chicken breast, baked  
1 orange  
2 macadamia nuts

Zone Meal Plans, *continued*

## 3-Block Menus

## Breakfast

**Breakfast Quesadilla**

1 corn tortilla  
 1/4 cup black beans  
 1/3 cup onions (raw), chopped  
 5/8 cup green pepper (raw), chopped  
 2 eggs (scrambled or fried)  
 1 oz. cheese  
 3 tbsp avocado

**Breakfast Sandwich**

1/2 pita bread  
 1 egg (scrambled or fried)  
 1 oz. cheese  
 1 oz. sliced ham  
*Serve with 1/2 apple and 3 macadamia nuts*

**Fruit Salad**

3/4 cup cottage cheese  
 1/4 cantaloupe, cubed  
 1 cup strawberries  
 1/2 cup grapes  
*Sprinkle with 9 chopped almonds*

**Smoothie**

*Blend together:*  
 1 cup milk  
 2 tbsp protein powder  
 1 cup frozen strawberries  
 1/2 cup frozen blueberries  
 9 cashews

**Oatmeal**

2/3 cup cooked oatmeal (slightly watery)  
 1/2 cup grapes  
 1/2 cup cottage cheese  
 3 tsp walnuts, chopped  
 1 tbsp protein powder  
*Spice with vanilla extract and cinnamon*

**Easy Breakfast**

3/4 cantaloupe, cubed  
 3/4 cup cottage cheese  
 9 almonds

**Steak and Eggs**

2 oz. steak, grilled  
 1 fried egg  
 1 slice toast w/ 1 tsp butter  
 1/4 cantaloupe, cubed

## Lunch

**Tuna Sandwich**

3 oz. canned tuna  
 3 tsp light mayo  
 1 slice bread  
*Serve with 1/2 apple*

**Tacos**

2 corn tortillas  
 3 oz. seasoned ground meat  
 1 oz. grated cheese  
 1/2 cup tomato, cubed  
 2/3 cup onion (raw), chopped  
 Lettuce (as garnish), chopped  
*Serve with Tabasco to taste*  
 15 olives, chopped  
*Serve with Tabasco to taste*

**Deli Sandwich**

1 slice bread  
 3 oz. sliced deli meat  
 1 oz. cheese  
 3 tbsp avocado  
*Serve with 1/2 apple*

**Quesadilla**

1 corn tortilla  
 3 oz. cheese  
 3 tbsp guacamole  
 Jalapenos and salsa as garnish  
*Serve with 1 orange*

**Grilled Chicken Salad**

3 oz. chicken, grilled  
 2 cups lettuce  
 1/4 cup tomato, chopped  
 1/4 cucumber, chopped  
 1/4 cup green pepper (raw), chopped  
 1/4 cup black beans  
 1/4 cup kidney beans  
 3 tbsp avocado

**Easy Lunch**

3 oz. deli meat  
 1 oz. sliced cheese  
 1-1/2 apples  
 3 macadamia nuts

## Dinner

**Fresh Fish**

4-1/2 oz. fresh fish, grilled  
 1-1/3 cups zucchini (cooked), with herbs  
*Serve with large salad with 1-1/2 tbsp salad dressing of choice*  
 1 cup strawberries

**Beef Stew**

*Saute:*  
 1 tsp olive oil  
 1/3 cup onion (raw), chopped  
 5/8 green pepper (raw), chopped  
 ~6 oz. beef (raw), cubed  
*Add:*  
 1-1/2 cups zucchini (raw), chopped  
 1-1/2 cups mushrooms (raw), chopped  
 1/2 cup tomato sauce  
*Season with garlic, Worcestershire sauce, salt and pepper*

**Chili (serves 3)**

*Saute:*  
 2/3 cup onion (raw), chopped  
 1-1/4 cups green pepper (raw), chopped  
 in garlic, cumin, chili powder, and crushed red peppers  
*Add:*  
 13.5 oz. ground beef, browned  
 1 cup tomato sauce  
 3/4 cup black beans  
 1/2 cup kidney beans  
 45 olives, chopped  
*Add fresh cilantro to taste*

