

The Raw Food Bodybuilding Training Manual

How to Succeed on the Raw Food Diet and Build Muscles

Charlie Abel





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How to succeed on the Raw Food diet and build muscles too.

By Charlie Abel
Natural Bodybuilder since 1974

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On the cover: A bird is a symbol of Freedom.

Currently, The Raw Food Bodybuilding Training Manual is only published in digital form as an e-book and is available from www.LivingNutrition.com bookstore.

Introduction: Can you actually lift weights and build muscle on a *RAW FOOD DIET*????

That's the question I'm so often asked, "Can you actually lift weights and build muscle on a *Raw Food Diet*?" The whole question is asked in a state of disbelief, especially the words *Raw Food Diet*, which bring to mind images of people looking like concentration camp victims, with protruding ribs, trying to live on lettuce and celery, and oh so woefully deficient in that magic ingredient: PROTEIN.

But when I tell people that I'm a bodybuilder; I'm 53 years old (as of 2010); I won 3rd place in an actual bodybuilding contest at age 48; and my diet consists of fruits, vegetables, and approximately 1/2 cup of nuts per day (considered a protein food), well, they really don't know what to say! And then I go on, "OK, so if you're eating all this protein - meat, fish, chicken, eggs, milk, and I'm not. In fact, according to you I'm not getting *ANY* protein," then, rolling up my arm and showing my baseball size biceps muscle, "then how did I grow these muscles? In fact, let's see *your* biceps muscles!" To which I've yet to receive much of an intelligent response, and certainly not a response that has any facts or research behind it.

I really can't blame anyone for their interest in protein. I grew up on the Standard American Diet myself. As a bodybuilder in my teens and 20's, I read the bodybuilding magazines and I too, was convinced enough to spend hundreds, if not thousands of dollars on protein supplements along with eating all the protein foods: meat, dairy, eggs, etc. But then my life changed, and I started to learn the real facts about nutrition, not getting my nutritional education from advertisements.

In 1999 I opened a personal training studio, and my life's work was to show people how to reap the benefits that a strength training program could offer. I sought to deliver to people the most effective methods I could find in both training and nutrition.

As I sought the best nutritional information, I read book after book, fascinated by what I was learning. I was definitely in the correct occupation because I loved what I was doing, eagerly devouring new information. What I found was that a plant based diet, and specifically a raw plant based diet, was incredibly healthy for humans. I read stories of many people who were even reversing serious "incurable" diseases by adopting such a diet. I even made my own glaucoma go away at age 40 by changing my diet and not using medications.

The reason this is important, especially for the strength trainee, is what I heard from listening to the contestants at the last bodybuilding contest I entered in May of 2005, which was the first contest I had entered since 1982.

You see, bodybuilders are under the impression that what they're doing, their sport, is healthy for them, and it is. But, they never consider the fact that their habit of consuming large amounts of protein, especially animal protein, is hard on their bodies. They just accept without question that you need to eat protein to build muscle.

Bodybuilding started out as a health promoting sport, designed to improve your health and well being by virtue of the fact that the inner health and vitality from healthful living manifested itself in the outward strength, vitality, and large muscles. But then the sport was ruined by not only steroids, but multitudes of other drugs. So I was careful to enter a bodybuilding contest that offered strict drug screening via urinalysis, which I found at www.naturalbodybuilding.com.

So backstage at this contest, I spoke to contestants about things like: "did you hear what happened to such and such famous bodybuilders? He had a triple bypass surgery . . . both brothers died in their fifties. . . he had kidney failure." These were the things about famous bodybuilders that we only heard about through the grapevine, but what about first hand knowledge?

Well, I personally know of a weight lifter in his sixties that had both hips replaced. I actually saw one famous bodybuilder who was featured in the documentary Pumping Iron, who is getting around on crutches these days. And one of the contestants I spoke to at this last contest I entered told me that his doctor told him not to do squats anymore, because all that weight pushing down on his spine will cause degenerative disc disease. (No one considered that maybe his diet was the cause, and not the squats.) Then he told me that "even people who don't workout get degenerative disc disease." And when he told me that, I realized what I said earlier, that bodybuilders think that what they're doing is healthful, but they never even consider the possibility that excess protein is slowly degenerating their bodies.

So when I read about the plant based diet, I thought, you know, it sounds good, it makes a lot of sense, but I just need meat for adequate protein - I'll think about it.

And I did think about it, for two months or so. And then I thought to myself, "Ok, I'll try it. I'll experiment on myself. I'll try a vegan diet and see what happens." And so I did for two years, and then I progressed to a raw vegan diet and I've been on it ever since. So far, it's been working out great - I'm strong, muscular, healthy, and happy - what more could a man want?

And so, through this book I have the opportunity to pass on to you what I found out from my own experience on a raw vegan diet, and you can draw your own conclusions as to what's right for you.

This information on this website on training and nutrition applies equally to women, although obviously they will not have to eat the quantity of food that I do, and even some men will eat more or less depending upon their size.

So are you going to become a famous bodybuilder after reading this book? Maybe, if that's your goal, but if not, with correct training and a healthy diet, you will become as muscular as your body will allow, and build your health at the same time, and not risk your health at the expense of building large muscles. My ideal is to build my muscles as large as they can be, as strong as they can be, and at the same time build my health and live as long as I can, and with the raw diet I no longer worry about developing diseases caused by the Standard American Diet (hereafter referred to as the SAD). I live worry free, and I hope you can do the same by applying what you learn from me.

Part I: Succeeding on the Raw Food Diet

Chapter 1 – You Gotta Have a Reason

Chapter summary: If you have a strong, compelling reason to improve your health on a raw vegan diet, your chances of staying with the diet and succeeding are much greater than if you don't have a good reason.

Many people "try" the raw food diet for a short period of time, then quit. Although they are in great need of the health benefits, somehow they're just not convinced deep down inside of the merits of the raw food diet, and therefore go off it. So, I've found that in order to succeed long term at this raw food diet, it is imperative that you have a very good reason to stay on it, or join the ranks of those who've tried it and quit.

One of most common reasons for starting and staying on the raw food diet is when people have a serious disease and have reached the end of the road as far as conventional medicine can take them, so they try raw foods as a last resort. They stay with it because if they didn't, they'd be dead. This is also the reason you'll hear people wonder things like, "why do all those people on raw foods look so unhealthy?" It's because their bodies have been ravaged by years of taking prescription drugs.

So, it's rare for a person who is completely "healthy" to go on the raw food diet, but that's what I did. Although I had minor medical conditions such as glaucoma, for the most part my health was good. I was the rare individual who went on the raw food diet to insure my health and just be healthier.

Since I was healthy to begin with, what compelling reason did I come up with to stay on the diet? In a word, it was knowledge. I studied all about it as much as I could, and because of what I found out, there was no way I could go back to any other diet. The raw food diet just made so much sense, once I fully understood as much as I could, and this is what I shall try to convey to you in this book.

How exactly did I get started on the raw food diet? I was tricked into it really. In the year 2000, I was the owner of The Exercise Specialist, a personal training studio in Santa Rosa

California. I attended a lecture one evening for continuing education purposes. The speaker was Dr. Doug Lisle, the staff psychologist for the True North Health Fasting Center. I later considered myself lucky enough to live in the vicinity of this facility and attend this lecture, for this one evening literally changed the course of my life - and my health.

I learned many interesting things that night, and at subsequent lectures from Dr. Lisle and personal study of his and related materials and books, which I will be relaying to you here in this book. What he had to say in his lecture made so much sense, I thought, but doggone it, he says not to eat meat, and being a bodybuilder, well, I just needed my protein. So I continued my eating of the Standard American Diet (SAD), eating my protein such as a can of sardines for lunch. But I kept thinking a lot about what Dr. Lisle had to say, and after 3 months decided to take the plunge and do an experiment and see what would happen without meat and dairy in my diet, on a cooked food vegan plant based diet. After all, I remembered, I did try the McDougall diet several years ago, I didn't eat meat then, and I maintained my strength alright. So I went for it.

I did very well on the diet. Protein didn't seem to be an issue, as I maintained my size and strength OK. The only undesirable effects I got, which I learned from Dr. Lisle, was that when eliminating meat and dairy from the diet, the body sometimes has "withdrawal" symptoms. These symptoms vary from person to person, depending upon many factors such as age, diet, and health in general. In my case, for the first 2 weeks I would say I had a very slight headache, and I did notice a rash consisting of small red dots on my forearms for 2 to 3 days. That was it.

I continued reading and learning about diet and nutrition, and came across this raw food diet thing. I considered it totally weird. I went to a raw food potluck to check it out. These people actually don't eat anything cooked. I came home from this raw food potluck full of energy that night. I thought about this diet for a while before trying it as an experiment too. I learned about Dr. Lorraine Day (www.drday.com), a physician who refused chemotherapy for her cancer, and treated herself with daily meditation, prayer, and a raw food diet. The graphic pictures of her breast tumor which she just let grow really got my attention and I figured that if raw foods were good for a sick person like her, then they must be good for a healthy person too.

Another reason that compelled me to try the raw diet was the "animal diet argument", as I called it. Of all the thousands of species of animals in the world, how many of them cook their food? One: only humans. How many species of animals have the diet induced diseases that humans get? None - that I could tell. It was coincidental one night that I saw a television program about the monkeys living at the Rock of Gibraltar. It went on to say that tourists were discouraged from feeding the monkeys human "foods" such as chocolate candies and popcorn because by eating these, the monkeys contracted "human" diseases, and when they stopped eating these, the human diseases went away. This really got me thinking, and these two arguments were enough to convince me to try the raw food diet.

So for me, what compelled me to stay on and succeed with the raw food diet was knowledge. I studied the Transformation Institute's Essential Natural Hygiene course for 3

hours per day for 6 months to complete it and get the diploma. This kept my mind focused and screened out all the thoughts that could distract me and get me off the diet. You know, things like family members saying silly things like “you look so skinny on that raw food diet” when in fact I hadn’t lost a pound. One thing I realized is that many people make comments based on ignorance. There are many other people who will tell you things like the raw food diet is a big mistake, you’ll be deficient in B12, you need your protein, all sorts of hogwash. I realized that these comments were coming from people who had never been on a raw diet or had not read or studied about it at all, so why would I listen to them?

The biggest reason that kept me on the diet was plainly the fact that it worked and I felt great. When I went from a SAD to the cooked vegan diet, it was like taking a step up the ladder of health. I noticed an increase in my feeling of well being and increased mental clarity. Then when I went from the cooked vegan diet to the raw diet, I noticed an equal step up in health, well being, and mental clarity. So why would I want to go back to a state of lesser health? Because for me, I really wasn’t “addicted” to anything. People are really diverse in their mental and physical makeup, many are prone to addictions such as alcohol, tobacco, soft drinks, chocolate and more. I had none of these. I did learn from Dr. Lisle’s lectures though that addictions can take up to 18 years to overcome, and sometimes never, such as alcoholics who can never take a drink again.

To repeat, the biggest reason I’ve found that spells success on the raw food diet is knowledge. After all, the number one cause of disease and death in the world is not cardiovascular disease or cancer - it’s *ignorance*! I’m writing this book so you can learn what I’ve spent several years learning from reading and personal experience so that you can find success and health on the raw food diet.

Chapter 2 – My Daily Diet

The most common question I get is people want to know what a typical day’s diet is for me. So here’s a typical day’s eating:

7:00 am – 2 Oranges, with several leaves of Kale.

Upon awakening at 5:30 to 6:30, the first thing I do before eating is wait for a hunger signal. It’s called *listening to your body*, and it’s an important enough concept that I will keep repeating it. Right now, you need to know that I feel it’s important to never eat unless you’re hungry. So when I get the hunger signal, I start with a small meal, that is I purposely under-eat because I’ve found from personal experience that eating large or heavy meals first thing in the morning upsets my stomach. The reason is that upon awakening, your digestive system is awakening too, and not up to the full speed of digestion, so I go slowly. In fact, the Essential Natural Hygiene course actually recommends not eating *at all* until 12 noon to let the digestive system cleanse and be ready for digestion. Although this may be good for a mini fast and digestive cleanse now and then, I’ve found that done on a daily basis, it is the quickest way to continuously lose weight and not get enough daily calories because getting enough calories to maintain your bodyweight on a raw diet is hard enough by eating all day, and if you only eat

half the day, it's downright impossible to get enough calories. So I've found that I can start my day early with small meals, gradually increasing the size of the meals and changing the type of food I eat.

At the same time that I've learned to eat small meals, I've also found that the type of food I eat makes a difference. First thing in the morning, I've found it best to avoid some fruits, mostly sweet fruits especially like pears and melons, and eat non-sweet, acid, or sub-acid fruits like tomatoes or citrus. With some experimentation, you'll find what fruits work for you. Right now you need to know that the examples of fruits for this meal are just that, examples of fruits and may be rotated throughout the year to achieve variety in the diet.

8:00 a.m. Two more oranges, or other non-sweet fruits in season, along with some kale or lettuce.

At this point, my digestive system is still waking up, not yet ready for a full meal, and I again wait for the hunger signal before eating again, then, I purposely under-eat. Oranges are just an example, but here are some non-sweet fruits that are common that work equally well: grapefruit, cucumbers, tomato, and other acid and non-sweet fruits. Fruits that don't work so well at all are very sweet fruits such as melons and pears, especially watermelon.

9:30 a.m. More fruit, with ½ cucumber or a rib of celery. I'll eat another type of fruit for variety, but if all I have for fruit at this meal or earlier meals is bananas, I'll limit the amount of bananas and purposely under eat on them because I've found that too many bananas at once this early in the day will upset my stomach.

Now I'm able to handle a larger meal, but I still don't fill completely up, instead I'll only eat until half full or so. It takes discipline to do this because some fruits are so good that I don't want to stop, but discipline pays off in preventing an upset stomach. The upset stomach from fruit eating can be common with people new to the raw diet and can turn them off from it simply because they don't understand it. Again, knowledge here is the key to success.

10:30 a.m. Bananas (or other fruit) with celery or cucumber.

At this point in the day I feel ok to start eating bananas, especially if I plan on working out this day, which I used to do at 12 noon. So I want to get a good calorie dense meal in now and give it time to digest so I can work out an empty stomach, but draw energy for the workout from this meal so I'm strong enough to lift heavy. I eat until just a shade under full. Now full means satisfied, not stuffed. There is never a reason to stuff oneself on any diet. I finish fruit meals with celery or cucumber for several reasons. First, it adds fiber to the food in the stomach, which slows the rate of sugar absorption. The chewing action cleanses the teeth after the meal assisting in the prevention of tooth decay. Non-sweet foods also cleanse the palate and increase the water content of the diet as adequate water intake is essential also.

12 Noon, 2 p.m., 4 p.m. Bananas (or other fruit) with celery or cucumber.

OK, my digestive tract is full awake and ready to be filled! So eat any fruit until comfortably full. The meal times listed are just estimates as in reality I wait until hungry before eating each meal. This is because the content of each meal varies because of many factors such as my hunger level, my activity level, the type of food, the ripeness of the food, and more. I wait until hunger tells me to eat, then I eat until satisfaction tells me to stop without stuffing myself.

6 p.m. Salad with nuts or Avocado.

At this point in the day, my palate has had enough fruit, and I'm ready for a taste other than sweet fruit, and this has been working for me the entire length of being on the raw diet. I'm looking forward to a big salad and this is how I do it.

First, it is important to select the proper bowl so you eat enough. My salad bowl is 10 inches across and 4 inches deep. It's a mixing bowl actually. After washing and drying my lettuce, I chop it up a bit and fill the bowl half full with lettuce. I stay completely away from that pale green iceberg lettuce and always eat the various dark green varieties such as Romaine. I usually mix several varieties of dark green lettuce to make it interesting. Next, I'll chop a large handful of cabbage or Bok Choy cabbage. I'll also add some sweet bell pepper, broccoli and/or cauliflower, and sprouts.

Although I used to make salad dressings, I don't anymore, as I prefer to eat the ingredients of the salad dressing just roughly chopped. I usually add 3 tomatoes to the salad, then my ½ cup of daily nuts or ½ of a large avocado, or an entire small one. I'll vary the nuts such as almonds, pistachios, Brazil nuts, sunflower seeds, hemp seeds, pecans, and walnuts. I soak all nuts except the Brazils in water for usually 6 to no more than 24 hours before using them, then drain them before adding to the salad.

