



Build Muscle, Burn Fat, Live Lean

Eat naturally grown carbohydrates, lean complete proteins, and mono-unsaturated fats at the same time.

*Eat every 2-3 hours in the portion ratio of fist, fist, thumb for meals and 1/3 of that for snacks.
Weight train to build muscle mass, do cardio to burn fat.*

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Introduction: LiveLean.org – Take On Your Health!

What is living lean? This concept is simple. Build Muscle, Burn Fat. Okay, how do you do it?

Living lean is actually simple. It is simply knowing how to eat, buying the right foods, then having routines in place to prepare your meals, pack food when necessary and eating every few hours to keep your metabolism on fire.

This LiveLean (audio – go to livelean.org for the audio version) book is going to explain what to feed your body and how to fuel it regularly to keep your metabolism on fire. The videos on the website, LiveLean.org, will show you some basic weight training exercises that will build muscle and some cardiovascular exercises that will burn fat. These exercises, combined with eating every few hours, will, literally, melt the fat off of your body, while building lean muscle mass.

The Basics:

Our bodies are electro-chemical-mechanical machines that are operated by a complex hormonal control system. Although the body and mind are interrelated in every aspect, let's think of the body itself as a machine for a moment. For this example let's pretend that the body is a car. In order to run a car you need gasoline, its fuel. If you are driving your high performance car, you should use a high-octane gasoline. "Octane ratings measure a gasoline's ability to resist engine knock, a rattling or pinging sound that results from premature ignition of the compressed fuel-air mixture in one or more cylinders." A higher-octane level, for a car that needs it, improves combustion efficiency and the result is better performance. The fuel required to power a car is very sophisticated and a car will not operate without it. You cannot just pour anything in the gas tank. Filling a car with water or alcohol would not work; a car requires refined petroleum fuel. The amount of fuel that a car consumes is dependent on the size of the engine. A bigger engine obviously needs more fuel. Our bodies function the same way. Our energy level, feelings and emotions are dictated by how and what we fuel ourselves, both mentally and physically. This program will teach you how to fuel your body with high-octane fuel that makes our bodies function in the optimal way, e.g. building muscle and burning fat.

If we look back to the history of the human race we will notice that before the 1900s civilization was very physically active and ate foods that were rich in nutritional quality. When the industrial revolution arrived in the 1900's whole grains started to become completely refined, thus removing most of their nutrients while adding refined sugar. Thinking about the changes in 1939, nutritionist Jean Bogert noted, "The Machine Age has had the effect of forcing upon the peoples of the industrial nations the most gigantic human feeding experiment ever attempted." Industry, marketing and greed have forever changed the eating habits of the world. These days the foods that people regularly eat are produced in mass quantities, stripped of nutritional value, loaded with preservatives, to improve shelf life, and then marketed as healthy. Many of the foods that we consume contain toxins for which our bodies are not evolutionary prepared. It is your choice to put toxic foods in your body. On a macro scale, the only way for us to change what is being offered is to change our eating habits and shift the demand curve to

healthier products. This is already happening, look at the closing of Hostess. Although I empathize with those who lost their jobs, this shows that the demand for Twinkees & Cupcakes has been declining. But, changing the nutritional habits of industry is not the goal of this program. The goal of this program is to get you the knowledge and tools to be getting leaner every single day. It has been said that success is the progressive realization of a worthy goal or ideal. Success on this program means that each day, you will be leaner than you were the day before and, over time, you will see major results. Following these principles, you will know, with certainty, that you are on the right track.

This is why it is critical that we pay attention to what we eat. If we do not pay close attention to our meals in the right portions and time them correctly, we lead our body's electro-chemical-mechanical system to be overloaded with foreign and often toxic foods. Our bodies are not made for and have not evolved to eat these types of foods! Toxic foods, combined with lack of physical activity, is a major reason for our society's prevalence toward chronic diseases such as obesity, cancer, heart disease, diabetes and other physical disorders. Think about what happened to the environment between the 20s and 90s it became very polluted. The same sort of things happened to the human race's bodies in this time frame and is proven by the increased number of cases of these diseases. Without examining and applying a proper diet, you may be lucky and avoid these serious ailments; however, you are still not living at your full potential, you are still not living lean. There is tremendous power in one's attitude when they know that they are getting in better shape each day of their lives, rather than always feeling like they have to start a diet to get in good shape. When one fuels themselves using sound dietary principles, they will avoid normal everyday pitfalls such as this lack of energy, hormonal mood swings as well as long-term illnesses. Examine your diet and lifestyle right now. Do you eat in a hit or miss fashion or what I call a 'See Food Diet'? I am sure you have heard the old joke, "I follow a See Food diet, meaning that when I see food, I eat it!" A See Food diet suggests that you eat whatever is in front of you and in varying quantities. If you do not plan your shopping list and what you eat it is time to change; it is time to LiveLean.

Although this whole process of planning your dietary meals may sound difficult. It really is not. Living lean is for optimum performance and a long life. Do you want to be there for your grandchildren and great-grandchildren? If so, it is time to apply what you learn. The first law of thermodynamics applies here, which states that in any closed system energy is conserved. You can only get out of a system what you put into it. Every time you eat something a part of that is staying in your body in some form of muscle or fat. So you literally are what you eat. If you are putting in sporadic foods and other junk, then the result is bad performance and foreign toxins in your body, leading to the above ailments. If, however, you are fueling yourself with the exact foods that your body requires, the foods for which the body was made, in the correct portions and at the right frequency, then you will feel an optimal state of performance, all the time. Again, what is put into a system must come out in some form. As you have probably heard, garbage in, garbage out.

As one eats, they should view their diet as the most powerful drugs that exist. A proper diet contains all of the macro and micronutrients that humans need to thrive and live a healthy life. (micro and macro nutrients will be discussed later) By eating properly you will avoid common ailments that currently plague society. It is important to enjoy the way you eat and to make your new dietary habits a permanent way of life, rather than a short-term fix or sacrifice. The LiveLean lifestyle is just that, a way

for you to completely master your diet and for you to appreciate the natural tastes of food and to become a culinary artist yourself. There is nothing more attractive than saying you are so on top of your game, that you are a healthy cook and that you experiment with various recipes and spices, etc. Our diet fuels our bodies and is something over which we have direct control. Our food is what determines how we look, feel and live. The goal of this program is to give you a valid theory so that you are certain you are on the right track. If you do what this program says, you will be getting leaner every day for the rest of your life. Ask yourself if you are following a valid dietary theory now? Is the extent of your dietary knowledge that 'see food' approach where you decide what you eat through convenience on whatever is in front of you when you are hungry? Or does it derive from what you see on television commercials, billboards, or what that person in the gym is telling you?

Or do you eat through a valid theory that you have researched? Ask yourself if you want to continue being a part of the greatest dietary experiment ever conducted by giving into the major corporations' advertising campaigns and possibly killing yourself one bite at a time? I am a business man, and what you are about to read is my opinion of the truth. First, let me preface this with a paragraph about business. I am sure we have all heard that, "The greatest among us shall serve." The way we earn an income is by serving others. Putting it simply, business is putting a formal wrapper around the service you provide so you can be remunerated with payment and make a living and do the things you want financially. Business is done between two people. That being said, business is a skill we should all learn. I will write more about this in CreateJobs.biz, please go there to sign up so you can be notified when the site is done.

There is something else we have in our society, it is considered big business. Big Business is a totally different animal than small business. These large corporations are simply profit making entities that do what they must, legally of course, to make profits. Short-term corporate growth is their goal, and not just steady growth, massive growth. The food business is a hyper-competitive marketplace. They see the consumer as revenue and do what they must to lobby Washington to get the shelf life longevity ingredients and methods approved so they can sell more. We are seeing the side-effects of eating the foods they produce and it seems that they really do not care about the unknown long-term toxic effects of the toxins in their food. This form of corporate behavior is evidenced how a senior executive in a major corporation treats their employees and investors when their companies go bankrupt. Many of them sell their millions of dollars' worth of stock and have a golden parachute, not to benefit their employees or investors. When the floor falls out from beneath them, they are millionaires, while their employees lost their pensions. These are their employees. Imagine how much they care about their customers. Our society has a prevalence toward this shelf-life management and this is especially true in corporations and politics where the leaders of both usually have a shelf life of three to eight years. They plan to maximize their personal holdings or popularity during that period and many times do not really care about the long-term consequences of their decisions. This is evidenced again by the corruption and terrible fiscal decisions made in government spending that is bankrupting governments all over the world. This is the same mentality that many of these food corporations have. They have absolute junk that they sell for which they produce creative commercials and expect you to buy this garbage and actually eat it! This could not be more true than in the tobacco industry where the companies make products that actually kill their customer! But, they still make the products! Are you going to give your money and, more importantly, your life to them? You may wonder what you can do.

Well, that is simple. STOP BUYING AND EATING THEIR UNHEALTHY FOODS. The only thing that will change what is sold, is if you stop buying it. Although I have empathy for those who lost jobs when Hostess closed down, this is an example of the demand for products changing and the company not offering healthier alternatives. Twinkies are terrible for you. Period. If you wonder why you struggle with weight, it is because you are doing exactly what you are being told to do, which is, if you are hungry, order a pizza and it will be there in 30 minutes, or go to a fast food joint and get 2,500 calories in a meal that will put you to sleep and pack on some weight on your stomach or rear end. If this doesn't make you mad as hell, I don't know what will. This, right now, is your chance to make your own decisions on your life and diet. You need to do this. You have been putting this off for way too long.

You may be wondering, “How did this happen?”

If you are shocked with the information you just learned, you are not alone. You are being severely manipulated. You may be beginning to see why we eat in such ways that make us fat, tired and depressed. Let's get a little history on the subject. It starts with the information and stimuli that we regularly take in. Food companies are the second largest advertisers in the U.S. economy directly behind the automotive industry. According to a study I read, approximately \$11 billion was spent on advertising in 1997 and most of these advertising dollars were spent on candy, soft drinks, salty snacks, pastries, ice cream, burgers, pizza, fried foods. These are some of the food companies' most profitable products. An additional \$3.1 billion was spent by the fast food industry alone. That is nearly 15 billion dollars spent on advertising by food companies to sell low quality, highly processed, high saturated fat and high glycemic carbohydrate foods to consumers. (More on the glycemic index to come.) The USDA spent \$333 million on nutritional education programs and marketing on how to eat healthy. Simply stated, we take in fifty times more stimuli on how to eat poorly than healthy.ⁱ This was in 1997, those numbers have gone up since then. This is why I say you have been manipulated and why to be easy on yourself when it comes to why you are struggling with your weight. You have been doing what you have been told to do by marketing; it is time to break free.

These advertisements and marketing are completely misleading as well. As we eat as recommended by these commercials, we are obese and have ailments and diseases directly related to poor dieting practices. Here is another example that illustrates how little the corporations actually care about the consumer and how much they only are concerned about one thing, their profits. Did you ever see that heartburn medication commercial where five big, fat, burly guys are sitting around a table eating a variety of unhealthy food such as pizza, beer, soda, and potato chips? At the end of the meal they are all burping and dying for a heartburn medication because they have such heartburn. Wouldn't it be nice if instead of having fat guys that get sick around table, there was a commercial that said, “If you ate these foods”, pan shot of the Live Lean list of foods and five healthy guys and girls, and the narrator saying, “You would feel great!” Of course that would be ideal, but it is not practical until people stop eating foods that require them to take heartburn medication. I thought of a new advertisement for a beer commercial: “Each one of these beers is 200 calories, drink six you have 1,200 calories, that slice of pizza is 600 calories, and those cheese fries, 500 calories. In this one evening you have eaten 2,300 high glycemic/high saturated fat calories. Do that 100 times per year, or once every weekend night, and the

total is 250,000 unhealthy calories per year! That is at least a pound a week of pure fat you gained! Nice work! Yes, all of that beer, late night diner food, and pizza are actually going to have long term consequences. Nice job becoming fat, hyperglycemic and possibly develop diabetes and being a burden on our health system for your entire life! Really, thanks.” Now that would be the truth, and in my opinion, a great commercial!

