

INTERMITTENT FEAST

AN EVOLUTIONARY & SCIENTIFIC APPROACH TO SLASHING FAT



by

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INTERMITTENT FEAST: An Evolutionary & Scientific Approach to Slashing Fat

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INTRO: THE FAT LOSS & HEALTH ENHANCEMENT HIERARCHY

Gung fu is based on simplicity; all techniques are stripped down to their essential purpose without wastage or ornamentation, and everything becomes the straightest, most logical simplicity of common sense. Being wise in gung fu does not mean adding more but being able to remove sophistication and ornamentation and be simply simple — like a sculptor building a statue not by adding, but by hacking away the unessential so that the truth will be revealed unobstructed. True refinement seeks simplicity. — Bruce Lee

In order to truly help you succeed with your fat loss and health enhancement goals, I realized I needed to simplify my coaching approach, and streamline my educational content.

Scientists and fitness writers can pontificate over the details of human physiology and nutritional biochemistry into eternity, which is quite fun in certain settings (yes I am a nerd). And every dietary approach should be based off these principles.

But the reality remains that getting results off the chalkboard, and outside of advertisements, comes down to teaching people simple strategies they can learn, easily remember, and consistently apply in the real world.

That's a good thing, because a large percentage of the health & fitness industry purposely over-complicates things in order to sell you a bunch of bullsh*t you don't really need, or because insecure coaches need to feed their egos, establish credibility, prove their superiority, validate some kind of position, or maintain some kind of guru status.

As a result, many advanced athletes and fitness enthusiasts are just as information overloaded, and suffering from paralysis by over-analysis, as the complete beginner looking for an efficient way to get started. And unfortunately, confusion leads to a lack of action and results.

In order to become part of the solution, instead of part of the problem, my nutrition advice has DEVOLVED over time.

Improving your health and ruthlessly slashing fat is simple (not easy). Over-complication comes from ignoring what we know we really need to do to produce results, and searching for an easier way, a magic pill, that miracle solution, etc.

I've always viewed the steps to achieve your fat loss and health enhancement goals in terms of a hierarchy of importance. You should start at the top if you want to get somewhere with your goals.

1. FOOD CHOICES (Lesson #1)

Food choices are #1 in your quest for dropping fat, looking good naked, preventing disease, and improving your overall health and wellness.

Moving away from modern Y2K eating by cutting out processed, man-made foods; and returning to our evolutionary, ancestral, or cultural pasts by eating more real, natural foods (wild animals and plants) will take you 90% of the way in achieving your goals, automatically, without all of the over-complication, confusion, and misinformation in the health & fitness industry.

2. DIET STRUCTURE (Lessons #2-4)

Choosing the appropriate diet structure FOR YOU (meal frequency and food distribution) is about making your plan as realistic, functional, and sustainable as possible, given your lifestyle, career demands, and goals.

Anything can work in the short-term when motivation is high -- say for an athletic competition or for a new Facebook photo. But what is going to work as a long-term, lifestyle strategy?

Most approaches (eat 6 small meals, starve at night, etc.) are impractical, and are based more on fitness tradition than scientific necessity. There is no one right Way. The best structure is simply the one that allows you to most consistently stick with your plan.

I believe our hunter-gatherer evolutionary past again provides us with clues. Eat lighter and LESS frequently while active and "hunting" during the day, and eat the majority of your calories at night while relaxing or socializing. That's not the only way, but it is one of the easiest ways, because it goes with our natural instincts, which is to feast at night.

Many do this naturally, albeit with poor food choices. It is the poor food choices that are the problem, not the diet structure itself. Correct the food choices and you correct the problem, that's why food choices always remains #1.

You can attain a good level of health and fitness, and a natural bodyweight, with steps 1 & 2 alone.

3. DIET DETAILS & ADVANCED PRINCIPLES (Lessons #5-12):

Detailed dietary calculations (calories, protein, carbs, fat grams, etc.) and advanced principles are more for athletes trying to attain higher-level performance or physique goals. Take care of the big picture basics and your overall health first -- eating real foods and finding a sustainable diet structure. Then dive into the program details to get ripped.

But once you are ready to take it to the next level, these details can be the difference between looking average, and looking awesome. It's a Sports Nutrition "thang", and we need to take advantage of modern research in this field to attain modern physique or performance goals. Despite what some claim, there is no One Universal Right Way or system that fits everyone, everywhere.

Calories need to be targeted based on goals. Macronutrients need to be adjusted based on individual activity levels and metabolic factors. Calorie and carb cycling may be necessary to

break plateaus and reach elite levels. Everything needs to be applied, tested, and assessed in the real world, and adjusted based on results.

I believe I can give you a good place to get started, but you'll have to take some personal accountability and do some work on your own to figure out what protocol works best for you.

4. EVERYTHING ELSE

The majority of the fitness industry's focus, and most of the stuff being sold to you (miracle supplements, magical detox plans, etc.), are "extras" at best, and probably account for less than 5% of real world results. And most of this stuff just makes you "feel" like you are doing something good for yourself, even though you are not.

The best fat burner is to stop eating crap. The best detox plan is to stop eating crap. Real world results are not about what you read about for entertainment purposes, or about how many products you buy. They are all about what you do.

Alas, I wish I had something more flashy, innovative, or quick fix appealing to tell you. But in this real life battle against such relentless and unforgiving enemies as body fat and poor biomarkers of health, only the best weapons will allow us to succeed. And THE best weapon I know of is the tough love truth.

Now that we've become acquainted, shall we dispense with the fun and games and get down to the heart of the matter?

We all come to new material with preconceived notions and established beliefs. With nutrition, much of that has been engrained in us since we were kids. All I ask is that you keep an open mind, take in what I am presenting without bias, and then:

1. Research your own experience. 2. Absorb what is useful. 3. Reject what is useless. 4. Add what is specifically your own. -- Bruce Lee.

LESSON #1 -- FOCUS ON FOOD CHOICES

A. WHAT TO DO - SUMMARY

1. Use Paleo/Caveman/Evolutionary Nutrition as the foundation of your diet, and the first thing you think of when making food choices. If it was around in caveman times you can eat it. If man made it, don't eat it. If you can cut its head off or pluck it from the ground, it's probably good to go. If it's neon blue and comes in a bag or box, it's probably not great.
2. Choose REAL foods (animals and plants) over REFINED foods (pretty much everything else). Ditch the muffins to ditch the muffin top.
3. Choose NATURE'S foods (animals and plants) over self-proclaimed, processed & packaged "HEALTH" foods (refined oils, whole grain cereals and breads, 100 calorie snack bars, probiotic yogurts, protein bars, etc.), except for poisonous mushrooms, which you should probably leave alone.
4. If you are an athlete or regular exerciser (especially strength training or any other high-intensity activity), you may want to add back in some starchy carbohydrates to support the physiological and metabolic demands of anaerobic exercise (muscle glycogen restoration, inhibiting protein breakdown/catabolic activity/muscle loss). Drive a Ferrari around, and you need to fill up the gas tank. If your Shaggin' Station Wagon has been sitting in the garage, probably not so much.
5. A carb-based, traditional Japanese Village-style diet is a good template for active strength trainers/anaerobic athletes -- basically a Caveman Diet plus some rice and root vegetables. The Irish Farmer's Diet (meat and potatoes), Okinawans (pork and sweet potatoes) and Kitavans (fish and root vegetables) are other good examples.

B. WHY YOU SHOULD DO IT -- BULLETS

PROVIDES A SIMPLE EDUCATIONAL TEMPLATE

- The Caveman theme is a simple theme to remember and practically apply, thus it is a great educational tool for everyone: from advanced athletes who have been information overloaded by the fitness industry, all the way down to the complete beginner that doesn't know (or care) much about nutrition, and needs a simple approach to get started.
- Forget about mainstream media and marketing hype, and even scientific debate, and think about your physical appearance and health logically for a second. Mass food refining has only been around for a tiny fragment of our existence. We evolved on more natural diets. So what kinds of foods do you really think are better for us -- apples or Apple Jacks?

CUTS THROUGH THE DIET INDUSTRY BULLSH*T

- The Caveman theme cuts through all of the nutrition myths and bias standards that are out there, which are highly influenced by the refined foods and supplement industries. It places logic and common sense above all of the bullsh*t that is being marketed and sold to you. We were lean and healthy long before magic fat burning pills, miracle detox cleanses, "health" bars and shakes, etc. The foods we evolved on are much better for us than the foods we make.
- Gets you to follow science and logic rather than gurus. "But this authority or trainer said 'x' is good for me?" "But this celebrity or pro athlete is sponsored by 'y' company and says I need 'z' to be fit like them". Maybe it is, maybe it isn't. Maybe you do, maybe you don't. Phone a caveman friend to make sure.
- It gives you the tough love truth. Listen to what you WANT to hear for entertainment purposes or to "feel" like you are doing something healthy/good for yourself, even though you actually are NOT. Listen to what you NEED to hear if you want a simple plan to start getting stuff done, and seeing real world results. The Caveman gives you that kick in the a\$\$ we all need from time to time. You can keep spinning your wheels or you can start moving forward.
- It calls bullsh*t on much of the "health" industry that preys on uninformed consumers. Organic crap is still crap. Gluten-free crap is still crap. Organic, gluten-free cookies are still cookies, and are not that great for your health or body composition goals. The Caveman can show you the true Way. Wild salmon and spinach are gluten free as well.

MAY JUST SAVE YOUR LIFE

- There are numerous real life, epidemiological studies of how when individuals from specific cultures (Pima Indians, Inuit Tribes, Native Japanese, etc.) switch from their ancestral/traditional diets to a diet that resembles the modern American diet, body fat skyrocketed and biomarkers of health plummet.
- I don't want to use the fear-monger/scare tactic here, but its the truth, moving back to a more ancestral way of eating may just save you and your family's life. With modern Y2K eating, here are some scary stats: 2/3 of the U.S. adult population is overweight, 1/3 are obese, childhood obesity is at an all-time high, 26% of U.S. adults over 20 years of age, and 36% of adults over age 60 (over 57 million) have pre-diabetes, statisticians estimate that the number of people worldwide with diabetes will increase from 175 million in the year 2000 to 353 million in 2030, man boobs and muffin tops have reached epidemic proportions.

MERGES HEALTH ENHANCEMENT WITH PHYSIQUE ENHANCEMENT

- It ensures a HEALTHY and sustainable approach to losing fat and changing your physique. There are many crash dieters who will follow uninformed plans based on fake diet foods, which leads to nutritional deficiencies and sets themselves up for huge weight rebounds and subsequent yo-yo'ing.

- There are many athletes that look great on the outside, but are train wrecks internally. They are extremely unhealthy and dealing with side effects such as sleep disturbances, depression, elevated disease risk factors (blood pressure, cholesterol, blood sugar), metabolic damage, digestive disorders, and a lack of natural hormonal production/control as a result of performance enhancing drug usage, recreational drug usage, pharmaceutical drugs to combat medical symptoms, and poor food choices. That's not hardcore or tough my friends. That's just plain stupid.
- If total calories are controlled, you can lose body fat eating Skittles and Ho-Ho's, but what is that doing to your internal health? As the late, great Serge Nubret once said, "Every sickness comes from food."
- I'm a vain piece of crap, so I, more than anyone, get that it is dropping fat and building a physique that turns heads, makes the opposite sex lust, blush, or stumble, etc., that really motivates us. Health concerns seem meaningless when you are about to star in your own gun show or thong song.
- But it is the health impacts of food that matter most in the long run, and should lie at the core of any worthwhile dietary approach. Who cares if you can look good at the beach if you are too sick to get there, or too depressed to enjoy it while you're there? At the same time, I don't care if I make it to 120 years old if I have to live and look like a goblin to do so.
- "But I've eaten crap every night for the last 10 weeks and look good, and my biomarkers of health are OK?" Dude, talk to me in 10 years. Take it from someone who has worked with clients of all ages, and former competitors with metabolic and hormonal damage -- its the cumulative effects of our dietary habits over a lifetime that matter, not any 10-week time frame.
- These goals, however, do NOT have to be mutually exclusive; as many uninformed athletes or non-athletic scientists would have you believe. Its not an either or situation. You can improve your health and improve your physique at the same time. The food choices we make can merge those two goals together.