A word about salad dressings, as they're really easy to make once you have the basic concept down. In Dr. Doug Graham's recipe book, "The New High Energy Diet Recipe Guide" (it's the only recipe book I've found so far that I can recommend because of the simplicity of the recipes and all recipes use proper food combining) he explained that you really need two ingredients in a salad dressing – a fat, and a "bite." The fat is the various nuts or avocado. The "bite" is the fruit you add to it such as tomato, or an acid fruit such as orange or grapefruit. So with just those three fruits, taking turns combining them with the 7 nuts I listed, there are enough possibilities to keep you from getting bored. I will talk more about salads in my discussion on food combining.

9:00 p.m. or before bedtime. Fruit with celery.

At this point, the salad has left my stomach, and my sweet tooth is asking for a sweet meal before bedtime. Bananas are good now, as are any fruit. Celery again cleanses the teeth, but I also feel that the minerals or something in it, which I may have read about, but can't recall where, help me to sleep.

One of the questions I commonly get is why do I recommend eating before bedtime when many recommend giving the digestive system a rest so that the body won't be burdened with

digestion while sleeping and can have energy for other tasks? I do so simply because I'm getting a hunger signal and the body knows what its doing and "I", my conscious mind doesn't. If I didn't need food, I wouldn't be getting a hunger signal, as some days I don't. Besides, I've noticed that babies, the people who are living in instinct a whole lot more than the rest of us, eat and go right back to sleep all the time. It doesn't seem to affect them negatively at all. And, I've found that if I don't eat, then I'll be up in the middle of the night, not being able to sleep, with a growling, hungry stomach. So I've found to simply trust the body and eat when hungry.

In conclusion, you'll see that I've completely changed my eating habits. It is necessary to eat many times throughout the day, letting hunger be your guide. One of the reasons for people to drop out of the raw diet is that they complain to me that they were hungry all the time. So I ask them what they ate and when they ate it. I get answers like, "well, I had an orange for breakfast at 8 a.m., so I'm eating fruit, but by 10 a.m. I'm starving." What did you have for lunch? "A banana." It's easy to see why they failed, isn't it?

So success on the raw diet comes from breaking away from the traditional 3 square meals, and also changing your thinking of what a "serving" is – a serving is not a banana, or an apple – it's enough bananas or apples or whatever fruit to fill you up.

Chapter 3 – The Protein Issue

Chapter summary: Eating a proper raw vegan diet of fruits, certain vegetables, nuts, seeds, and sprouts as I outline here has provided me adequate nutrition for 8 years (as of 2010) for my optimum human health as well as enough protein to support a bodybuilding program of lifting heavy weights.

Ah, the protein issue. What a hot button when it comes to the raw food diet. In fact, you could almost say that when it comes to the raw food diet and bodybuilding, the whole discussion boils down to one topic, and that's protein. The primary reason that I am writing this book is to demonstrate my bodybuilding results from eating a 100% raw vegan diet and with the proper knowledge of how to apply that diet, you can be a successful bodybuilder without eating meat and other animal products to secure enough protein to build muscle.

Consider what Dr. Darden wrote on page 229 of his book, "The New High Intensity Bodybuilding." He spent several years working with a Dr. Harold Schendel who worked with starving children in Africa. His story is that initially, in an effort to provide good nutrition and save starving children, doctors would force feed these children high protein diets. The children got worse. The doctors quickly realized that what these children needed were calories, and that by eating simple, not complex carbohydrates - their condition improved. They used a mush mixture of water, sugar, fatty acids, with small amounts of protein, vitamins, and minerals.

Now I ask you, after reading this passage, the answer is perfectly clear to me, is it clear to you too? What they really fed these children is a food that is quite similar to fruit, the food that

humans are designed to eat. Wouldn't it have been interesting to see how these starving children would have improved if given a raw food diet consisting mostly of fresh fruits?

I really like the above Dr. Schendel story because it shows how the protein issue is so ingrained in our brains, that even supposedly educated people like doctors have this assumption that protein is this magic food that makes everything better. I like the fact that they were quick to realize their error, and find what did work – simple, easy to digest calories with low amounts of protein, vitamins, and minerals.

So, I am here to show you my own results. I've had all sorts of questions from people about my protein intake that I think are quite amusing due to people's fixation on protein. After reading my daily diet, one woman accused me of holding back information and demanded of me, "come on, tell me the truth now, where do you really get your protein?" Another said that I couldn't possibly lift weights on a diet containing "no protein."

And my response is this: I'm not hiding anything in my diet. This is not a diet of NO protein, it is a diet of adequate plant protein. Do you think that I could do 8 chin-ups with 50 pounds around my waist and enter a bodybuilding contest on a diet containing no protein? Can you do 8 chin-ups with 50 pounds around YOUR waist?

I want to clarify my message here also. I'm saying that the raw vegan diet does contain adequate protein to build a reasonable amount of muscle so that as a "raw fooder" people don't have to go around looking like a human skeleton. I believe that more muscle looks better on every body. It makes you more athletic looking, and firms flabby areas because muscle is what shapes the human body. Listen closely here to my message: a raw vegan diet does contain adequate protein to build adequate muscle and strength for most people, BUT, I still believe that if you want bigger muscles still, eating lots of meat and drinking lots of milk will give you BIGGER muscles.

The reason that I suspect that eating meat will build bigger muscles than the raw vegan diet, is for several reasons. First, meat is a stimulant to the human body. When people eat meat, they are usually on a SAD which contains high amounts of salt which retains water. Cooked food diets containing meat also contain an abundance of calories. When there is a lack of calories you lose size in general, not gain it, and this is a problem for those on a raw diet who don't know how to eat enough fruit to get enough daily calories.

The problem is that I have no way to verify that belief. Right now, over age 50, my muscle measurements are less than they were at my bodybuilding peak when I was in my twenties. I don't know if this reduction in size is due to my diet, or to what extent it may be due to my diet, or if it's due entirely to my age. I say age is a factor because age appears to affect every other bodybuilder too, that's the whole reason they have age categories in bodybuilding contests, as the older competitors don't stand a chance against the men in their 20's and 30's. All the top bodybuilders decline in their 40's and 50's.

So to verify this belief scientifically, I would have to turn the clock back to my 20's and go on a raw vegan diet for a year, then go back to the SAD and compare the results. Obviously I can't do this, so someone in their 20's will have to do it. Of course I could change back to a SAD now and see if it made a difference, but there's no way I'm going to do that now, the health risk to me is simply not worth the information.

My question is, why would you want to eat such foods knowing the health risks of eating an animal food diet? If you really want to get big, then pump yourself up with steroids while you're at it, you'll really get big, and possibly be a famous bodybuilder too. But then look at what happens to some of those famous bodybuilders. There were two brothers who both won the Mr. America contest and both died around age 50. Sure, I would have liked to achieve their "success," but they're gone now, and I'm still going strong. My point is that while muscles are great to have, the bodybuilding world has lost its way. It's really very sad. The muscle magazines are loaded with drug filled monsters whose only interest is short term fame and not health and longevity. I got into bodybuilding as a means to be healthier and live longer, not kill myself for the short term.

Psychological aspects of Protein

There is a second reason that so many people are so fixated on the protein issue, and that's psychological. You see, many people look for an easy way out and will do anything to avoid hard work. This is human nature, and it's called conservation of energy. The workouts required to build above normal levels of muscle mass are very difficult, and really require that they be properly supervised so that the trainee works hard enough to stimulate above normal levels of muscle mass. What I'm saying is that properly done, the workouts are anything but easy, they're brutal. So instead, most people would rather do easy workouts and instead place their faith in food (protein) and supplements (pills) to do the work for them. In the raw food circle, this explains the popularity of the "super foods" – goji berries, spirulina and the like. They play on people's paranoia that they're not getting some critical nutrient in their diet, so they're willing to buy their way to health and muscles instead of work for them, which is the only way. This concept of conservation of energy is part of the motivational triad and along with the psychological concept of lacking in critical nutrients is explained more thoroughly Dr. Lisle's book, "The Pleasure Trap."

So where do I get my protein?

I get my protein from the fruits I eat and vegetables such as leafy greens. Yes, there is some protein in fruits, but leafy greens are really high in protein, as high as 30 to 40%. I also make it a point to eat raw nuts each evening to secure enough protein. The reason for this is that I read Dr. Vetrano's book, "Errors in Hygiene?" In it, she cites her experiences with patients who followed the advice of eating all fruit diets with absolutely no nuts whatsoever. These people did very well on the all fruit diet, *at first*. After a while, though, they all showed signs of long term protein deficiency. Now I have never yet met anyone who was so concerned about my

getting enough protein on this raw food diet that was able to list the signs and symptoms of protein deficiency.

Dr. Vetrano lists some of the signs of protein deficiency as apathy, wounds that don't heal, ridges in the fingernails, and long term signs such as brown spots on the skin that may be seen on alcoholics, since a serious alcoholic will neglect his diet to the point of protein deficiency. In the general population though, even with the SAD, protein deficiency is so rare that you just don't see it. But, you will see signs of an overabundance of protein, especially animal protein, and this is the main reason for a raw vegan diet. Although it may be possible to eat too much plant protein on a vegan diet eating such processed foods as tofu and all those meat alternatives such as "not-dogs" and the like, on my whole natural raw food diet I don't think it's a concern.

So how many raw nuts for protein should one eat each day?

In my first 5 or 6 years on a raw food diet, I closely adhered to Dr. Doug Graham's advice of eating 10% or less of my calories from protein. I once charted my food intake using Nutri-diary online, and found my intake to be roughly 80% carbohydrates mainly in the form of fruits, 10% fat, and 10% protein because of eating ½ cup or less of raw nuts per day, and this is what I recommended. But, I have since, through my experience, changed this recommendation. If I feel the need, I now sometimes eat up to one full cup of nuts per day – and I do this for several reasons.

First, I had two sources of raw food knowledge of which to choose that I felt were worthwhile – Dr. Graham said no more than 10% protein, while Dr. Vetrano said that when you are under more stress, you require more protein, and to not be concerned about a slight excess of protein as long as it is plant based as in raw nuts. So, I followed and recommended Dr. Graham's advice for many years, but then, because of constant fatigue from working out heavy, which is a form of stress, I increased my daily nut intake as per Dr. Vetrano's guideline – and I think that eating more nuts is the way to go if one has the need due to stress or other factors. Why? I noticed a quick improvement within a week or two – just like Dr. Vetrano said happens when people who are protein deficient. The biggest change was that of my personality – I actually reached a point with my temper would get out of control – I once screamed at my computer and threatened to pound it with a hammer – (which in some situations is justified!) but I did it a little too often. After fixing the overtraining problem, which I'll discuss later and eating more nuts, the whole rage thing went right away. I became a happier person.

Why do I think I was protein deficient? Well, heavy workouts are a form of stress, and when you're under stress, you require more protein, she says. Frankly, I was tired of being tired all the time, so I did two things – cut back on my workouts and increased my daily nut intake. The result – now my energy is high and now I'm Mr. Happy – with a song on my mind all day – a big, happy improvement in my personality. And, during the past two years I developed two cavities, which could have been caused by a lack of protein, let me explain.

When we're under stress or do not ingest adequate protein, your body may not have adequate protein to enable the saliva to re-enamel the teeth, and this could cause tooth decay. If we have an inadequate fat intake, our body could be unable to produce hormones it needs for muscle growth, and too low a fat intake may contribute to tooth decay also. All I know is that I hope my small tooth decay problem is over since I increased my nut intake, as two cavities in two years, after 20 or more years with no cavities is too many for me.

Chapter 4 – Whole Natural Foods

Chapter summary: I recommend a diet of whole, natural (unprocessed) foods. If a food comes in a bottle, box, jar, can, package, or wrapper; I am highly suspicious of its value to good nutrition and usually avoid it.

My philosophy of eating goes a bit beyond just eating raw foods. My guideline is to eat foods that are whole, natural, fresh, raw, ripe, organically grown and biologically suited to be eaten by humans.

Whole Natural Foods

My guideline for eating whole foods simply means to avoid processing of any kind and eat the whole food as nature grew it and intended it to be eaten. There are many reasons for this. Let's look at oranges for example. First, of course I'm going to peel it and eat it. I just want to be specific here because there are some people who will take things to the extreme when I say "whole" foods and go ahead and try to eat their orange peel, banana peels and swallow their peach pits. No way. I'll peel my orange and bananas, and throw away my pits, thank you.

Let me tell you a funny story about oranges and processed food. Someone once asked me, "do you drink orange juice?" No, I responded. "Why not?" he asked. It's processed food, I responded. Ignorantly, he burst out with laughter and laughed and laughed. But it was me who was laughing inside at his ignorance. So let me explain why I avoid processed foods even to the small extent of juicing.

When you take a whole food like an orange, and separate and throw out the pulp, then eat the rest, you now have a processed food. It's no longer whole as nature created it and it changes many factors many people never thought of.

First, when you juice it, it exposes much of the food to air, which destroys the nutrients such as vitamins. This doesn't happen when you chew it and mix it with saliva, so you've reduced your nutrient content already. Next when you put it in your mouth and drink it down, you've just bypassed the first step in the digestive process which is mixing food with saliva and chewing it. Then when it reaches the stomach it empties out of the stomach much more rapidly and sugars are absorbed more rapidly causing a sugar spike in the blood stream. This doesn't happen when all the fiber is there to slow down the rate of sugar absorption because there is a more gradual tapering off of the blood sugar level. Next, because there is no fiber, the

intestines don't have the needed fiber and this can lead to constipation. Fiber is an essential nutrient.

Getting all your required nutrients takes care of itself when you eat whole fruits and vegetables. Un-natural foods, in addition to processed foods, would be things like artificial sweeteners and all the food additives like MSG, food colorings and the like. I don't eat any of them.

Fresh Foods

Eating fresh foods means eating fruits and vegetables that are not preserved in any way other than refrigeration, and possibly freezing. Freezing is really not optimal, but I feel that it really harms the food to such a small extent that on occasion, I will eat a frozen food such as frozen banana ice cream run through a champion juicer. I don't do this very often at all though.

I avoid foods that have been preserved in anyway such as pickling, canning, or by any other method such as fermenting. I don't believe that fermented foods confer any health benefits at all – in fact, just the opposite is true. Fermented foods are foods that have been carefully “spoiled” and this is often said to be a benefit and increase the amount of beneficial nutrients such as “friendly” bacteria which will be used by the stomach. I've found this information to all be false when in reality the fermenting of foods only cause a loss in nutrients. I stick with fresh, unfermented foods. My guideline is that if it comes out of a package, bottle, box, can, jar, or wrapper – avoid it!

Raw Food

The basic reason I eat raw foods is that heat destroys nutrients. Yes, I know there are those who will tell you that cooking is beneficial in some respects because it makes nutrients available to the body that otherwise would not be if the food were eaten raw. I don't buy that reason at all for two reasons. First, even though these people claim that cooking makes some nutrients more available, they still admit that other nutrients are destroyed by the heat. So what's happened is a food's balance of nutrients in its raw state is altered from what nature created, and it is now a processed food.

The second reason for me is that no animal, other than the human animal, eats cooked foods. Every other animal comes fully equipped for eating its natural food. It will have the physical characteristics needed to catch the food, and the digestive equipment to digest it.

Ripe Food

Fruits are designed to be eaten at their peak of ripeness. This means I don't go out and eat green papaya salads or the like. Even when it comes to bananas, there are some people who prefer them to have some green on them, when in fact at their peak ripeness all green is gone and they have brown speckles on them. When bananas are still green, they are starchy. As they

ripen, these starches change to a simple sugar. Looking at the human digestive system, we find that although we can digest some moderately starchy food, we are designed to digest simple sugars most easily, and not designed to eat heavy starchy foods. One of the reasons that a raw food diet gives people an increase in energy is that the load on their digestive system is much less because the foods rich in simple sugars are so easy to digest. The body saves a lot of energy simply because it takes a lot more work to digest heavy fatty and starchy foods.