The next reason for this epidemic of poor eating habits is the availability and low cost of processed foods. People have a plethora of low quality foods at their fingertips and can eat them at a perceived value. We hear things like ‘Super Size’, ‘Dollar Menu’, and ‘Buy 1, Get 1 Free’ at fast food restaurants and supermarkets and think that we are getting more for our money. Technically, we are getting more food. However, when consumed, the re-cooked fat in that food is like Chinese Stars in our arteries, so we are getting more, but it just happens to be more poison. (This Chinese Star analogy will be explained in a moment.) Little do people know that the food that they are eating is the least costly part of the production process. A recent report listed several examples of this trend to consumers. Labor, packaging and marketing cost more than the food itself; so, it’s very profitable to make these low quality foods and in larger portions. Shouldn’t your food to be the most expensive part of the production process? If the production & marketing is more expensive than the food itself, what does that say about the quality of the food? I mean, come on, this is just common sense. This super sizing ‘Value Marketing’ trend that combines several foods into one deal, or often referred to as the ‘Dollar menu’ is offered by almost all of the fast food restaurants. A normal caloric range for people to ingest in a day is from 1,600 to 2,800 calories depending on the lean body mass and physical activity of the individual. One super-sized meal may meet one’s entire caloric requirement for the day, and that is without refills on their sodas. Let’s examine some more statistics according to the movie Super-Size America:

- 3 cups of movie theatre popcorn in 1957 was 168 calories, currently movie theatres serve 16 cups that provide 900 calories.
- When McDonalds opened, its original burger, fries and 12 oz coke provided 590 calories.” Today’s super-sized meal provides a whopping “1,550 calories!”
- An original coke had about 80 calories. A 64 oz. 7 Eleven Double Big Gulp has 800 calories and a 20 oz. Coke, commonly served at vending machines, contains 250 calories.
- A 1957 1 oz. McDonalds Hamburger had 210 calories, while currently the average is 6 oz. providing 618 calories.
- 1990 Nestle Butterfinger was 2.1 oz. and had 270 calories, while today’s is 5 oz with 680 calories.

These statistics are startling! On average the amount of calories taken in per day per person in America is 3,800, and we only need about half of that. This type of food intake results in at least a 24-pound weight gain per person every year! It is no wonder that 68% of Americans are overweight and 36% are obese! This is ridiculous. We are eating too many calories of the wrong foods! This is why our population is overweight. The reason I wrote this program was because I heard an obese woman stand up at a seminar I was at and, between her tears, reveal the pain she was in. She has had diabetes since 1997, she is in Weight Watchers, but after the meetings, goes to IHOP. Her family is devastated that she will only have another decade with them as, statistically, she will die in the next ten years, and she is 44. She

said that being obese affected her self-image, her relationship to her integrity, as well as all of those around her. She is seriously suffering, and at that moment, I knew that all obese people feel the same way, although they do not say it. When one has a low self-image, that leads them to project their low self-esteem onto others through their words and actions. This leads to much interpersonal conflict in the world. I knew at that moment, that I had to share the knowledge that I had on how to eat in a way that changes the way we see ourselves and our bodies. I knew I had to write the program, LiveLean.

That being said, the full explanation is not just a caloric answer. It goes even deeper than that. So now we know that we are constantly inundated with advertising stimuli from major food manufacturers. We must also realize that we are constantly surrounded with inexpensive food and opportunities to eat as well. Everywhere we drive there are fast food restaurants, everywhere we go there are vending machines, and most of the supermarket aisles, in the center of the supermarket, contain refined carbohydrate foods. Let's take our overweight epidemic back to the youth of our country. Our youths are being trained to eat garbage foods. The foods in school cafeterias are normally refined carbohydrates consisting of pasta, bread and bagels, juices, candies, sodas, and low quality-high saturated fat proteins such as hotdogs and hamburgers. Soft drink companies actually have paid arrangements with some school districts that guarantee volume and territory arrangements. There have been cases where school administrators encouraged teachers to allow students to consume soft drinks during class to meet their quota! That quota, when met, gives the school a certain dollar figure for the exclusive rights to distribute their soft drink brand in the schools! The school districts are basically paid to feed their students pure sugar found in soft drinks. One 12 oz soda contains about 140 high glycemic sugar calories, which will be explained in a moment. Let's be clear here, the public school system in our country is a business. We need to have a voice for the children. This program is a beginning to that voice.

The current mode of physical education in most schools consists of very little physical activity. Activities are not geared toward any strategy for health; rather they are a means to fill time, students are lucky if they break a sweat. Some schools actually have physical fitness classes as infrequently as one day per week. A person's dietary and physical fitness habits are usually formed during these formative years. As people adhere to these current types of dietary and fitness habits, which they are taught in school, throughout their life, it is obvious that they will be fat, possibly obese, out of shape and susceptible to disease. My idea is to teach the basics of weight training and cardiovascular training during these formative years, in both high school and college and have homework workout assignments. We will discuss physical fitness in a moment.

Looking back even one century ago people were active on farms and ate natural game meat that was low in saturated fat. They did not have to concern themselves with exercise and healthy eating. Our ancestors were physically active and were forced to eat fresh sources of protein, fat and grown carbohydrates. These days our meat sources are cows that are raised through sedentary lifestyles and are fed through a strategy to fatten them up with complex and refined carbohydrates. We fit this 'fatten up model' well by eating the same sort of highly processed carbohydrates and not moving much. In a sense, we are just like the cattle. We are stuck inside a series of pens for most of the day, only moving when we have to walk to our car from our living quarters and from our car to our office, then back to our car, then to our couch where we lie sedentary in front of the television for hours. Then we

sit back and graze on low quality foods in the pasture. Our ancestors worked out constantly and ate foods that were rich in nutritional quality. We evolved being physically active and eating high quality, nutritious foods. If you want to LiveLean, you must adapt those habits again now. The feeding experiment has failed. It is up to you to make the decision to take control of this aspect of your life and just do it. Yes, it is obvious that our school systems, work environments and home environments require some dietary and fitness revitalization. Be sure, however, not to blame you, or your child's, environment for an overweight and out of shape condition after learning this program. After applying what you learn in this program, you will have the tools and knowledge to succeed at becoming leaner every day of your life.

This is a very macro view of the overweight epidemic. Let's step inside of the body and view what is happening to us when we eat. What is in the foods that we are eating and how should we eat? Let's start with a dietary literacy test. Do you know the difference between a protein, carbohydrate and fat? Do you really know what your body does when you eat each of these? Do you know the nutritional values of different foods and the intervals in which to eat them? Do you think there is a difference in the nutritional quality of carbohydrates in a bagel and in fresh spinach or in the protein quality of a hotdog or chicken breast? When your body is thirsty and asking for water, do you think there is a difference between drinking pure sugar in the form of soft drinks and juices or in drinking a glass of water? Do you think that these little dietary decisions really matter? Well they do! Food is our source of fuel and is what gives us the energy and nutrients to what we will do every day and is what remains in our cells long after we have eaten it.

Let's examine the physical 'caloric' realities of food and how they affect our bodies. The energy in the foods we eat is measured in calories. A calorie is a form of energy, specifically a unit of heat equal to the amount of heat required to raise the temperature of one kilogram of water by one degree at one atmospheric pressure. For fitness a calorie may be considered a unit of measurement that describes the amount of energy that food will provide to your body. One pound of fat stores 3,500 calories and one pound of muscle stores 600 calories. Fat cells are where our bodies store excess energy for use at a later time, the goal of this program is to burn the energy in fat cells, not store it. When we eat we are fueling our bodies. Our bodies, just like that car, will burn a certain amount of fuel depending on the size of our engine. The amount of calories that we are able to burn is directly related to our body's composition, the amount of muscle mass versus fat in our body. (Note: our organs also burn calories, however, we are going to focus on building more muscle mass to burn calories in this program as we can't change the amount of calories our organs burn, we can only build more muscle to burn more calories). Muscle burns more calories than fat. As we exercise, both aerobically, (cardiovascularly) and anaerobically (weight training) and maintain a proper diet our metabolism will increase.

Simply stated, our metabolism is the amount of energy (calories) that our body burns to maintain itself. It is the body's process of using oxygen to convert food and stored fat into energy. Our bodies are constantly burning energy to keep it going during everything we do, every second of the day. For the purposes of this program, metabolism is a function of our body composition, exercise, the types of foods we eat and the timing of our meals. Our bodies burn calories all the time; when we eat, digest, type, work out and when we sleep. As one Lives Lean, e.g. muscle mass increases and body fat decreases, their metabolism will increase, e.g. they will burn more calories during a day.

Let's take an example of two twin brothers, Ralphie and Johnny. They are the exact same age, height and weight. Ralphie has an active lifestyle and works out regularly. He is in the gym three days per week training with weights, and in the mornings, before he showers, he does 20 minutes of cardio. Johnny just never got into working out and does not do much besides go to work and watch television. In this case, Ralphie would have a much higher metabolism than Johnny. Due to more muscle mass and physical activity, Ralphie's body will use more calories to maintain itself than Johnny's. As one works on increasing their muscle mass through weight training and amount of physical activity through aerobic exercise and an active life, the result will be a leaner body composition with more muscle and less fat, leading to a higher metabolism. If the two twin brothers consume the same amount of calories, the one who exercises with the larger muscle mass will gain muscle and burn fat, while the one with the sedentary lifestyle and smaller muscle mass will only gain fat. This illustration of the two brothers shows the basics of living lean.

The Difference Between Losing Weight & LivingLean:

There is a huge difference between losing weight and living lean. I am sure you heard people say things like, "I need to lose weight." Losing weight, e.g. becoming skinny is a very easy equation. Losing weight simply requires that you eat less calories than your body burns. A pound of fat is 3,500 calories and a pound of muscle is 600 calories. One's basal metabolic rate is the amount of calories their bodies burn per day, including the physical activity they perform. For this example, if your body burns 2,500 calories per day, and you eat 2,000 calories, you are eating 500 calories per day less than your body burns, so in seven days, you will have a 3,500 calorie deficit. If your body just burned fat, this would be ideal, you would lose a pound of fat per week, however, your body does not just burn fat. It burns muscle, too, so if your body burned solely muscle, it would lose 6 lbs of muscle with the same calorie deficit, which is very bad. If you follow the calorie deficit approach to diet, you will lose weight, but you will be losing both fat and muscle. This results in you losing weight, but, you are becoming skinny, e.g. losing muscle mass and fat. The goal of this program is to LiveLean, which means to build muscle and lose fat, so you will be getting more buff every single day of your life.