IS A LONG-TERM APPROACH VS. A QUICK FIX

- Any plan can work for the short-term when motivation is high -- say for an upcoming athletic event; or just for beach season or updating your Facebook page.
- However, it is virtually impossible to stay in the relative calorie deficit necessary for fat loss, at least for any meaningful length of time, if you are making poor food choices. You can't cut calories while eating crap and expect to stay the course.
- This is where point systems or other calorie counting diets fail. You're not going to be able to stay on a diet plan for long eating low calorie lasagna, fudge cake, or "snack

packs". Fake foods like this are just empty calories with no functional nutrients. They have no effects on satiety or the hormones that regulate appetite and energy intake. You will feel constantly hungry, deprived, and miserable dieting on these foods. In other words, you will constantly feel like you are DIETing.

- That's why people yo-yo on and off these plans. They are not sustainable. And it's not because YOU went off the diet. It's because THE DIET was not sustainable in the first place
- It's easier to stay "faithful" to your fat loss plan when it emphasizes real, whole, natural melons (or nuts), I mean food. As an experiment, I've had female clients struggle to net 1200 calories a day and male clients 2000 calories a day when they cut out all refined foods (including oils), and ate only real foods.
- It is much easier to stay in the calorie deficit necessary for fat loss, while still giving your body all of the essential nutrients and micronutrients it needs, indefinitely, IF you are emphasizing real foods. Which means you can maintain a year-round fit physique, low body fat percentage, look awesome, AND have great health and vitality. No more yo-yo'ing.

C. HOW TO DO IT - PRACTICAL APPLICATION

WHAT TO EAT

1. Eat low calorie, nutrient dense, real, natural, high-satiety foods. Eliminate high calorie, nutrient poor/empty calorie, packaged, refined, low satiety foods.
 2. Eat wild, hormone/anti-biotic free, unprocessed, natural animal proteins. They provide us with: essential amino acids (for tissue maintenance - including lean muscle mass), essential fatty acids (for normal cellular and hormone production), vitamins and minerals (like B-vitamins, zinc, iron, etc.), and "good fats" (50% of the fat in beef is monounsaturated).
 3. Eat a variety of plant foods (fruits and vegetables). They provide us with: fiber, different vitamins and minerals (A, C, calcium, potassium, etc.), natural antioxidants, and disease-fighting phytonutrients.
- *That's all you really need for survival and normal functioning. The rest of what you take in is all about energy production. And the human body is very adaptive. It can use either carbs or fats as its primary fuel source.
4. I feel whole food fats are a better primary fuel source for certain demographics (sedentary, insulin resistant, diabetic, obese) = fat from animal protein foods, avocado, coconut, and nuts.
 5. I feel carbohydrates (natural starches) are a better primary fuel source for other demographics (athletes and regular exercisers) = yams, sweet potatoes, potatoes, and rice.

WHAT TO CUT -- LEVEL I

1. Concentrated sources of fructose (high fructose corn syrup and table sugar, packaged and processed foods): Excessive fructose consumption has been linked to obesity, insulin resistance, type II diabetes, and elevated triglycerides.
2. Trans-fats/hydrogenated oils (in packaged and processed foods): Trans fats raise total cholesterol, bad cholesterol (LDL), and lower good cholesterol (HDL), elevate blood triglycerides, their intake has been linked to our most common and serious health problems: obesity, diabetes, and a host of other risk factors for common killers such as heart disease, stroke, cancer, and yes, even premature death (I'd say that's a red flag). And more importantly than death, they increase "belly fat" and induce abdominal obesity.
3. High n-6 oils (in refined vegetable oils): These oils disrupt optimum essential fatty acid balance (n-6: n-3 ratio) and decrease insulin sensitivity and glucose disposal, increase risk of cardiovascular disease and certain forms of cancer, aggravate inflammatory and autoimmune disease, promote whole body inflammation.
4. Gluten (in wheat, rye, barley, and as a stabilizer in many processed foods): A gluten allergy can be the root cause of Coeliac's disease, Chron's disease, and Irritable Bowel Syndrome. A sensitivity to gluten, which goes undiagnosed in many, can lead to chronic fatigue or lethargy, impaired immune system functioning, cortisol elevation, water retention and bloating, abdominal fat deposition, stubborn fat, "that last layer or 10 pounds, abdominal pain or discomfort.

** These are foods I would say most nutritionists and coaches, regardless of camp or system, would agree should be minimized in the diet.*

WHAT TO CUT -- LEVEL II

5. Lectins (in wheat, beans, legumes): increase intestinal permeability and allow partially digested food and remnants of gut bacteria to leak into the bloodstream (leaky gut syndrome), compromise immune system, may adversely affect protein digestibility and amino acid availability.
6. Phytic acid (in whole grains = breads and cereal grains): phytic acid inhibits the absorption of minerals including iron, zinc, calcium, and manganese, may adversely affect protein digestibility and amino acid availability.
- *7. Dairy (milk, yogurt, cheese): a dairy allergy can lead to mucous production, histamine production, GI distress (constipation and/or da nasty farts), cortisol elevation and stubborn fat/water retention, milk is high on the insulin index and has been linked to diabetes, has been linked to acne, is a highly acidic food (especially certain cheeses) which can lead to mineral imbalance, and milk is a hormonal nutrient delivery system (estrogen, IGF-1, prolactin) of OTHER species, cheese may lead to cheesy ass, etc.

** These foods are more debatable, with coaches, camps, and systems on both sides of the fence. Many will include some of the above foods in their diets and are just fine -- from both a cosmetic and health standpoint. Many believe that cutting out one, or all of these foods, was the true key to their success.*

If you are struggling with your health or bodyweight, my advice is to test and assess in the real world. Cut out these foods for a few weeks, and see how you look and feel. Add them back in and see how you look and feel. In an era of mysticism and blindly clinging to dogma and gurus, this advice brings back some simple dietary common sense.

Beyond science and theory or systems, the real world results FOR YOU provide the real world answers FOR YOU. My experience, and that of a large percentage of my clients, has led me to my current hypothesis that these foods should be excluded from the diet as well, for ideal results.

LESSON #2: INTERMITTENT FEAST

A. WHAT TO DO - SUMMARY

1. Eat your biggest meal, and the majority of your calories and carbohydrates at night.
2. Hunt & Feast. Eat lighter while hunting during the day to avoid digestive stress and blood sugar swings/crashes (whether for food in the wild, business deals in the boardroom, butt kicking training sessions in the gym, or a queen/king for your palace makes no difference), and eat the majority of your calories at night while relaxing or socializing in order to refuel, recover, and prepare for the next day's battles.

B. WHY YOU SHOULD DO IT - BULLETS

IT GOES WITH OUR NATURAL EVOLUTIONARY INSTINCTS

- We can use the Caveman/Evolution theme as a simple educational tool, not just for food choices, but also for diet structure -- food distribution patterns. Human beings evolved on a fasting/feeding cycle. We spent the majority of our existence actively tracking, hunting, and gathering our food during the day (often times completely fasted, or with little ingested food). We spent the evening relaxing and feasting on whatever we could catch.
- Most cultures that don't obsess over "dieting" eat their largest meal at night as well. It is our natural instinct. You should do the exact same thing if you want to make dropping fat as easy as possible.

IT TAKES ADVANTAGE OF PSYCHOLOGICAL FACTORS

- Our brains work on a sacrifice/reward pattern, and this structure takes advantage of that on a daily basis. Most people find it relatively easy to sacrifice, cut calories, eat lighter, make better food choices during the day, etc., as long as they know they can eat a larger meal at night, and get to end the day satiated and satisfied (at least in the kitchen, the bedroom is your own responsibility).
- The reverse is not true. Most people who reward themselves with food all day and then try to sacrifice by cutting calories at night end up cheating or bingeing on junk foods anyway. Trying to cut calories at night goes completely against our evolutionary instincts, natural desires, business schedules, and social patterns. That's why it rarely works in the real world, off the glossy magazine pages.
- Another human instinct is to overeat whenever possible, in order to stock energy reserves for future times of fasting and famine. This was great for survival in caveman times, not so great with the modern, unlimited access to free-for-all food parties. This structure satisfies that natural urge to feast like a beast once a day, yet still remain in the calorie limits necessary for fat loss.

- Most studies show that as long as you control for calories and food choices, meal frequency and food distribution is irrelevant in regards to fat loss (if anything it points to reducing meal frequency and eating more at night - exactly the OPPOSITE of what you hear in the fitness industry). Since that's the case, you can build your diet around a structure that gives you the best chance at succeeding. And most of us, instinctually and socially, want to eat big at night. Go with, not against, your nature.

PHYSIOLOGY OF THE HUNT - MAXIMIZES FAT BURNING & COGNITIVE FUNCTION

- Ingestion of starchy carbohydrates during the day can spike blood sugar and insulin levels and blunt fatty acid mobilization for 6 hours or more. In non geek-speak, essentially you shut down the body's ability to burn fat with frequent carb-based meals during the day.
- By "saving" your starchy carbs for dinner and eating lighter, caveman foods during the day, you control insulin and blood sugar levels, maximize fat burning hormones and cellular factors (cAMP), and give yourself a decent stretch of time where you are optimally burning fat.
- Fasting or lighter eating is associated with adrenalin, stress, hunger, and the fight or flight evolutionary response. It signals the body to produce energy for activity and improves mental alertness and cognitive function. Perfect for when you need to get stuff done like finish work for a deadline, or watch porn.
- Contrast that with large, carb-based meals during the day. Energy for digestion takes energy away from activity and productivity. Large meals can also result in rebound hypoglycemia (lower blood sugar following food intake), which results in becoming sleepy, tired, lethargic, fatigued, unable to focus, "brain-fogged", dependent on stimulants to get by, etc.

PHYSIOLOGY OF THE FEAST - REFUELS ENERGY RESERVES & BUILDS MUSCLE

- Insulin sensitivity and nutrient partitioning to muscle cells improve: (1) After a strength training session and (2) After a period of fasting and/or lower carbohydrate intake. If you combine these two, the effects can be synergistic.
- Basically, this just means when glycogen stores are relatively depleted (after training and/or at the end of a day of lower-carb eating), carbohydrates will be used to restock these energy reserves first, before spilling over into fat stores. If you drive your car around all day and the gas tank is empty, you need to fill it up for the next day.
- A large, carb-based feast at night maximizes energy storing, muscle building hormones and cellular factors (cGMP, mTOR) at night. It is highly anabolic.

- Carbs trigger serotonin release, which makes us feel good/content (the reward), and induces sleep. In fact, many athletes that train hard and try to cut carbs at night complain of insomnia. Now you know why.
- Think of it as two distinct nutritional periods. During the day hours you eat lighter so you remain in a fat burning, energy production mode (hunt mode). During the evening hours you provide your body with the raw ingredients it needs to build/maintain muscle, store energy reserves, recover from the demands of the current day, and prepare your body for the tasks of the next day (feast mode).

IT IS THE EASIEST PLAN TO FOLLOW

- I think food choices accounts for 90% of the fat loss and health enhancement ballgame, that's why I spent so much time on the topic. Where meal frequency and food distribution becomes relevant is in terms of making a plan functional/sustainable in the real world. Diet "structure" can make your plan almost impossible to stick to, or relatively easy to follow year-round.
- There is not doubt in my mind that the most practical, functional, sustainable, and enjoyable diet plans, and thus most successful diet plans, are the ones in which the majority of calories and carbs are eaten at night. This goes against everything you've probably ever heard regarding an optimum fat loss protocol. But guess what? If everything you heard about in the Health & Fitness industry actually worked, there would be a lot more people walking around in shape.
- Regarding this topic, I can tell you without a doubt that going AGAINST mainstream advice works well for losing fat and retaining lean muscle mass. Since having clients switch to this structure, dietary adherence rates (and thus results) have sky rocketed. The overwhelming majority say that this is the easiest "diet" they have ever followed, and actually see it as more of a "lifestyle plan" than a quick-fix diet.
- Personally, I have gotten into shape for fitness photo shoots and physique competitions following both the more traditional fitness nutrition approach (5-6 small meals, cut calories at night) and this hunt and feast structure. The former was a very difficult/miserable plan to follow, and only worked as a short-term "in season" approach. The latter was exponentially easier to follow, and works as a functional lifestyle plan to be at or near photo shoot/competition/beach-ready shape year-round.