Organically Grown

Organically grown food is not something new, it is the norm. Foods grown non-organically with pesticides have really only been around for less than 100 years, while organically grown foods (and plants) have withstood the test of time since the earth was born. Why then is organically grown produce viewed as a minor segment of the food industry? Why, when you walk into a supermarket, is the organically grown section only a small part of the produce section? And why are the organic foods priced higher than conventionally grown? Which is better?

My opinion is that organically grown produce was viewed as a minor segment of the food industry because of shortsightedness on the part of the food producers. When conventional, non-organic farming methods arrived on the scene, it revolutionized food production. Suddenly huge farms sprang up using pesticides and petroleum based fertilizers and crop yields rose immensely. The shortsightedness was the fact that this type of farming is not sustainable, that is, more energy is put into the crops than is harvested. Problems arise when hundreds and hundreds of acres are planted with the same crop (monoculture), it's totally unnatural in nature. So, insects do their job, their numbers increase, and now there's a "need" for pesticides. This is why the concept of permaculture gained in popularity due to its philosophy of "polyculture", (mimicking nature by planting a variety of plants) instead of monoculture planting.

Aside from the philosophical reasons for organically grown food, the other reason that concerns vegans is vitamin B12. It is well documented that this vitamin is produced by bacteria, and common nutritional mis-knowledge will tell you (1) that you can only get this vitamin from animal foods and (2) beware of those vegan diets because you won't get any B12. Vitamin B12 is actually plentiful in organically grown plant foods. The reason that it is claimed to be missing in plant foods and only found in animal products is because they're talking about *commercially grown non-organic produce*. When plants are grown in soil that is repeatedly bombarded with pesticides and artificial fertilizers, B12 producing bacteria is not found in the soil, and thus not found in the plants. So is organically grown worth the extra price? I'd say it is. I vote with my dollars every time I buy organic.

I will back up my testimony my own experience, which is that as of this writing I have been on a 100% raw vegan diet for 8 years now, with no B12 supplementation and no signs of B12 deficiency.

Chapter 5 – Foods biologically suited to humans

Chapter summary: All animals are designed by nature to eat specific foods. Humans are specifically designed to eat fruits, nuts, certain vegetables, seeds, and sprouts.

In the last chapter I stated that one of my food guidelines was that I eat only foods that humans are biologically suited to eat. In this chapter I'll explain exactly what that means to me.

Let's look at some examples in the animal kingdom. We'll start with the bald eagle, and after only a couple examples, you'll understand what I'm talking about.

"Hey eagle eyes, you don't miss anything, do you?" Have you ever heard someone say that, or a similar comment? What do they mean? Look at that bald eagle circling overhead. Nature equipped him with the vision he needed to see small animals from high above the earth. When a mouse is spotted from high above, again, the eagle has the perfect equipment to catch his prey: the wings, the speed, and the talons. The prey is his. Once caught, the eagle has the perfect tool, his sharp beak, to rip apart the flesh, and the perfect digestive system with the proper digestive juices to extract nutrients from his catch. The eagle eats only what nature designed him to eat.

Take the plankton eating type whale. Again, nature perfectly designed him with the mouth to filter sea water very efficiently to harvest all the plankton he needs to sustain himself.

I use both my examples to make the case for both raw foods and foods we are biologically adapted to. Does the whale ever say, "I'll have the sautéed plankton tonight? Does the eagle ever request a BBQ'd mouse? No, they're merely animals, they don't have the choice in the matter. Ok, but that's my example of why we need to eat raw foods. Humans are the only species on the earth that cooks its food, and has the diseases to go with it.

But back to the whale and the eagle, if the eagle can't find a mouse, snake, or fish, will it go find a turnip instead? No, it can't. It literally cannot because it doesn't have the equipment to find or eat a turnip. It will starve instead. But humans can because they're different, aren't they? Well, yes, they can eat different food than they are biologically adapted to in order to avoid starvation, but along with that comes a deficiency in health. So let's take a closer look at what humans are biologically adapted to eat.

Let's say that somehow, as an experiment, you were abducted by aliens, your memory wiped clean, and you were dropped into a veritable garden of Eden, to be observed on how you survived, just on instinct. Everything to ensure your survival was there, it would just be up to you to find it. As I layout this example, I want you to observe the guidelines I've already laid out for you.

First of all, how would you know to eat? How would your body communicate this need to you? You would *feel* hunger, an emptiness inside that will eventually command your undivided attention. And just how would this feel? Painful, wouldn't it? Downright painful! And what would you search for to get rid of this pain? Pleasure. So you're walking along, feeling this pain, and all of a sudden, your sense of smell gives you . . . pleasure! An apple, what a wonderful smell! And you head toward it in the most direct manner as you can, because why? Because out of the field of green in this garden, something stands out perfectly to you, the bright redness of a ripe apple, you can't miss it. And as you get closer, and the smell more intense, your mouth begins to water as your digestive system prepares itself. Ah, but that apple's just a bit out of reach. No problem, you just happen to have two eyes on the front of your head giving you binocular vision, perfect for judging the depth perception necessary to climb this tree. And, you also happen to have opposing thumbs, perfect for grasping branches and climbing.

Then you take a bite out of that apple, and wow! THAT tastes good! Eating can be sooo pleasurable! It's been several days since you've eaten and immediately you decide you want more of this, no question about it! These are good! So you eat and eat, and well, do you keep eating forever? Eventually, everyone stops eating, I've watched them, even fat people at fast food places stop eating.

You'll stop eating because your body signals you to stop by several means. Again, here's the key, you *feel* full in the abdomen. The apples begin to not taste as good as the first one, and you just plain lose interest in eating. So you stop.

So let's discuss what's happening here with our human body. First, understand that the body speaks to us through our *feelings*. We're motivated to avoid pain, and seek pleasure. We do this because our body has needs for its survival and it lets us know in no uncertain terms what it needs by sending us feelings. You *feel* hunger, out of breath, tired, sad, the need to relieve yourself, this is how the body communicates and it's an important concept that bears repeating.

Let's take a step back in our example and see what would happen if you didn't find that apple right away, but instead found something else. You know you are hungry because your mouth is watering, so as you walk through this garden, how exactly would you know what is good for you to eat? As we found out, simply because it tastes good. Nature knows what you require and put it there, and it gave your body a mechanism to know what is good for it, and that mechanism is your taste.

Ah, but as a child, my mom always made me eat things I didn't like because they were "good" for me. Now I ask, *were they?* Now we can ask, is liver and onions really good for you? Oh mom . . . liver. . . yuk! Observing children gives us an indication of what foods humans are really designed to eat.

So again, as we wander through the garden, suppose we just pick a leaf and eat it, what happens? You can figure this out now. We put a leaf in our mouth and it's so bitter and astringent that your reactions take over and you spit it out immediately! Or, the alkaloids in the plant make the linings of your mouth burn intensely. Only humans disconnected from their instincts would say this is good for you and sprinkle hot peppers on their Mexican food. In nature, your reaction is to spit it out immediately!

Chapter 6 – The Digestive System

Chapter summary: The human digestive system requires the proper foods to function properly. Given improper foods it malfunctions, resulting in disease and improper bodyweight.

In the last chapter I briefly discussed some of the mechanisms of digestion: the first smell of the aroma of fruit, then the mouth begins to water, and how food is mixed with saliva as it is chewed. So let's look at what happens next, and at the intelligent design of the human digestive system.

Our stomach has an intelligent sensing mechanism to determine exactly what we eat and this is tied to our appetite. Here's an example: let's say that you're very hungry, but you're on a diet, so you've decided that the way to lose weight is to "eat less." What would happen if you filled up your stomach with water? When we put food in our stomach, it immediately senses all qualities of the food: the weight, the volume, the calorie content, fiber content, and nutrient content consisting of vitamins, minerals and more.

So if we were to fill our stomach up with water, expecting to "fool" the stomach into believing that this is a full meal and will satisfy our appetite so we can lose weight, we quickly find that we only fool ourselves, as we quickly get the hunger signal in just a short time. What happened? The stomach sensed a large volume of food due to the stomach being stretched, a large weight to the food, but zero calorie content. The stomach is smart enough to know that the water requires minimal or no digestions, and rapidly empties, and immediately sending a hunger signal to the brain saying in effect, "give me some real food, some calories."

Now this discussion so far has been rather basic and self evident. But let's carry it a bit further as it applies to our concept of whole natural foods. Let's say we fill up our stomach with orange juice, what happens? The stomach will sense the volume of food due to the stretch of the stomach, and measure the weight of the food in proportion to the stretch, so far so good. But as it senses the calorie, vitamin and mineral content, something is amiss here. It would be as if the stomach were thinking out loud: "gee, for this volume of food, with this amount of

vitamins and minerals, something is not quite right here. It seems the fiber content is missing. In my informational report I send to the appetite center in the brain, I just cannot certify that my report is accurate.”

If we use another example, things can only get worse. Take a piece of chocolate cake for example. When the stomach receives it, for the huge amount of calories it contains, a proportional amount of stretch (volume) and weight don’t match. The vitamin and mineral content are too low for this amount of calories also. The problem we have here is that we have a food that is artificially created by man that doesn’t exist in nature, and the result being that the stomach, which is “calibrated” for whole natural foods, can’t “read” the calorie and nutrient content of the food properly, and therefore sends the brain an inaccurate report. The result of this inaccurate “report” is that the whole digestive/appetite regulation mechanism doesn’t work as it should.

Well, I take that back, to an extent. There’s always the exception, the skinny person in their twenties who has a “bottomless pit” for a stomach and can eat all they want without getting fat. But even this, I feel, is a youthful phenomenon, as I’ve seen these people can become overweight in middle age.

The result of eating processed foods, instead of whole natural foods, is that, simply, the stomach can’t read these foods properly and it affects the body’s ability to maintain a normal bodyweight. People get fat, and they say they don’t eat a lot. Their “metabolism” gets messed up. You’ll notice that some people are fat, say 30 pounds overweight, but did you ever notice that they just seem to stay 30 pounds overweight? True, some do keep gaining, but others are stuck at a plateau.

The problem here is eating processed foods, and the stomach is unable to “read” the ingested food properly, resulting in the body’s inability to regulate a proper bodyweight. What’s the solution? Whole, natural foods.

I found the topics in these last two chapters to be fascinating when I first learned them from Dr. Lisle’s lectures, and read more about them in his book, “The Pleasure Trap.”

Chapter 7 – What to expect the first year on a Raw Vegan Diet

Chapter summary: It generally takes a full year, or more, to adapt fully to a raw vegan diet.

In the last chapter I explained how eating processed foods leads to the body’s inability to regulate a proper body weight. The solution is simply to return to eating whole natural foods. The reason for this is that our stomach is “calibrated” to eat only whole natural foods, and when you return to such a diet, everything starts working as it should again.

Our bodies have been designed for a natural environment of whole natural foods, and the fact that people have not been eating whole natural foods for only a hundred years or two has not changed the human body. Just look at all the fat people in historical photos and the stories of the diseases they’ve suffered through.

So what you can expect during your first year on a raw vegan diet is this: while eating all the raw vegan food you want to fully satisfy your appetite, your body weight will automatically keep dropping as you lose your excess body fat, stay there a while, then automatically rise to your optimal bodyweight.

I'll give you first an example I read about, then my own experience. In my initial studies on the raw food diet during my first year on the diet, in order to find out what was going to happen to me, I read of a man who started out at over 200 lbs. bodyweight. Over the course of 6 or 7 months, his weight dropped to about 110 lb. Then, magically, his weight began to rise to 130 lb. and has since stayed there.

The reason I use the word "magically" is because of my own experience. In my own case, I was pretty lean already, and didn't eat a lot of junk food. I started the diet at a weight of 152 lb. After several months, I had slowly dropped to 144 lb. My weight stayed there for a couple months, and then magically, and this means without changing my diet or increasing my calorie content, my weight gradually rose back up to 150, even going up to 158 for a while.

What happened to my body composition during my first year was that I lost pretty much all the excess fat off my body. To me as a bodybuilder, it was great – I got to eat all I wanted and I looked ripped (ripped is a bodybuilding term used to describe bodybuilders who have virtually no fat on their bodies so that all the muscles can be seen in detail). I am convinced that due to my exercise program at the time, I lost absolutely no muscle mass, but instead, my exercise program required that I keep all my muscle mass because the exercise program told my body that the muscle mass *was required*. This is why I preach and preach to people on or considering the raw diet to start a strenuous strength training program to keep all the muscle mass you have in order to not become a human skeleton during the first year transition phase.

My appetite

During the first year of going on the raw food diet, I described my appetite as "ravenous" – meaning my appetite was never quite fully satisfied. It felt as if I could never get enough to eat. Even when I did completely fill my stomach, I felt "unfulfilled." This, I believe, is that for all my life, I was conditioned from eating the SAD with its high fat content and complex combinations of food, to feel full and sluggish after eating a meal. Since the raw diet doesn't do this, I felt "unfulfilled."

I've found in talking to people who have attempted the raw diet that this is one of the major reasons for their not staying with the diet. They say that the raw diet just doesn't "fill them up." They miss their heavy fat laden SAD. Others, who do stay with the raw diet, manage to replace the high fat SAD with an even higher fat raw diet, which is neither healthy nor desirable.

Let me qualify the above statement. I believe that a raw high fat diet may have its place, for a short period of time anyway. When meat, milk, dairy and processed foods are removed from the diet, this is a healthy step in the right direction. So I say keep moving in the right direction. When adapting to the raw diet, many people find success by imitating the SAD with raw foods. You'll find all sorts of recipe books filled with things like raw pizza, raw salmon loaves, raw spaghetti, and more. No matter what food you used to love, it seems some clever raw food chef has come up with a raw substitute, all high in fat content of course, to satisfy you just like your old SAD diet did.

I find no fault with these recipes during the transition period, as they're much healthier than the SAD original foods. However, I highly recommend during the transition period to phase out

these foods as soon as you can. There are several reasons to do this, the first is for health reasons, because a high fat diet, raw or not is not healthy and you want to reduce your fat intake to about 10% of your total calorie content.

You will also find that after a while, preparing all those fancy recipes becomes too time consuming. As your taste buds adapt (see the chapter on Neuro-adaptation) you will begin to relish and seek out the simplicity of eating only one or two foods at a time and enjoying the flavors nature created instead of trying to disguise them with complex combinations of foods. (see chapter on Mono eating).

I also like the idea of eating whole natural foods. Apples, pears, bananas, grapes – are all deliciously natural foods that nature prepared for us. Sodas, pretzels, pizza, meatloaf, candies – you won't find these growing on trees, they're purely man-made concoctions. I feel that as long as you keep eating raw substitutes for these foods, you'll keep being reminded of them, and find it harder to forget about your old way of eating. That's right, the raw diet is a totally new way of eating, so as soon as you can, I suggest divorcing yourself from the old foods, and open yourself up to a whole new world of flavors and foods – go natural!

To conclude this chapter, I want to finish discussing what you can expect the first year. Remember I said that I described my appetite as "ravenous?" Well, an example of this is about an hour or two after dinner each night, I would get hungry again and eat 60 dates before bedtime, followed by celery or cucumber. Now I've heard all the warnings about "too much sugar" when I tell people this, so let's discuss the sugar issue right now.

The issue of sugar in the diet has been a bit confusing for many people. Yes, sugar is not healthy, *when you're talking about that poisonous refined white sugar from the supermarket.* However, I firmly believe that sugar in fruit is entirely different. First, it's not refined - it has all the fiber, vitamins, minerals and nutrients in the proper ratios that nature intended to be consumed together. Second, while fruits with their sugars are part of a raw diet, it takes time to adapt to eating lots of fruits on a raw diet.

So, to conclude, during the first year on a raw diet your body will be adapting to your new diet. You will be adapting psychologically to the new foods, your weight will be normalizing, your taste buds will be adapting and most importantly, the "friendly" bacteria in your digestive system, which help you digest your food, will be changing their whole structure to your new diet.