**Turkey and Greens**

3 oz. turkey breast, roasted  
 2-1/2 cups kale, chopped and steamed  
*Saute garlic and crushed red peppers in 1 tsp olive oil, add the steamed kale and mix.*  
*Serve with 1 peach, sliced*

**Easy Dinner**

3 oz. chicken breast, baked  
 1-1/2 oranges  
 3 macadamia nuts

Zone Meal Plans, *continued*

## 4-Block Menus

## Breakfast

**Breakfast Quesadilla**

1 corn tortilla  
 1/2 cup black beans  
 1/3 cup onions (raw), chopped  
 5/8 green pepper (raw), chopped  
 2 eggs (scrambled or fried)  
 2 oz. cheese  
 4 tbsp avocado

**Breakfast Sandwich**

1/2 pita bread  
 2 eggs (scrambled or fried)  
 1 oz. cheese  
 1 oz. sliced ham  
*Serve with 1 apple and 4 macadamia nuts*

**Fruit Salad**

1 cup cottage cheese  
 1/2 cantaloupe, cubed  
 1 cup strawberries  
 1/2 cup grapes  
*Sprinkled with 12 chopped almonds*

**Smoothie**

*Blend together:*  
 2 cups milk  
 2 tbsp protein powder  
 1 cup frozen strawberries  
 1/2 cup frozen blueberries  
 12 cashews

**Oatmeal**

1 cup cooked oatmeal (slightly watery)  
 1/2 cup grapes  
 3/4 cup cottage cheese  
 4 tsp walnuts, chopped  
 1 tbsp protein powder  
*Spice with vanilla extract and cinnamon*

**Easy Breakfast**

1 cantaloupe, cubed  
 1 cup cottage cheese  
 12 almonds

**Steak and Eggs**

3 oz. steak, grilled  
 1 fried egg  
 1 slice bread with 1-1/3 tsp butter  
 1/2 cantaloupe, cubed

## Lunch

**Tuna Sandwich**

4 oz. canned tuna  
 4 tsp light mayo  
 1 slice bread  
*Serve with 1 apple*

**Tacos**

2 corn tortillas  
 4-1/2 oz. seasoned ground meat  
 1 oz. cheese, grated  
 1/2 cup tomato, cubed  
 1/3 cup onion (raw), chopped  
 Lettuce (as garnish), chopped  
 20 olives, chopped  
*Serve with Tabasco to taste*  
*Serve with 1/2 apple*

**Deli Sandwich**

2 slices of bread  
 4-1/2 oz. sliced deli meat  
 1 oz. cheese  
 4 tbsp avocado

**Quesadilla**

2 corn tortillas  
 4 oz. cheese  
 4 tbsp guacamole  
 Jalapenos and salsa as garnish  
*Serve with 1 orange*

**Grilled Chicken Salad**

4 oz. chicken, grilled  
 2 cups lettuce  
 1/4 cup tomato, chopped  
 1/4 cucumber, chopped  
 1/4 cup green pepper (raw), chopped  
 1/2 cup black beans  
 1/4 cup kidney beans  
 4 tbsp avocado

**Easy Lunch**

4-1/2 oz. deli meat  
 1 oz. cheese  
 1 apple  
 1 grapefruit  
 4 macadamia nuts

## Dinner

**Fresh Fish**

6 oz. fresh fish, grilled  
 1-1/3 cups zucchini (cooked), with herbs  
*Serve with large salad with 2 tbsp salad dressing of choice*  
 2 cups strawberries

**Beef Stew**

*Saute:*  
 1-1/3 tsp olive oil  
 1/3 cup onion (raw), chopped  
 5/8 green pepper (raw), chopped  
 ~8 oz. (beef (raw), cubed)  
*Add:*  
 1-1/2 cups zucchini (raw), chopped  
 1-1/2 cups mushrooms (raw), chopped  
 1 cup tomato sauce  
*Season with garlic, Worcestershire sauce, salt and pepper*  
*Serve with 1 cup strawberries*

**Chili (serves 3)**

*Saute:*  
 2/3 cup onion (raw), chopped  
 1-1/4 cups green pepper (raw), chopped  
 in garlic, cumin, chili powder, and crushed red peppers  
*Add:*  
 18 oz. ground beef, browned  
 2 cups tomato sauce  
 3/4 cup black beans  
 3/4 cup kidney beans  
 60 olives, chopped  
*Add fresh cilantro to taste*