On this program, you should not weigh yourself. As you weight train and eat a proper, nutritious diet, you will gain muscle. Muscle is approximately 18% denser than fatⁱⁱ, so it weighs more. As you weight train you will be putting on muscle and as you do cardiovascular exercise, you will burn fat, along with keeping your metabolism on fire by feeding yourself every 2-3 hours with the right types of meals and snacks. The eating every few hours thing. You hear this all the time, eat six small meals a day, blah, blah, blah. Think of it like this. Your metabolism is like a fire. What happens when you don't put wood on the fire for a while? The fire dwindles down and becomes burnt embers. When the fire dwindles down, there is no heat and its ability to burn is gone. How do you keep the fire going? You put wood on it regularly. Same is true with your body. 75% of living lean is eating the right types of foods every few hours. 20% is exercising and 5% is supplementation.

The real equation to look at is your body fat percentage, NOT the scale. Your goal is to reduce your body fat percentage and increase your basal metabolic rate, e.g. muscle mass. Yes, you can get tests to prove

you are on the right track by nutritionists; however, this is unnecessary in my opinion. Just follow the program and you will see and feel the results of decreased body fat and more muscle. On this program, you are guaranteed to be on the right track.

The real feedback of this program is not weight, it is:

1. How you look and feel
2. How you fit into your clothes & how your body has changed
 - a. For men, bigger chest, arms, legs, abs showing
 - b. For women, more defined arms, legs, shoulders, legs
 - i. Women, please do not worry about becoming bulky. You need muscle to burn fat and get lean.
3. That you are losing fat and gaining muscle

The benefits are many, just Google, "Benefits of good diet and exercise" and you will see for yourself.

The LiveLean.org Program:

Now, onto the program! Now you know why people struggle with their weight, this is how to LiveLean.

How to Build Muscle:

The way that we develop muscle mass is to weight train. We will discuss the actual workout in depth shortly. Again, as our muscle mass increases in our body, our engine gets bigger and our metabolism, our ability to burn more energy, also increases. As one gains muscle mass, the amount of calories our bodies burn, at all times, rest or active, increases as well. As we gain muscle, the effect of cardiovascular exercise increases the amount of fat we lose.

It would be great if becoming lean were as easy as the caloric equation mentioned above. If caloric considerations were all that we had to concern ourselves with, we could figure out our lean body mass, discover the amount of calories our body's burn during the day, read labels on the foods we eat and get leaner every day. Unfortunately it is not this easy. The body's control system and the way it responds to food and the frequency with which we consume food makes this analysis a bit more complex. We will now discuss oxygen, water, the different types of macronutrients, the response our bodies have to those foods and the frequency in which we should eat our meals.

An internal combustion engine requires two things necessary for operation, air and fuel. Air is necessary for the fuel to combust. Did you ever light a candle and put a glass over it? What happens? The candle goes out because it runs out of oxygen. This is exactly what happens when someone suffocates from running out of air. The first and primary requirement for our physical bodies is an ample supply of oxygen. It is oxygen combined with the fuel we ingested that creates energy. The first step to becoming leaner every day is to increase activities that add more oxygen flow to our bodies and to eliminate anything that restricts oxygen flow to our bodies.

Breathing: Your lungs are the gateway for oxygen to enter your body. People should focus on eliminating anything that impedes the flow of oxygen into their bodies and breathe deeply. An ample flow of oxygen leads to a variety of health benefits and is instrumental to improving your metabolism. A note on Smoking: Smoking obviously decreases the amount of oxygen into your body because it literally clogs your lungs with black tar. If you smoke, think about what you are really doing. When you take a drag you are taking a deep breath. It is not the smoke that is giving you the high; it is the added oxygen that gives you that feeling. When you have the desire to have a cigarette, take a walk outside and take 10 deep, slow breathes. This gives the exact same feeling as having a cigarette. Try this today if you smoke. If you need some reasons why to stop smoking think about these. Smoking is a known carcinogen (cancer causing agent), is the number one age accelerator and cause for heart disease and cancer. If you smoke, be sure that you will have one of two things happen to you: (1) you will die prematurely and leave your family and friends, or (2) you will have a severely de-habilitated quality of life when you are older. Remember and apply what Yule Brenner said on his deathbed, "Don't Smoke." Again, I want to emphasize here that big business does not necessarily have the good of the end user in mind. If they did, they would not market and sell cigarettes. There is no incentive for these big

companies to encourage you to eat well. I have figured out a way, and am sharing it with you. It is up to you to take control of your life and health, not some third party government agency like the USDA.

Water: Water is the next most important element for living lean, optimum health, energy and memory. Human beings can live around five weeks without food, but only a few days without water in a moderate climate. The body is 60 – 70% water and this water is constantly cycled through the body in a plethora of bodily functions. Most of the water that we consume is removed by the kidneys. Some is lost by the process of breathing and tearing and sweating. It is imperative that we drink enough water. I read a statistic that showed that going into a dehydrated state even by 2% causes us to lose over 20% of our energy, memory and awareness. If we feel thirsty we have already reached a point of dehydration and are operating at less than optimal energy levels. We should never get thirsty. The way to avoid becoming thirsty is to drink enough water and in a regular fashion. It is recommended that we intake at least twelve glasses of water per day. I personally recommend drinking one glass of water every hour, which for a normal person yields about eighteen glasses per day. This will give your body enough water to fully flush your system and allow you to urinate regularly and cleanly. Your urine should be almost clear. If your urine is yellow, you need more water.

The next most important part of our physical well being is the food that we eat, our fuel. Food is one of the things over which we have direct control in our lives. Hippocrates once said, “Let food be your medicine and medicine be your food.” A healthy diet is the best method to ensure health in your future. The word diet is derived from the Latin word “dieta”, meaning way of life or regimen. You are developing a healthy way of life and your dietary regimen will add order to many other areas of your life. For many, this way of eating is going to be a big change. Let it be. Get hardcore about it. Get some friends enrolled in the program with you and support each other. When I started living and eating this way, a good friend of mine also was on the program. We truly encouraged each other and pushed through any negative peer pressure that was leading us to break our diet. After six months of eating this way, your life will be changed. You will not be able to eat the other foods. People couldn’t force you to eat poor quality foods or drink alcohol in any quantity and you will be proud to LiveLean. Your example will be leadership to others. If they ask how you did it, please point them to the site: LiveLean.org.

Ingestion: Here we will break down what happens when we eat. The first step of nutrition is ingestion, meaning actually picking up food and chewing it. When we ingest foods we should focus on chewing the foods from twenty to fifty times to ensure proper digestion. Assimilation is the rate at which foods are absorbed into the body and will be discussed in length further. When the food enters the blood stream it is brought to each cell of the body. Each cell in the entire body is regenerated each year, meaning that your cells are physically the matter you put into your mouth, so you literally are what you eat. After foods are absorbed, the body creates toxins and those toxins and used cells are eliminated through the body’s waste. We should have a bowel movement every 24 hours, if you aren’t you should eat more fiber and drink more water, which you will have plenty of in the LiveLean program. All foods are made up of three major macronutrients that the body needs; they are carbohydrates, fats, and protein. Carbohydrates and fats supply energy while protein, in addition to energy, provides the structural components necessary for the growth and repair of muscle (and other tissue). How do these different macronutrients work and how do they affect our body?

Macronutrients:

Fats: The first macronutrient that we will discuss is fat. This paragraph is a bit technical, but bear with me as I want you to have a strong background on what is going on when you eat. Scientifically fats are a class of molecules known as fatty acids, which are strings of carbon atoms with varying numbers of hydrogen atoms attached. The carbon-carbon configuration is of high energy and therefore twice the caloric value of carbohydrates and proteins. Fatty acids with a hydrogen atom attached at every available site are called saturated fats (SFAs). The body prefers to use this type of fat for energy.ⁱⁱⁱ Fatty acids with one hydrogen atom missing are known as monounsaturated fats. Monounsaturated fats (MUFAs) have a link in their carbon chain where two carbon molecules share, not one, but two bonds with each other. Body fat contains monounsaturated fats and can be converted into energy that the body burns as easily as saturated fats. Those fatty acids with more than one hydrogen atom missing are known as polyunsaturated fats. Polyunsaturated fats (PUFAs) have two or more double bonds in their carbon chain. Some are used for energy but most have other vital functions in the body. These small changes in chemical structure have significantly different effects on health.

Saturated fats raise serum cholesterol levels and thus pose the greatest threat to your heart.

Monounsaturated and **polyunsaturated** fats do not raise cholesterol levels. In fact, research indicates that both may actually reduce blood cholesterol levels when substituted for saturated fat in the diet. We will discuss this later in the program. Another type of fat that is artificially created by food companies is trans-fats, short for transformed fats (TFAs). Trans-fats are essentially low quality vegetable oils transformed into saturated fats through an electrical-thermal-chemical process. Food companies raise vegetable oil close to the boiling point, then bubble hydrogen through the heated oil while passing electrical currents through it. The entire process is done for one purpose, to increase the shelf life of that fat, thus increasing the life of that product, which increases the bottom line. This is how margarine and other unhealthy oils are made. Chemically this alteration makes the vegetable oil more like saturated fat.

There are two essential fatty acids, meaning that the body does not make them. They are alpha linoleic acid (omega 3) and lenolinic acid (omega 6) essential fatty acids. Ninety-eight percent of society consumes too much fat, yet 95% of people are deficient in the intake of these two essential fatty acids.^{iv} The word essential means necessary and that the body does not create them. Once the body has omega-3 and omega-6 fatty acids, it can produce other required fatty acids. Deficiencies in these two acids may result in disorders such as ulcers, dry skin and arthritis. Most fatty acids are in the forms of triglycerides. Triglycerides are the chemical form in which most fat exists in food as well as in the body. Triglycerides are derived from fats eaten in foods or made in the body from other energy sources like carbohydrates. Calories ingested in a meal and not used immediately by muscle and other tissues are converted to triglycerides and transported to fat cells to be stored. Hormones regulate the release of triglycerides from fat tissue to meet the body's needs for energy between meals.^v

This leads us to the use of fats in our body. Fats are our energy reserve. Fat also insulates the body and cushions vital organs. Fat comes from two places: (1) directly from foods and (2) are converted from glucose (blood sugar) for storage in the body. Our bodies store fat when we feed and exercise it in a way that triggers the fat storing process. (We will discuss this process when we discuss carbohydrates.) Our goal is to get out of the fat storing mode and into the fat mobilization mode, meaning the state

when our body will not store fat for future use, but use the triglycerides in our fat cells for fuel and burn it. We want our bodies to be in a constant state of flux so that the body always knows that it is going to eat and will therefore constantly burn its fat stores for energy. We store fat in three different places, subcutaneously (under the skin), intramuscularly (in our muscles), and inter-organ (between organs). As you begin to mobilize your fat stores, you will lose fat in all three of these areas and decrease your body fat percentage. Almost all the cells in the body can convert fats into energy, a process called fatty-acid oxidation. This is our goal with our new dietary and nutrition regimen, doing this long-term is living lean.

There are four sources of saturated fats. They are animal fats (saturated fats), processed fats (trans-fats), fats exposed to high temperatures (oxidized fats), and tropical oils. Animal fats include butter, lard, cheese, and red meat sources. Processed fats include cooking oil, margarine, and hydrogenated fats. High temperature fats cook into food at high temperatures. High temperature cooked foods include fried foods such as French fries, pork rinds, potato chips, and fried calamari. Tropical oils include, coconut, palm and palm kernel oils. These fats make you feel tired, make you fat, shut off the fat burning process and contribute to diseases such as heart disease, strokes and cancer.^{vi} Another thing to note is that fat is a place where our body stores toxins. So the more fat you have on your body, the more of a toxic state you are in.