THE MYTHS ARE FALSE

- Myth #1. Eating a big meal at night will make you fat. Eating at night doesn't make you fat. Eating too much/too many calories makes you fat. If you've eaten large and frequent meals throughout the day and then eat another large dinner on top of that, chances are you will overeat calories and gain fat. It's the total food intake not the distribution that is the problem. If you eat lighter during the day and are active, chances are you enter dinner in a relatively large calorie deficit with depleted energy reserves, and even a large

meal with a significant amount of carbohydrates will be used to restore energy reserves first before spilling over into fat stores.

- Myth #2. A large meal at night will inhibit natural growth hormone production. It is all in the timing here. If you eat right before you go to bed, a large meal and resulting insulin spike may impair natural GH production. But if you eat 2-3 hours before going to bed, allow time for digestion, allow time for insulin to rise and fall back to baseline levels (which is 2-3 hours in a normal functioning individual, those suffering from diabetes its different), the resulting rebound hypoglycemia (what you want to avoid during the day) not only induces sleep, research has shown it can actually TRIGGER growth hormone release.

C. HOW TO DO IT - PRACTICAL APPLICATION

1. Fast or eat lighter, caveman-style foods during the day: leaner animal proteins, veggies, whole fruit, and small servings of whole food fats (nuts, coconut, etc.). Don't eat starches -- save those for dinner. Don't eat sugar, save that for...never...or cheat nights.
2. Feast at night. Eat a big, complete, satiating, satisfying dinner based on real foods (food choices are still critical).
3. If you are sedentary, eat a big Caveman-style meal: larger serving of animal protein, lots of vegetables, whole food fats for fuel, and maybe a piece of fruit for dessert.
4. If you exercise, eat a Japanese Village-style dinner: animal proteins, veggies, and some natural starch foods like yams, potatoes, or rice for anaerobic fuel (servings based on body size and activity levels).

LESSON #3 - FIND THE RIGHT MEAL FREQUENCY FOR YOU

A. WHAT TO DO - THE SUMMARY

1. My core principle is to feast on real foods at night (intermittent feast): Eat your biggest meal, the majority of your calories, and the majority of your "energy" nutrients (starchy carbohydrates or added whole food fats) at night.
2. Beyond that, the rest of your meal frequency and food distribution pattern is highly flexible.
3. The optimum meal frequency pattern -- FOR YOU -- is the one that allows you to be the most consistent with your diet, gives you the best energy and cognitive function, etc. Whatever pattern is the most practical, functional, sustainable, and effective for you, given your specific situation and goals, is the best pattern for YOU. Don't cling to archaic traditions or modern gurus.
4. Multiple small meals/snacks, the traditional 3-square meals, and various intermittent fasting protocols all can pair well with the intermittent feast.

B. WHY YOU SHOULD DO IT -- BULLETS

- Numerous scientific studies have shown that if you control for food choices and total calories, meal frequency is irrelevant in terms of body composition change, metabolic rate, and the thermic effect of food.
- That's really just a fancy way of saying that despite what you've heard in the fitness industry (that clings to dogmatic systems), you can get equally good fat loss results eating 6, 3, or even 2 main meals a day.
- Since that's the case, you can build your diet plan around your lifestyle, natural tendencies, career demands, time and food availability, calorie demands, digestive tolerance, etc. You can make the diet fit your life as opposed to the other way around.
- In other words, the physiology of meal frequency doesn't matter so much. Both science and anecdotal evidence prove that. It is the psychological and social factors that are the most crucial variables in your decision. This, of course, necessitates some self-experimentation on your part. How does meal frequency fit into your daily schedule, career demands, lifestyle habits, and social patterns? To slave away trying to fit into a fitness approach of 6 small meals a day may be unrealistic and counterproductive, and most importantly is completely unnecessary.

C. HOW TO DO IT -- PRACTICAL APPLICATION

1. Eat your main meal — with the majority of your calories and energy nutrients – at dinner. After that, test, assess, and find what works best for you in the real world.

2. Basic Fitness Spread Option. Eat 4-5 smaller caveman-style meals/snacks throughout the day, and feast at dinner (big caveman-style meal for sedentary, big Japanese village-style meal for athletes).

3. Traditional 3-Meals a Day Option: Eat a protein-only breakfast or a lighter caveman-style breakfast, a light caveman-style lunch, and feast at dinner.

4. Intermittent Fast Option: Skip breakfast, eat a light caveman-style lunch, and feast at dinner.

5. Warrior Diet "B" Option: Limit yourself to light, caveman-style snacks throughout the day (mostly vegetables, whole fruit, small servings of protein, small servings of whole food fats), and eat 1 big, main meal at night.

LESSON #4 - INTERMITTENT FAST

A. WHAT TO DO - SUMMARY

1. As I said in the previous section, the optimum meal frequency pattern for you is the one that works best for you, and allows you to most consistently stick to your dietary plan. Don't cling to systems. Do whatever works.
2. However, if someone put a gun to my head and forced me to pick one (like in giving you a decent starting point from which to experiment and self-analyze, etc.), first, I would sh*t my pants. Then, I would recommend pairing intermittent feasting with its cousin, intermittent fasting.
3. In real world terms, skip breakfast and eat all of your calories at lunch and dinner.

B. WHY YOU SHOULD DO IT - BULLETS

IT IS FUNCTIONAL

- Remember the evolutionary theme - eat lighter during the day while hunting and eat more at night while relaxing? Well, some would prefer, and do really well (both from a functional and physique enhancing standpoint) not eating anything during the day, or at least the morning hours.
- For example, some people inherently hate eating breakfast -- they start the day on the run, don't have time to prepare and clean up from a healthy breakfast, the thought of eating caveman-style foods at 6am is unappealing, the only way they can eat breakfast is if it is a sugar-loaded refined pastry or kids' cereal or other refined garbage, they've always hated eating breakfast yet have always force-fed themselves to the point of nausea because that's what the fitness magazines said they must do, eating breakfast actually just makes them hungrier an hour later, etc.
- But in reality, they would rather just skip breakfast, or just have a cup of coffee or tea, and do not suffer major consequences from doing so, and "eat bigger" when they finally do. This is what a lot of people instinctually do, albeit with poor food choices. Improve the food choices, and you'll see it's not the diet structure that was the problem, it was the poor food choices. As you'll see below, this structure works quite well for fat loss and muscle maintenance.
- On the run or on the go, we usually have more time for, and control over, our lunch and dinner choices than breakfast.

IT PROLONGS THE BODY'S ABILITY TO BURN FAT

- The body naturally wakes up in a fat burning, energy production mode. Eating food, particularly sugar and refined carbohydrate-loaded breakfast foods, gives your body an

immediate fuel source, and shuts down those prime fat burning hours. Ingestion of starchy carbohydrates at breakfast can spike blood sugar and insulin levels and blunt fatty acid mobilization for 6 hours or more.

- By skipping breakfast, you prolong the amount of time your body is burning stored energy reserves as its primary fuel source, thus optimizing your ability to maximally burn body fat.
- Fasting increases growth hormone levels and the cellular factor cAMP, both of which increase the body's fat burning mechanisms.
- An additional benefit is that fasting increases BDNF (brain-derived neurotrophic factor), which improves memory and cognitive functioning by helping support the central nervous system and facilitating the growth of new neurons and synapses. Maybe that's why I can use those fancy words. You get leaner, you get smarter = cool.

14-22 HOUR FASTING LIMIT

- But there comes a point of diminishing returns, and I recommend keeping the fasting length to 14-22 hours. This has to do with metabolic processes that happen when your liver glycogen stores become low.
- Glucose is the primary fuel for the brain and central nervous system. It can also use ketones, but ketosis is not necessary for maximal fat loss, and has many drawbacks (muscle loss, drops in metabolic rate, impaired thyroid production, lower testosterone, etc.). My plans assume a non-ketogenic diet.
- Muscle glycogen fuels the muscles (hence the name), and are really only used during high intensity activity (to fuel muscular contractions). But it is the liver that regulates normal blood sugar levels at rest and during low intensity activity, thus providing the fuel for the brain and CNS. When liver glycogen stores become low, your blood sugar can drop below its normal limits.
- From a functional and cognitive standpoint -- this leads to poor athletic performance/fatigue and poor cognitive performance/"brain fog".
- From a cosmetic standpoint -- this can lead to muscle loss. The body starts breaking down amino acids and converting them to glucose at a higher rate (gluconeogenesis) in order to make up for the lack of glucose availability and to stabilize blood sugar levels. If those amino acids are coming from protein, that is OK. If those amino acids are coming from muscle tissue, it results in muscle loss. The body's primary metabolic goal is to fuel the brain and CNS, not to look good in a bikini or board shorts, so in certain cases it is willing to sacrifice muscle to keep the brain going.
- The average liver (for both men and women) stores between 80-110g of glucose. At rest, the rate of liver glycogen breakdown to maintain normal blood sugar levels is roughly

6g/hour. Liver glycogen starts to become low at around the 14-22 hour mark, and the contribution of amino acids as an alternative fuel source for the brain goes up. Note, the numbers don't exactly add up because there is no need to burn liver glycogen during the first few hours following a meal with carbs (the body can use incoming carbohydrates). So depending on whether or not the last meal before a fast had carbs or not makes a difference.

- Thus my recommended 14-22 hour fasting "limit" depending on the pre-fast meal. At that point, you should eat something to avoid some of the drawbacks of longer-term fasts.
- Martin Berkhan of Lean Gains recommends a 16-hour fasting window and an 8- hour feeding window. To simplify, I just say skip breakfast and eat something by lunch.

FASTING MYTHS ARE ONLY PARTIALLY TRUE

- So you can see, some of the myths about fasting can be true or false depending on the protocol. Fasting can lead to muscle loss, poor cognitive performance, metabolic decline, etc. only if the fasting period is too long. None of these things will happen with short-term fasts, as long as the fast period is kept to within reasonable limits. That's why I believe intermittent fasting is superior to alternate-day fasting protocols (at least from a physique standpoint).
- You would see poor cognitive performance and heightened muscle catabolism when liver glycogen is low/depleted. If you eat the majority of your calories and carbohydrates at night, this would happen closer to lunch or dinner the next day, NOT breakfast. So you don't need breakfast to boost the metabolism, have energy for morning tasks, perform well athletically or cognitively, etc. Your body can still use liver glycogen that was stored the night before to fuel the brain. The night feast is not only restoring energy reserves from the current day's activities, it is preparing your body for the next day's activities.
- The fast and feast work together in perfect harmony...

C. HOW TO DO IT - PRACTICAL APPLICATION

1. Skip breakfast. Black coffee or tea with no additives is cool (and can actually be beneficial with this structure).
2. Eat a lighter, Paleo-style lunch: relatively lean protein, vegetables or salad, 1-2 pieces of whole fruit and/or 1-2 servings of whole food fats.
3. Feast at dinner.

LESSON #5 - CALCULATE CALORIES FIRST

A. WHAT TO DO -- SUMMARY

1. Food choices are always #1 in the fat loss & health enhancement hierarchy. But after that, you have to account for total calories.
2. Regardless of macronutrient debates (high protein, low carb, low fat, low common sense), determining total calories is still the most important step in designing an advanced fat loss diet, muscle gaining diet, re-composition diet, or any other physique-based dietary plan.
3. Set your calories according to your body composition goals.