**Turkey and Greens**

4 oz. turkey breast, roasted  
 2-1/2 cups kale, chopped and steamed  
*Saute garlic and crushed red peppers in 1-1/3 tsp olive oil, add kale and mix.*  
*Serve with 2 peaches, sliced*

**Easy Dinner**

4 oz. chicken breast, baked  
 2 oranges  
 4 macadamia nuts

Zone Meal Plans, *continued*

## 5-Block Menus

## Breakfast

**Breakfast Quesadilla**

2 corn tortillas  
 1/2 cup black beans  
 1/3 cup onions (raw), chopped  
 5/8 cup green pepper (raw), chopped  
 3 eggs (scrambled or fried)  
 2 oz. cheese  
 5 tbsp avocado

**Breakfast Sandwich**

1/2 pita bread  
 2 eggs (scrambled or fried)  
 2 oz. cheese  
 1 oz. ham, sliced  
*Serve with* 1-1/2 apples and  
 5 macadamia nuts

**Fruit Salad**

1-1/4 cups cottage cheese  
 1/2 cantaloupe, cubed  
 1 cup strawberries  
 1 cup grapes  
*Sprinkle with* 15 chopped almonds

**Smoothie**

*Blend together:*  
 2 cups milk  
 3 tbsp protein powder  
 2 cups frozen strawberries  
 1/2 cup frozen blueberries  
 15 cashews

**Oatmeal**

1 cup cooked oatmeal (slightly watery)  
 1 cup grapes  
 1 cup cottage cheese  
 5 tsp walnuts, chopped  
 1 tbsp protein powder  
*Spice with* vanilla extract and cinnamon

**Easy Breakfast**

1-1/4 cantaloupe, cubed  
 1-1/4 cups cottage cheese  
 ~ 15 almonds

**Steak and Eggs**

3 oz. steak, grilled  
 2 fried eggs  
 1 slice bread with 1-2/3 tsp butter  
 3/4 cantaloupe, cubed

## Lunch

**Tuna Sandwich**

5 oz. canned tuna  
 5 tsp light mayo  
 1 slice bread  
*Serve with* 1-1/2 apples

**Tacos**

2 corn tortillas  
 6 oz. seasoned ground meat  
 1 oz. cheese, grated  
 1/2 cup tomato, cubed  
 1/3 cup onion (raw), chopped  
 Lettuce (as garnish), chopped  
 25 olives, chopped  
*Serve with* Tabasco to taste  
*Serve with* 1 apple

**Deli Sandwich**

2 slices bread  
 4-1/2 oz. deli meat  
 2 oz. cheese  
 5 tbsp avocado  
 1/2 apple

**Quesadilla**

2 corn tortillas  
 5 oz. cheese  
 5 tbsp guacamole  
 Jalapenos and salsa as garnish  
*Serve with* 1-1/2 oranges

**Grilled Chicken Salad**

5 oz. chicken, grilled  
 2 cups lettuce  
 1/4 cup tomato, chopped  
 1/4 cucumber, chopped  
 1/4 cup green pepper (raw), chopped  
 1/2 cup black beans  
 1/2 cup kidney beans  
 5 tbsp avocado

**Easy Lunch**

4-1/2 oz. deli meat  
 2 oz. cheese  
 1-1/2 apples  
 1 grapefruit  
 5 macadamia nuts

## Dinner

**Fresh Fish**

7-1/2 oz. fresh fish, grilled  
 1-1/3 cups zucchini (cooked), with herbs  
*Serve with* large salad with 1/4  
 cup black beans and 2-1/2 tbsp  
 salad dressing of choice  
 2 cups strawberries

**Beef Stew**

*Saute:*  
 1-2/3 tsp olive oil  
 2/3 cup onion (raw), chopped  
 1-1/4 cups green pepper (raw), chopped  
 ~10 oz. beef (raw), cubed  
*Add:*  
 1-1/2 cups zucchini (raw), chopped  
 1-1/2 cups mushrooms (raw), chopped  
 1 cup tomato sauce  
*Season with* garlic, Worcestershire sauce,  
 salt and pepper  
*Serve with* 2 cups strawberries