Now here's an important informational tidbit that I heard at a lecture some time after I'd been on the raw diet and it explained what happened to me and made such good sense. It's important to understand the difference between eating food, and assimilating food. You see, when you change to the raw diet, the bacteria that help you digest your food are used to the SAD. When you change to a raw diet, it takes these bacteria about a year to adapt to helping you fully digest your food. And that's the key – while it may seem like you're eating a lot of food, the reality is that your intestinal bacteria are not yet fully efficient at helping you digest all that food. The result is that a lot of food is eaten, but not all of it is assimilated fully. This helps explain why people lose weight the first year even though they're eating a lot of raw food. As the bacteria become more efficient in digestion, the body automatically goes back to its ideal weight.

My answer to what to expect on the raw diet the first year is to understand what's happening, as I've explained it above, and then just plain hang in there, keep at it, don't give

up. Do you really want to go back to the SAD and the degenerative disease process it causes? Hang in there.

Chapter 8 – Transitioning Right to a Raw Vegan Diet

Chapter summary: *The best way to transition to a raw vegan diet can be summed up in one word: gradually.*

Ok, in the last chapter I explained what to expect the first year on the raw vegan diet. Unfortunately, that information won't help you much if you don't go about it right, so I go into detail about the proper procedure here.

I've found that very few people can change instantly from a SAD to a raw vegan diet and stay with it. So few, in fact, I'd say that virtually no one does it. For example, I spoke to one lady who was so excited upon discovering the raw diet and what it could do for her sick husband who had exhausted his conventional medical avenues. That she immediately jumped into a 100% raw diet herself. After a little less than two weeks, I saw her enthusiasm disappear. She explained how awful she felt, the headaches and other symptoms, all due to this diet which "just wasn't for her." How sad I thought, if only she had taken the time to learn a little more about how to go about changing her diet the right way, she could've reaped enormous health benefits.

As for myself, I have found success on the raw diet, but it didn't happen overnight. In fact, for two years before starting the raw diet, my transition from a SAD consisted of eating a cooked vegan diet. I had no trouble with stopping my eating of meat and dairy, as this gave me only very slight headaches and a small arm rash for two weeks. But for two years I was happy on a cooked food vegan diet. I made a lot of vegan recipes, and the best cookbook I found was Dr. Goldhamer's (see resources) Health Promoting Cookbook. The reason I liked it so much, aside from the fact that the recipes are actually *good*, that the recipes are made with no added salt, sugar, or oils.

So let's say that someone comes to me asking for advice on how to successfully transition to a raw vegan diet, and right now they've made no changes, and are simply eating the SAD. What would I tell them?

First off, I'd start an education program so you know why you want to do this. I have plenty of books listed in the appendix. But let's say you've already done that, and you're ready to get started, ok great! Though I have seen a complete transition format in the Essential Natural Hygiene course, and I do think that it is very good, I'd like to get to the basics of that program, simplify it even more so that you have the knowledge of how and why.

The first and foremost successful method of transitioning is to do so s-l-o-w-l-y. I know, I know, you want to get healthy right now, as you know how unhealthy those foods are for you. Well, that's great, but understand that making changes too fast is the greatest reason for failure, and that the body takes time to adapt to changes.

As a rule, the older a person is, the more eating habits are ingrained in them, and the harder it is to change. Younger people can make changes faster. But generally, what keeps people from making any changes is fear. Fear of what will happen to them by making dietary changes. Also, some people don't want to give up some of their foods. Some foods are actually addictive, like chocolate, and although people know they should give them up, they don't want to, or they do give them up, but the cravings cause them to eat them again.

So my general guideline is to make changes, one or two at a time, every couple weeks or so, when you are ready to make them. Here's an example of how to proceed: Let's say I recommend to a group of people to start off with eliminating all meat, fish, and dairy products. Let's view the response of several people.

The first person is the easiest, she says "no problem" and that's that.

The second person says "fine, but I have a party to go to Saturday and they're having a BBQ and, well, it's a family gathering, and, well, it's so good, and it would be hard to explain to everyone why I can't eat Uncle Joe's ribs with his famous sauce." Ok, that sets the tone of where to start. I believe that ANY reduction in meat, fish, and dairy in the diet will result in an improvement in health. The party's Saturday, right? And there are five days between now and then when you can eat a plant based meal, so have your meat at the BBQ. After that, you can continue to eat meat one night a week for several months until you're ready to give it up entirely, and the improvement in your health by cutting back on your meat intake will provide the motivation for you to drop the meat entirely, when you're ready, of course.

The next person has no problem eliminating meat and fish, but says her lunchtime sandwiches would be awfully dry and boring without butter and mayonnaise on the bread. Ok, no problem, eliminating the meat is a good first step, and eliminating sandwiches which would eliminate the need for butter and mayonnaise is a matter of re-planning your meals away from traditional foods such as sandwiches. This will just take some time and education, but will happen when she's ready.

And let's take the last person in our group, who needs to make the slowest transition. Often slow and steady wins the race. Let's start by making one "small" change, which could be a big change for someone who's hesitant. I'd say pick one change that you feel comfortable with, and go with that. It could be having a meatless meal one night a week. Then, say after several weeks, when you're ready, make it two meatless meals per week, and so forth. The important thing here is steady progress, and as you improve your diet and see an increase in your health, you will continue to be motivated to make changes to see an even greater increase in health.

So to wrap up, here's a basic guideline of how I would proceed to transition:

- 1) Eliminate all meat, fish, dairy. Replace with cooked and raw vegetarian meals.
- 2) Eliminate all unhealthy habits: smoking, alcohol, caffeine, prescription drugs, salt, sodas, candies.
- 3) Start increasing the amount of raw foods and decreasing the amount of cooked foods. Eat a daily salad containing a whole head of dark green lettuce.
- 4) Do a 24 hour water only fast once every 2 to 3 months.

Chapter 9 – Trust your body

You'll notice that throughout this booklet, I refer you to trust the processes of the human body. When it comes to your appetite, responses from exercise, bowel habits, and other examples, my personal belief is that I trust the inner wisdom of my body.

I wish to expand on this concept of inner wisdom of the body, for it is the most fundamental concept covered in The Essential Natural Hygiene course, which I highly recommend. I will touch on it briefly here in an effort to convey to you just how vast this wisdom is, but realize that it's beyond the scope of this booklet to cover it in much detail.

I believe that the actions of the human body are always right actions. That is, the body is always working to preserve itself and restore a state of optimal health. It never intentionally destroys itself. This same whatever it is that causes the human sperm and egg to attach and divide itself up into a growing number of cells, is the same intelligence that causes plants to grow, and planets to form, for it is ubiquitous all through nature, it is universal intelligence. I want to call your attention to the wisdom of the human body as I see it, so you can come to respect it with awe also.

Just how small is a human cell? Ever seen one? There are estimates that there are approximately 100 trillion cells in the human body. Do you know what constitutes a cell? Inside each cell are other living organisms, hundreds or thousands of them maybe, so the human body is actually made up of several quadrillion organisms. Here's a fact that will boggle your imagination even more: each cell is like a city within itself and it is said that even the smallest cell is about one billion times the size of its smallest component! Sounds more like a universe than a city.

The brain contains over 50 billion brain cells. The body can synthesize over 100,000 proteins. Imagine the communications system of a large city with over a million residents. That's nothing compared to the instant communications within the body which would be the equivalent of at least 36,000 earths each having four billion residents! When you feel pain in one part of your body, the entire rest of the body is instantly aware of it and immediately begins work to preserve and repair itself. Modern science and technology can't even come close to what the human body can do, but yet we think we're smarter when we inject drugs into the body to "fix things."

So why do people get fat, sick, and unhealthy if the body is so wise? Simply because they're ignorant of what the body needs to be healthy. Every living organism has requirements to stay healthy, and if the requirements aren't met, the organism dies. Humans are no exception. To support this, listen to people say things like "what do you mean you don't eat cooked food? Humans are supposed to eat cooked food. We've been eating cooked food for thousands of years. We're the one animal that has a brain to enable us to cook our food in order to eat foods that other animals can't eat."

That could be a convincing argument, but at the same time, humans have been sick and suffering for thousands of years too, and often they can't figure out why. People have also been smoking for thousands of years, but is that a reason to do it too?

Chapter 10 - The Healing Crisis

The concept of a "healing crisis" may be new to some readers, so I want to explain a bit of it here, for it follows naturally the trust your body chapter.

The biggest reason that I chose to adopt a raw diet is to avoid being sick. No one likes to be sick, do they? I certainly don't. So I'd like to report to you that I haven't gotten sick since I started on this diet, and in a way I can, but in another I can't. I have been sick many times on this diet, if that's what you want to call it, but I now refer to "sickness" as a healing crisis because I've educated myself, again from the Essential Natural Hygiene course, as to what sickness really is. So I want to share my experiences.

The reason sickness is called a healing crisis is because it's the body that is actually initiating the shutdown called sickness, in an effort to cleanse or assert its main energies to a task that it must attend to. The wisdom of the body I explained in the previous chapter is at work here. During a healing crisis, often the body will shutdown the appetite, thinking mechanisms, and muscular systems by making you feel achy and want to just sleep in bed all day. It does this for the reason that it must divert all energies for the task at hand of cleansing, repairing, or whatever it feels it must do to preserve itself.

The best example of this is if we should eat rotten food. What happens? Did the food go into our digestive system and decide to cause some trouble and cause us the discomfort of diarrhea? No, it's an inert substance and doesn't have a brain. Instead, the wisdom of the body decided that it was in its best interest to flush out the intestinal tract of this bad food and this was the best way to do it.

A cold therefore becomes not something caused by a virus, but rather, the body cleansing itself of toxic materials. What are these toxic materials? Well, they could simply be normal cellular waste products that are getting backed up and unable to be eliminated properly because the conscious mind is busy working against the wisdom of the body by not exercising and ingesting loads of chemically laden junk foods.

So I want to tell you that I do experience a cold or two a year, and I have had a bout where my intestinal system gave itself a quick flush out.

I've also had one other major healing crisis that really caught my attention. One November after being on the raw diet for a couple years, I developed a rash first on my lower abdomen, then on my chest. It consisted of red round rashes about the size of a quarter, with an itchy dry spot in the center. It would be worse at night and wake me up. It lasted a few weeks, and returned to a lesser and lesser degree three or four times. I've not had a recurrence now for a couple years.

So I looked it up on the internet and found something that matched so exactly that there was no question what it was. It was called Pityriasis Rosea (you can look it up and see pictures on the internet). The dermatology sites on the internet state that "its cause is unknown" but it was harmless, and goes away, and all the details about it.

To me, though, it was a good sign that my body had the necessary vitality to institute a healing crisis and purge itself of whatever it was it had to. Although conventional medicine doesn't know the cause, that's where we differ in our opinions. To me, the cause is internal body toxicity, but cleansing of what, you might ask. It doesn't matter to me, it's just reassurance that my body is cleansing itself.

But a short time later, I had another experience that might give some insight as to what it was. I had to spend a week in Washington DC a couple years ago, and in order to stay raw, I had no where to eat but an Asian food store within walking distance. They had some oranges and lettuce in their produce section, but not much else that I was interested in, and I needed something more substantial for calories since I couldn't locate ripe bananas. So, I ended up eating, much to my delight, frozen durians all week, maybe 2, 3 or 4 a day.

Within a week or two of returning home, the Pityriasis was back again, and the light went on in my head. Frozen durians from Thailand are dipped in a fungicide that I suspect leeches into the flesh that's consumed. So I had accumulated a toxic excess that my body had to cleanse itself of. The connection, to me, was too close to miss. Since then I've avoided frozen durians and have not had any recurrence of the rash.

One of the reasons I moved to Hawai'i though, is so that I would have fresh durians, without being dipped in fungicide, available. It has taken a couple years to find the best durians on the island. Many of the durians grown here are just not as good as the ones grown in the durian capitol of the world, Thailand. The Hawai'i durians often have thick skins and a Styrofoam like flesh. So I have come to find the best durian growers here, from one grower especially, and I have to tell you, it has been worth the search, and worth the wait.

I cannot tell you with any certainty that this rash was a result of my eating raw foods. It may well have happened had I stayed on the SAD, since most people who get it are on a SAD. It's possible that it wasn't connected to the durians at all, instead, I also like to theorize that

because I'd been on the raw diet, my body now had enough vitality to cleanse itself of any toxic substances it may have been storing for many years, such as all the toxic immunizations I was given in the military.

Another story that I'll keep short is at age 40, I was diagnosed with acute glaucoma and was told that I could lose my vision, and of course, they didn't know the cause. Not wanting to be on any medication for the rest of my life, I immediately eliminated white sugar from my diet, because that was all I knew what to do at the time. The frequency of the glaucoma episodes immediately began to diminish. (at the same time I left a stressful job, which is a factor.) Four years later I began my journey into veganism, and two years later raw foods. I've since not had a recurrence of the glaucoma and long ago threw away the medications. I was told I'd have it for the rest of my life too. Another doctor proved wrong.

Chapter 11 – Avoiding unhealthy foods

I want to point out to you here that not all raw foods are designed to be eaten. A case in point (to the extreme) is one raw food acquaintance here on the island. A friend told her that she would benefit from some "variety" in her diet, and convinced her of the merits of eating wild plants, since many were so "valuable." So here's what she did: she went out in the jungle and just started eating a variety of leaves that she found. She didn't even know what they were. The result? You can very well imagine: she was in bed sick the next day. My point is, there are edible plants designed for human consumption, and there are those that are not, which can be poisonous.

There are also a lot of plant foods that are in the middle. They're not really acutely poisonous, but they're not really good for you either. It's not within my scope here to go into great detail, but I will list common foods that I avoid since the scope of this book is to show you what I've eaten and survived on since I began this diet.

Mushrooms are a food I avoid. They are a fungus and I've read that they are basically indigestible.

Certain leafy greens I avoid, such as collard greens and spinach. It is said that they contain a high amount of Oxalic acid which binds with calcium and prevents its absorption.

Molasses is a processed by-product of sugar production and as such is not a natural food. Honey is a food for bees, not humans, and I've avoided it. The Natural Hygiene course says it contains formic acid. Of course I avoid all sugars – white, brown, raw, etc.

Salt is a not a food and I avoid it. Salt is an inorganic mineral that is not useable by the human body. It's toxic. Sodium found in edible plants such as celery is organic and usable. My point being that I've survived without eating salt, any kind of salt. I don't care if it's natural salt, sea salt, pure salt from the Himalayas. It's called all sorts of names to confuse people, but I avoid it all.

I don't use spices and seasonings, there's no need to. These are for cooked food. When you cook a food, you are cooking the flavor out of it, that's why it smells good, because that's where the flavor went, right out the window. To cover up the remaining bland taste, spices are added. The problem is, many spices are toxic in large amounts. I know, you're only eating a small amount, but why eat a small amount of something that's toxic? Would you eat a small amount of rat poison? In large amounts it will kill you, but does that mean in small amounts it's good for you? Not in my book.

I avoid fermented foods such as "rejuvelac." One of my food guidelines I wrote about elsewhere in this pamphlet is that food must be fresh. Fermented foods have been carefully spoiled, and people promote them as having greater health benefits because of the bacteria that helped spoil it. My belief, based on the Hygiene course is that foods should be fresh, not spoiled and that the bacteria actually is not beneficial due to the presence of the toxic wastes from the bacteria.

Garlic and onions are two foods that I avoid. In fact, I avoid all root vegetables because I do not feel they're natural foods for humans. Carrots I will only eat once in a great while, usually incidentally because someone grated a few into a salad at a raw potluck. But I'm adamant about avoiding garlic and onions because rather than having health benefits as some people proclaim, I believe that they are actually toxic and should be avoided.

When someone eats garlic and onions, they smell like it, why? The body immediately recognizes the non-food and shoves it to the nearest exit, out the pores.

What about herbs? Again, many proclaim the medicinal qualities and health benefits. To me, when someone says "medicinal qualities," a red flag immediately goes up in my mind: that food is toxic. I seek to ingest foods, not medicines. A short explanation of how medicines work goes like this (You will recall in my explanation of what a healing crisis is from the previous chapter): During a healing crisis, the body generates "symptoms" such as a runny nose. People think that the symptoms need to be eliminated, so they take a medicine. What the medicine does is to present a toxic emergency that the body deals with immediately, while it abandons the healing crisis it initiated. The symptoms go away, the patient is "healed," the medicine worked, or did it?