B. WHY YOU SHOULD DO IT -- BULLET POINTS

- No miracle combination or drastic cutting of any macronutrient can circumvent the law of thermodynamics. The only way to force your body to burn stored body fat is to take in less calories than you burn, on average, over some time frame.
- Even if you cut carbs to zero, if you eat unlimited fat and protein, you can still enter a state of caloric excess. And even though your body has shifted to burning a greater percentage of fatty acids as fuel, in caloric excess, it will simply obtain those fatty acids from the abundance of dietary fat you are taking in. It will NOT be forced to tap into internal body fat stores as a reserve fuel. Quite the opposite is true. The excess calories will be stored as body fat, regardless if insulin and blood sugar are constantly kept at a low level. Unused fuel gets stored. And if you are in a calorie surplus, there is unused fuel.
- You can cut dietary fat to zero, but if you are eating above your total calorie limits with carbs, blood sugar levels will sky rocket, insulin levels will be chronically elevated, glycogen stores will be maxed out, the body will convert excess glucose into fatty acids, and they will be stored as body fat. Again, even though it is a different "fuel", unused fuel gets stored.
- Excess energy can be stored as body fat, regardless of the macronutrient source. Thus, you must attain an energy/calorie deficit if you have any shot at dropping fat.
- Now, certain foods give you a better chance at maintaining a calorie deficit. Forget protein vs. carbs. vs fats. Real, whole foods have a high satiation value and are much harder to overeat than refined foods (animal proteins, vegetables, whole fruits, etc. are better than sugar, refined carbohydrates, and refined oils, etc.). That's why food choices are step #1.
- But that doesn't change the fact that calories are the most important "number" (not the only one, but the most important one) to get right in the physique enhancement game.

Eat real, whole foods and you have a much better chance at reaching and staying in the calorie deficit necessary for fat loss, but keep in mind, calories still count.

- The same is true with building muscle. You have to maintain a slight calorie surplus, over some kind of averaged time. You can eat massive amounts of protein, but if you are in a calorie deficit, that protein will simply be burned as an alternative fuel source instead of being used for tissue construction.

C. HOW TO DO IT - PRACTICAL APPLICATION

1. Set total calories based on your physique goals.
2. Targeted Fat Loss: 10-12 x bodyweight
3. Weight maintenance/Body Recompositioning: 12-16 x bodyweight
4. Targeted Muscle Gain 16+ x bodyweight
5. If you are significantly overweight, use your lean body mass instead of total bodyweight.
6. These ranges are just ballpark starting points. Adjust as necessary based on feedback and results.

LESSON #6 - OPTIMIZE PROTEIN INTAKE

A. WHAT TO DO -- SUMMARY

1. Set protein at optimum levels to build/maintain lean muscle mass.
2. Additional protein may be useful as it is a high satiety food, can improve feelings of fullness, reduce hunger cravings, and give you a better chance of staying in the calorie deficit necessary for fat loss.
3. If your budget allows, emphasize wild, natural, unprocessed, free range, organic, hormone-free fish and meats if possible.
4. It is a myth that you need to eat protein every 2-3 hours. Split your protein up over whatever meal frequency is the most functional for you. Theoretically, you could eat all of your protein needs for the day in one meal, and achieve good results.

B. WHY YOU SHOULD DO IT

RESEARCHED-BASED PROTEIN RECOMMENDATIONS

- Amino acids from protein are the building blocks of many of our body's tissues, including skin, hair, nails, and most importantly for us, lean muscle mass. Ensuring adequate protein intake for the DAY (not some magical number per meal) gives us the amino acids we need to build and maintain these tissues.
- Most research shows this is between 1.5-2.0g/kg (or rounded up to 1g/lb of body weight) for strength training athletes.

REASONS TO EAT ADDITIONAL PROTEIN

- In an energy deficit, the body can use amino acids as a reserve fuel (breaks them down and converts them to glucose). A protein-based diet can provide insurance, and ensure that these amino acids are coming from ingested protein, not your lean muscle mass.
- Beyond physiological actions, the satiety index of foods -- or the effects foods have on feelings of "fullness" and regulating appetite and energy intake -- is one of the most important variables to consider when making food choices. High satiety foods keep you fuller for longer periods of time, prevent hunger cravings, prevent overeating, and make it much easier to stay in the calorie deficit necessary for fat loss. Natural animal proteins are high satiety foods.
- A high protein, high vegetable diet is a high satiety diet (more so than a refined food diet), and gives you a good chance of staying in the calorie deficit necessary for fat loss.

REASONS TO NOT EAT EXCESSIVELY HIGH PROTEIN

- Protein should be the foundation of your diet, but it should not be excessively high as many extreme bodybuilders recommend. Steroids increase protein synthesis, and those using them may indeed be able to utilize excessively high amounts of protein for supra-physiological processes. This is not true for the natural athlete.
- In high amounts, especially combined with low carb diets, a process called de-animation occurs where the body strips amino acids of their nitrogen molecule and converts them to glucose. This is a metabolically (and literally) costly way to obtain glucose. You're better off just upping the carbs a little bit to "spare" protein.
- The body must excrete that remaining nitrogen through the urine. And although high protein diets don't cause kidney disease, excessively high protein intakes do force the kidneys to work harder than is necessary.
- And at some point, despite what many proclaim about unlimited protein diets, there can be drawbacks and dangers. At very high amounts (5+g/kg), you can exceed the liver's capacity to convert excess nitrogen to urea and excrete it through the urine. This causes blood ammonia levels to rise, which can lead to nausea, diarrhea, and in extreme cases, even death (rabbit starvation syndrome).

PROTEIN DISTRIBUTION SCIENCE

- It is a myth that you need to eat small protein meals every 2-3 hours. You can, and it works too, but it is not necessary (remember, meal frequency is irrelevant when standardizing all of the variables). The rate at which the body digests, absorbs, and releases amino acids into the blood stream is relatively slow -- 3-10g/hour based on the protein source, most whole foods average 5g/hour.
- This means if you eat a big protein-based meal at night (Feast), it will take a long time to digest, and will be releasing amino acids into your system overnight, and throughout the next morning. This will provide the "constant influx" of amino acids that many fitness professionals proclaim is necessary to prevent muscle catabolism. For example if you eat a pound of meat for dinner (roughly 100g of protein), amino acids will be releasing into your bloodstream for up to 20 hours.
- Eating a large protein-based meal at night is why you don't necessarily need to eat breakfast the next day. Amino acids will still be releasing into your system from the previous night's feast. Eating larger protein-based meals in general is why you don't need to eat smaller ones every 1.5 hours. That's a myth designed to sell you protein powders, bars, and supplements, and is not necessary.

PROTEIN TYPE

- Wild, natural, unprocessed, free range, organic, grassfed, hormone-free fish and meats have much better essential fatty acid ratios (higher in Omega-3, lower in Omega-6) and

higher amounts of healthy monounsaturated fat than their processed and commercially raised counterparts. If you can afford it (and you can if you cut down on all the bullsh*t "health" foods and supplements), go for the good stuff.

C. HOW TO DO IT -- PRACTICAL APPLICATION

1. Eat 1.5-2.0g/kg or 1.0g/lb of bodyweight per day. If you are significantly overweight, use your lean body mass instead of your total body weight.
2. You can increase that number somewhat on a diet if it helps improve satiety and prevents the overeating of other macronutrients, or calories in general.
3. But don't eat excessive amounts of protein (4-5g/kg). This has physiological drawbacks.
3. Split your protein up over whatever meal frequency pattern you've selected: 6, 3, or 2 can all work.
4. If your budget allows, emphasize wild, natural, unprocessed, free range, organic, hormone-free fish and meats if possible.

LESSON #7 - EMPHASIZE WHOLE FOOD FATS

A. WHAT TO DO -- SUMMARY

1. Get the majority of your dietary fat as by-product of your animal protein sources.
2. If you need to add fats (you eat really lean animal proteins, you are following a lower carb diet and need a higher percentage of fats as energy), add WHOLE FOOD, natural fats (nuts, avocado, coconut), not refined fats (refined oils, dairy).

B. WHY YOU SHOULD DO IT -- BULLETS

ESSENTIAL FATS AND "GOOD" FATS

- We need essential fatty acids for survival and normal functioning, but these requirements (n-3, n-6) are relatively small, only a few grams per day.
- There are reasons to eat additional fat. Monounsaturated fat can raise HDL (good) cholesterol and lower LDL (bad cholesterol). Lauric acid (a type of saturated fat in coconut) can also improve the total cholesterol: HDL ratio. For men, the right types and ratios of monounsaturated and saturated fats can support natural testosterone levels.
- You can get all of the essential fatty acids (n-3 in fish) and "good fats" (50% of the fat in beef is monounsaturated fat) you need from animal foods, and they come in the right amounts and ratios that Mother Nature intended.
- Any "added" fats are just an additional source of energy. This can be good or bad depending on your total calorie requirements and goals (a deficit is necessary for fat loss), and the composition of the rest of your diet (added fats and carbs should be somewhat inversely related).

THE PROBLEM WITH REFINED FATS

- Any time man alters a food from its natural state it is worse off for you. What's Jack LaLanne's old line, "if man made it, don't eat it"? This is usually applied to carbs, but I believe it is equally relevant to one's dietary fat sources.
- In nature, fats are meant to be eaten with protein (animal meats) and/or with fiber (nuts, olives, avocados, coconut). They are meant to be eaten as part of a whole, natural, unprocessed food. They are NOT meant to be eaten as a stand-alone, refined oil, dressing, or cream sauce. Where were the oil refining factories during the majority of our evolutionary existence?
- As soon as you start refining fats, you end up with: 1) A concentrated source of calories with low food volume, which puts you on the wrong side of the energy balance equation,

which in turn makes it impossible to lose body fat. 2) A disrupted balance in EFA ratio (most oils are higher in Omega-6's than Omega-3's). 3) A low satiety food.

- Fat is a highly satiating food in its natural state when combined with protein and fiber. However, as a refined oil, fat is very low on the satiation scale. Just like with refined carbohydrates, because of this low satiation value, refined fats (even healthy ones) are very easy to overeat. This is how you end up with the salad that you believe is a "light" lunch or dinner, but actually contains 1500 calories or more.

C. HOW TO DO IT -- PRACTICAL APPLICATION

1. For carb-based diets, set fat intake at 15-25% of total calories. The majority of this dietary fat should come as a by-product of your animal protein sources.
2. If you need to add fat to hit those percentages, add WHOLE FOOD fats (nuts, avocado, coconut), not refined fats (refined oils, dairy).
3. If you should be on a lower-carbohydrate diet (you are sedentary, obese, diabetic, insulin resistant, etc.), the percentage of fat in your diet may need to be higher to provide the necessary energy/calories. Regardless, emphasize fat as by-product of your protein foods and whole food fats.

LESSON #8 - CARBOHYDRATE RECOMMENDATIONS FOR THE SEDENTARY

A. WHAT TO DO -- SUMMARY

1. The Intermittent Feast for sedentary populations is a lower carbohydrate diet approach (100g a day), not a very low/ketogenic approach (<25g/day). You can obtain this small amount of carbs from vegetables and whole fruit. No starch or refined sugars are necessary (nor recommended).
2. A traditional Paleo-style diet is a great template for sedentary populations: animal proteins and vegetables for essential nutrients, whole fruit and whole food fats for energy.

B. WHY YOU SHOULD DO IT -- BULLETS

- Liver glycogen fuels the brain and central nervous system at rest and during exercise. Fatty acids primarily fuel the muscles at rest and during low intensity activity. Muscle glycogen is really only used for high-intensity muscular contractions during intense exercise. The body can store about 80-110g of carbohydrate as liver glycogen, and between 300-500g of carbohydrate as muscle glycogen (depending on size).
- In determining energy nutrient intake (daily carbohydrate and fat intake), you must first assess how many carbohydrates you need, and for what reasons. A sedentary person is not exercising and burning through muscle glycogen stores, so they do not need to worry about replenishing these stores with a high carbohydrate intake. High carbohydrate intakes (300g or more) are more appropriate for athletes that undergo the cyclical depletion (through training/exercise) and repletion (through Sports Nutrition principles) of muscle glycogen stores.
- Sedentary populations really only need to worry about providing adequate carbohydrates to fuel the brain and central nervous system at rest, which is primarily regulated by liver glycogen stores. This can be accomplished with roughly 100-125g a day (this does not vary much with weight and gender, as the liver is roughly the same size regardless of those two variables).
- This is why research shows that lower carb Paleo/Caveman-style diets may be the best approach for improving body composition and biomarkers of health for obese, insulin resistant, and sedentary populations.
- Fruits and vegetables are the most satiating carbohydrates, are the most nutrient dense, have the highest food volume, and have the least impact on blood sugar and insulin levels, and thus should be emphasized. Sugars should be avoided, and starches are not necessary.
- Ketones can also fuel the brain (as opposed to glucose and liver glycogen), and many advocate a ketogenic diet for sedentary populations. But long-term ketogenic diets have many drawbacks: muscle loss, impaired testosterone production, impaired growth

hormone production, impaired thyroid production (reduced conversion of T4 to its more active T3 form), reduced insulin sensitivity, suppressed metabolic rate, low sex drive, irritability, depression, vitamin/mineral deficiency, etc. What good is a six-pack if you have a lifeless noodle (or whatever the female equivalent would be -- I have some ideas -- but don't want to offend) living downstairs?