Cholesterol is a hard waxy substance critical to many body functions. While essential fatty acids (EFAs) keep membranes pliable, cholesterol gives them enough rigidity to prevent their collapse. Too much cholesterol in the body has definite adverse effects. It is the main component of the plaque that builds up on the walls of arteries, which leads to heart attacks, strokes and other problems resulting from poor blood circulation. The body uses carbon or acetate fragments to make cholesterol. Acetate fragments are the end product of fatty acid oxidation and an intermediate product of carbohydrate metabolism. Saturated fats are the main source of acetate fragments because they are the preferred fuel of the body for energy. High GI (High Glycemic) carbohydrates produce acetate fragments rather quickly and so diets high in saturated fats and refined carbohydrates have great influence on cholesterol production.^{vii} Cholesterol is transported by the body by protein-coated carriers called lipoproteins after fat droplets are absorbed through the small intestine. These particular lipoproteins are called high-density lipoproteins, or HDL. They carry the fat globules composed of both cholesterol and triglycerides to the liver. The liver then metabolizes the fat. The fats that are sent out to various parts of the body are carried by low-density lipoproteins, or LDL.

All cells in the body have receptors for LDL, but when each cell has absorbed enough fat and cholesterol for its needs, the receptor closes. The remaining LDL keeps circulating in the blood and eventually is either stored as fat or transferred back to an HDL carrier for return to the liver. HDL is known as good cholesterol and LDL as bad cholesterol. The reason is that when it's in the form of LDL, cholesterol can collect on and damage arterial walls, which increases the risk for arteriosclerosis which causes heart attacks and strokes. A diet high in saturated fats and refined carbohydrates increases the amount of LDL circulating in the blood and elevates blood serum triglycerides and cholesterol. Polyunsaturated fats lower LDL but lower HDL as well. Monounsaturated fats moderately lower LDL but do not affect HDL.^{viii} Monounsaturated fats do not clump and do not produce acetate fragments leading to LDL.

When we eat any saturated fat those hydrogen atoms are literally damaging our arteries like Chinese stars and also act as a clumping agent in our blood. When the saturated bond travels through the blood stream, it sticks to other molecules and damages the walls of the arteries. This, combined with artery lining buildup of cholesterol, is what happens when people have a blood clot or heart attack. Red blood cells bring oxygen to the rest of the body and the entire blood supply goes through body in less than a minute. Bad fat makes your blood cells sticky and they form clumps. When blood cells stick together by one's choice of foods, the clump can grow so large that it blocks off the entire artery. This is the most extreme case of this clumping. What normally happens, however, is the blood cells do not travel throughout the blood stream as efficiently as possible and this limits the amount of oxygen that goes to our muscles, organs, tissues and ultimately our cells. This lack of oxygen causes the body to limit its cleansing process and leaves the body in a state of toxicity. This is the beginning of many diseases of toxicity such as cancer, heart disease, and diabetes. This process also blocks the body's ability to burn fat. So if you are impeding your body's ability to carry oxygen, then you will not burn as much fat.^{ix}

This process helps us see that we want to keep our fat intake to monounsaturated and polyunsaturated fats that are rich in omega-3 and omega-6 fatty acids. So the first step is to stay away from the fats on the saturated fat list. The second step is recognizing that even good fats can become toxic if they are oxidized before you eat them. When fatty acids oxidize they begin to turn rancid, which makes them toxic. Most fats oxidize quickly when exposed to heat, light or air. So you want to avoid any process that exposes these good fats to heat, light or air. You should try to consume the fats on the good fats on the livelean.org website list in their natural state. That means no frying, roasting or other processes that transform the state of the fat molecule into its oxidized state. This includes French fries, fried chicken wings, fried calamari and other foods of that sort. The best places to get your fats are from plant sources that you can read in the good/bad fat list. Not all plant oils are good for you, however. Tropical oils are one example of this. Remember that just because it is edible, doesn't mean that it is good for you. You have to work on eliminating toxic fats and work on ingesting good-essential fats into your diet.

Measuring fat in foods: When you read the labels in stores remember a very basic rule. When choosing foods that have the term low fat be careful not to be deceived. One should look at what percentage of total calories is fat and keep this number under 20%. That is a good rule of thumb for healthy fat eating. For example, 2% milk is 35% fat, while 1% milk is 22% fat. As Joe Dillon recommends, a good equation to use to calculate fat in foods (grams of fat) x 9 / (total calories per serving) = caloric percentage of fat, which we want to keep to 20% or less.^x

By changing your intake of essential fats you will notice a plethora of differences in your life. You will soon feel better because these fats speed up your metabolism, make your skin more elastic, slowdown your aging process and improve your immune system. Remember that excellent snacks and great sources of essential fats are raw nuts. Please see the list of good/bad fats on the site to learn more.

Protein: The next macronutrient that we will discuss is Protein. Protein is needed for the construction, maintenance and repair of the body's structure. When a protein food is eaten the body breaks it down into amino acids. There are twenty amino acids and they can be combined in many ways, just like the alphabet, into protein chains. These are three-dimensional shapes that vary in their purpose in the body. Proteins are the major building block for muscles, blood, skin, hair, nails and

internal organs, including the heart and the brain. Protein is very important for the creation of hormones that effect many functions of the body including the rate of metabolism. Protein also helps prevent the blood and tissue from becoming too acidic or too alkaline and helps regulate the body's water balance.

Enzymes are proteins that act as catalysts for all chemical reactions in the body and are essential for digestion, cellular energy, tissue, organ repair, and brain activity. Enzymes bind with other molecules called substrates to change their chemical composition for a desired result. These results vary for different bodily needs. There is a unique enzyme for every substrate, so the body needs many enzymes to function. The diet also supplies the body with specific enzymes. A lack of enzymes in the body can have significant consequences. This one of the reasons why we must ensure that we have enough protein in our diets.^{xi}

Protein that is not needed for construction, maintenance or repair of the body's structure can be used for energy production. Excess protein in the diet, once broken down into amino acids is turned into glucose or glycogen, or put into storage as fat. The problem is that when protein is burned for energy it does not burn clean like carbohydrates and fat, but leaves a toxic residue called ammonia. If there is insufficient carbohydrate in the diet, in order to meet energy demands especially of the brain, protein in muscle tissue is used, which results in a loss of lean body mass. High dietary intake of protein, however, can also exacerbate allergies and autoimmune diseases by aggravating the immune system. This means that you only want to eat the right amount of protein for your lean body mass and rate of physical activity, which we will discuss below.

There are eight essential amino acids, the building blocks of protein. From these eight your body makes over 50,000 different proteins. Meat, fish, poultry, eggs, dairy products and soybeans furnish the eight essential amino acids. The proteins that you put in your body should be lean, meaning that you want to keep the amount of the fats these proteins sources contain to twenty percent or less of their calories.

On this program, you are going to be weight training and doing cardio, so you are considered an athlete. Get use to it. That is who you are now. A side note on being an athlete. Another thing that always makes me think is when we go to athletic events as spectators. The athletes are finely tuned athletic machines, eating exactly what this program is telling you to eat, and in the same frequency. But, look at what the so called fans are fed: Beer, hot dogs, nachos, pretzels, soda, wings, etc. If the athletes eat that food, they would be cut from the team! You literally cannot eat healthy at a sporting event. That is why it is important to pack your own meals wherever you go, which we will discuss later, and when someone questions you on why you are bringing your own food, you tell them that you are an athlete and your coach has you on a special diet, your coach being me. If they try to stop you bringing it into wherever you are going, ask them if they serve that food, if they don't, tell them you are bringing it in until they serve healthier food. Make a stand for your health.

So how much protein do you need? As an athlete, you need between 1.2 and 1.7 grams per kilogram of body weight or (0.5 to 0.8 grams per pound). This sounds complicated, but it isn't. You simply take your entire protein intake and divide it by your meals in a day, but it is even easier than this. In simple terms you want at least 20 – 30 grams of protein per meal or 10-15 grams of protein per snack. The hardest part about any meal is getting the lean complete protein in. When you work your muscles harder you

need more protein. You want a portion of protein the size of your fist at meals, and half the size of your fist for a snack. More on this later.

When you put food in your body you trigger one of two hormonal responses. You will either trigger insulin or glucagon. Excess insulin causes a negative effect by storing excess blood sugar in the fat cells as triglycerides. The opposing hormone to insulin is glucagon, a mobilization hormone that actually raises blood sugar levels, taking triglycerides out of the fat cells. When you trigger glucagon to be released blood sugar stabilizes, glucagon pulls fat out of your fat cells then facilitates the burning of that fat. The cravings go away and you feel satisfied. How do we get more glucagon? It is very simple, you turn it on by your choice of macronutrients. Glucagon is triggered by the ingestion of lean complete protein. You control whether your body will dump glucagon or insulin into your blood stream by what you eat. Glucagon minimizes the release of insulin. Protein not only releases glucagon, it also slows gastric emptying, meaning it slows down the rate at which carbohydrates enter your system, more on this later.

Carbohydrates: Carbohydrates are the chief source of energy for all body functions and muscular exertion and are foods about which people are most confused.^{xii} Carbohydrates are crucial to the body's recovery process, especially after working out. Carbohydrates are necessary to feed the brain, whose primary fuel is glucose. Simple carbohydrates are glucose (GI 137), fructose (GI 32), and lactose (GI 65) and are found in simple sugars, fruit sugars and milk sugars respectively. All carbohydrates eventually break down into one of these three forms of sugar. Carbohydrates are foods that derive from plants and are the only source of dietary fiber. There are two types of fiber, water-soluble fiber and non-water soluble fiber. Non water-soluble fiber keeps the colon clean and is found in fresh fruit and vegetables. Water-soluble fiber helps lower cholesterol in a non-toxic way and is found in foods such as oat bran, oatmeal and whole oats. Naturally grown carbohydrates are loaded with fiber. The conversion rate, or how fast the body transforms carbohydrates into sugars is referred to its glycemic index (GI).