The result is the reason for the healing crisis in the first place still exists and the body will deal with it again when it can generate enough vitality to do so. In the meantime, the patient appears to have been "cured" when in fact he wasn't helped at all. It comes from a misunderstanding of what "sickness" is: it's all a matter of toxicity within the body.

Chapter 12 – Vitamin B12 and Eating Meat

One of the warnings that people hit vegans with is the B12 issue. They'll tell you that you can only get B12 from animal foods, specifically meat.

OK, I'll make my response short and sweet: if you can only get B12 from meat, and if you cook all your meat, and heat kills vitamins, then how do you get B12 from cooked meat?

I have done some reading on this issue and formed my own conclusions. It seems that the best information I've found says that B12 is produced by bacteria. The reason that plants "don't" have B12 is because commercially grown produce is grown in soil that is deficient in bacteria because the pesticides and commercial fertilizers kill the B12 producing bacteria. So I look to organically grown produce, food I forage because it's grown naturally, and my own home grown produce being the best source of B12. The reality is that plants contain an abundance of B12.

It's also said that the bacteria in our intestines produces all the B12 we need. Others say that this doesn't help us because the B12 is produced in the colon, but absorbed ahead of this in the small intestines. Others overcome this statement by saying that B12 is produced by the bacteria in our mouth.

Others say the answer is in eating raw meat or insects. I don't know about you, but insects don't really appeal to me.

As for meat eating, I've encountered those who eat raw plant foods, and include meat in their diet. Some eat cooked meat and others eat raw meat. The people I've heard about who eat cooked meat will often proclaim that they get meat like "naturally grown" salmon swimming in the purest water and eating the purest foods. To me, they missed the point, that being that humans aren't designed to eat meat.

It all goes back to the basic argument for eating raw foods, that is, all animals eat raw except for humans. Those animals that do eat raw meat eat it freshly killed, warm, and bloody. Other animals like vultures and hyenas eat rotten meat. Do either of those options appeal to you? They don't to me.

I've heard experts say that everyone is different on a vegan diet, but eventually they all become deficient in B12. Some people take 5 years, some 2 years, others 25, but they all miss B12.

I don't take supplements at all, so taking a B12 supplement is not in my game plan, especially after hearing Dr. Lorraine Day explain that B12 supplements are made from either toxic cow's livers or activated sewage sludge. My personal belief about supplements is that they are highly processed foods and are to be avoided. Do you really think live vitamins are inside those vitamin bottles on the shelves for months when fresh vitamin containing produce spoils in only hours or days? I think not.

I would also like to present this to you. If B12 is produced by the bacteria in our colon, then our feces must contain B12? If so, I read an interesting book entitled, "The Humanure Handbook." If you search for it, you can read the entire book free online. It tells how to safely handle and compost humanure and use it to grow food. I've done it for the past several years

now, and as far as I'm concerned, it works great! It's just a matter of getting over the belief that our feces are something to be flushed and never seen again. They're actually a nutrient rich plant food, possibly full of B12. The basic concept of using humanure is to complete the "nutrient loop" which can be summarized this way: plants take nutrients from the soil, we eat the plants, and through our feces we replace the nutrients back into the soil for the plants to use again. What happens instead is that the nutrient loop is broken by flushing the sewage away, and nutrients in the form of petroleum based fertilizers need to be brought in to feed the plants.

So my personal experience after 8 years on the vegan diet is that I've had no signs of B12 deficiency at all, that being no nerve damage. I haven't been tested and don't plan to have it done, unless the need arises.

As far as I'm concerned, my B12 comes from foods organically grown, as organically grown has withstood the test of time, millions of years behind it, whereas commercial mono-culture grown agriculture is a recent development that is lacking in quality and sustainability.

Chapter 13 – Mono Eating and Food Combining

In the beginning, there were fruits. You ate an orange and you tasted an orange. You ate an apple and tasted a wonderful apple flavor. Then someone found out that if you combined an apple and an orange, you got a new flavor. Soon people were mixing all sorts of foods and coming up with all sorts of new and exciting flavors that never before existed. These mixtures are called recipes. If you eat a SAD, you are quite used to recipes and possibly don't eat individual foods too much.

So when people go raw, it's quite natural for them to want recipes, because they're used to them. Besides new flavors, the raw recipes often provide something else the SAD recipes provide, and that's lots of fat, in fact people eating raw recipes often eat a higher percentage of fat than they did eating a SAD. But, this can be seen as an improvement because of the absence of animal foods and cooked food.

As one stays on the raw diet for any length of time, it is quite natural for them to begin to stray away from recipes and eat a simpler diet for several reasons. The main reason being that those recipes can be expensive, complex, and time consuming to prepare. People learn that a high fat diet, even a high fat raw diet is not in their best health interest. So it's quite common for them to take a step back and return to a simpler way of eating.

The simplest and quite possibly the best way of eating is called "Mono" eating, and it's just what the name implies: eating one food at a time per meal. The reason for this can be natural: in the forest you walk upon a tree and eat your fill. A few weeks later, another variety of fruit ripens upon a tree, and when you find that tree you eat your fill. Over the course of a year, you eat a great variety of fruits during their season. All animals do this; they don't have a choice because they don't have refrigerators or a modern food distribution system like we do.

In my mind there's a benefit to mono eating that we should all be interested in: it provides for the most efficient digestion thus facilitating the most efficient absorption.

Each food has its own digestion requirements and is best eaten and digested by itself. When we mix several foods it becomes a trade-off between the foods as to which is digested best. A high fat food and a high protein food require the body to manufacture different digestive enzymes to digest it best. Of course there are some foods that are complex in themselves, containing both high fat and high protein. Beans, for instance are in this category, but it's frequently cooked beans that present a problem. A few fresh raw green beans from the garden are usually easily digested.

I will point your attention to the fact that we are more than interested in the nutrients we ingest from plant foods, instead, it is more important how many of those nutrients we ingest are actually absorbed by the body.

When we eat a complex meal, the body labors to digest it the best it can. My guess is that digestion is not as complete as when foods are eaten individually, so over the years I've reverted to eating one food at a time.

During the day, I eat mostly one fruit at a time, but for dinner each night I became used to my salad containing a half dozen or more vegetables along with nuts or avocado. A whole salad with a raw dressing is a good thing, and I've eaten one for many years, but it is a recipe, a new flavor that you've created. Then one evening to save time, I didn't make my salad, but ate the ingredients separately on the run. I was so surprised! When I bit into a tomato, a burst of fresh pure tomato flavor surprised me, the same with the Macadamia nuts. The salad was a recipe flavor that gave me a hint of tomato and Mac nuts, but it's just not the same pure flavor, and now I enjoy eating even my salad in a Mono style of eating each evening.

Mono eating provides the best digestion and absorption by providing the best combination of foods, and that is simply no combinations of foods. To back up this claim, there is an entire study of this topic that is quite common in Natural Hygiene and raw food communities known as food combining. There are even food combining charts that you can buy and use in your meal planning.

I've found that most people get easily confused by the food combining charts, even though I agree that they provide good information. The confusion arises because of the problem that people are trying to construct a meal with too many ingredients, and it soon becomes too complex trying to figure out exactly what food combines well with what other food.

Mono eating, or even limiting your food selection to 2 or 3 foods at a meal greatly simplifies the problem, although I feel mono eating is best. Before I explain this more, it will help if I explain the basics of food combining first.

Without a food combining chart in front of you, here are the fundamentals: First, why combine foods? The reason is not only for optimum digest, but to avoid problems like indigestion and gas formation. When we combine a food that has a long digestion requirement usually due to its high fat content, it can take up to 4 hours to digest, depending upon the amount of food consumed at one time. Other foods, such as melons, digest very quickly, in 30 minutes or less. So for example, if these two foods are ingested at the same time, while the nuts are digesting, the melon, full of sugar, stays in the stomach far longer than it needs to, and it's in the perfect environment for, you guessed it, fermentation. So it ferments.

The problem with fermentation is that it produces by-products such as intestinal gas, alcohol, and acetic acid (vinegar). These can be irritating to the digestive lining and the alcohol can actually be absorbed into the bloodstream. In people with weak digestions, this can really be a problem. Food combining and mono eating eliminates the problem by eliminating the cause.

Other basics of food combining (briefly) are that there are 4 categories of fruits. Melons should be eaten alone. There are acid fruits, sub-acid fruits, and sweet fruits. Acid fruits can be eaten with sub-acid, but not with sweet. Sweet fruits can be eaten with sub-acid, but not with acid. Proteins and starches should be eaten separately. I recommend you get a good food combining chart, such as the one from Vibrance, (formerly Living Nutrition magazine) and use it to guide you.

So I've found that food combining is a good thing, but can lead to confusion. The solution from any confusion is simply to eat as simple as possible with mono meals, so here is my method for using food combining charts, yes charts, as there are several different interpretations of what is good food combining.

First, since you'll be eating a mono meal, decide on the main food item that you're going to eat. A tomato (or two, three or more)? Fine, you're going to eat a tomato meal. If you only want to eat tomatoes, that's all you need to do. But suppose its dinner time, and you haven't had your nuts for the day? Then you look at your food combining chart and see that nuts combine well with tomatoes.

So my method of simplifying the use of a food combining chart is to decide what is the main course of your meal, then look at the chart and see what goes with it. Frequently charts rate the combinations as good, fair, or poor. After making a few errors, you'll soon know what combinations work for you and which don't. When you make a bad combination and suffer the gas or indigestion consequences, you know what to do, it's the same concept that I've been preaching throughout this booklet, and that's simply wait for your appetite to tell you when your digestive system is ready for more food. When you're hungry, you'll know, you can't miss it!

There are three unique foods that are worth pointing out because they are soooooo useful. They are cucumbers (actually a non-sweet fruit), celery, and lettuce (as stalks and leaves they

are considered vegetables). These three are unique in that they combine well with all the food groups: fruits, nuts (proteins), and starches (beans and moderately starchy root vegetables such as carrots and Jicama).

I usually eat one or perhaps two of these three foods, (abbreviated LCC), with each meal. For a nut meal, I believe they aid and speed digestion. For fruit meals, they are a big help in cleansing the teeth and adding fiber to moderate the rate of sugar absorption. If you're getting used to eating fruit meals and get a "spacy" feeling from eating fruit, increasing the percentage of LCC to the percentage of fruit eaten at one time will help.

Because LCC go so well with everything, I consider them "non-foods" as far as food combining goes, so if I eat a meal of apricots, then lettuce and celery afterwards, I still consider this a mono meal of apricots, because only the one fruit was eaten, and the lettuce and celery as digestive aids.

A word here about lettuce and leafy greens is appropriate. So much is said these days about "superfoods" but if there is one food that is really a super food, it is lettuce and leafy greens such as kale. Dr. Joel Fuhrman exclaims that leafy greens are the highest nutrient density food that you can consume and he says that some, such as Bok Choy, actually help repair broken DNA in the body, preventing cancer!

In fact, lettuce and leafy greens are a good source of protein! How much protein is in lettuce? If you go to the USDA nutrient database at www.nal.usda.gov/fnic/foodcomp/search you'll see that *lettuce* is 29% protein, *as a percentage of calories*. Try it - go to the website, for the key word on the first page type in "Lettuce." On the next screen, select "lettuce, Cos or Romaine, raw", click submit. On the next screen 100 grams is already selected for you. On the next screen it shows that 100 grams of lettuce contains 17 calories. We want to find out how many calories for each 100 calories of lettuce are protein calories, giving us the percentage of protein per 100 calories, so take 100, divide by 17, this gives us 5.88. Now for each 100 grams of lettuce there are 1.23 grams of protein, and if each gram of protein is 4 calories, multiply 1.23 times 4 and you get 4.92. Multiply this by 5.88 and we get 28.92, rounded off to 29 and we have out of every 100 calories of lettuce there are 29 calories provided by protein. So we see that lettuce is very high in protein - but we really don't eat that much of it, so it is a source, but not our complete source.

Chapter 14 – Neuro-Adaptation

"Why do raw foods taste so bland? I could never eat raw foods just plain, where's the flavor? I need to sprinkle salt on my tomato, or sugar on top of my grapefruit. How could I live on a total raw food diet when I can't even eat raw foods? If I went on a raw food diet, there wouldn't be any fun in eating anymore. Imagine living the rest of your life on that kind of food - rabbit food - I just couldn't do it."

The answer to comments like these are that you simply need to understand how the body works, and you'll understand how to like the taste of raw foods. The answer is that your sense of taste has become spoiled, but it can be restored.

When I was a young boy, one morning my Mom ran out of salt, so I got flat tasting oatmeal for breakfast. But you know what happened? After a few days I got used to it, and when the salt came back all of a sudden I could taste it in my cereal whereas before I couldn't.

So there's your answer, can you see it? The human body, specifically in this example, adapts, but it takes a little time. It's the same as when you're inside a house reading under a lamp, then go out in the sunlight and things are too bright for a while. Soon the light level outside appears normal. When you go back inside to your reading, it seems so dark, but then your eye readjusts and reading is ok again in that light.

So by eating the SAD, it's like your taste has become used to the bright sunlight outside, and when you go inside to the darkened room, all the raw foods taste pale by comparison, when in reality there's still plenty of light to read, or flavor in your raw foods. It just takes time to adapt. Be aware however, that in order to adapt to the raw foods, you need to be totally off all the artificially super sweetened, salted, and fatty foods of the SAD, or your taste buds will never "un-adapt" from their flavor and re-adapt to raw foods. It can take 30 to 90 days to totally adapt, so hang in there!

I was fascinated to learn about Neuro-Adaptation from hearing Dr. Lisle's lecture. I've presented the topic only briefly here, so I placed his book, "The Pleasure Trap" in my reading list at the end of the book. I highly recommend it.

Chapter 15 – FAQ about the Raw Food lifestyle

Q: What do you think about seaweeds - sea vegetables like Dulse, Laver, Nori sheets. Are they natural or do they have too much salt and minerals?

Nori sheets don't fit my guideline for foods, as they come in a sheet, they don't grow that way, so they're obviously processed with a shelf life and they come in a package. With all that said, though, I did eat seaweeds when I was eating a cooked vegan diet, and did enjoy them, however, since adopting a raw diet, I have taken the advice of Dr. Doug Graham and have stopped eating all seaweeds. The reason he gives (that I recall) is that the ocean is like the sewer of the world. Everything gets washed into it, and these plants are growing in basically a sea of toxic waste. My own reasons for not eating them now also include the fact that most often they are dehydrated, lacking the water, thus they are not a whole natural food.

Q: Do you think young coconuts play an important role in a raw foods diet? I've been reading a lot about including coconut oil in a daily diet for losing weight. Also, do you recommend a diet high in bananas if weight loss is desired?

I've found coconuts to not play an important role at all because of their high fat content. It may be a "good" fat, but too much fat is still too much fat – whatever the source. I rarely

consume cocos at all anymore, although perhaps once a week eating a young coco should be ok, and when I do, it replaces my intake of other fatty foods such as nuts or avocado for the day. Especially for losing weight, I would avoid them entirely. I've found that they say all sorts of good things on the package of those coconut products, but they're also selling them too, it takes away any credibility of what they have to say.

And, to lose weight, most importantly, I've found it best to wait until I get hungry before I eat, then wait an additional hour before I consume another meal.

Yes, a diet high in bananas is a good way to lose weight because it enables you to eat as much as you want without going hungry. This is my basic message here, that when you eat a diet of whole natural foods, the body will seek its ideal weight without an excess of fat.

Q: My daughter is finding that she needs to go on a raw diet but I went to a raw food meeting and most raw foodists were very weak and I checked their heart which also was very weak, so I need some direction so I can help my two kids.

I asked in response, "exactly how did you "check their hearts?" He replied: "I checked their pulse by hand and observed the intensity of the heart and also looked for abnormal heart beats. Their muscle mass was not there at all. I see Ted Novak as a physical therapists who was the San Francisco 49's therapist and chiropractor for 10 years who also confirmed that the vegan and raw foodists he worked on had weaker muscle fiber."

My response is that checking their hearts in this manner was a very superficial method that resulted in (to me) unconvincing conclusions. I also believe that this gentleman has fears about not eating meat, thus resulting in looking for any reason to convince himself that he needs to keep eating his meat.