- Although ketosis may be beneficial for certain disease states, it is NOT necessary for a targeted fat loss/health enhancement diet. Research shows that ketogenic diets are no more effective than non-ketogenic, low carbohydrate diets for fat loss. Thus in most cases, I advocate a low-carbohydrate BUT non-ketogenic diet for sedentary populations.

C. HOW TO DO IT - PRACTICAL APPLICATION

1. Stick to non-starchy vegetables and whole fruit as your primary carbohydrate sources.
2. 100-125g of carbohydrate per day is a good target number. You can obtain this with unlimited non-starchy vegetable intake and 1-3 pieces of whole fruit a day.
3. The balance of your calorie requirements should be made up of protein and whole food fats.

LESSON #9 - CARBOHYDRATE RECOMMENDATIONS FOR THE ACTIVE

A. WHAT TO DO - SUMMARY

1. The athlete and regular exerciser can add back in some more concentrated carbohydrates to refuel depleted muscle glycogen stores, and help create the anabolic environment necessary to repair and build lean muscle that has been damaged through training.
2. Carbohydrate type is critical. In addition to non-starchy vegetables and whole fruits, the regular exerciser should add back in some low sugar, low "anti-nutrient", gluten-free starches, which provide a concentrated source of energy, and are the best foods for restocking muscle glycogen stores. You don't need refined sugar.
3. A Traditional Village-style Japanese Diet is a great template and simple educational tool for regular exercisers and athletes. This is basically a Paleo-style diet with the addition of a select few starches -- white rice and root vegetables (yams, sweet potatoes, potatoes, squash, taro root).
4. Other simple templates include the Irish Farmer's Diet (meat and potatoes), the Okinawan Diet (pork and sweet potatoes), and the Kitavan Diet (fish, sweet potatoes, fruit, vegetables, coconut). There are more. Look into your cultural past for clues.

B. WHY YOU SHOULD DO IT -- SUMMARY

SIMPLE ANALOGIES

- A Paleo Diet is the best "balance point" for most sedentary people to optimize health and reach a natural bodyweight. Intense training shifts the balance towards catabolic processes. You need an anabolic recovery period to restore balance. Starchy carbs, and their effects on insulin, can be highly anabolic/anti-catabolic.
- Cavemen were trying to survive, not performing glycogen-depleting strength training sessions for performance or cosmetic enhancement (team sports or building lean muscle, slashing fat, looking awesome, etc.). Lower carb diets are great for insulin resistant, obese, and sedentary populations, but not so much for athletes. They do not support anaerobic training.
- If your car just sits in the garage collecting dust, it doesn't need gas. Loading up on starchy carbs is like trying to fill up a full tank. It just spills over the side. In the human body, that overspill equates to body fat storage, and a host of other negative effects. However, if you drive your car around every day, sometimes for long mileage, you have to fill it up often. If you don't, you will run out of gas. An empty tank in the human body also has negative effects, including muscle loss.
- In other words, exercise creates a unique metabolic environment, an altered physiological state, and changes the way your body processes nutrients both during activity and for up to 48 hours after completion of a training session. If you exercise 3 or more days a week,

than your body is virtually in a recovery mode 100% of the time. It is in an altered physiological state beyond pure resting conditions 100% of the time, thus its nutritional needs are completely different than sedentary populations.

ANECDOTAL EVIDENCE

- Low glycogen levels as the result of inadequate carbohydrate intake are associated with low energy levels, fatigue, lack of motivation, and decreased performance. Conversely, numerous studies have documented the positive effects of carbohydrate intake and elevated muscle glycogen concentration on performance, work output, and high intensity intermittent activity.
- High intensity training coupled with low/no carbohydrate diets can equal muscle loss and the resulting skinny fat syndrome. Muscle is what gives our body's its shape, definition, and tone. Even if you "lose weight", if a larger percentage of that is muscle, you will still appear soft and flabby. "Fat loss" accompanied with muscle gain/maintenance is what gives you that ripped, defined, or sleek and toned and tight look.

PHYSIOLOGY

- Muscle growth or maintenance is the result of the balance between muscle protein breakdown and muscle protein synthesis. If synthesis exceeds breakdown, you get muscle growth. If breakdown exceeds synthesis, you get muscle loss.
- Protein initiates muscle protein synthesis. Adequate protein intake ensures optimal protein synthesis. But that is only half of the battle.
- Intense training increases muscle protein breakdown. And while protein intake increases protein synthesis, it is carbohydrates that stop protein breakdown (thus carbs are considered anti-catabolic). If your body has an immediate fuel source (carbohydrates), it has no need to break down an additional one (muscle stores).
- Fats may be protein/muscle sparing at rest and during lower intensity activity, but carbohydrates are more protein/muscle sparing around training.
- Ketones can fuel the brain and CNS, while fatty acids fuel the body at rest. While ketogenic diets may be a decent option for sedentary populations (although I've already discussed are not necessary and are not my preferred choice), they are terrible for athletes. The reason? Activities like weight training (or any high intensity anaerobic activity) can only use glucose as an energy source. Ketones and free fatty acids (FFA) cannot be used. Therefore the lack of carbohydrates on a ketogenic diet will eventually lead to muscle loss, because the body will break down amino acids to provide the necessary glucose to fuel high intensity activity.
- It helps if you look at carbs simply as fuel for high-intensity activity. If you perform strength-training sessions on a regular basis, then you need carbohydrates, perhaps a lot

of carbohydrates. Muscle glycogen stores can become nearly depleted in response to intense exercise. Carbohydrate intake post-workout is used to refill these depleted muscle glycogen stores, and is less likely to spillover and be stored as body fat.

- And if you don't refill the tank, there can be metabolic, hormonal, and physiological drawbacks. For women, low carb diets coupled with intense training protocols can impair thyroid production and sabotage normal metabolic rate. For men, that combination can shatter testosterone production and met rate. For both, an empty tank in the human body equates with becoming tired, depressed, lethargic, irritable, impaired performance, muscle loss (increased protein breakdown to make up for lack of incoming fuel), stubborn fat, frustrated that despite dieting your body is not changing, etc.
- Sufficient carbohydrate intake supports free testosterone and an optimum free testosterone:cortisol ratio (a biomarker of adequate recovery vs. overtraining) in response to high intensity activity. Dietary fat may support natural testosterone levels for all populations, but carbohydrates play a role specifically for athletes and regular exercisers.

DISEASED STATES VS. ATHLETES

- Contrary to what many believe, insulin itself is not pro-inflammatory, it is actually anti-inflammatory. Glucose, or more specifically glucose backed up in the bloodstream is what can be inflammatory.
- So for a hard training athlete with good insulin sensitivity (and especially after training, fasting, or the combination of the two), starch intake is not problematic. Insulin will do its job of clearing glucose and amino's from the blood, deliver it to the starving and damaged muscle cells, and provide all of the anti-catabolic/anabolic benefits. This is Sport/Bodybuilding Nutrition 101.
- However, for someone who has some degree of insulin resistance (due to being sedentary, fat, making poor food choices, etc.), starches can be problematic. This is really where Paleo Nutrition 101 and starch bashing is actually relevant/spot-on. With insulin resistance, insulin is no longer doing its job of clearing glucose from the blood. Because of this, if you flood the body with glucose from starch, chances are it won't get into the muscle cell, and will back up in the bloodstream. This is where you get chronic inflammation and disastrous health consequences like elevated triglycerides, cholesterol, type II diabetes, and rapid fat gain.

CARBOHYDRATE TYPE

1. "Carbs" tend to get a bad name because of the ones most people emphasize in the Y2K American Diet. That's why food choices should always remain #1 in the nutrition hierarchy.
 - A. Concentrated sources of fructose (sugar, high fructose corn syrup) are metabolically disastrous in the body and can lead to insulin resistance, diabetes, and rapid fat accumulation.

B. Many are allergic or sensitive to gluten (wheat, rye, barley). This can lead to gastrointestinal distress, lethargy/fatigue, body fat, and water retention.

C. Paleo nutritionists refer to a group of compounds collectively as “anti-nutrients” (lectins and phytic acid found in most grains, cereals, legumes). These can lead to gastrointestinal distress, and impair protein and mineral absorption.

2. Most athletes make their carb choices for the wrong reasons:

A. Its high in protein. Protein should come from animal foods.

B. Its high in fiber. Most fiber, vitamins, minerals, antioxidants, and phytonutrients should come from plant/vegetable foods.

C. Its low glycemic. The glycemic index doesn't matter as much for athletes because they are highly insulin sensitive and generally combine carbohydrate foods with protein and vegetables in a complete meal, which lowers the overall glycemic response.

3. The only real reason left after that to eat starchy carbs is for the sole purpose of obtaining glucose to refill muscle glycogen stores, not all of the additional compounds that come along with the starch. If you are eating starchy carbs for any other reason than to obtain those glucose chains, I believe you are eating them for the wrong reasons.

4. The best low sugar, gluten and "anti-nutrient" free starches that provide you a concentrated source of glucose, without the crap, are rice and root vegetables.

C. HOW TO DO IT - PRACTICAL APPLICATION

1. There is a wide range of appropriate carbohydrate intakes based on specific activity levels, individual metabolic factors, and body composition goals.

2. The general consensus in Sports Nutrition (and Bodybuilding & Fitness Nutrition) for a ballpark starting point would probably be: 1-3g of cho/lb, 2-7g of cho/kg.

3. Since protein should remain constant, dietary fat intake must be adjusted up or down to stay within the appropriate calorie ranges. This is a crucial step that is often overlooked (carb intake is adjusted up, fat intake is not adjusted down, and many come to the conclusion that increased carbs made them fat. Wrong. Increased calories made them fat).

4. This must be tested, assessed, and adjusted as necessary in the real world based on feedback and results.

5. The best starch foods for athletes are low sugar, low fructose, and gluten and anti-nutrient free. These include: yams, sweet potatoes, potatoes, squash, taro, and white rice. Still keep most modern carb foods out of the diet -- sugar, flour, pasta, bread, cereals, grains, refined snack foods, etc.

LESSON #10 - PRE-WORKOUT MODIFICATIONS

A. WHAT TO DO -- SUMMARY

1. Train in a fasted, or in a relatively fasted state (last full meal 3-5 hours before).

B. WHY YOU SHOULD DO IT -- BULLETS

BASELINE ADVICE

- From a functional standpoint, this minimizes any digestive stress during training.
- From an energy production standpoint, it prevents rebound hypoglycemia during training. Starchy or sugary carbs before training can result in a blood sugar crash, fatigue, lack of focus, and feelings of "hitting the wall".
- From a fat loss standpoint, this optimizes GH production and fat burning during training.
- From a muscle-building standpoint, this sets the stage up for a huge anabolic/muscle building rebound in the post-workout recovery period. Research shows fasted training boosts the signals for muscle growth (mTOR initially inhibited during fasting and training, triggered with proper recovery and nutritional support). Stress, from training, nutritional hardship, or a combination of the two, leads to adaptation.

TROUBLESHOOTING

- Some who train at lunch or in the afternoon complain of low energy and/or poor performance training completely fasted, or running on a protein + fat only, no carb lunch.
- With a large, carb-based meal at night, you should have plenty of MUSCLE glycogen reserves to fuel muscular contractions during your intense workouts the next day, even if you fasted all day long.
- However, LIVER glycogen is what regulates normal, system-wide blood sugar and brain and CNS functioning. Depletion of LIVER glycogen is what normally causes fatigue or poor performance. In other words, the muscles could keep going, but the brain and CNS say, "stop".
- During resting conditions, the body only uses about 5-6g/hour of liver glycogen to regulate circulating blood sugar. During high intensity activity, this can jump 8-10x.
- On rest days, you can go without carbs all day, eat a protein + fat only lunch, and be fine.
- With morning training you should be fine without carbs as well. There will be plenty of liver glycogen in the tank from the previous night's meal.