Foods that transform into sugars rapidly are considered high glycemic carbohydrates, while foods that break down more slowly are considered low glycemic carbohydrates. Most processed foods contain high glycemic carbohydrates because they have been refined and most of the fiber, protein and natural fat have been removed in the refining process. When eaten alone, high glycemic foods cause hyperglycemia which is a condition when blood sugar goes too high. This spike in blood sugar gives us a temporary high or sugar rush. The pancreas monitors blood sugar. When the blood sugar goes too high the pancreas acts to reduce it by releasing a fat storing hormone called insulin. Insulin attacks excess glucose and converts it into triglycerides (blood fats) then stores triglycerides in the fat cells. Insulin then lowers the level of blood glucose, but does not stop at the optimal level; insulin keeps taking out blood sugar until there is a deficit in the blood. It may drop your blood sugar too far which is a condition called hypoglycemia. This is low blood sugar, which may cause one to feel hungry, moody and possibly depressed. At this point the brain does not have enough glucose to feed itself. It is hungry and not at it's best. When the brain is deprived of glucose it releases hunger pangs that ask you to eat. The brain sends out the signal to get more 'glucose' into your system and the fastest way to get glucose? You guessed it, by eating sugar. Now you are stuck in the sugar circle which means that the more you eat, the more your body wants. These sugar cravings may overcome the individual and that person eats more sugar and repeats the whole process over and over again. If you don't eat, your brain will go to its

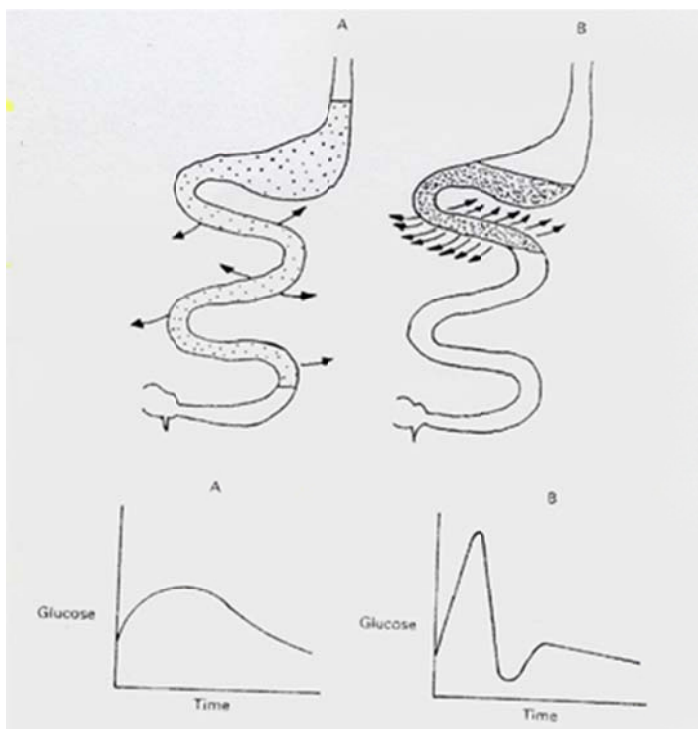
next source of glucose, which is transforming the protein in your muscles into glucose. This is not what we want to do! We are trying to build our muscle mass, not decrease it! The problem with the sugar cycle is that insulin is essentially a storage hormone evolved to put aside excess carbohydrates in the form of fat. So the insulin that is stimulated by excess carbohydrates aggressively promotes the accumulation of body fat. In other words, when we eat too many carbohydrates, we are essentially sending a hormonal message via insulin. The message: store fat. Not only do increased insulin levels tell the body to store carbohydrates as fat, they also tell it not to release any stored fat. This makes it impossible to use stored body fat as energy.^{xiii} This is one of the main reasons our society is fat.

A few other diets should be mentioned here. The Atkins Diet has a viewpoint that people should give up eating carbohydrates and focus all of their food intake on proteins and fats. The Atkins Diet does not take into consideration the types of fat to eat either. As we have just discussed there are tremendous differences in the types of fat that you eat. Atkins actually recommends that we take in butter, fats from steaks and other saturated fats in any proportion that we want. This leads the body to a state of Ketosis, which is a toxic state where the body releases ketones in the urine from the breakdown of muscles as the source of glucose. This diet is not supported by scientific evidence. An Atkins type diet may help you lose weight, but the long-term consequences of a high fat/high protein diet are terrible and can lead to heart disease and high cholesterol. The Zone, written by Barry Sears, PhD. is another popular dietary book on the shelves. This book is excellent in that Dr. Sears recommends balancing carbohydrates, proteins and fats in every meal. Sears uses the glycemic index as his main measure as to whether a carbohydrate should be eaten. Another author is Joe Dillon who wrote his Energyfirst.com program that recommends eating good fats, lean, complete proteins and food as grown carbohydrates in equal percentages throughout the day.

One thing, on which most experts agree, is that the faster carbohydrates enters the bloodstream, the more of a problem they are. When carbohydrates are eaten alone, the glycemic index is an accurate measure for this rate of absorption. High Glycemic carbohydrates consumed alone raise blood sugar levels quite rapidly, providing bursts of energy that are followed by an energy letdown.^{xiv} The glycemic index is dependent on several variables as well, such as the amount of cooking, processing, fiber and fat. Reference material on the glycemic index values vary as well. The glycemic index does not take into account the nutritional value of foods either, so deciding to eat a certain type of food strictly on the glycemic index is not a good step. In the LiveLean program, you are not going to eat carbohydrates by themselves. We should always eat carbohydrates with a source of protein and a fat. When carbohydrates are eaten with the other two macronutrients (protein and fat) and in the right proportions they enter the blood stream at a time released pace. The glycemic load is how much the food will raise a person's blood glucose (blood sugar) level after eating it. The glycemic load of the meals and snacks we recommend assimilate into the intestines at a rate that keeps blood sugar stable. I am going to refer to a commonsense answer to the types of carbohydrates that we should eat; they are called 'food as grown' carbohydrates. For a complete list of 'Food as Grown' carbohydrates, please see the website: LiveLean.org.

"Food as grown" carbohydrates contain loads of fiber, which slows the assimilation of that particular carbohydrate into the bloodstream. We slow the assimilation of a meal when the fiber from these 'food as grown' carbohydrates is combined with protein and fat. When food as grown carbohydrates are

eaten in the right proportions with lean complete protein and good fats, the rate at which that entire meal is assimilated will keep the blood sugar steady for hours.^{xv} Okay, what does all of this glycemic talk mean? There are many different opinions on the subject; however, I am going to recommend one single step that will help you understand what to eat. **STAY AWAY FROM PROCESSED AND REFINED CARBOHYDRATES AND EAT NATURALLY GROWN SOURCES OF CARBOHYDRATES COMBINED WITH LEAN, COMPLETE PROTEINS AND GOOD FATS.** This will ensure that your blood sugar stays constant, limits the amount of insulin released and maximizes the amount of glucagon released, thus triggering your fat burning mobilization process. Please examine the following graph (or below) on the meals page on LiveLean.org to understand what happens to one's blood sugar level when one ingests a high glycemic meal vs. a low glycemic load meal balancing protein, carbohydrates and fats.



On that graph, figure A shows the blood sugar remaining constant with slow gastric emptying, while figure B shows the effect of a high glycemic load and a peak in blood sugar levels. In figure B, the peak is where the insulin is released, and the valley is where the hunger pangs are felt. This chart proves that in order to keep your blood sugar constant, you should eat the proper portions of the foods we mentioned above and in their proper intervals. It is imperative that you know and stick to the portions that your body needs.

Micronutrients and Supplementation: There are many known micronutrients, minerals and antioxidants found in food as grown carbohydrates, proteins and fats. There are two kinds of vitamins water soluble and fat soluble: first, water soluble: B complex, vitamin C, the bioflavonoids and beta carotene-that are easily eliminated by the body; and second, fat soluble: vitamins A, D, E, and K – that can accumulate if an excess is ingested. Vitamins and minerals can be supplied by a varied whole food

diet of fresh fruits and vegetables, whole grains, legumes, nuts and seeds, fish and low fat animal products. There are a variety of vitamins and minerals found in the foods we eat that act as antioxidants. We will discuss antioxidants in a moment. An example is green leafy vegetables that contain chlorophyll. Chlorophyll is what causes photosynthesis where leafy green plants gather carbon dioxide and sunlight and transform them into oxygen and carbohydrates. Chlorophyll is an excellent detoxifier and cleanser of the blood. Flower vegetables such as broccoli and cauliflower are rich in vitamins. Root vegetables such as carrots, yams and sweet potatoes are great, too, and are rich in antioxidants. We do not know all of the vitamins and nutrients in foods. That is why it so important to have a well-balanced diet consisting of many foods including proteins, fats and colorful vegetables. Just like working out with free weights in the gym hits the auxiliary muscles that are not hit with machines, balanced foods get all of those 'other or auxiliary' nutrients into our body.

Supplementation is helpful to ensure that you have the right nutrients in your body at all times. Be careful not to give into products that are just propaganda and gimmicks feeding on the nutritionally illiterate. Supplementation is a good addition to good clean nutrition, not a substitute. The recommended daily allowance (RDA) is the minimum and not necessarily the optimum amount of vitamins and minerals. I personally take a multi vitamin and 2,000mg of C and, an E and a Fish Oil each morning.

Another type of supplementation is protein powder. There are a variety of protein powders in the market. Please be sure to choose an all-natural protein powder as many of them contain chemicals that are toxic to your body. Remember, the goal is to eat every two to three hours. The best foods to eat are lean complete proteins, naturally grown carbohydrates and mono-unsaturated fats. I consider a protein shake an emergency meal. I try to stick to real food meals and snacks. On the days when I do need a meal in a pinch, I take one to supplement my normal diet. Sometimes, I will have a protein shake before the gym, or before bed. Normally, if I have a protein shake, I have an apple and a handful of raw nuts after drinking two scoops of protein powder from one of those shake bottles or blender.

Juicing. Juicing is an excellent way to get a lot of nutrients into your body from vegetables and fruits. Remember, however, that the juice you are drinking is high glycemic when it is consumed alone. Be sure to add some sort of protein, fat and fiber to the meal when you choose to juice. Also, keep the portions to about 8oz. I have seen people add juice to their diet and they consume massive portions of juice, which increases their blood sugar rapidly, which defeats the point of this program. Remember, everything that goes in your mouth should be balanced with the three macronutrients, and in emergencies, fat or protein can be consumed alone, but do not eat carbohydrates alone as your blood sugar will spike.

What is an antioxidant? They are what combat free radicals. Oxygen molecules normally have 16 electrons, when something knocks one of these electrons off, like smoking, drinking or junk food, it makes this oxygen molecule a free radical. It wants to bind with anything it can to get back that missing electron. We want to prevent that free radical from bonding with another cell, thus causing it to impede oxygen flow throughout the body. Instead we want that free radical to bond with something that is called an antioxidant that we are putting into the body on purpose. This will decrease the oxidation process in the body. We see oxidation all the time, what do you think rust is? Rust is oxidation of iron.

The same may be said about the paint on a car. When the paint oxidizes it loses its luster. This process of oxidation is a major cause of the aging process and disease. Getting rid of these free radicals prevents oxidation; antioxidants neutralize these free radicals.

Live Lean Nutritional Summary: The goal is to eat the correct types of foods in the right portions and intervals of eating. This process will combine our foods in a way that slows the assimilation of foods into our bloodstream. The blood sugar level is what we are trying to keep constant with our eating habits. We want to minimize the release of insulin and maximize the release of glucagon. You can eat protein and good fats by themselves because they have no effect on blood sugar. Avoid eating carbohydrates by themselves because they will disrupt your blood sugar. Our goal is to make this as easy as possible. Simply, choose one serving of food from the protein list, one serving of food from the carbohydrate list and one serving from the fat list for your meals, and make sure your snacks are just smaller sized portions of the three macronutrients. Please go to LiveLean.org for the list. An easier way to understand servings is to think of a 'serving' as the size of a clenched fist for proteins and carbohydrates, and the size of a tablespoon or your thumb for the fats. Eat every 2-3 hours and you will live an existence you never knew existed. You will have more energy, be more alert and be on fire!

Planning the diet: We cannot just sit back and continue eating the way we are today according to the 'See Food' dieting methodology. As you have just read, the "see food" method of eating is truly hazardous to your health and counterproductive to increasing lean muscle mass and decreasing your body fat percentage. Again, the entire goal of diet is to increase our lean muscle mass, while decreasing our body fat percentage, not merely to lose weight. The most important parts of LivingLean, and in a way that allows for your peak physical and mental performance, is to have the systems in place to eat the right foods every few hours. The reason why people do not stay in their ideal body composition is because they give up and veer off of the proper way of eating, which is primarily due to lack of planning, execution and peer pressure. Remember your diet is your new way of life and that once you truly grasp that change and plan your meals you will look and feel the way you have only dreamed. You will not be a victim of the food manufacturer's nonsense anymore.