**Chili (serves 3)**

*Saute:*  
 2/3 cup onion (raw), chopped  
 2-1/2 cups green pepper (raw), chopped  
 in garlic, cumin, chili powder, and crushed  
 red peppers  
*Add:*  
 22.5 oz. ground beef, browned  
 2 cups tomato sauce  
 1 cup black beans  
 1 cup kidney beans  
 75 olives, chopped  
*Add* fresh cilantro to taste

**Turkey and Greens**

5 oz. turkey breast, roasted  
 2-1/2 cups kale, chopped and steamed  
*Saute* garlic and crushed red peppers in  
 1-2/3 tsp olive oil, add steamed kale and  
 mix.  
*Serve with* 3 peaches, sliced

**Easy Dinner**

5 oz. chicken breast, baked  
 2-1/2 oranges  
 5 macadamia nuts

Zone Meal Plans, *continued*

## 1-Block Snacks

1 hard-boiled egg  
1/2 orange  
6 peanuts

1/2 cup plain yogurt  
*Sprinkled with* 3 cashews, chopped

1 oz. cheese  
1/2 apple  
1 macadamia nut

1 oz. canned chicken or tuna  
1 peach  
1/2 tsp peanut butter

1-1/2 oz. deli-style ham or turkey  
1 carrot  
5 olives

1 oz. mozzarella string cheese  
1/2 cup grapes  
1 tbsp avocado

1 oz. jack cheese  
1 tbsp guacamole  
1 cup tomato

1 cup strawberries  
1/4 cup cottage cheese  
1 macadamia nut

1 poached egg  
1/2 slice bread  
1/2 tsp peanut butter

1/4 cup cottage cheese  
1/2 carrot  
3 celery stalks  
5 olives

3 oz. soft tofu  
1/2 apple  
1/2 tsp peanut butter

1 oz. tuna  
1 large tossed salad  
1 tsp salad dressing of choice

1 hard boiled egg  
1 large spinach salad  
1 tsp salad dressing of choice

1 oz. grilled turkey breast  
1/2 cup blueberries  
3 cashews

*Blend:*  
1 cup water  
1 tbsp protein powder  
1/2 cup grapes  
1/3 tsp coconut oil

*Blend:*  
1 cup water  
1/2 oz. spirulina  
1 cup frozen strawberries  
3 cashews

1 oz. cheddar cheese melted over  
1/2 apple  
*Sprinkled with* 1 tsp walnuts, chopped

1/4 cup cottage cheese  
1/2 cup pineapple  
6 peanuts

1 oz. sardines  
1/2 nectarine  
5 olives

1-1/2 oz. feta cheese  
1 cup diced tomato  
5 olives

1-1/2 oz. salmon  
12 asparagus spears  
1/3 tsp olive oil

1-1/2 oz. shrimp  
2 cups broccoli (raw)  
6 peanuts

1 oz. Canadian bacon  
1 plum  
1 macadamia nut

1-1/2 oz. deli-style turkey  
1 tangerine  
1 tbsp avocado

1/4 cup cottage cheese  
1 cup sliced tomato  
1/3 tsp olive oil

1-1/2 oz. scallops  
1 sliced cucumber  
1/2 tsp tartar sauce

1 oz. lamb  
1/4 cup chick peas  
1/3 tsp tahini

## Typical CrossFit Block Prescriptions and Adjustments

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To best understand the Zone Diet, CrossFitters should read Dr. Barry Sears book “Enter the Zone.” This article gives more information regarding block prescriptions and “fat intake” adjustments for CrossFitters.

The chart based on sex and body type in the “Zone Meal Plans” article is perfect way to begin the Zone. In cases where the athlete chooses the wrong block size, this can be modified after a few weeks once the desired results are not achieved. While starting at a block higher or lower than ideal may slow progress, it is infinitely more important to start weighing and measuring intake than not to start at all.

Dr. Barry Sears details a more precise method to calculate one’s block prescription in “Enter the Zone.” It is:

$$\text{Zone block prescription} = \text{lean body mass (lb.)} * \text{activity level (g/lb. of lean body mass)} / 7 \text{ (g protein/block)}$$

The activity level ranges on a scale of 0-1. For those who work out several days a week and do not have a labor-intensive job, the activity level should be 0.7 (most CrossFitters). This simplifies to a Zone block prescription that is 10 percent of lean mass.