- But towards the end of the morning after a fast, or in the afternoon after a fast and a lower carb lunch, liver glycogen can reach low levels, and would certainly near depletion with the addition of high intensity training.
- A piece of whole fruit immediately pre-workout can give you just enough immediate energy to get through a high intensity training session. Fruit is fast digesting, so it can give you a quick shot of energy without digestive stress. It is also low glycemic, so should not cause rebound hypoglycemia as refined sugars or starches could.
- Won't fruit inhibit fat burning? If you were doing cardio to burn fat, this would absolutely be true. But strength training is anaerobic. You don't want to be "burning fat". You want to be burning carbs/glucose/glycogen. You want these kick a\$\$ strength training sessions to stimulate the body to build muscle and eventually boost the resting metabolic rate, so you can burn more fat at rest when you are recovering. In other words, the amount of fat you burn with one hour of training is meaningless, it is the amount of fat you burn the other 23 hours of the day that matters most.
- This is kind of like implementing the old school, Nutrient Timing advice except substituting whole fruit in place of the refined sugar drinks.
- Do you need protein? Not necessarily. If you've eaten a large serving of protein the night before in your feast, you should have plenty of amino acids in your system. To add more would be redundant. And protein foods digest slowly, so they could lead to digestive stress if consumed immediately before training. Protein supplements or amino acids? I'll let you be the judge on whether you think you need them or not.

C. HOW TO DO IT -- PRACTICAL APPLICATION

1. If you workout in the morning, train fasted, eat a piece of fruit post-workout (see next section), and eat your normal lunch and dinner in the post-workout period.
2. If you workout in the late morning or at lunch, experiment with a piece of whole fruit immediately pre-workout, and eat your normal lunch and dinner in the post-workout period. You may do better with or without the fruit, let feedback be your guide.
3. If you workout in the later afternoon or evening, eat a Paleo-style lunch 3-5 hours before training, experiment with a piece of fruit immediately pre-workout, train, and then eat your big carb-loaded dinner as your post-workout meal. Again, let feedback be your guide as to what protocol works best.

LESSON #11 - POST-WORKOUT MODIFICATIONS

A. WHAT TO DO -- SUMMARY

1. Regardless of the time of day you train, for practicality, sustainability, and overall "ease" of diet, I believe the majority of your calories and carbohydrates should still be eaten at night.
2. But you may need to make some modifications post-workout to minimize catabolic activity/muscle breakdown.

B. WHY YOU SHOULD DO IT -- BULLETPPOINTS

- The idea that the majority of your calories and carbohydrates should be consumed in the immediate "post-workout window" is somewhat misleading.
- Glycogen restoration and muscle protein synthesis (anabolic activities) take time after the workout. Glycogen restoration can take 24 hours or longer. Muscle protein synthesis can be elevated for 36 hours or longer post-workout. Building muscle is not just about what you do immediately post-workout, it is about what you do with your overall diet (consuming enough protein and calories daily).
- But muscle breakdown/catabolic activity can happen fast post-workout. Amino acids can be converted to glucose to make up for the energy deficit created by exercise, and to re-stabilize blood sugar. The primary goal post-workout, then, should be to provide your body with an immediate fuel source to prevent the body from breaking down its own muscle tissue for energy. While protein initiates protein synthesis, it is carbohydrates that prevent protein breakdown. Including some carbs post-workout is critical.
- You could go with the traditional insulin-spiking carbs post-workout, which is exactly what you should do if you train in the late afternoon/evening. But if you train in the morning or at lunch, I find this to be problematic for a lot of clients because of the resulting rebound hypoglycemia and blood sugar/brain functioning crash.
- Immediately post-workout is the one time you don't really need insulin to get carbs into the muscle cell. Muscular contractions translocate glucose transporters (GLUT4) to the muscle cell membrane and transform glycogen synthase (a rate-limiting enzyme for glycogen synthesis) into its more active I-form (vs. inactive D-form), both of which facilitate glucose uptake into the muscle cell and facilitate glycogen restoration. It's called the insulin-INDEPENDENT phase of glycogen restoration.
- What you want is fast-digesting carbs post-workout, not necessarily insulin-spiking carbs. And although fruit is low glycemic, it is one of the fastest digesting carbs. This is why it can work well as a daytime post-workout fuel — quick glycogen restoration without a blood sugar crash.

- You do need insulin present at all other times of the day to facilitate glucose uptake into the muscle cell. It's called the insulin-DEPENDENT phase of glycogen restoration. This is why including starchy carbs in the big evening meal is so important for exercisers = it is highly anabolic (continues to restock glycogen reserves, initiates protein synthesis, etc.).
- So for the “day-walkers” (later morning or early afternoon training), have a piece of fruit immediately post-workout. Wait 30 minutes (fruit digests fast when eaten by itself, and will halt catabolic activity) and then eat a normal, Paleo-style lunch. This combination allows you to refill some glycogen stores and provides amino acids without over-spiking insulin and triggering rebound hypoglycemia. Then you fully re-stock your depleted muscle glycogen stores with the starch chow-down, throw-down at night.
- If you train in the morning, eat 1-2 pieces of fruit post-workout to prevent muscle catabolism, and then eat your normal, Paleo-style lunch, and big starchy carb-loaded dinner at night. Do you need protein after a morning training session? I'm not opposed to it, but remember you should still have plenty of amino acids in your system from the previous nights meal. So while I don't think it is problematic to add protein, I also don't think it is completely necessary.

C. HOW TO DO IT -- PRACTICAL APPLICATION

1. If you train in the late afternoon or evening, your big carb-loaded dinner will serve as your post-workout meal. No modification necessary.
2. If you train in the late morning or early afternoon, train fasted (or with a piece of fruit immediately pre-workout), have a Paleo-style lunch post-workout, and then the big Japanese Village-style dinner.
3. If you train in the early morning, have 1-2 pieces of fruit post-workout, a Paleo-style lunch, and then the big Japanese Village-style dinner.
4. With both the pre and post-workout protocols, test it out and see what works best for you. Some do better with the fruit modifications, some do better without and just sticking to the baseline template.

LESSON #12 - ADVANCED CALORIE & CARB CYCLING

A. WHAT TO DO -- SUMMARY

1. For psychological relief, sustainability, and physiological reasons, eat a cheat meal, spike meal, re-feed, carb-load, or whatever else you want to call it once a week regardless of plan.
2. For targeted fat loss diets, increase calories to maintenance or above (primarily via carbohydrates) 1-2 times a week.
3. For recomposition diets, cycle days of lower calories on rest days to optimally burn fat with days of higher calories on training days to support recovery and muscle growth. Your weekly calorie average should be somewhere at or near your maintenance calories.

B. WHY YOU SHOULD DO IT -- BULLETS

PSYCHOLOGY AND SUSTAINABILITY

- Planned cheat meals makes most diet plans more realistic and sustainable, and prevent the failing/starting over again cycle. If you know you can eat whatever you want on Saturday night, it makes it infinitely more likely that when Wednesday night comes around after a long, hard day of work, and you are having a craving for something, you can resist and stay on track. It is easier to toughen up and say, "I'll just wait for Saturday."
- They also make the diet plan more functional in terms of socializing and living a balanced life in the real world. No one wants to live like a hermit, never be able to be away from their kitchen, never be able to enjoy a night out on the town with family or friends, just for six-pack abs.

PHYSIOLOGY OF THE DIET

- If you are on a bulking/mass gaining diet and are in a daily calorie surplus, physiologically you don't need cheat meals, calorie spikes. It would solely be for psychological, social, and sustainability reasons.
- If you are on a fat loss diet and are in a daily calorie deficit, there are additional physiological reasons for cheat meals, calorie spikes, and carb-loads.
- The human body is highly adaptive, and eventually adapts to your new, lower calorie levels. The net effect is that the longer and more consistently you diet, the harder it becomes to continue getting results, and the more likely you are to reach a plateau (and for some, rebound). During prolonged caloric restriction, the body is more prone to losing muscle, slowing its metabolic rate, reducing energy expenditure, and less likely to continue burning fat.

- Calorie deficits reduce a hormone called leptin. The physiological effects of leptin include regulation of centers of the brain that control hunger and feeding behaviors, body temperature, energy expenditure, and bodyweight.
- Reduced leptin levels increase hunger, predisposes you to binge eating/weight rebound, and reduces metabolism and energy expenditure. Leptin response is one of the physiological reasons why many dieters plateau and fail with their ultimate goal.
- In addition, leptin is a master control hormone, meaning its levels have an effect on other hormones. During prolonged calorie deficits the following can occur: testosterone levels drop, growth hormone and IGF-1 levels drop, thyroid levels drop, More specifically the conversion of t4 thyroid to its more active t3 form is inhibited.

PHYSIOLOGY OF THE RE-FEEDS

- Overfeeding, or a caloric surplus, has the exact opposite effects of chronic caloric restriction. A day of re-feeding can offset the metabolic downshift that occurs with chronic dieting. It can re-set leptin, testosterone, growth hormone, and thyroid to normal, pre-diet levels. It can re-sensitize the body to the fat loss process and help you break through a plateau.
- Carbohydrates increase leptin levels higher than dietary fats or protein. So from a purely physiological perspective, you should emphasize carb-loading/carbohydrate re-feeding on your spike/cheat day.

C. HOW TO DO IT - PRACTICAL APPLICATION

1. CHEAT MEAL (bulk diets and sedentary plan).

Eat a cheat meal once a week.

For purely physiological benefits, emphasize carb-loading or carbohydrate over-feeding.

For psychological benefits, eat whatever you want/whatever you have been craving.

2. CALORIE SPIKES/RE-FEEDS (fat loss plans).

5-6 days a week eat your base fat loss diet (10-12 calories per/lb).

1-2 days a week spike calories to maintenance levels or higher (15+).

Protein and dietary fat remains the same. Increase calories primarily via carbohydrates (re-feed, carb-load, etc.).

3. CALORIE CYCLING (recomposition plans).

Over the course of the week, average eating at or near your maintenance calorie levels (15 cal/lb).

On your 3-4 rest days a week, eat at calorie levels geared towards fat loss (12 calories/lb).

On your 3-4 training days, eat at calorie levels geared towards building muscle mass (18 calories/lb). Increase calories primarily via carbohydrates.

4. CALORIE + CARB CYCLING (recomposition plans)

I believe it is the shift in calories that matter most, but some choose to pair calorie cycling with carbohydrate cycling.

On rest/fat loss/lower calories days, eat a lower carbohydrate diet with carbs coming primarily from vegetables and whole fruits. Make up the rest of your calorie requirements with dietary fat (fattier cuts of meat and/or added whole food fats).

On training/muscle building/higher calorie days, eat a lower fat, higher carbohydrate diet. Get your dietary fat as by-product of relatively lean protein sources, don't add fats, and get the rest of your calorie requirements from carbohydrates (starch foods).

APPENDIX I -- FOOD CHARTS

A. FOOD CHOICES

FISH

Salmon	Tuna	Mackerel
Cod	Sole	Flounder
Rockfish	Orange Roughy	Halibut
Monkfish	Red Snapper	Perch
Trout	Anchovies	Sardines

*Any Wild Fish

SHELLFISH

Abalone	Clams	Crab
Lobster	Shrimp	Scallops
Oysters	Mussels	Calamari

*Any Wild Shellfish

MEATS/POULTRY/GAME MEAT

Skinless chicken breast	Skinless turkey breast	90% or leaner ground turkey
Eye of round	Top round/London Broil	Top Sirloin
90% or leaner ground beef	Filet mignon	Flank steak
Lean cubed steak	Buffalo	Pork Loin
Eggs (1-3)	Ostrich	Horse meat
Venison	Quail	Alligator

*Any lean meat. Shoot for less than 10g of fat per 4oz serving

NON-STARCHY VEGETABLES

Spinach	Mixed greens	Lettuce
Bell peppers	Broccoli	Cauliflower
Cucumber	Artichoke	Asparagus
Cabbage	Celery	Carrots
Brussel Sprouts	Onions	Zucchini
Mushrooms	Tomato	Seaweed/Nori

*Any non-starchy vegetable

WHOLE FRUIT

Orange	Blueberries	Raspberries
Strawberries	Cherries	Apple
Banana	Cantaloupe	Melon
Grapefruit	Grapes	Mango
Pineapple	Kiwi	Plum
Peach	Pear	Nectarine

*Any whole fruit

GOOD STARCHY CARBS (for regular exercisers)

Yam	Sweet Potato	Russet Potato
Red Potato	Waxy Potato	Yukon Potato
Squash	Pumpkin	Basmati rice
Jasmine Rice	Sushi rice	Medium or long-grain rice

*Any starchy tuber or rice variety

WHOLE FOOD ADDED FATS (for low-carbers)

Avocado	Coconut	Almonds
Cashews	Brazil Nuts	Macadamia Nuts
Walnuts	Pecans	Pine nuts

*Any nuts, except peanuts (which technically are a legume).