The first step to living lean is to plan your shopping trips for your food. Please choose foods that are on the following list. The best way to shop is to go to a bulk food store like Restaurant Depot, Costco, Sam's Club or another place where you can buy in bulk. This cuts down the price per serving drastically and allows you to eat full meals for less than \$5 a serving, often less than \$3 per serving. Again a serving is the size of your fist for protein and carbohydrates and the size of a tablespoon or your thumb for the fats. Do this for three meals per day and three snacks. Some wholesale food suppliers require a membership available only to businesses. All you need to shop there is a Tax ID for a business and a picture ID. My recommendation is to start an LLC for your business. In New Jersey, it costs \$125. Even if it is you are one person, consider this starting a cafeteria for your business and if anyone asks, say it is for your company cafeteria. Whether your business is one person, or 100,000 people, it is your attitude toward it that matters. Feel as if you are the CEO of a 100,000 person company and act that way. When

you have the 100,000 person company, be sure your cafeteria has the same menu, but with a lot more portions!

Snacks are considered to be 1/3 of a regular serving. There is a list of good snacks below, too. The key to living lean is knowing your staple foods, buying them in bulk, packing them properly, then you just cook them and eat them at the right times. If you are traveling on the road, you have to pack a cooler to go. The size of the cooler depends on for how long you are going away. If you are going away for a day, an ice pack, a bag of raw nuts, a few apples and a few bottled waters will do the trick. If you are going away for a weekend, you will need a larger cooler with more supplies. Just get the re-freezable ice packs and put them in the cooler to keep your dietary supplies cold. Be sure that the ice packs are only directly touching your water bottles. If your ice packs touch your food directly, e.g., apples or hard boiled eggs, it freezes the food and will sometimes ruin the consistency. Then, when on the road, eat every two to three hours.

Living Lean requires eating the same foods a lot and experimenting with different seasonings to change make the flavors more appetizing. When you eat like this for a while, you start to enjoy the natural flavors of the foods without seasoning. Your appreciation for the culinary arts increases drastically as well. Consider yourself a gourmet chef, again, on a side note, it is a coveted and attractive skill knowing how to cook healthy, delicious meals.

My Normal Dietary Routine:

Wake up, have a glass of water and on some days a cup of black coffee. Black is important as the milk in the coffee is high glycemic unless taken with protein, fat and fiber. I put my feet in my sneakers and jump on the treadmill or go outdoors for 20-30 minutes. After my workout, I quickly shower, then go into my kitchen. I take out quick oats oatmeal, put one serving in a bowl with a tea spoon of Chia Seeds and a table spoon of raw, natural peanut butter. I put a kettle on the stove to boil water, cut up a pepper, an onion and a tomato, pour half a quart of egg whites into a Teflon coated frying pan, put vegetables on top, put lid on pan so it steams the vegetables, put burner on medium. When the water boils, I take the boiling water, pour it on the oatmeal and pour the rest of the hot water into a pitcher with a green tea bag to make green tea. I check on the egg white/vegetable mixture and scramble them up, then take the eggs off of the frying pan and put them on a plate. In this meal, the protein is the egg whites, the carbohydrates are the oatmeal and vegetables, and the fat is the raw, natural peanut butter. Afterward, I wash the dishes and take out a chicken breast to defrost for lunch. I put the zip locked bag of chicken breast in a long foil chafing dish and fill the chafing dish with cold water. I leave it in there until lunch time. Cold water defrosts the meat without cooking it. You can also leave the chicken in the fridge over night to defrost it. Do whatever you prefer.

At 10 AM, I have a snack. Usually a yogurt and an apple, or a protein shake and an apple.

At about 11:30 AM, I cover a baking sheet with tin foil, take the chicken breasts out of the chafing dish and out of the zip lock baggie and put the chicken breast on the tin foil covered baking sheet. I cook a few extra chicken breasts at lunch so I have them for dinner. I put some steak seasoning on the chicken, then put the chicken in the oven on 400 degrees for about 10 minutes. After putting the chicken in the oven, I take a sweet potato, scrub it off with a brush to clean it, put it on a plate and put it in the microwave for 8-10 minutes depending on the size of the sweet potato. After I hear the microwave beep

for the sweet potato, I flip the chicken, put seasoning on the other side and put it in for another 15 minutes. If I have company, I put in another sweet potato after the first one is done. While that is going, I wash off some spinach and arugula, cut up an onion, pepper, and tomato and make a spinach salad.

I then go back to my desk and do some more work. From there, the microwave beeps and it is time to set the table. After I set the table, I shut off the oven, take out the chicken with an oven mit, put it on the plates, then I take the sweet potatoes out and cut them up into slices, put balsamic vinegar and olive oil dressing on the spinach salad, and serve the chicken. This meal is amazing and gives a stable blood sugar level and provides energy for hours. The fat in this meal is the raw, extra virgin olive oil.

At 3PM, I have a hand full of nuts with an apple, another protein shake with an apple, or a yogurt with an apple. Again, add some fat to your snack, a small handful of nuts will do the trick or some flax seed oil in your shake.

At dinner, I usually prepare a sweet potato again with some salad as mentioned above and have a similar meal with different seasoning on the meat. If I am going to the gym that night, I will usually have a protein shake before the gym. When I get back from the gym, I will usually put a half of quart of egg whites on the pan again, boil some water and have some oatmeal with that. One of my favorite treats before bed is to take a scoop of natural peanut butter and mix it into the hot water and oatmeal. When you pour some milk into that mixture, it tastes absolutely delicious.

That is pretty much the routine. Very, very simple. Adjust it to your schedule and lifestyle. Feel free to mix it up with the following list of good foods below. Just be sure to eat each meal and snack with a fist, fist, thumb protein, carbohydrate, mono-unsaturated fat serving proportions and never eat carbohydrates alone. Again, you can eat proteins and fats alone because they have no effect on your blood sugar, but eating carbohydrates alone spikes your blood sugar. Again, very simple guidelines to follow, but when you are getting leaner every day, it is totally worth the effort.

Food Sources^{CR:}

Some of the foods below sound exotic, and they are as this is a complete list of good food choices. Just be consistent with your macro-nutrient choices and eat the ones with which you are comfortable. Again, your cost per serving will be under \$5 for each meal and snack you have, so this is cheaper than going to any fast food restaurant. After you eat like this for a while, you will notice your food preferences change drastically and you won't want to eat refined foods any longer. Please note that in the bad food section, alcohol is listed. There is absolutely no alcohol, of any kind, on this program. Alcohol is a toxic substance, depressant and the purest form of sugar that exists. If someone challenges you on this saying, come on, just have a beer. Politely say no and that you are on the LiveLean Program and your getting and living lean is more important than putting alcohol into your body. If they persist into peer pressuring you to join them in their mediocrity, ask them how long they have had a drinking problem. If they continue to persist, question your friendship with that person as they do not have your best interests in mind. Have a seltzer with lime or a water with lemon.

Good Food Sources

Fats	1 table spoon with each meal	For snacks, include a tablespoon of fat.
Best choices	Omega-6 fatty acids	Omega-3 fatty acids
Raw nuts of any kind	black currant oil	canola oil
Raw seeds of any kind	borage oil	chia seeds
Extra virgin olive oil	corn oil	fish oils
Avocado	cottonseed oil	flaxseed oil
	evening primrose oil	flaxseeds
	grapeseed oil	greens, dark leafy
	Lean meats	pumpkin seeds
	Any raw nut	puslane
	peanut oil	soybean oil
	poultry	soybeans
	safflower oil	walnuts
	seeds	walnut oil
	sesame oil	roe
	soybean oil	mackerel
	sunflower oil	anchovies
		herring
		salmon
		sardines
		whitefish
		tuna, albacore
		turbot
		shark
		bluefish
		bass, striped tuna
		lake trout
		Atlantic sturgeon

Proteins	Serving	Grams-Protein
Recommended 0.5 - 1 gram per lb/day		
Chicken breast, white meat only, no skin	1 breast	25
Turkey, white meat or dark meat	3.5 oz	25
Non-fat or low-fat cottage cheese	1 cup	30
Lean white fish	3.5 oz	25
Seafood	3.5 oz	25
Non-fat cheese	1 slice	5
Skim milk	1 cup	9
Non-fat plain yogurt	1 cup	12
Non-fat sour cream	1 oz	5
Non-fat cream cheese	1 oz	5
water packed tuna	1 can	24
Salmon	3.5 oz	25
Egg White	1	3
Egg Beaters	8 oz	24
Whey protein powder	1 scoop	16

Carbohydrates	Serving
All whole fresh fruit	Apples, pears, peaches, oranges, melons, etc.
All fresh frozen fruit - unsweetened	Strawberries, blueberries, raspberries, etc.
All raw vegetables	Spinach, cucumbers, tomatoes, carrots, etc.
All Steamed Vegetables	Squash, broccoli, green beans, etc.
Grilled vegetables	Onions, bell peppers, etc.
Yams and Sweet potatoes	
All whole grains	Old fashioned rolled oats, brown rice, wheat, etc.
All whole grain products	Multi-grain bread, whole wheat pasta
All legumes:	beans, peas, lentils, green peas, non-fat refried beans, split pea soup

Bad Food Sources

Bad Fats
Anything Fried
Butter
Lard
Margarine - of any kind
Mayonnaise
Salad dressings: Ranch, Blue Cheese, etc.
All cream sauces: Alfredo, Bernaise, Hollandaise
Bacon, sausage, and all "breakfast" meats
Hot dogs of any kind
Lunch meats and all processed meats, aka salami, and other fatty meats
All Red Meats – eat in extreme moderation
Whole eggs
Cheese - all regular cheese is 60-90% fat
All regular dairy products: Milk sour cream, etc.
Low fat dairy products: 2% = 37% fat (1% milk or skim is okay)
All processed oils
All roasted nuts and roasted seeds
Peanut butter - except raw and natural
Gravy

Bad Carbohydrates
Bad = processed

Alcohol of any kind: beer, wine, Scotch, etc.
Sugar of any kind: brown, raw, turbinado, etc.
Sweeteners of any kind: Equal, maple syrup
All white flour products: crackers, bread, tortillas, etc.
Dry breakfast cereals: Grape Nuts, Shredded Wheat, etc.
Cake of any kind - including fat free
Candy of any kind - including sugar free and gum
Cookies of any kind - including fat free
Pie of any kind - including sugar free
Dried fruit of any kind
Fruit juice of any kind - including fresh squeezed
Granolas and mueslies
Jams and jellies of any kind - even unsweetened
All muffins and donuts
White flour pasta
Popcorn of any kind - including air popped
Any potato that is white inside
White rice and rice cakes
Sodas of any kind - including diet sodas
Potato chips and pretzels

This diet contains 100% of the macro and micro nutrients needed to LiveLean. This diet combined with the following workout regimen guarantees that you will get leaner every single day of your life. You will be progressing toward your goal of living lean, being buff and feeling incredibly sexy.