As for his physical therapist confirming that vegans had "weaker" muscle fiber, this again, is superficial and inconclusive. My question was, did these people work out as I do? No answer. My own experience shows that if you take a random sampling of people on the SAD, most of them don't have that much muscle because they don't workout. So, it's not a question of diet, but exercise.

I believe that everyone needs to workout to build muscle mass. Few people do. Raw food vegans typically lose most of the excess fat on the body, and if they don't workout, they'll appear thin because most people don't work out and don't have very much muscle mass. If you take people on the SAD, who have lots of fat, they can also appear to have more muscle tissue due to all the fat. But if you stripped off all the fat, you will find that they really don't have that much muscle mass either.

I've observed, over the years of attending vegetarian, vegan, and raw food potlucks that yes, most of these people don't look very healthy. I would always get the comment that I was the first healthy looking vegan they've seen. The best I can answer this is that a lot of these people

are alive today because they are victims of modern “medicine” and they owe their lives to the raw vegan or vegetarian diet. Not many people switch to the diet because they were relatively healthy to start with like I did.

Q: My daughter feels like her energy is low even though she is a full time student and goes go to the gym and has a job. She says if she doesn't eat protein her energy drops more.

I've found it to be a common topic of misunderstanding, confusing protein intake with energy levels. First of all, protein is not the preferred source of fuel for the body, carbohydrates are. If not enough carbohydrates are consumed, protein and fat can be converted to energy, but it takes work for the body to do this and it's preferable to eat carbohydrates for energy.

High protein foods that people typically consume that they say “gives them energy” are also typically high in fat. This provides a lot of calories and takes a long time to digest, thus filling them up and allowing them to go 4 to 5 hours between meals. This is what people are used to on the SAD, so when they switch to a raw diet and eat only fruits, they digest fast and the person needs to eat more often, which they are not used to doing, then they wonder what's wrong and why they don't have any energy.

The solution is to eat more and eat more often when eating fruits on a raw vegan diet. This takes time, usually up to a year, which is why I recommend transitioning to a raw diet gradually and learning all about it so you know what to expect.

I don't know your daughter, but consider the possibility that her energy is low because of overtraining at the gym also. The right amount of exercise can be rejuvenating, while too much can zap your energy too. I see too many people on treadmills in gyms for hours trying to burn calories to lose weight. My experience shows that this is futile. It would be much better for them to lift weights, build some muscle tissue, eat raw and enjoy the extra free time from not being on a treadmill.

Q: I have been training for almost 25 years now and I was a vegan for 10 years and did raw food for 2 years. I lost a lot of weight and mass on the raw food diet although I must say I did feel great and did not need a lot of sleep on it. I switched back to meat for muscle gains and have since put size back on. I would like to try raw food again, but do not want that loss of muscle to occur like before. My question to you would be not so much where do you get protein but what about the amino acid profiles? It is said that plant foods are incomplete proteins and do not contain all the essential aminos.

I've tried not to make promises that simply aren't true, so I've always told people that if you just want to get big and don't care about your long term health, then yes, I will agree that you will get bigger muscles by eating meat. The whole reason I'm writing this book is to spread my message that you can build enough muscle on a raw vegan diet to look like a healthy human being, not a human skeleton, but you will never be as muscular as a meat eater. To me, there's nothing wrong with that.

I have not met or seen pictures of this person, but I've found that a lot of bodybuilders in a typical gym may be very "big" but they also have a lot of fat on them adding to their muscular "size." They consider this fat to be "mass" and when they lose it, they say that they are losing muscular size. He also could very well have lost actual muscle, for he doesn't mention if he changed his training or had to reduce his poundages at all.

Speaking from my own experience though, what happened to me when I went on a raw diet was that I lost all my fat, and kept all my muscle and didn't lose any strength at all. It was a bodybuilder's dream come true: I looked great, very muscular, and didn't have to diet at all to maintain my leanness. In fact, I was eating all I wanted!

As for amino acid profiles, this is another variation of the fear of not getting enough protein. The information that plants provide incomplete proteins and thus protein foods need to be combined to achieve complete proteins was written in a book, which I don't remember the title. The important story about this is that the author of the book, retracted the statement about having to combine proteins in the next book, but this information never caught on due to people's frenzy about getting enough protein.

As for amino acid profiles, though, the information that I go by is found at www.healthpromoting.com. There, an article entitled "Where do you get your protein?" by Dr. Goldhamer explains the concept of amino acid recycling, and how the body re-uses amino acids to make complete proteins. It's absolutely the best article on the subject that I've found. The main point of the article that I wish to convey is that the body is capable of making complete proteins from incomplete proteins using this recycling process.

This is another reason that I am writing this book: to show the world my results. We can discuss the scientific points of the raw vegan diet without end, but quite simply stated, on a raw vegan diet my protein needs are being adequately met, enough in fact, to build additional muscle. If my protein needs were not being met on this diet, and for the past five years, I would have long since been dead by now! That's a fact that cannot be refuted, and I've found that those who wish to keep bringing up the protein issue are ignoring this fact and using it to hang on to their fear of letting go of meat and "protein foods."

I do offer a solution though, and that is for a person like this to increase the raw food percentage of his diet as much as possible, say 95%. Then if he wants to eat meat from there, his health risk is much lower. You see, the issue of whether to eat meat or not is an individual choice, it's all up to the person to decide what level of health that he wishes to achieve and what lengths he is willing to go to in order to achieve it.

Q: How do you get enough vitamins and minerals eating raw?

Quite simply, raw foods are packed with vitamins and minerals and one of the most basic reasons for eating raw is that you get more vitamins and minerals because they aren't destroyed by heat in the cooking process. When this happens, some vitamins and minerals are

destroyed while others may not yet be completely destroyed, so the whole vitamin/mineral balance which nature designed perfectly in raw foods is utterly destroyed.

I should really be asking other people how they get their vitamins and minerals by not eating raw!

I was also tested several times by a vitamin company that used some sort of ultra violet light method to test a person's beta-carotene level. They found most people tested about 17,000, and with supplementation of their vitamins, they were proud that they were able to get people up to a value of 25,000. Well, I walked in there and measured 66,000 and they man only asked me if I was a vegetarian, to which I answered yes, and after that he had nothing to say, what could he say? He certainly had no reason to sell me anything. I proudly kept on walking right out of his booth.

This question also states the distorted state that our society has come to, and that is, that it is considered almost weird or unbelievable to be able to get your vitamins and minerals from eating fruits and vegetables! Listen, fruits and vegetables are where vitamins were first discovered from – what's unbelievable is how can one get live on the vitamin and mineral deficient Standard American Diet devoid of fruits and vegetables, or vitamin pill bottles that have been sitting on store shelves for months.

Q: How do you eat a well balanced diet?

A "balanced" diet is really a fallacy. It implies that you need to eat from all the "food groups" listed on food charts for a balanced diet. The concept of a balanced diet comes from government agencies who decide what's good for you based on contributions from the commercial interests of large corporations like the Dairy Council. Of course they're going to say milk is good for you. Is this information unbiased?

One of my guidelines is to eat as large a variety of plant foods in as unprocessed a form as possible. This means that although I may eat only one food at a meal, over the course of a year I eat a huge variety of fruits as they come into season.

Q: How do you afford to eat raw? Isn't organically food more expensive?

I feel that eating raw is actually cheaper than eating a SAD for several reasons. First, walk into a store and see how expensive cuts of beef are. Then you have to spend time and money to cook it too. How much are potato chips priced by the pound? Corn flakes?

I buy bananas for 50 cents per lb. and I'm starting to grown my own. Now you may not be able to grow bananas where you live, but most people live in a climate where they can have a garden or a greenhouse and grow at least some of their food.

No room for a garden? Be creative. There's a product called an "earth box" that allows you to grow fruits like tomatoes in about a 1 x 2 foot space on your patio or apartment balcony. You can grow your own sprouts in your kitchen.

Because raw foods are packed with vitamins and minerals, I spend nothing on supplements. Do you know how much some people spend on just supplements per month?

One way to save on food is to ask your store if you can save by buying in bulk and ordering ahead of time. In California, I was given a 10% discount by placing bulk orders and picking them up in a few days when they arrived. Also, shop the farmer's markets and learn the best time to buy such as when they want to leave and don't want to take anything home with them.

One of the best ways I've found to save on food is to go "foraging" and get free food. Look for fruit trees on empty lots and help yourself. Look for fruit trees in people's yards that have fruit on the ground rotting. It's a good indication that they don't eat the fruit because it grows on their tree, but would rather go buy it at the store. Sounds silly, but it happens. The best approach I've found is to knock on the door and ask to buy the fruit you pick off their tree. 99 times out of a 100 they'll say to "take all you want – free!"

Learn to know your wild edible plants. In California in the spring, Miner's lettuce is plentiful. Wild blackberries are plentiful in August. It's just a matter of educating yourself. Check for books on edible plants in the library. One of the benefits of foraging is that you get foods that are organically grown by nature, and fresher than you can get even at the farmer's market!

Of course fruit trees could always spontaneously sprout up at that park or vacant lot in your neighborhood, couldn't they? And you'll be right there to harvest the fruit too. It's certainly not vandalism, rather, *improving* the property value and adding habitat for birds. Be creative, and I'm sure you'll come up with more ideas.

I also save on health care. Why eat a SAD that is making you sick? Is that cost effective? The long term savings are in no doctor, dentist, or hospital bills.

Q: I understand that lifting weights will help build mass and power, however I'm curious in what to eat.....Of course, I have to increase the number of calories, but I'd like to find out how much to eat, and what to eat. How do I measure the number of calories to take in? Are there any resources online geared towards to strength athletes and raw foods?

I get the "how do I eat differently now that I lift weights" question all the time, and the answer is you eat no differently at all.

People think they have to increase their calories, or decrease their calories for all sorts of reasons, and I ask them, decrease or increase by how much? How would you know what to do? The answer is that frankly, you don't know, instead, I suggest you rely on the most sophisticated calorie counting system known - your appetite. With a raw diet – all you have to do is eat until full and let the body decide how much food you need. You can't eat more or less even if you want to any more than if you decide to breathe more or less – the body will tell you what it wants and you can't do much to change it.

Consider also that there is no way to accurately count calories. I read estimates that calorie charts are as much as 40% inaccurate. At that rate, the inaccuracy is so great that it's worthless to count calories.

But, counting calories is also worthless because of other reasons. Say researchers decide that a banana has 90 calories. Does that mean that all bananas have exactly 90 calories? What degree of ripeness was the banana they tested? Does it make a difference? It sure does because it will depend upon how much digestion the body will have to do to extract so many calories from that banana.

What about all the other countless factors? Does digestion vary from person to person? Does the emotional state affect digestion? Etcetera etcetera!

My method is simple. Let the most sophisticated calorie counting mechanism know to mankind count the calories: your appetite. It may not have been working properly when you ate a SAD processed food diet, because it is designed for whole natural foods. Now that you're eating raw, give it time to work again and return your weight to a normal level. It's as simple as this: eat when you're hungry.

Q: My first question regards the number of bananas you consume. You get at least 1/3 of your calories from bananas. I was wondering if you can explain why this is a better choice than a more diversified diet. I understand that you need the caloric density that bananas provide, but 40 per day just seems like an unusually large number.

Another question I have relates to your interactions with regular doctors. Have you found endorsement of your current diet within the medical community? Have you had any blood tests taken, and if so, what were the results like?

First of all, I don't eat 40 bananas a day, but I did meet on raw food person who claimed to. He was a bicyclist and when he did a lot of riding, he ate up to 40 bananas per day. Myself, I eat about 7 or 8 lb of bananas a day. I don't know how many that is because here in Hawaii we have the small finger type banana which may be less than half the size of a supermarket banana on the USA mainland. I find that people who are new to the raw diet or never heard of it get scared when they hear of such claims.

Like you said, the number of bananas I consume is a better choice than other fruit because of its caloric density which is more than most other fruits. Simply put, the main problem in a raw diet is getting adequate calories, and I just plain don't feel satiated eating other fruits until I have my bananas. It's just a matter of meeting the needs of your appetite. Now if you feel satiated eating less bananas, then fine. Also, rather than wonder whether all those bananas are good for you and if I should be eating all those bananas, I can now actually look at over 8 years of doing it – with no problems and good health. I've also already explained that over the course of a year I do eat a great variety of other fruits also as they each come into season.

Another reason to eat mainly bananas is because many fruits can be tough on your mouth and tongue. I've had times when eating too many tomatoes or citrus made my tongue sore, and

eating all peaches and apricots actually made my gums bleed after several weeks. With bananas though, I can eat them year round without any problems, this is why I consider them my mainstay. I will even go so far as to say that to be successful as a raw fooder, you will have to eat a lot of bananas – they're that important.

Here's an interesting trivia on bananas I found when I did a google search on "How much DNA do humans share with bananas? The answer: One half. We share half our genes with the banana.

No, I have not found endorsement from the medical community because I didn't bother to ask them. I feel that their realm is surgery and drugs, treatment and diagnosis of disease, not prevention of disease and maintenance of health. Simply put, my belief is that modern medicine is for the treatment of disease, and not about health. The closest I came was Dr. Goldhamer's site at www.healthpromoting.com, and somewhere in his material he states that it's not possible to live on a raw diet, (like I have for 8 years) because it's not possible to consume enough food to get adequate calories. Hmmm, I guess I've disproven that theory. It seems to me that doctors will only talk and give their opinion about the raw diet, about which they've had no education nor tried it themselves. So, until they've got some real experience in it, I don't ask the uninformed. And, the few doctors (chiropractor) like Dr. Doug Graham that are raw foodists are having great success with it.

I've had no blood tests taken, for the above reasons about doctors. I don't believe they know what a raw fooder's normal values should be, and would be compared to the standard values which may or may not apply. I did have that laser skin test for carotenoids or something (I don't exactly remember) by Pharmanex vitamin company. I was off the charts! Normal values were 18,000 to 25,000, and I measured 66,000. They didn't have anything to say, because they had nothing to sell me.

Q: What about people prone to Candida? Shouldn't fruit be eaten by itself? Does this follow an acid-alkaline diet? I've read that the sugars in most fruits are harmful?

I've never had Candida, but as I recall Dr. Doug Graham suggests his 80-10-10 diet is best for it. I believe he says a high fat diet is the culprit, not sugars. I would suggest consulting him or his new book: "The 80-10-10 diet."

I don't eat fruit by itself, but lettuce, cucumber, and celery combine and compliment it well by adding fiber.

As far as I know, yes, the diet I'm on keeps the body in good acid-alkaline balance. A high fat diet, like eating too many nuts and seeds is responsible for causing the body becoming out of balance, and pulls calcium out of the teeth and bones for buffering, causing many people on a raw food diet to wonder why they have bad teeth on this new supposed healthy diet.

I've not read that sugars in fruits are harmful at all. In fact, I've read and have followed for over 8 years now that the sugars in fruits are the ideal food that humans are designed to eat

and I've been doing very well on this diet so I can speak from personal experience, not what I've read.

Q: Do you believe raw veganism is healthy for a teenager?

I know of one healthy boy that was raised on a 100% raw vegan diet since birth. He's 5 years old now and doing great. So yes, I believe raw veganism is for teenagers, and I wish I knew about it when I was a teenager. Personally, I would do just what I'm doing now if I were a teenager, the training routines and diet apply to you too.

Q: How much sleep and rest do you get? And how much would one need if they have dark shadows under their eyes and wake up still somewhat tired?

I get 8 to 10 hours sleep per night when I'm working out three times per week. If I take a layoff, my sleep requirement goes down to 6 or 7 hours. I rarely need a nap, but they can be good if I didn't get a good night's sleep or am doing heavy physical labor.

I'd say if you have dark shadows under the eyes and wake up tired, then you need more sleep, and the key to me is getting to bed earlier, say 8 or 9 pm, then sleeping until you wake naturally. The raw food diet is great, but if you don't get enough sleep or pay attention to the other factors of health, you'll be just as unhealthy as if you ate a SAD diet. So how much sleep do you need if you have dark shadows under your eyes? I would have to go with the same answer I heard Dr. Doug Graham give when asked how much sleep does anyone need. His answer? Enough. I can't tell anyone how much sleep they need other than to get enough. Once you get enough sleep, the dark circles should go away.