GOOD CONDIMENTS

Garlic	Onions/spring onions	Chiles
Chile Pepper	Pepper	Sea Salt
Wasabi	Mustard	Garlic or onion powder
Natural Salsa	Pico De Gallo	Balsamic vinegar

*Any herbs or spices

B. MICRONUTRIENTS IN WHOLE FOODS

- Here is why I believe you don't necessarily need multivitamins and supplements. You can get all of the micronutrients you need from real, whole food.

Micronutrient	Food Source	Serving	Amount	%RDA
Vitamin A	Sweet Potato	1 cup	38433 IU	769%

*B-Vitamins	Buffalo Top round	16oz	1.1-30.2mg	17-151%
Vitamin C	Orange	1 whole	97.9 mg	163%
Vitamin D	Atlantic Mackerel	6 oz	612 IU	152%
Vitamin E	Almonds	1 cup	37.5mg	250%
Vitamin K	Spinach	1 cup	145mcg	181%
Zinc	Beef sirloin steak	16oz	16.2mg	108%
Selenium	Sockeye salmon	16oz	152mcg	224%
Magnesium	Swiss Chard	2 cup	300mg	76%
Calcium	Cooked spinach	2 cup	500mg	50%
Iron	Buffalo top round	16 oz	13mg	72%
Potassium	Baked potato	1 large	1600mg	46%

*Thiamin (1.1mg, 71%), Riboflavin (1.6mg, 97%), Niacin (30.2mg, 151%), Vitamin B6 (2.7mg, 137%), Folate 68.5mcg (17%), Vitamin B12 (7.6mcg, 126%), Pantothenic Acid (3.9mg, 39%)

C. SATIETY INDEX FOOD CHARTS

- Here is why I believe you should cut out refined foods and make the foundation of your diet real, natural foods.
- High satiety foods keep you fuller for longer periods of time, prevent hunger cravings, prevent overeating, and make it much easier to stay in the calorie deficit necessary for fat loss.

* All are compared to white bread, ranked as "100"

FOOD	RANKING
*high satiety foods	
Boiled potatoes	323%
Fish	225%
Oranges	202%
Apples	197%
Beef	176%
Eggs	150%
*Low Satiety Foods	

Yogurt	88%
Peanuts	84%
Candy Bar	70%
Doughnuts	68%
Cake	65%
Croissant	47%

D. FOOD DATABASE LINK

Here is a great resource for the calorie, macronutrient, micronutrient, fatty acid analysis, and other information of virtually any food. Simply type in the food you are researching into the "enter food name" box:

<http://nutritiondata.self.com/>

APPENDIX II -- SAMPLE CALCULATIONS & DIET TEMPLATES

- * The calculations in this section are rounded for simplicity's sake.
- * All baseline calculations are simply starting points. You must test, assess, and then adjust and refine based on real world results.
- * Sample diets are presented as templates for flexibility and variety. Simply select foods from the charts in Appendix I, and plug into the diet template.

1. SEDENTARY FAT LOSS DIET WITH WEEKEND CHEAT DAY

A. SEDENTARY CALCULATIONS BASELINE DIET DAYS

Weight: 250lbs

Body Fat: 30% body fat

Lean body mass = 175lbs

Goal: Fat loss

1. Calories = 10 cal/lbs LBM

$$(10 \text{ cal/lbs}) \times (175\text{lbs}) = 1750 \text{ calories}$$

2. Protein grams = 1g/lbs LBM

$$(1\text{g/lbs}) \times (175\text{lbs}) = 175\text{g}$$

3. Protein calories = 4 cal/g

$$(4 \text{ cal/g}) \times (175\text{g}) = 700 \text{ calories}$$

4. Carbohydrate grams = 100g from fruits and vegetables

$$100\text{g from fruits and vegetables}$$

5. Carbohydrate calories = 4 cal/g

$$(4 \text{ cal/g}) \times (100\text{g}) = 400 \text{ calories}$$

6. Fat calories = remaining calories = calories - protein calories - carbohydrate calories

$$1750 - 700 - 400 = 650 \text{ calories}$$

7. Fat grams = 9 cal/g

$$(650 \text{ calories}) / (9 \text{ cal/g}) = 75\text{g}$$

8. Totals

$$1750 \text{ calories, } 175\text{g protein, } 100\text{g carbs, } 75\text{g fat}$$

B. SEDENTARY DIET BASELINE TEMPLATE

Breakfast

Skip or black coffee or plain tea

Lunch

8oz animal protein

non-starchy vegetables

1 serving whole fruit and/or 1 serving whole food fats (1/4 - 1/2 avocado, 1/4 - 1/2 cup nuts or shredded cocconut)

Dinner

16oz animal protein

non-starchy vegetables

1-2 servings whole fruit

1-2 servings whole food fats

C. SEDENTARY DIET CHEAT DAY TEMPLATE

Breakfast

Skip or black coffee or plain tea

Lunch

8oz animal protein

non-starchy vegetables

1 piece whole fruit and/or 1 serving whole food fats

Dinner

Hide small children and eat whatever you want, whatever you have been craving.

2. ACTIVE FAT LOSS DIET WITH 2 CARB-UP/RE-FEED DAYS

Weight: 200lbs

Goal: Fat Loss

A. BASELINE DIET CALCULATIONS

1. Calories = 10 cal/lbs

$$(10 \text{ cal/lbs}) \times (200\text{lbs}) = 2000 \text{ calories}$$

2. Protein grams = 1g/lbs LBM

$$(1\text{g/lbs}) \times (200\text{lbs}) = 200\text{g}$$

3. Protein calories = 4 cal/g

$$(4 \text{ cal/g}) \times (200\text{g}) = 800 \text{ calories}$$

4. Fat calories = roughly 20% of calories

$$(2000 \text{ calories}) \times (0.2) = 400 \text{ calories}$$

5. Fat grams = 9 cal/g

$$(400 \text{ calories}) / (9 \text{ cal/g}) = 45\text{g}$$

6. Carbohydrate calories = total calories - protein calories - fat calories

$$2000 - 800 - 400 = 800 \text{ calories}$$

7. Carbohydrate grams = 4 cal/g

$$(800 \text{ cal}) / (4 \text{ cal/g}) = 200\text{g}$$

8. Totals

$$2000 \text{ calories, } 200\text{g protein, } 200\text{g carbs, } 45\text{g fat}$$

B. BASELINE FAT LOSS DIET TEMPLATE

Breakfast

Skip or black coffee or plain tea

Lunch

*12 oz animal protein
non-starchy vegetables
1 piece whole fruit and/or 1 serving whole food fats*

Dinner

*16oz animal protein
non-starchy vegetables
3 servings starchy carbohydrate (i.e. 3 cup rice or 24oz potato/sweet potato)*

C. CARB-UP/RE-FEED DAY CALCULATIONS

1. Calories = 15 cal/lbs

$$(15 \text{ cal/lbs}) \times (200\text{lbs}) = 3000 \text{ calories}$$

2. Protein grams = 1g/lbs LBM

$$(1\text{g/lbs}) \times (200\text{lbs}) = 200\text{g}$$

3. Protein calories = 4 cal/g

$$(4 \text{ cal/g}) \times (200\text{g}) = 800 \text{ calories}$$

4. Fat calories = roughly 20% of calories

$$(3000 \text{ calories}) \times (0.2) = 600 \text{ calories}$$

5. Fat grams = 9 cal/g

$$(600 \text{ calories}) / (9 \text{ cal/g}) = 65\text{g}$$

6. Carbohydrate calories = total calories - protein calories - fat calories

$$3000 - 800 - 600 = 1600 \text{ calories}$$

7. Carbohydrate grams = 4 cal/g

$$(1600 \text{ cal}) / (4 \text{ cal/g}) = 400\text{g}$$

8. Totals

3000 calories, 200g protein, 400g carbs, 65g fat

D. RE-FEED/CARB-UP DAY TEMPLATE

Breakfast

Skip or black coffee or plain tea

Lunch

12 oz animal protein

non-starchy vegetables

1 piece whole fruit and/or 1 serving whole food fats

Dinner

16oz animal protein

non-starchy vegetables

7 servings starchy carbohydrate (i.e. 7 cup rice or 56 oz potato/sweet potato)

3. ACTIVE WEIGHT MAINTENANCE/RECOMPOSITION DIET WITH CALORIE CYCLING

Weight: 175lbs

Goal: weight maintenance/recomposition

A. REST DAY/LOW CALORIE CALCULATIONS

1. Calories = 12 cal/lbs

$$(12 \text{ cal/lbs}) \times (175 \text{ lbs}) = 2100 \text{ calories}$$

2. Protein grams = 1g/lbs LBM

$$(1 \text{ g/lbs}) \times (175 \text{ lbs}) = 175 \text{ g}$$

3. Protein calories = 4 cal/g

$$(4 \text{ cal/g}) \times (175 \text{ g}) = 700 \text{ calories}$$

4. Fat calories = roughly 20% of calories

$$(2100 \text{ calories}) \times (0.2) = 420 \text{ calories}$$

5. Fat grams = 9 cal/g

$$(420 \text{ calories}) / (9 \text{ cal/g}) = 45 \text{ g}$$

6. Carbohydrate calories = total calories - protein calories - fat calories

$$2100 - 700 - 420 = 980 \text{ calories}$$

7. Carbohydrate grams = 4 cal/g

$$(980 \text{ cal}) / (4 \text{ cal/g}) = 245 \text{ g}$$

8. Totals

$$2100 \text{ calories, } 175 \text{ g protein, } 250 \text{ g carbs, } 45 \text{ g fat}$$

B. REST DAY/LOW CALORIE DIET TEMPLATE

Breakfast

Skip or black coffee or plain tea

Lunch

*8 oz animal protein
non-starchy vegetables
1 piece whole fruit and/or 1 serving whole food fats*

Dinner

*16oz animal protein
non-starchy vegetables
4 servings starchy carbohydrate (i.e. 4 cup rice or 32oz potato/sweet potato)*

C. TRAINING DAY/HIGH CALORIE CALCULATIONS

1. Calories = 18 cal/lbs

$$(18 \text{ cal/lbs}) \times (175 \text{ lbs}) = 3150 \text{ calories}$$

2. Protein grams = 1g/lbs LBM

$$(1\text{g/lbs}) \times (175 \text{ lbs}) = 175\text{g}$$

3. Protein calories = 4 cal/g

$$(4 \text{ cal/g}) \times (175\text{g}) = 700 \text{ calories}$$

4. Fat calories = roughly 20% of calories

$$(3150 \text{ calories}) \times (0.2) = 630 \text{ calories}$$

5. Fat grams = 9 cal/g

$$(630 \text{ calories}) / (9 \text{ cal/g}) = 70\text{g}$$

6. Carbohydrate calories = total calories - protein calories - fat calories

$$3150 - 700 - 630 = 1820 \text{ calories}$$

7. Carbohydrate grams = 4 cal/g

$$(1820 \text{ cal}) / (4 \text{ cal/g}) = 450\text{g}$$

8. Totals

3150 calories, 175g protein, 450g carbs, 70g fat

D. TRAINING DAY/HIGH CALORIE TEMPLATE

Breakfast

Skip or black coffee or plain tea

Lunch

8 oz animal protein

non-starchy vegetables

1 piece whole fruit and/or 1 serving whole food fats

Dinner

16oz animal protein

non-starchy vegetables

8 servings starchy carbohydrate (i.e. 8 cup rice or 64 oz potato/sweet potato)