The activity factor should increase if the athlete does CrossFit two or more times a day, trains for another sport in addition to CrossFit, or holds a strenuous daily job (e.g., construction, farming, etc., and potentially coaching, if on one’s feet all day). Although CrossFit workouts are relatively intense, they are not long in duration. An individual does not need to increase the activity level value based on intensity alone; activity volume determines this.

### Sample Calculation Of The Zone Block Prescription

Suppose an athlete is 185 lb. (84 kg) with 16 percent body fat. He does CrossFit five days per week and works in a typical office environment. A sample calculation of his Zone block prescription follows.

First, lean body mass is calculated (calipers are a convenient, easy-to-use, and reasonably accurate method):

$$\text{lean body mass} = 185 \text{ lb.} - (0.16 * 185 \text{ lb.}) = 185 \text{ lb.} - 29.6 \text{ lb.} = 155.4 \text{ lb.}$$

Because the activity factor is 0.7, the simplified formula is used:

$$\text{block prescription} = 155.4 \text{ lb.} * 0.10 = 15.54 \text{ or } \sim 15 \text{ blocks}$$

Typical CrossFit Block Prescriptions and Adjustments, *continued*

This means that the example athlete above would eat 15 blocks/day, or:

<b>Protein</b>	15 blocks * 7 g	= 105 g (420 calories)
<b>Carbohydrate</b>	15 blocks * 9 g	= 135 g (540 calories)
<b>Fat</b>	15 blocks * 3 g	= 45 g (405 calories)
<b>Total Calories</b>		= 1,365

Note, the total calories presented here are underestimated due to hidden calories. Most foods are classified by a single macronutrient, despite some other macronutrients present (e.g., nuts are classified as a fat, but have some protein and carbohydrate calories). These less predominant macronutrients for each source are not included in the total calorie calculations.

This athlete could also choose to round up to 16 blocks, particularly if the athlete is more likely to have compliance issues. The Zone prescription is a calorie-restrictive diet and can be difficult especially for new-adopters. Rounding up to the next whole block when one's calculation has a decimal value may result in a slower progress, but may also get better long-term compliance. Once the athlete has become accustomed to the diet, then the total blocks can be lowered to 15, particularly if desired body composition is not yet achieved.

### Increasing Fat Intake

The caloric restriction leans out the athlete while providing enough protein and carbohydrate for typical CrossFit activity levels. However, the athlete can become too lean. The athlete is considered "too lean" when performance decreases in combination with continued weight loss. "Too lean" should not be based on body-weight or appearance alone. When a loss of mass coincides with a drop in performance, the athlete needs to add calories to the diet. This can be accomplished by doubling the fat intake.

For the 15-block example athlete, daily food intake at two times the fat would be:

<b>Protein</b>	15 blocks * 7 g	= 105 g (420 calories)
<b>Carbohydrate</b>	15 blocks * 9 g	= 135 g (540 calories)
<b>Fat</b>	30 blocks * 3 g	= 90 g (810 calories)
<b>Total Calories</b>		= 1,770

Typical CrossFit Block Prescriptions and Adjustments, *continued*

At twice the fat, the macronutrient ratio based on calories has changed from 30% protein, 40% carbohydrate, 30% fat to: 23% protein, 31% carbohydrate, 46% fat. Fat can continue to be multiplied if the athlete has further mass loss and performance decline. Many CrossFit athletes have a diet including five times the fat.

For the 15-block athlete, daily food intake at five times the fat would be:

<b>Protein</b>	15 blocks * 7 g	= 105 g (420 calories)
<b>Carbohydrate</b>	15 blocks * 9 g	= 135 g (540 calories)
<b>Fat</b>	75 blocks * 3 g	= 225 g (2,025 calories)
<b>Total Calories</b>		= 2,985

At five times the fat, the macronutrient ratio based on calories has changed to: 14% protein, 18% carbohydrate, 68% fat. ■