Q: Should one exercise while detoxing?

That would be an individual choice according to the energy level of the individual. Listen to your body. If you have the energy and inclination, by all means, yes, exercise, as it is a stimulant to the body and expedites the detoxification process. If you're low on energy, then either don't exercise and just rest, or exercise just as much as you have energy for. The bottom line though, is to listen to your body. (I'm assuming that you're referring to any type of detoxing such as the initial period of adjusting to the raw food diet, as well as coming off of any type of drug such as caffeine, nicotine, or hard drugs.)

Q: In getting enough sleep, how do I condition myself to actually fall asleep when my body needs to? And quickly? I could lie in bed at night twiddling my thumbs for hours and hours, and by morning I would feel really deficient in sleep.

I recommend learning how to quiet the mind, such as proposed in the book, "The Power of Now," by Eckhart Tolle. Learning how to deal with all the chatter that goes on in the mind, or spiritual development in another sense, will add to your health and enrich your development as a person.

Next, I find in myself that should I stop exercising, my sleep requirement goes down, and I have trouble going to sleep, then when I do go to sleep, I then only sleep soundly for 5 or 6 hours – the result being that I wake up very early (say around 2 or 3 a.m.) and then I'm only half

asleep until dawn, which bothers me because I'm worried that I'm still awake and will be tired all day. The solution is to get more exercise! Now I don't recommend exhausting yourself with heavy weight lifting, for reasons I'll discuss in the section on overtraining, but just enough light to medium physical activity such as riding a bike several miles, gardening and the like. Just get out and move some.

Q: I am an acne sufferer. I have been researching diet and have been led to the raw food diet. I was unsure if I would be able to intake enough food as I weight train as well. This is how I found your site. I noticed you have an extremely high intake of bananas which have quite a high sugar content. This is known to irritate acne. Is there any suggestions you have to replace the bananas? Or would you still recommend these?

I would still recommend bananas as I've never heard of acne caused by them. You'd have to experiment and see. What I have heard is that it's usually dairy products that most commonly cause acne, and have heard of several people who eliminated dairy and thus their acne. For the most part, the raw diet would be a good step toward eliminating acne.

I also don't believe that because you lift weights, that you will require so many additional calories. You see, calorie charts that I've seen rate intense muscular work such as weightlifting as using only an additional 400 calories per hour. If you follow my workout advice and workout for 30 minutes three times per week, you will only burn an additional 600 calories per week, which will be hardly noticeable.

Q: I'm still not sure how you can build muscle without protein. I am a female 45 and did natural bodybuilding 2 yrs ago. I had to work so hard to get protein in or my muscles would not grow. Last year I have been eating mostly veggies/legumes/fruits but I seemed to have lost most of my muscle. I do work out but my muscles are just not growing. I can't see enjoyment from your diet. Don't you miss treats like ice cream or chocolate? If your muscles grow from what you say you eat I think it is amazing.

My point is that I am getting enough protein to build some muscle, and enough to make me a standout from your average person. Although my muscles do grow, they don't keep on growing, there is a limit. I would like them to grow much bigger, but alas, I've read that most champion bodybuilders were also never satisfied with their development too. So it's a matter of being happy with what you have. Also, you're 45 and I'm over 50 now, and if you look around, no bodybuilder that I know of has, being over 40, surpassed the condition they were able to achieve in their 20's.

No, I don't miss any punishments like ice cream or chocolate, for that's exactly what they are to the body. Humans can act so irrationally at times, like abusing the body with things that are unhealthy to celebrate achievements. Instead, why not do something good for your body to celebrate? I like to splurge and spend 20 or 30 dollars on a fresh durian.

In getting your muscles to grow, I would suggest that instead of finding ways to eat more protein, read carefully my recommendations on training and avoiding overtraining. I've found that training has a much greater effect on building muscle than does diet.

Q: I'm a 6ft., 21 year old guy and only weigh 56kg (123 pounds), I have been battling facial eczema for the last 2 years and have been trying to put on muscle for the last year. The doctors have said that I have to live with the eczema and the only way to treat it is with topical steroids 'drugs'. I've been in search of a clean diet in the hope that my eczema would 'permanently' go away, but I haven't been able to maintain a strict high calorie diet. So far I have cut dairy and wheat from my diet. Next step is to try the raw food diet. If the raw food diet cures my eczema I would be interested in putting the raw food diet to test and trying to pack on a large amount of muscle in a short period of time. Do you have any suggestions and do you think you can help me? I have the dedication.

I think you're on the right track cutting out the wheat and dairy, and I'd be interested to see how you do on this.

As for the drugs and doctors, my question is if the drugs work, then why would you have to keep taking them and just "live" with the eczema? Obviously they don't work, and the doctors don't have the answers, but someone is making a profit from selling those drugs, aren't they?

It would be great to see you pack a lot of muscle on fast, and the best time for rapid gains is in the first few months of working out on someone who has not worked out in the past. My suggestion is to simply follow the exercise routines outlined here in this book.

Q: How many meals do you generally eat? Dr. Graham says that eating bigger, less frequent meals is better because it stresses your digestive system less.

You'll see from my diet outline that I eat about 8 or more meals per day. I find that eating big meals is never the answer, as the best way to get a bellyache after eating fruit is to stuff yourself. I believe that it's best to eat to the side of partially under-eating, than to overeat. To me, overeating, or stuffing oneself as full as you possibly can is never the answer and can cause problems such as gas. It's just overstressing the digestive system.

Q: How much time before sleeping should you eat your final meal?

Well, I've read recommendations that we should not eat for at least 2 hours before bedtime. However, I don't practice that because at times I'm just too hungry, and if I don't eat before bedtime, then I have to get up in the middle of the night and eat so the hunger doesn't keep me awake.

I've also observed that infants breastfeed, then go right to sleep. So if they can sleep and digest, then I figure I can do the same. Because raw food digests so easily, I feel it's not a problem, and it's been working out well for me. My bedtime meal, if I feel the need for one, is not a large meal, it's just that my body didn't receive sweet fruits for dinner, and needs the sugar from fruit so I can go to sleep ok.

Q: Can the 80/10/10 be done just on raw Vegetables, & exclude fruit? Do you personally or know anyone that does this? What do you think of the 'pH Miracle' diet which says to exclude sweet fruit, since it causes acidity in the blood, & can lead to Candida.

No, it would be very difficult to eat just raw vegetables and exclude fruits. Here's why: leafy greens contain about 100 calories per pound of food, vegetables such as celery and carrots supply slightly more. So to get 2000 calories from vegetables, you're looking at eating roughly 20 lb. of food per day. That's a lot of chewing, and if you've ever eaten 1 lb. of lettuce, I've found that sometimes my jaw muscles get tired from just that much chewing. I believe that we just aren't built to eat that much food.

If we observe grazing animals such as horses and cows, we see that they spend the vast majority of their day just eating, because their food is so low in calories. Humans need the additional calories from fruits which average 300 to 400 calories per pound of food. To me, this is reasonable, and I've been doing it, that is, eating roughly 7 to 8 lb. of food daily for the past 8 years now.

I personally don't know of anyone who has succeeded on just eating vegetables. I've met people who have tried, and they're awfully skinny from a calorie deficiency, then they eventually go back to eating some cooked food because the raw diet "didn't work" for them.

I disagree with the pH Miracle diet as I believe that it's excess fat, as Dr. Graham says, that causes the problem, not eating sugar in fruit. I stand as an example of someone who has eaten a lot of fruit for over 5 years now without Candida.

Q: If I do have to eat cooked foods because I'm at the pub with buddies or on a trip or something, which foods do you recommend I select besides salads? I usually go for the carbs like pasta/rice and lots of veggies and ask for no oils or butter. And I try for no salt too. If it's available, I drink water with lemon juice. Of course, fries and nachos are hard to say no to, and so when I do binge on that I count it in as my fat for the day. Traveling and the social world, how do you deal with that?

I have done some traveling, all the way across the US to Washington DC, in fact, and I've managed to stay raw the whole time. I do it by planning ahead.

When on the airlines, I bring my own food, usually dates and celery. Dates are a good traveling food because they can last a day or two without refrigeration and they pack a lot of calories in a small volume. Airport food vendors usually have fruit and bottled water if you must have it. On rare occasions, I may have to even go hungry for a few hours, but I can handle it because I'm committed to staying completely raw.

When I get to my destination, I plan ahead by stopping at a grocery store and buying my food there instead of relying on restaurants. Restaurants are the worst places to eat because not only is their menu selection frequently unhealthy, there's the chance that even though you may ask for no salt, who's to say they don't add other poisons like MSG?

If you really must eat at a restaurant, try to choose one to go to that has a salad bar, or one of the many new restaurants that have vegan items on the menu. Many pizza places have vegan pizzas, or vegetarian burritos. In general, the best plan is to avoid the worst food: meat, dairy, and fried foods (I hate to tell you, but the fries and nachos are fried). Lightly steamed vegetarian fare is always preferable to fried.

As for handling the social world, it may well be better to ask how does the social world handle me? Attitude is the key. I take the lead and consider my food choices healthy and mainstream, and the SAD unhealthy and abnormal. I've gone to social dinners and brought my own food, simply ate it and instead of saying anything to the people I was with, I simply waited for the questions that came and answered them in a factual manner. I've found people are more responsive from this approach, rather than me trying to give them a lecture about their unhealthy food choices.

Q: If someone chose to drink some water, would you recommend spring water, distilled, alkaline, or ionized? The reason I am asking is because some people say distilled water is dead water and it leaches calcium from our bodies. It's confusing because Paul Bragg used to say that under no circumstances drink spring water, only distilled. This is because of organic particles in spring water, which is not good for our body because it hardens joints and so on, so what is your take on that?

According to the Essential Natural Hygiene course which I completed, distilled water is the best to drink, so on the rare occasions when I drink, that's the water I reach for.

The issue of leaching minerals from our bodies is addressed in the course also, for it's a commonly asked question. Distilled water does not leach minerals out of the body tissues. What happens though, because you are ingesting pure clean water, the body is now able to excrete any inorganic minerals stored in tissues and bones that are waiting to be excreted, and this is commonly mistaken for "leeching of minerals from the body."

Why does the body store inorganic minerals in tissues and bones? Briefly, because it can only eliminate them so fast, and if it's busy with doing other things, it will store things to be eliminated, out of harm's way, until it can get to them. This is why water only fasting is a cleansing process because during a fast, the body is not busy with the process of digestion and can cleanse itself by completing tasks it needs to complete such as this.

I would also add that there's no such thing as "dead water" or "live water." Water is water and it doesn't live. It's one of those terms that are baseless.

Q: In the previous answer, you stated "in the rare occasions when I drink." You mean to tell me that you don't drink water? I thought water was essential to health?

Good point. The raw food diet is actually known as a "water sufficient diet." This means that my water needs are met from the foods I eat because they naturally contain a high percentage of water. The reason people need to drink water is because it isn't in the foods they eat – it gets

cooked out of it. They also ingest a lot of poisons like salt and chemicals which the body needs lots of water to flush out to maintain health.

The problem to me with finding good water to drink is not being able to get distilled water, but what was the water stored in? All plastics leech into the water, even the polycarbonates. It's reported that plastics are immune disruptors. I suspect even stainless steel leeches nickel also.

So when I feel the need to ingest extra fluid, to me the best thing to do is not to reach for water, but to reach for foods extra high in water content such as cucumbers, celery, and juicy fruits such as melons, peaches, pears, etc. The reason for this is because they contain the very purest source of water which has actually been "filtered" by the roots of a plant, much better than distilled water stored in any container.

One more reason to eat foods over drinking water is that the foods contain nutrients, whereas water is only water. Athletes consume sports drinks to replenish their electrolytes, but I suggest fruits as the best water to reach for because it also contains all the nutrients you could ever want all in a perfectly balanced ratio by nature – no side effects guaranteed! If you were to fast on water only for a while, then eat a piece of celery, you would be startled by how salty it tastes!

So my water needs are supplied by the foods I eat, but if I find myself sweating heavily from labor and as indicators of dehydration my urine output is low or stools hard, I will drink if I have to, but more likely I'll have lots of celery and cucumber.

Q: Can you go into detail a bit about healthy bowel habits on a raw food diet? I'm afraid I'll be running to the bathroom all the time.

It's simple, when I have to go, I answer the call. Usually it's only once a day, once in a while none for a day or even two, then it could be three times in a day! But no, I've never had a problem with running to the potty every hour or so, and I believe that reports of people doing so on a raw diet are exaggerated. Of course if you have diarrhea because of something you ate, that's a different story.

I also wanted to comment what feces from a healthy person look like. To me, a simple way to tell if you're eating enough greens is if your feces are green. On a raw diet, gone are the brown hard stools that you get from eating the SAD. Of course if your stools are hard then that's an indicator to watch that you're dehydrated. If you're eating healthy, then your stools on a raw diet should be green and the consistency of firm soft serve ice cream.

Q: My personal trainer insists that I eat meat, what do I do?

You can counter insist that the trainer work with your meatless diet or you'll find a new trainer. The trainer works for you, not you for him. Show him this booklet and/or my website. You might have to open his eyes to the fact that bodybuilding can be done without eating meat.

You can explain that muscles are good, but it's also a matter of being healthy and I'm sure you can give him loads of information about how unhealthy eating meat is.

Another option is to simply stop eating meat and see if he notices. I doubt that he will, then one day you can inform him that you've not eaten meat for 6 months and watch the confused look on his face as all his ideas about eating meat collapse in that instant.

Q: The only reservation I have about you, intelligent as you obviously are, is what am I to make of someone who eats three to four DOZEN bananas A DAY? In England this would be regarded as completely nutty. I must say I concur with this.

You hit the nail on the head exactly! The whole purpose of this booklet is to relate to people what I have done on the raw food diet the past 8 years, what I've learned, and the conclusions I've come to. You are the one who makes the decisions for yourself, and what you eat is entirely up to you. This is the essence of a concept known as freedom.

I understand it may sound a nutty to you, but in situations such as these, I have no problem doing what I do because for one, I'm doing it as an experiment. I'm not saying it's the way to go, I'm just saying "here's what I'm doing and here is the result." How else am I going to learn?

I remember from history that people were called nutty who thought the earth was round, too. I'm inspired by the quote in Dr. Graham's "Grain Damage" book, "every single advancement in human society was brought about by a non-conformist."

The advantage of bananas, besides having a higher calorie ratio than most fruits, is that they are what I term "mouth friendly." You see, I've run into the problem that many fruits just can't be eaten in large quantities because of their acidity, they hurt your mouth. Sometimes I eat a pineapple and the acid makes all the little "corners" in your mouth burn. I've even had one pineapple that made my tongue bleed! Once I ate a lot of apricots and peaches for a couple weeks because they were cheap and in season. The result was that I developed bleeding gums from the acidity. Once I stopped and returned to bananas, the bleeding went right away.

Chapter 16 - Questions from Women

Q: My question for you to include in your book is this: What about women bodybuilders? It has been hard to find good women resources for diet & weight training. I am not trying to bulk up like the men. I want to be lean, strong and healthy. What should I do as a woman? Answer this and you will have a loyal following!

Everything in this booklet applies equally to women as well as men. When you take strenuous strength training and apply it to a man, he gets big muscles due to his testosterone levels. Women don't have as much testosterone and are built differently, so they will never end up looking like a man. My point is that you can't bulk up like a man precisely because you are not a man.

I know, there are women bodybuilders you've seen on TV that look like men, aren't there? My response is yes, there are, but you won't be one of them, for two reasons: 1) Most likely these women are on steroids, 2) these women are often "one in a million" meaning that they have the genetic makeup to become that muscular, while most women don't. Look around at typical women. Not all are curvaceous like models. There's a few that are actually big boned and built sort of like a man – those are the ones that when you put on a bodybuilding program, with drugs, end up looking like a man.

Of the women I know that don't have the potential to look like a man, I've never encountered any who had muscles that were "too big." Instead, I've only encountered women that were *afraid* of getting muscles that were "too big" and in reality, there is no way they'll ever get that way. Instead, because you are a woman, strength training will only make you more firm, toned, athletic looking, and more feminine due to your body wanting to maintain a higher percentage of fat than a man. Gone will be the flabby, weak body.