4. ACTIVE WEIGHT MAINTENANCE/RECOMPOSITION DIET WITH CALORIE & CARB CYCLING

Weight: 175lbs

Goal: weight maintenance/recomposition

A. REST DAY/LOW CALORIE & CARB DAYS

1. Calories = 12 cal/lbs LBM

$$(12 \text{ cal/lbs}) \times (175\text{lbs}) = 2100 \text{ calories}$$

2. Protein grams = 1g/lbs

$$(1\text{g/lbs}) \times (175\text{lbs}) = 175\text{g}$$

3. Protein calories = 4 cal/g

$$(4 \text{ cal/g}) \times (175\text{g}) = 700 \text{ calories}$$

4. Carbohydrate grams = 100g from fruits and vegetables

100g from fruits and vegetables

5. Carbohydrate calories = 4 cal/g

$$(4 \text{ cal/g}) \times (100\text{g}) = 400 \text{ calories}$$

6. Fat calories = remaining calories = calories - protein calories - carbohydrate calories

$$2100 - 700 - 400 = 1000 \text{ calories}$$

7. Fat grams = 9 cal/g

$$(1000 \text{ calories}) / (9 \text{ cal/g}) = 110\text{g}$$

8. Totals

2100 calories, 175g protein, 100g carbs, 110g fat

B. REST DAY/LOW CALORIE & CARB TEMPLATE

Breakfast

Skip or black coffee or plain tea

Lunch

*8oz animal protein
non-starchy vegetables
1 piece whole fruit and/or 1-2 servings whole food fats*

Dinner

*16oz animal protein
non-starchy vegetables
1-2 pieces whole fruit
1-3 servings whole food fats*

C. TRAINING DAY/HIGH CALORIE & CARB CALCULATIONS

1. Calories = 18 cal/lbs

$$(18 \text{ cal/lbs}) \times (175 \text{ lbs}) = 3150 \text{ calories}$$

2. Protein grams = 1g/lbs LBM

$$(1\text{g/lbs}) \times (175 \text{ lbs}) = 175\text{g}$$

3. Protein calories = 4 cal/g

$$(4 \text{ cal/g}) \times (175\text{g}) = 700 \text{ calories}$$

4. Fat calories = roughly 20% of calories

$$(3150 \text{ calories}) \times (0.2) = 630 \text{ calories}$$

5. Fat grams = 9 cal/g

$$(630 \text{ calories}) / (9 \text{ cal/g}) = 70\text{g}$$

6. Carbohydrate calories = total calories - protein calories - fat calories

$$3150 - 700 - 630 = 1820 \text{ calories}$$

7. Carbohydrate grams = 4 cal/g

$$(1820 \text{ cal}) / (4 \text{ cal/g}) = 450\text{g}$$

8. Totals

3150 calories, 175g protein, 450g carbs, 70g fat

D. TRAINING DAY/HIGH CALORIE & CARB TEMPLATE

Breakfast

Skip or black coffee or plain tea

Lunch

8 oz animal protein

non-starchy vegetables

1 piece whole fruit and/or 1 serving whole food fats

Dinner

16oz animal protein

non-starchy vegetables

8 servings starchy carbohydrate (i.e. 8 cup rice or 64 oz potato/sweet potato)

5. ACTIVE MUSCLE GAINING/BULK DIET

Weight: 150lbs

Goal: Weight gain/muscle gain

A. WEIGHT GAIN DIET CALCULATIONS

1. Calories = 18 cal/lbs

$$(18 \text{ cal/lbs}) \times (150 \text{ lbs}) = 2700 \text{ calories}$$

2. Protein grams = 1g/lbs LBM

$$(1\text{g/lbs}) \times (150 \text{ lbs}) = 150\text{g}$$

3. Protein calories = 4 cal/g

$$(4 \text{ cal/g}) \times (150\text{g}) = 1500 \text{ calories}$$

4. Fat calories = roughly 20% of calories

$$(2700 \text{ calories}) \times (0.2) = 540 \text{ calories}$$

5. Fat grams = 9 cal/g

$$(540 \text{ calories}) / (9 \text{ cal/g}) = 60\text{g}$$

6. Carbohydrate calories = total calories - protein calories - fat calories

$$2700 - 600 - 540 = 1560 \text{ calories}$$

7. Carbohydrate grams = 4 cal/g

$$(1560 \text{ cal}) / (4 \text{ cal/g}) = 400\text{g}$$

8. Totals

$$2700 \text{ calories, } 150\text{g protein, } 400\text{g carbs, } 60\text{g fat}$$

B. WEIGHT GAIN DIET SAMPLE DIET

Breakfast

Skip or black coffee or plain tea

Lunch

8 oz animal protein
non-starchy vegetables
1 piece whole fruit and/or 1 serving whole food fats

Dinner

12 oz animal protein
non-starchy vegetables
7 servings starchy carbohydrate (i.e. 7 cup rice or 56oz potato/sweet potato)

TROUBLE SHOOTING (for all diet templates)

1. Low energy or poor performance during training. See pre and post-workout modifications in Lessons #10 and #11.
2. Can't eat all of the required food at night.

First, doesn't that just sound a lot better than trying to starve at night?

Second, you will adjust to eating larger meals at night.

Third, if your calorie requirements are high and you just can't get them down -- even after an adjustment period -- have two dinners. Break up your night meal into an early dinner starting at 5-6pm and a late dinner starting at 7-8pm. Try to still allow at least 2 hours between finishing your late meal and going to bed.

THANK YOU

I want to thank you for taking the time to read this book. I know there are an infinite number of fitness resources available to you, and I am honored that you have chosen me as one of those resources.

I believe the material within this book can truly help you achieve your health and fitness goals.

But infinitely more important, you have to believe in yourself. If you narrow your focus, make a commitment, and execute, you are capable of great things, well beyond just building a beach body. That's easy compared to what you can really do in life.

When man comes to a conscious vital realization of those great spiritual forces within himself, and begins to use those forces in science, in business, and in life, his progress in the future will be unparalleled. -- Bruce Lee.

It is spiritless to think that you cannot attain to that which you have seen and heard the masters attain. The masters are men. You are also a man. If you think that you will be inferior in doing something, you will be on that road very soon. -- Hagakure

No matter what it is, there is nothing that cannot be done. If one manifests the determination, he can move heaven and earth as he pleases. -- Hagakure.

STAY IN TOUCH

I will continue to provide ongoing resources for you to help you along your journey. If you think that would be of use to you, please stay in touch.

Website: <http://natemiyaki.com/>

Facebook: <https://www.facebook.com/NateMiyaki>

Twitter: <https://twitter.com/NateMiyaki>

YouTube: <http://www.youtube.com/user/natemiyaki>

ADDITIONAL RESOURCES & REFERENCES

LESSON #1: FOCUS ON FOOD CHOICES

A. SUPPORTING ARTICLES

1. Robb Wolf -- What Is The Paleo Diet?

<http://robbwolf.com/what-is-the-paleo-diet/>

2. Stephen Guyenet -- Interview With a Kitavan

<http://wholehealthsource.blogspot.com/2010/12/interview-with-kitavan.html>

3. Stephen Guyenet -- Lessons From the Pima Indians

<http://wholehealthsource.blogspot.com/2008/05/lessons-from-pima-indians.html>

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LESSON #2: INTERMITTENT FEAST

A. SUPPORTING ARTICLES

1. Ori Hofmekler -- Top Ten Diet Fallacies

<http://www.ironmanmagazine.com/index.cfm?page=article&go2=1346&StartRow=1>

2. Martin Berkhan -- Is Late Night Eating Better For Fat Loss and Health?

<http://www.leangains.com/2011/06/is-late-night-eating-better-for-fat.html>

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LESSON #3: FIND THE RIGHT MEAL FREQUENCY FOR YOU

A. SUPPORTING ARTICLES

1. Nate Miyaki -- Deep Meal Frequency Thoughts

http://www.t-nation.com/free_online_article/most_recent/deep_mealfrequency_thoughts

B. RESEARCH

Cameron et al. 2010. Increased meal frequency does not promote greater weight loss in subjects who were prescribed an 8-week equi-energetic energy-restricted diet. *Br J Nutr* Apr;103(8):1098-101.

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LESSON #4 -- INTERMITTENT FAST

A. SUPPORTING ARTICLES

1. Martin Berkhan -- Top Ten Fasting Myths Debunked
<http://www.leangains.com/2010/10/top-ten-fasting-myths-debunked.html>
2. Suppversity -- Intermittent Thoughts on Intermittent Fasting -- Myth #2: Reducing Meal Frequency to 1-2 Meals Will Make You Fat.
http://suppversity.blogspot.com/2011/09/intermittent-thoughts-on-intermittent_05.html
3. Suppversity -- Intermittent thoughts on Intermittent Fasting -- The Switch: Introducing the AMPK vs. mTOR Metabolic Seesaw.
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LESSON #5: CALCULATE CALORIES FIRST

A. SUPPORTING ARTICLES

1. Lyle McDonald -- The Fundamentals of Fat Loss Diets Part 1

<http://www.bodyrecomposition.com/fat-loss/the-fundamentals-of-fat-loss-diets-part-1.html>

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Porrini et al. 1995. Effects of physical and chemical characteristics of food on specific and general satiety. *Physiol Behav.* 1995 Mar;57(3):461-8.

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LESSON #6: OPTIMIZE PROTEIN INTAKE

A. SUPPORTING ARTICLES

Bilsborough and Mann -- A Review of Issues of Dietary Protein Intake in Humans
<http://www.ncbi.nlm.nih.gov/pubmed/16779921>

Alan Aragon -- Is There a Limit to How Much Protein the Body Can Use in a Single Meal?
<http://www.wannabebig.com/diet-and-nutrition/is-there-a-limit-to-how-much-protein-the-body-can-use-in-a-single-meal/>

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LESSON #7: EMPHASIZE WHOLE FOOD FATS

A. RESEARCH

Rolls. 2000. The role of energy density in the overconsumption of fat. *J Nutr* Feb;130(2S Suppl):268S-271S.

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LESSON #8: CARBOHYDRATE RECOMMENDATIONS FOR THE SEDENTARY

A. SUPPORTING ARTICLES

1. Lyle McDonald -- How Many Carbohydrates Do You Need?

<http://www.bodyrecomposition.com/nutrition/how-many-carbohydrates-do-you-need.html>

2. Lyle McDonald -- Ketogenic Low-Carbohydrate Diets Have no Metabolic Advantage Over Nonketogenic Low-Carbohydrate Diets -- Research Review.

<http://www.bodyrecomposition.com/research-review/ketogenic-low-carbohydrate-diets-have-no-metabolic-advantage-over-nonketogenic-low-carbohydrate-diets-research-review.html>

B. RESEARCH

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LESSON #9: CARBOHYDRATE RECOMMENDATIONS FOR THE ACTIVE

A. SUPPORTING ARTICLES

1. Edward F. Coyle, Phd -- Highs and Lows of Carbohydrate Diets
http://www.gssiweb.com/Article_Detail.aspx?articleID=668
2. Nate Miyaki -- The New Starchy Carb Food Pyramid
http://www.nation.com/free_online_article/most_recent/the_good_the_bad_and_the_assfattening_the_new_starchy_carb_food_pyramid
3. Scott Abel -- Insulin Resistance? Stop the Nonsense
<http://scottabel.blogspot.com/2011/03/insulin-resistance-stop-nonsense.html>
4. Kurt Harris, M.D. -- Jimmy Moore inquires about "safe starches"
<http://www.archevore.com/panu-weblog/2011/9/29/jimmy-moore-inquires-about-safe-starches.html>

B. RESEARCH

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LESSON #10: PRE-WORKOUT MODIFICATIONS

A. SUPPORTING ARTICLES

1. Martin Berkhan -- Fasted Training For Superior Insulin Sensitivity and Nutrient Partitioning

<http://www.leangains.com/2010/09/fasted-training-insulin-sensitivity.html>

2. Martin Berkhan -- Fasted Training Boosts Muscle Growth?

<http://www.leangains.com/2009/12/fasted-training-boosts-muscle-growth.html>

B. REFERENCES

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LESSON #11: POST-WORKOUT MODIFICATIONS

A. REFERENCES

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LESSON #12: ADVANCED CALORIE & CARB CYCLING

A. RESEARCH

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