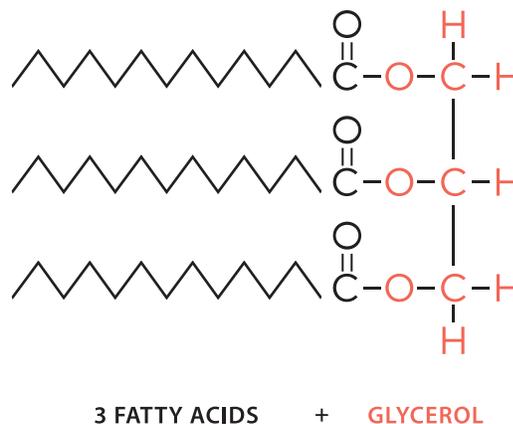
## Supplementation

Whole, unprocessed foods are the best source of both macronutrients and micronutrients in terms of composition, variety, and density, such that supplementation is generally not recommended. We contend that eating a high-quality whole food based diet in known quantities are the most important tenets of nutrition for improved performance and health. Not only are supplements generally poorer nutrient sources, but they are also an unnecessary focus for someone not following our basic diet plan of weighed and measured meat and vegetables, etc.

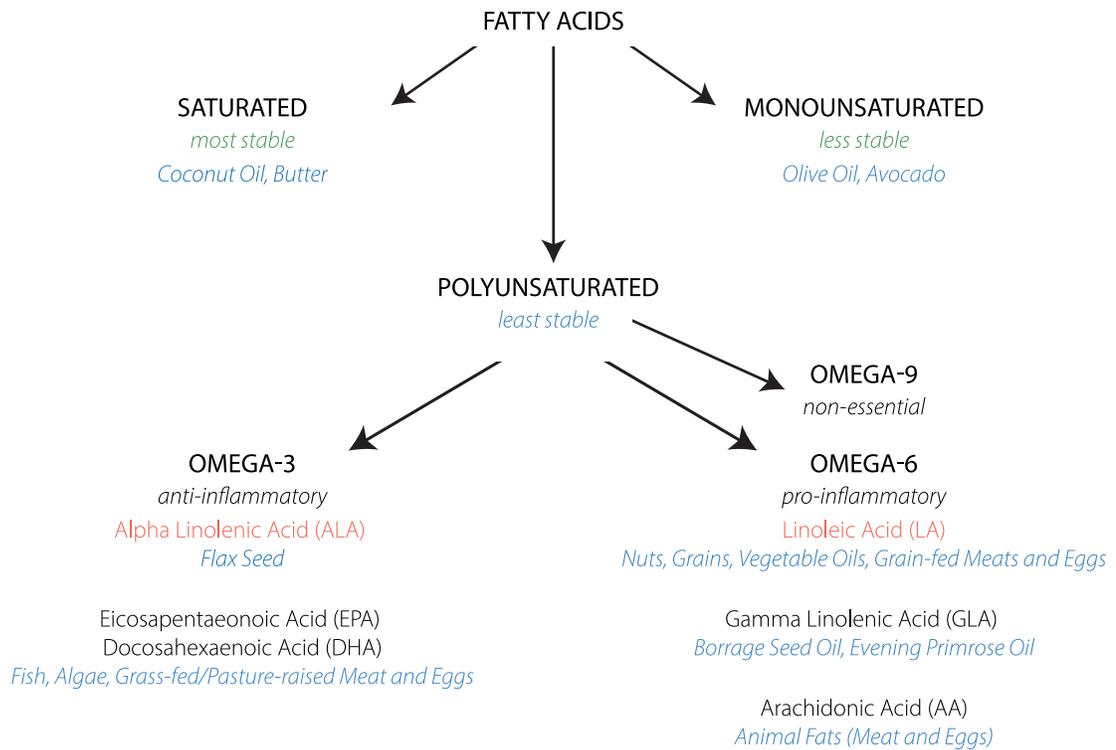
However, there is one supplement that we find is beneficial enough to make a blanket recommendation, and that is fish oil. Fish oil provides omega-3 fatty acids, which are a type of polyunsaturated fat.

Physiological fats are known as triglycerides in biological terms; they are composed of a glycerol backbone with three fatty acids attached (Figure 1). The attached fatty acids are mixtures of saturated, monounsaturated, and polyunsaturated fats. Although one fatty acid is prominent in each food, all three are represented to some degree. Figure 2 provides a summary of the types of fat and example foods of each.