This entire process allows you to become an educated and literate food consumer. Please understand now that you have read this section, you have the knowledge to eat in a way that will keep you in great health and getting leaner every day. You have the choice to put whatever you want into your mouth

and to follow an exercise routine that will allow you to look and feel great for the rest of your life. Remember that you are what you eat, meaning what you put in, you get out. Before you even go shopping, get rid of all of the foods on the bad lists. Completely get rid of them! Just throw them out or give them away to charity or to someone who has no food. But, now that you know what this food is doing to whoever eats it, you may not even want to give it away! Get rid of all of your bad foods! Get rid of all of them at once and go cold turkey into LivingLean.

Now replace the spaces in your cupboards where you once had bad food with your new food. Remember, too, that no one is perfect! You are allowed to have three off program meals per week. If you have a night out with your friends, or a wedding, you can enjoy what they are serving. There is no need to make a spectacle of yourself by refusing a home cooked meal, homemade pie, or that piece of wedding cake, however, keep it to one serving! If you go out for pizza, have a slice or two, not eight! If you do eat 3 non-certified meals in a week, it means that you have to be all the more conscious in your other meals and snacks for the rest of the week. In terms of your nutrition, you have to get one thing straight: as Joe Dillon says, *"It is health first and taste second."*^{xvii} You have to learn to enjoy the foods you are eating and appreciate getting lean. You will feel a drastic difference in your physical health in the first couple of days on your new diet because of the new amounts of oxygen flow in your body.

Your dietary literacy is now higher than 95% of the population. Remember in your journey to drink 12-18 glasses of water per day, to eat three to four smaller meals per day and in between those meals, two to three snacks as opposed to three large meals. Plan your grocery list and buy in bulk. Having a planned grocery list is the most important step. When you go out at night to dinner, stick to the program. Order something on the menu that is on the lists. If they don't have anything that is, ask them to make something off the menu. Come on, take control!

The Exercise Program:

The LiveLean.org Exercise Program is very straightforward. If a workout program is a completely new entity in your life, then you will need to ease into it in terms of weight and intensity. As always when starting a new physical activity, mention it your physician to inform him/her of your decision. Your first few workout sessions should be range of motion (ROM) exercises only. The purpose of ROM exercises is to get your muscles moving in the right direction. Follow the fitness videos on the LiveLean.org website, but start slowly for the first few weeks. Just get use to the movements. The purpose is not to see how much you can lift. The purpose is to exercise properly and consistently. Even if you are a seasoned physical fitness buff, you know that you must not only have the desire to push yourself each day, but also have the goals in place to do so. You should have gone through the live lean goal setting session where you asked yourself a series of questions, answered them and are now committed to your goals. If you want to see a great example of self-discipline, rent *Cast Away* starring Tom Hanks. As an actor, Tom Hanks did something that was amazing. His character required him to be very overweight at the beginning of the movie. Then for the final scenes of the film, he lost all of the bad weight and was incredibly lean. If he can do it, you can do it, too! That is a belief you must embrace, in all facets of your life, if someone has done something, you can do it, too!

You will be training both aerobically (cardiovascular) and anaerobically (weight training). Aerobic training includes activities that raise your heart rate which burns calories. Anaerobic training may also be called weight training, the purpose of which is to increase your amount of lean muscle mass, thus increasing your strength and metabolism. Physical training requires three basic principles: the intensity of the exercise; the frequency with which you work out; and the duration of the workout. Your anaerobic workouts will be intense, brief and infrequent. According to Mike Mentzer, "The intensity of a workout refers to the percentage of possible momentary muscular effort being exerted."^{xviii} Brief refers to workouts that are short in duration, about 20 minutes each. Infrequent means to train each body part once per week to ensure that after you stimulate your muscles, growth and healing are allowed to occur. This means that you will train intensely with weights three days per week, preferably every other day, e.g. Monday, Wednesday and Friday. The purpose of your individual workouts is to bring your major muscle groups to complete failure, thus forcing them to grow during their recovery period. As Mike Mentzer says, it is only on the last repetition (rep) of a set carried to a point of momentary muscular failure that an individual is forced to exert 100% of their momentary ability. Executing that last almost impossible rep causes the body to dip into its reserve ability. Since it has only a small amount of this reserve to draw upon before depletion occurs, the body protects itself from future assaults on its reserves by increasing its existing ability through the buildup of more muscle mass."^{xix}

The order of your workouts will incorporate a training strategy that allows complete failure in your muscle groups. In your body you have major muscle groups and auxiliary muscle groups that are much smaller in size than the major groups. Our goal is to completely exhaust all the muscle groups in the body parts on which we are focusing for that particular workout. This should be done without our auxiliary muscle groups failing, thus becoming 'weak links', before the major muscle groups. This requires what is called a 'super set' for the exercises. A superset is a set where you immediately jump from one machine to the next within 3 seconds of finishing your last repetition. You will also be

required to 'warm-up' for the first two sets of an exercise. However, on the third set you will push yourself to 100% intensity, and it is this set that you are going to push yourself to failure. This brings into play the concept of 'value'. Value is that which one acts to gain and/or maintain." The goal of your workouts is to increase your repetitions and/or weight from week to week. Your weight training values are the weights and repetitions that you performed the previous week at 100% intensity. Your goal is to 'beat' last week's repetitions and/or weight this week by pushing yourself just one more rep. This is your receipt for working out and your 'value' to which you will hold yourself true. To get to this level, please download the workout sheets and keep track of your workouts on a clipboard. The goal is to beat your last week's reps.

The point behind this entire workout is to get stronger, because as you get stronger your muscles will be getting bigger, thus increasing your lean muscle mass. The strength of one's muscle is directly proportional to the cross-sectional area of that muscle. So the stronger you get, the bigger you are getting.^{xx} This third set will allow you to gauge your progress in strength and also give you the motivation to beat your last week's repetitions and/or weight. This third set should be kept between 6 – 10 repetitions, as any more is considered overtraining. So when you reach your 10th rep on the third set at a certain weight, that means that you go up in weight the following week. For example on the last set of an exercise, if you did 50 lbs for 9 reps last week, this week you will be pushing for 50 lbs for 10 reps, then the following week, say you do 50 lbs for 10 reps, you will push for 55 lbs for at least 6 reps the week after. This method of weekly goal attainment keeps you in a competition with no one but yourself and your fitness log. You will also avoid over training. "Over training refers to performing any more exercise than the precise amount required for maximum results." You will be performing two semi-warm-up sets with the first sets of a muscle group and on the last set, you will be going at 100% intensity, thus bringing that particular muscle to complete failure. You will see exactly what this means as the workout is explained. Before each workout you should take 5 minutes to stretch your muscles. During both the stretch and the workout, be sure to breathe deep breathes.

Note: All workout sheets are available for free download at LiveLean.org. All exercises have demonstration videos on the website as well.

Cardio: One should do cardio every day as soon as one gets up for 20 minutes. Please choose one of the three cardio exercises: incline walking, heavy hands walking, interval running. It sounds like a lot, but when you get into it, you will love it.

Note: Going to failure with some exercises is hazardous without a spotter. Be sure to never go to failure without a spotter on equipment where not being able to lift the weight would be hazardous to your health. An example of an exercise that hazardous if you go to failure without a spotter is the bench press with free weights.

Weight Training, Day 1, Chest Shoulders, Triceps:

Chest, Shoulders, Triceps

Exercises:

Chest: (3 sets)

Flat bench dumbbell flys

Supersetted with

Incline bench press

Shoulders: (3 sets)

Side dumbbell raises

Supersetted with

Side swings

Triceps: (3 sets)

Skull Crushers

Supersetted with

Kick backs

Cardio:

15 minutes of incline walking or a class at the gym

Weight Training, Day 2, Back, Core, Biceps, Forearms:

Back, Core, Biceps, Forearms

Back (3 sets)

Shoulder width pull downs

Supersetted with

Cable rows

Core: (3 sets)

Weighted back extensions

Supersetted with

Leg raises

Biceps: (3 sets)

Preacher curl

Supersetted with either

Seated dumbbell curl or Spider curls

Forearms: (3 sets)

Reverse curls

Supersetted with

Wrist curls

Hang from bar for a total of 2 minutes. You may be only to do 15 seconds at a time, but do this to bring your forearms to total failure.

Cardio:

15 minutes of incline walking or a class at the gym

Weight Training, Day 3, Legs:

Legs:

Quads (3 sets)

Leg extensions

Supersetted with

Leg Press

Hamstrings: (3 Sets)

Seated leg curls

Supersetted with

Lying leg curls

Hips and Groin: (3 sets)

Abductor

Supersetted with

Adductor

Calfs: (3 sets)

Leg press calf exercise

Supersetted with

Donkey calf raises

Cardio:

15 minutes of incline walking or a class at the gym

Weekend:

One weekend day: Adventure Cardio (See next section)

One weekend day: Take One weekend day off.

As you can see weight training day 1 is upper body push muscles, day 2 is upper body pull muscles and weight training day 3 is lower body. This sequence allows for the body to train in a natural progression, allowing each auxiliary muscle to be pre-exhausted before its high intensity set. Another option is to switch day one to lower body to so that your legs are well rested by the weekend so you can be at your best for your weekend adventures about which you will read in a moment.

Aerobic training:

As a part of the LiveLean Program, you should to do a minimum of three days of cardiovascular exercise in addition to your weight training days, which also include cardio after your weight training workout. I recommend doing cardio everyday upon getting out of bed. Once it becomes a part of your routine, you will wonder how you ever lived without it. Just do it. You just learned how to build your lean body mass, now it is time to use that lean muscle mass to bring your body into a state where it will use your stored fuel, or fat. The actual meaning of aerobic is “with air and oxygen”. The purpose of aerobic exercise is to burn fat and increase your cardiovascular health; meaning the health of your heart, lungs and circulatory system.^{xxi} The goal of aerobic exercise is to use a large percentage of your lean body mass to burn calories. In the LiveLean.org program, we recommend four different cardiovascular exercises based on your fitness level.

1. **Beginner:** Incline Walking
2. **Intermediate:** Heavy Hands Walking
3. **Advanced:** Interval Running
4. **Classes:** All Levels
5. **These can also be alternated with or substituted by other activities such as:**
 - a. **Cycling**
 - b. **Stair Climbing**
 - c. **Elliptical**
 - d. **Rowing**
 - e. **Etc.**

Incline Walking: Incline walking is the first type of cardiovascular exercise that we recommend. It is low impact, so you are not beating down your knees and joints and is easy to ease into. This is my favorite to do in the morning as I jump out of bed. After about 5 minutes of it, you really warm up and can go much more intense. Incline walking is a great basic cardio. There are three variables, speed, incline and duration. I recommend doing a 3.2 – 3.8 speed at a 6-10 incline for 20-30 minutes in the morning. This is also a great post weight training cardiovascular exercise. When you do incline walking after working out, your heart rate is already elevated and you burn calories very efficiently.

Heavy Hands Walking TM: This is also a low impact exercise. Heavy Hands Walking™ gives you a ‘full body’ cardiovascular workout that uses both upper and lower body muscle groups to burn fat

simultaneously. Most cardiovascular exercises consist of only lower body fat burning such as regular walking, running and biking. In these exercises one only uses their leg muscles to burn calories. Some full body cardiovascular (cardio) exercises are swimming, cross country skiing, biking with moving handlebars and a method of walking called, 'Heavy Hands Walking'.^{xxii} I learned about this term after taking a course called EnergyFirst written by Joe Dillon. Joe Dillon speaks of the body requiring from eight to nine times more oxygen to burn fat than other fuels such as proteins or carbohydrates. The point of our cardiovascular exercise is to maintain a state where we are able to take deep full breathes, thus providing our bodies with enough oxygen to burn fat for fuel. We want to avoid a state of huffing and puffing, for this state in itself means that our bodies are in a state of oxygen deprivation and that we are unable to provide our bodies with the oxygen it needs to burn fat. When we enter the huffing and puffing state, our body continues to burn more calories, not in the form of fat, but in the form of carbohydrates and proteins. Our goal is to mobilize those toxic fat cells through our diet and exercise regimens, which occurs when performing cardiovascular exercise at 60 – 70% intensity.