The two types of polyunsaturated fats found most frequently in foods are omega-3 and omega-6 fats. Classifying a fatty acid as omega-3 vs. omega-6 is dependent on chemical structure. Polyunsaturated fats are sources of the two essential fatty acids, meaning they must be obtained from the diet. They are alpha-linolenic acid (ALA) (an omega-3) and linoleic acid (LA) (an omega-6). Omega-3 fats are known as “anti-inflammatory” fats, and omega-6 fats are known as “pro-inflammatory” fats based on their physiological functions. Both are needed in relatively equal quantities.



**Figure 1.** Fat in Food is in the Form of a Triglyceride.



**APPROXIMATE PALEO ERA RATIO**

2 OMEGA-6 : 1 OMEGA -3

**CURRENT RATIO**

20 OMEGA-6 : 1 OMEGA -3

*pro-inflammatory*

**Figure 2.** Summary of Fatty Acids and Example Food Sources.

Current diets tend to have too many omega-6 fats, pushing the balance towards pro-inflammatory physiological processes. The current omega-6:omega-3 ratio is approximately 20:1 and higher, where primitive populations likely had a ratio closer to 2:1. Sources of omega-6 fats to the diet are: vegetable oils, nuts, conventionally raised (grain fed/feed lot) meat and eggs, and farm-raised fish. Eliminating processed food according to our diet should reduce exposure to omega-6 fats from vegetable oils. However, most meat and eggs are conventionally raised, which result in greater omega-6 content than if they were wild or grass-fed. Nuts and seeds also have more omega-6 fats than omega-3. Therefore, it is possible that even though one eats the foods on our list, his or her diet could still be pro-inflammatory relative to the ancestral past.

Fish-oil supplementation improves the ratio of omega-6 to omega-3 fatty acids and reduces the inflammatory responses in the body. Fish oil provides two types of omega-3 fatty acids: eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), the form of omega-3 fats

preferred by the brain and body. The body can convert ALA to EPA and DHA, but the conversion process is inefficient. Some practitioners have recommended a combined daily intake on the order of 3 grams of EPA and DHA for an otherwise healthy individual, although the exact amount is dictated by one's total omega-6 intake. Each brand of fish oil has a different concentration of EPA and DHA per serving as indicated on the label. Individuals may have to take multiple servings to get 3 grams of EPA and DHA, as brands may include omega-3s that are not either (e.g., ALA). Flax seed or oil is not an appropriate supplement for omega-3's. Flax is a good source of ALA, but because of the poor conversion to EPA and DHA, it is not recommended. If the individual is vegan, DHA can be obtained with algae oil.

Research has indicated positive health benefits by supplementing with fish oil. Omega-3 fats help increase the fluidity of cell membranes, and research has indicated supplementation can improve insulin sensitivity, cardiovascular function, nervous-system function, immune health, memory, and mood issues. Omega-3's also function as an anti-coagulant, so military personnel should consider removing fish oil supplements from their diet a couple of weeks prior to deployment. It may also be appropriate for those with an upcoming surgery to stop taking fish oil two weeks from that date. These individuals should talk with their doctor regarding these circumstances.

It is possible to avoid omega-3 supplementation depending on food intake, although the individual needs to be fastidious with his or her diet. This could be accomplished by avoidance of all vegetable oils (which are used at most every restaurant), and nuts and seeds. Meat would have to be grass-fed, eggs pasture raised, and wild-caught fish should be consumed a few times a week. Because this is not practical for many people, supplementation is used.

Besides the ratio of omega-6 to omega-3's in the diet, the total amount of polyunsaturated fat is an important consideration. It is not ideal to take in high doses of either omega-6 (vegetable oils, nuts) or omega-3 fats (based on the stability of polyunsaturated fats relative to other fats, Figure 2). Fish oil supplementation does not negate the effects of a bad diet (e.g., eating fast food or excessive amounts of nuts and nut butters). The total recommended polyunsaturated fat intake in a diet is not well-established; an equal representation of the three fats appears prudent. Individuals should work with a primary care doctor to determine if supplementation is appropriate, particularly in cases with specific medical conditions. ■