This intensity level brings you to a point where you can still take the deep breaths about which we have been speaking. Another win/win benefit is that you will actually look forward to your workout every morning because you will not be killing yourself on the treadmill by bringing yourself to 100% heart rate. For some people, especially those who suffer from high blood pressure and heart disease, it is actually dangerous for them to push their hearts to 100% intensity.

Heavy Hands Walking^{TMxxiii} is very simple and will burn tremendous amounts of fat due to its complete aerobic workout and its 60-70% intensity effort. The speed at which you are going to walk is the speed where, if you were to walk any faster, you would break into a jog. The term 'heavy hands' refers to the brand name of the weights that you carry with you in your hands. If you want to research this exercise more, simply Google, "Heavy Hands Walking". To start, these will be one pound weights for women and about two pound weights for men. There are four basic motions in this exercise as described by Joe Dillon in his EnergyFirst Program. Please visit the aerobic workout page on LiveLean.org to see demonstration videos.

Pump and Walk: in this first technique you will keep your elbows by your waist and pump your weights up like you are doing a bicep curl. You will do one pump, with one hand per step. This is the basic motion and is the exercise that you will do in between sets.

Chest Flys: Keep your hands at chest height and your elbows by your sides at 90 degree angles. As you walk you will pull the weights in on one step and push back on the second step like you are trying to touch your shoulder blades together.

Lateral Raises: Start with your hands at your waist with your elbows at 90 degrees. Your shoulders are your pivot points. Each step you take you will raise one of your arms.

Overhead Presses: Keep your hands at shoulder height and extend hands up at full extension then put hands down again to shoulders.

The exercise will work like this. We are speaking about week one now so we will say 25 reps with one-pound hand weights. Pump and walk about 50 to 100 steps, then do 25 repetitions of chest flys while

walking. Then pump and walk about 50 to 100 steps, then perform 25 lateral raises while walking. Then pump and walk about 50 to 100 steps, then perform 25 overhead presses while walking. As Joe Dillon says in his course, this spells the acronym FLO™ (Flys, Lateral Raises, Overhead Presses). You should get 4 sets of this flow sequence in a 30-40 minute workout. In week 2 you will increase your workout to 30 repetitions and move up 5 repetitions per week until you reach 50 in week 6. Your workout should last between 20 to 40 minutes. After each set of your FLO™ sequence, increase the speed a bit and also increase the incline by a one half to one step increment.

Interval Running: Interval running is a great way to really get a high intensity cardiovascular workout, get your heart rate up and get your endorphins flowing, in addition to burning fat. The process is simple. I learned this cardio exercise from Bill Phillips in his excellent Body for Life Program. You exercise for twenty minutes, on the treadmill, depending on your fitness level, you will start slow, at a fast walk for most at 4MPH (6.4KPH) then run each minute according to the following chart:

Minute	Speed (MPH)	Speed (KPH)
1	4	6.4
2	4	6.4
3	5	8
4	6	9.65
5 (Peak)	7	11
6	4	6.4
7	5	8
8	6	9.65
9 (Peak)	7	11
10	4	6.4
11	5	8
12	6	9.65
13 (Peak)	7	11
14	4	6.4
15	5	8
16	6	9.65
17	7	11
18 (Peak)	8	12.87
19	4	6.4
20	4	6.4

By the time you get to the last peak level in the interval running, you be at a full sweat and have had a great workout. You can also try the interval running setting on the treadmill.

Classes: Classes at your gym are excellent ways to push yourself past where you thought you could go. You will also have the chance to meet a ton of new people, in addition to burning fat. I highly recommend classes at your gym no matter what fitness level you are.

The best time to do your cardio workouts is in the morning before breakfast and immediately after your weight training workout. This gives you two major benefits, (1) you will immediately attack your fat cells

because your body has no other food in it at that time; and (2) you will get your workout over with in the morning, freeing you to socialize or work on goals at night. On the mornings when you are doing cardio (I recommend getting into the habit everyday), get up and train immediately. Get up, put your feet in your sneakers and get on the treadmill or pavement, do it and associate pleasure with your exercise. Remember that when you do your cardio, the whole day will be better. Plan your day accordingly and do it. If you ever wake up and don't feel like doing cardio remember that you are going to spend the time doing something, so mentally get through that feeling and push yourself to workout. On your weight training days, it is up to you as to what time you want to work out. It is really what works for your schedule. Immediately after your weight training workout, jump right on the treadmill and do some incline walking or do a class. Push yourself post weight workout and you will maximize fat loss.

Adventure Cardio: On your weekend days, you really know you are living when you do something adventurous outside! There are tons of excellent activities that afford us an active lifestyle at any time of year. Depending on where you live, there is running, walking, mountain biking, hiking, canoeing, roller-blading, skiing, ice-skating, roller-skating, cross country skiing, rowing, water skiing, and swimming, to name just a few. Try to do one of these activities on each weekend morning or day and do something that puts you in touch with nature. Do this by yourself, or with your significant other, your family and your friends. There is so much to see and do out in the world. Go out there and explore it! When you go out into the wilderness, be sure to pack with you meals and water and eat them in proper balance and in the right frequency. When you perform these activities, be sure they are in addition to your regular training routine.

Remember also to become more active in general. These days people attempt to automate almost everything. Always try to be as active as possible in all of your activities. When there is work to be done, really want to do the work; because by doing that work you will be in better shape by burning more calories. Take this example from Prevention Magazine:^{xxiv}

Instead of...	Do this...	And burn an extra... (Calories)
Using a lawn service	Garden and mow 30 min each per week	360
Using the car wash once per month	Wash and wax your car 1 hour per month	282
Shopping online	Shop at the mall 1 hour	210
Hiring someone to clean and iron	Iron and vacuum 30 min each	152
Letting the dog out the backdoor	Walk the dog 30 minutes	123
Using a leaf blower 30 minutes	Rake leaves 30 minutes	50
Sitting while listening to a lecture 60 minutes	Give a lecture 60 minutes	40
Reclining while talking on the phone - 30 minutes	Stand for phone calls three 10 min phone calls	16
Buying presliced vegetables	Wash , slice, and chop veggies 15 minutes	13
Using the garage door opener	Get out of the car, and open the garage door (twice/day)	3
Using the remote to change the channel	Get up to change the channel	3
Total		1252

These little decisions to become more active have a tremendous effect on your calorie burning ability; and, as your lean body mass grows, these activities will burn more calories. I always try to turn liabilities into assets, meaning to turn something that normally takes money out of your pocket and to turn it into something that puts money into your pocket. If you are working out cardiovascularly three days per week, perhaps you could teach an aerobics, spin, or other type of exercise course where you can workout and be paid for it!

The third type of fitness is that of stretching and flexibility. Being a part of this training requires that you look into something that will actively give you time to use your body in new ways. Martial arts and yoga are two great ways to stretch, breathe, meditate and connect your mind and body. I recommend looking into your local area to find a dojo and yoga studio and try them out. Start by going once per week and you will feel a new air of confidence and awareness in your everyday life. I personally am a student of Aikido and yoga and they both have benefited me tremendously as well as introduced me to a great group of people.

Conclusion:

I met a Mennonite man from Lancaster, Pennsylvania on a trip once. He was seventy five years old and he was still working physically on the farm. He said he was the youngest of nine children and that his oldest sister is ninety-five years old and she is still very alert and active! I asked him the secret to his physical success and he described a diet that was full of non-processed, food as grown foods and consistent physical activity, essentially the LiveLean.org program. This man's results count! The secret to healthy living is healthy eating and physical activity. This man's entire family is alive and active and they are nearing 100 years old. Most of our society feels 'old' at 50 and can't wait to retire because of their improper diets and non-existent physical activity. So now that you know how to build muscle, burn fat and how the body works, you will have the power to progressively realize your goal of a lean, healthy body.

You should be proud. You now know more than 95% of society about fitness and health. Please remember to stay true to the dietary and physical fitness goals you set. I once heard character defined as being able to stay true to a goal, long after the passion for that goal is gone. Give this program six months and you will be a different person than when you started it. Remember, just because you are working out, that does not mean that you can eat whatever you like! Now that you are working out, your body requires the proper foods about which we have spoken even more than it did before. You are breaking down your muscle fiber and building new ones, you are leaving a bit of everything you eat on those muscles, so be sure to put the right things in your body. One of the students of this program once said that when he eats the breakfasts I recommend, he feels like he can run through a brick wall. Following the LiveLean Program, you feel this way all the time! In our office, we eat live LiveLean Lunches, as you probably saw on the website, and every day, we all marvel at how much energy we have. It is simply amazing when you get into it!

As Mike Moore says, "You only live once, so why not live lean." As you perform the LiveLean Dietary and Fitness Program you will feel dramatic results by building muscle and burning fat every day of your life. You will feel better and see and feel the results almost immediately. You now know that the condition of your body is not a mysterious thing over which you have no control. Please know that you

can do this. Once you get use to how to eat and train like this, your entire life will change. Get a good friend to do the program with you and get hardcore about it. Hold each other accountable and support one another. Living lean is leadership at its best. How can you expect your children, those around you and society in general to be in good shape, if you are not? True leaders motivate others by their actions, not just their words. They don't just talk the talk, they walk the walk. As you learn to purchase, pack, prepare and serve properly portioned, macro-nutrient balanced meals and snacks, you, too, will be an activist in the health community by your leadership. If I can do it, you can do it. You are capable of great things and I have complete faith in you. If you fall down, just get back up. You got this.

-Thomas Roman

ⁱ USDA, *Food Advertising in the United States*, http://www.ers.usda.gov/media/91050/aib750i_1_.pdf, (1997)

ⁱⁱ Google Answers, *Muscle Density vs. Fat Density*, <http://answers.google.com/answers/threadview/id/576481.html>

ⁱⁱⁱ Dunne, Lavon J. *Nutrition Almanac*, McGraw-Hill Professional; 5th edition 2001.

^{iv} Dillon, Joe. *Energyfirst.com Program*, [Online] Available <http://www.Energyfirst.com>

^v American Heart Association, 2003 [Online] Available

<http://www.americanheart.org/presenter.jhtml?identifier=4778>

^{vi} Dillon, Joe. *Energyfirst.com Program*, [Online] Available <http://www.Energyfirst.com>

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^{xiii} Sears, Barry, Phd. *The Zone*, Harper Collins, 1995.

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^{xix} Mentzer, Mike. *Heavy Duty*, 1990.

^{xx} Mentzer, Mike, *Heavy Duty*, 1990.

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^{xxii} Dillon, Joe. *Energyfirst.com Program*, [Online] Available <http://www.Energyfirst.com>

^{xxiii} Dillon, Joe. *Energyfirst.com Program*, [Online] Available <http://www.Energyfirst.com>

^{xxiv} "Calorie Burning", *Prevention Magazine*, December 2002.