The only differences for women from men is that they'll eat smaller amounts of raw food, but that will be automatic because everyone eats according to their appetite. As for the strength training, women will still lift moderately heavy weights as I recommend for men, but they won't be lifting weights as heavy as the men use. You did say that you want to be lean, strong, and healthy; this means that you have to lift what constitutes moderately heavy weights *for you*, since no one gets strong by lifting light weights.

Q: My question to you is... Is body fat difficult to lose without having to be in a gym 24 hours a day? I need to lose my stomach and tone my thighs. Will eating raw help with those areas and what exercises do I need to do?

When eating a raw diet, the body starts to work properly in its "maintain the ideal weight function." That is, the human body is not designed to carry too much excess fat. A little bit is good, but too much is not. My point being, that if you're eating raw, your problem won't be trying to lose excess fat, it just won't be there – automatically!

It's never advisable to spend that much time in a gym. This is one of most universal fallacies – that of "burning calories" to lose weight. What happens to your appetite when you increase your activity level? The appetite increases because it senses that more calories are being used so it sensibly increases the need for more calories to come in. It's merely trying to maintain your bodyweight and keep you from dieting yourself down to nothing.

Some women, I've found, carry a pad of fat on their lower abdomen that's so hard to get rid of, that the only way to really get rid of it is take your bodyfat down to such low levels that you just can't maintain for very long. So, the best advice I can offer is to eat raw and keep your bodyfat low naturally and minimize the lower abdominal fat with minimal effort. I would also encourage women to stay off drugs such as birth control and menopause hormones to avoid bloating from these drugs.

From an exercise standpoint, the best thing you can do is to get as strong as you can and increase your muscle tissue as best you can to maintain a fit and toned appearance. The best exercises you can do for the thighs and buttocks is squats, leg presses, and deadlifts. Two of the better exercises for the abdominals, (in addition to the 3 leg exercises – yes they do work the “core” abdominal muscles too) are chin-ups (or pulldowns) and pushups.

Part II – Bodybuilding How-to

Chapter 17 – On the Importance of Exercising

Why exercise, and further, why strength training?

We exercise simply because health is more than eating raw foods. There is a whole list of the requirements of health, some of which are: pure air and water, cleanliness, sleep, pure wholesome food, exercise, sunlight, rest, play, belonging, security, and more.

Health is more than eating raw foods. Sure, eating better helps a lot, but if you eat raw foods but breathe polluted air, or don't get enough sleep, will you have good health?

The same is true of exercise. It is an absolute requirement of life. Exercise aids other bodily functions such as circulation and digestion. It helps us to sleep soundly.

But there's one important point about exercise that I wish to promote, and that is, that exercise causes the body to grow and develop, and growth and development are the qualities of youth. Many adults wish to be young again, so even if you're very old, you have the opportunity to have within you a process usually thought of as belonging to youth exclusively – growth and development.

Strength training can be the most beneficial of any form of exercise. For the little amount of time it requires, it yields the greatest rewards. Through strength training we have the ability to actually change the appearance of our bodies by actually adding muscle tissue to the body. Bones may be the framework, but fat and muscle tissue fill it out and give it shape. Think of it, you can tell your body how you want it to appear!

Think of how adaptable the human body is. It's there to serve you in anything you want to do. If you wish to run, it will change and adapt so that you can run, or if you sit on a couch all day, it will adapt to that level of inability too.

As for introducing the youthful process of growth into any body, when we add muscle tissue by strength training, a whole lot more than growing new muscle is going on. All the support systems for that muscle tissue must adapt too. The bones, ligaments, and tendons get stronger, new blood vessels grow, the heart, lungs and other organs must get stronger and adapt.

Perhaps the number one reason that I exercise, aside from the appearance aspect, is that it just makes me feel good. That's also the universal comment I received from my clients at my personal training studio I used to own in California – they all experienced an increased feeling of overall well being.

So the above reasons are why I exercise, and I've been doing it since I was 16 - about 34 years now. I want to share with you the insights of what I've learned about the most time efficient method to achieve results. Do you think you have the time to workout for 10 minutes three times per week? Although my standard recommendation is 30 minutes three time per week, you can still receive benefits from a 10 minute exercise program. That's my minimum recommended.

Chapter 18 – The Dynamics of Muscle Growth

Chapter Summary: Human skeletal muscles grow in size and or strength when you perform tasks with them that are above and beyond what they have been doing.

Everyone who endeavors to build bigger and stronger muscles needs to understand exactly how muscles grow, and I'm going to explain that very simply here using 3 real life examples. Then, in subsequent chapters, I'll explain how to incorporate this knowledge into an exercise routine that produces results.

I came up with the following information on how muscles grow fully from my own observations of how the human body responds, which you'll see in the following examples, and how my own body responded from all the various bodybuilding routines which I employed in my 36+ years of bodybuilding since I started working out in my garage with homemade squat stands and a barbell on February 7, 1974.

Knowledge of how muscles grow, to me, had been very elusive. When I started bodybuilding, of course, I read all the muscle magazines. They don't tell you exactly how muscles grow, because it's so basic that it's implied – that is, lift heavier and heavier weights to build bigger and bigger muscles. I even read somewhere the story of the ancient Greek strongman named Milo, who lifted a small calf every day until it became a full grown bull and by then became a very strong and powerful man himself. This is the basic story of bodybuilding which is technically known as "progressive resistance training," which simply means that to grow bigger and stronger muscles you must gradually lift heavier weights. While this is true, there's a whole lot more to it than this, and everyone has an opinion on how to best go about it.

Let me side-step from the main topic here and explain more about what I just said as far as "everyone has an opinion on how to best go about it." Here's what happens, or has happened to me: You read a book or magazine that explains an exercise routine. The author rarely gives you a controlled study where the participants are photographed before and after, and you are given the exact routine they followed. This would give you an idea of realistic results. Instead, you are given a system of sets and reps that are recommended by the author. I ask, who is to

say that this is the exact routine that he followed? Did he modify it to make it look good for the book? Anyway, then the person reading the book frequently takes the routine makes his own changes and doesn't follow it exactly. Combine this with the genetic differences in humans, and you have the realistic fact that everybody's results are different with the vast majority of people achieving minimal results. Thus you have people writing in to the champion bodybuilders asking how they did it.

OK, with all that said, I'm going to start off with three real life illustrations of how muscles respond, adapt, and grow. I'm presenting this information so that you can know the basics of how muscles respond so that you will no longer be a slave to following the advice in bodybuilding books and magazines, but instead will have such an understanding of the mechanics involved so that you can think, experiment, and figure it out for yourself.

For my first illustration, I want you to imagine the unfortunate individual in a catastrophic automobile collision, who ends up in a body cast for 9 months. He was unable to move his arms, legs, and torso muscles for that time. The human body, especially the skeletal muscles, responds to the demands placed upon them, and in this case, with no demands, they respond by reducing their strength and size to only what is required, and in this case, our subject's muscles have become "weak as a kitten." Now when the doctor removes the body cast and the rehabilitation is started, just as a reference, the doctor asks the subject to get up out of bed and walk to the bathroom which is 10 feet away. What happens? It's a major challenge. The subject gets out of breath, tired and fatigued just doing this minor task. The good news, however, is that with favorable conditions, the muscles respond rapidly. The next day when the subject performs the same task again, it's a bit easier, and in a couple days he's performing it with ease and ready to tackle greater tasks like walking several hundred feet up and down the hospital corridors.

Next, consider the person who moves into a small apartment loft that is on the side of an existing house, and requires one to travel up three large flights of stairs to reach it. Imagine this person complaining of the fatigue in his legs because he has to go up and down the stairs several times a day for every little task such as getting the mail, the newspaper, and every time he wants to go somewhere, and then there's the added burden of making several trips to carry bags of groceries. After a week, he entertains the thought of finding a way out of his lease early as living here is too much of a "pain." However, by the time he gets around to looking for a new place and figuring a way out of the lease, another week has gone by, and actually, he has "forgotten" about the discomfort in his legs due to going up and down the stairs, it's now "no big deal." And, if he looked closely, he may find that the muscles of his legs are a bit larger or more defined. What happened is that the muscles of his legs simply adapted to the new daily task of going up and down the stairs.

Third, consider the carpenter who is preparing to build a house. For months he's busy "doing the paperwork" in preparation – getting building permits, working with the architect – but none of this involves strenuous work. Then construction starts and all day on the first day he's bending over, pounding nails, and lifting heavy loads of lumber. That night he goes to bed early

and sleeps soundly. The next morning he has a hard time getting out of bed, and he's a bit slower today but manages to finish another day of heavy labor. Of course he thinks to himself "this is hard work!" but by the end of the second week he's forgotten about how hard it is because his body has adapted again to the work load. After a month or so he finds that he can work all day long and although the work is hard, he has the energy after work for other activities.

To summarize the examples in this chapter, I point out that the human body attempts to adapt to any physical task that you ask of it. You ask it to adapt by simply performing that task, then, if the body is able to, it will adapt to enable you to perform that task. The human body can adapt to amazing tasks given time. The key phrase being, "if the body is able to (adapt)." How do you tell if the body is ready to surpass its previous performance? Simply by listening to your body. If you feel the enthusiasm to lift heavy, then you're ready, if you're tired, your body must need the rest.

Keep these three examples in mind for they are the basis of how muscles adapt as I will explain in upcoming chapters.

Chapter 19 – Bodybuilding Basics: A description of exercises

Before starting your bodybuilding program, I'm going to give you a description of exercises to use for each bodypart so you can eventually construct your own exercise routine. I'm not going to go into the details of how to perform each exercise, as there are plenty of books on how to do that. Rather, I'll describe which exercises you want to choose as the best in your situation and why. I advocate working out the entire body each session, rather than half the body one day, and the other half the next. The reason for this is that the entire body itself needs a rest because muscle groups are part of the whole body, not separate. As an example, try doing 10 sets of heavy sets of squats on Monday and you'll find you won't have much energy left or the desire to workout any other muscle group on Tuesday. This is because the support system for all the muscles, your organs get worked regardless of which muscle group is being worked, and they need to recover between workouts. So keeping that in mind, I'll list all the exercises for the entire body and we'll construct a routine as an example.

Calves: The best exercise is standing calf raises with a weight belt for added resistance around your waist. This is better than the standing calf raise machines which put the added resistance on your shoulders and compress your spine because you can add a whole lot more weight more comfortably on your hips, and doing calf raises usually requires a lot of added resistance. Another approach would be to hold a dumbbell in one hand and do one leg calf raises, then you can do multiple sets by going back and forth from right to left leg. The third choice is to use a seated calf machine, but because this bends the knee, it mainly works the soleus muscle under the main calf muscle you want to work, the gastrocnemius.

Hamstrings: The leg curl is the best exercise, using both legs. Deadlifts also work the hamstrings.

Front thighs or quadriceps: Let's start here with an understanding of the two different types of exercises, that is, compound or exercises that involve the use of 2 or more joints, and isolation exercises which are exercises that involve movement around only one joint. Compound exercises for the thighs would be barbell or dumbbell squats, leg presses, deadlifts, or hacksquats on a machine. Isolation exercises would be leg extensions on a machine.

Low Back, glutes, hamstrings: Deadlifts would be the compound exercise choice here. For an isolation exercise choose a Nautilus low back or their excellent hip extension machine, which is a rare find, but great if you can use one. Of course squats, deadlifts, and hack squats work the glutes and low back too, although on some hack squat and leg press machines the low back involvement is minimal.

Chest: Compound exercises would be bench press, dips, incline press, decline press, dumbbell presses. Isolation exercises would be bent arm flys with dumbbells or a peck deck machine.

Latissimus (upper back): Nautilus pullover is a great isolation exercise. Compound exercises are pulling movements such as pulldowns, and rowing.

Shoulders: Presses are the compound movements, lateral raises the isolation.

Biceps: All forms of curls are isolation movements that primarily work the biceps, but the biceps also get a lot of work from the pulling movements that work the upper back.

Triceps: There are many isolation exercises such as tricep pressdowns on a pulldown machine, or my favorite which is supine tricep extensions with a barbell (with your head hanging off the end of a bench, bend your elbows and lower the weight to your forehead, then straighten your arms so that the weight is once again above you with your elbows straight). The triceps also get worked from the pressing movements for the chest and shoulders, and the Nautilus pullover works them too.

Forearms: Wrist curls and reverse wrist curls.

Abdominals: The absolute best exercise is the Nautilus Pullover, followed by chin-ups or pulldowns. The reason is that you are able to add weight and progress to heavier weights, unlike abdominal crunches, sit-ups or leg lifts where it's difficult to add weight. Both are good because in the finished position one is supposed to crunch down with the abdominals. The next best choices would be tricep pressdowns on a lat machine, or push-ups as both keep the abdominals in a state of tension during the exercise. The next choice would be abdominal crunches and leg raises.

When I first started bodybuilding, and first saw a real bodybuilder, I was amazed, and my first question was, "what secret exercises is HE using?" I assumed that he had all these secret exercises that were responsible for his remarkable muscle size. Well, I'll tell you that there are

no secret exercises, but rather, how you use them that counts. So, we'll cover how to use the exercises next.

Chapter 20 – How to Start a bodybuilding program: The first month of Training
Chapter Summary: Learn proper form, increase resistance gradually.

To help you understand how to construct a bodybuilding routine, I'm going to take you along the ideal path to be followed by a beginner all the way up to an advanced trainee.

When starting, you can expect to get very sore muscles if you over do it and lift too much right away. So, I recommend starting out gradually with light weights to both prevent muscle soreness and to learn proper exercise form. I also find that when people start out using very heavy weights, they get sloppy in their form and also start throwing the weights around, both of which are dangerous and counterproductive. That's why it's best to start light and increase gradually. So to construct a beginning routine, select one exercise for each muscle group, and your routine should look like this, along with my suggested repetition range for each exercise:

1. Calf Raise 15 - 20 reps
2. Deadlifts 8 – 12 reps
3. Leg press or Leg Extension or Squats 8 – 12 reps
4. Bench Press or Dips 8 – 12 reps
5. Chin-up or Pulldown on machine 8 – 12 reps
6. Overhead press 8 – 12 reps
7. Biceps curl 8 – 12 reps
8. Tricep Extension 8 – 12 reps

Notice that I mainly chose compound exercises which are easier for beginners to perform. I will add isolation exercises later in advanced training.

Ideally, this routine should take you no more than 20 minutes to perform, and if you have your gym all set up, you could do it in less than 10 minutes, including the rest periods between exercises – but there's no reason to make it into a race, just don't dawdle. Catch your breath and go right from one exercise to the next. In some busy commercial gyms it may take longer, so try to arrange your selection of exercises to work around people the best you can, or just ask if you can work in for "only one set," or visit the gym during non-peak hours. This is why I prefer working out at home, so I don't have to wait on people and can go through the routine rapidly.

For the first week, beginners can perform the above routine 3 to 5 consecutive days if they wish. This will relieve muscular soreness. It is well known that when the muscles get sore from a new exercise routine, working out again the next day helps that soreness to go away faster.

Now, let's look at how a beginner would progress in weight for the first week. In this illustration, the trainee worked out on Monday, and by mid-day Tuesday got sore muscles, so

he worked out again on Tuesday to alleviate the soreness. He worked out again on Wednesday and then skipped Thursday, then on Friday started on an alternate 3 day per week schedule.

Week 1	Monday	Tuesday	Wednesday	Friday
Calf raise	20 lb	20 lb	25 lb	30 lb
Deadlift	50 lb	50 lb	55 lb	60 lb
Squat	50 lb	50 lb	55 lb	60 lb
Bench Press	100 lb	100 lb	105 lb	110 lb
Pulldown	80 lb	80 lb	85 lb	85 lb
Overhead Press	30 lb	30 lb	35 lb	35 lb
Bicep Curl	30 lb	30 lb	35 lb	35 lb
Triceps	35 lb	35 lb	40 lb	45 lb

The above weights are merely for illustrative purpose. The actual weights you use will depend on the equipment available and your strength level. Also, when starting out, really all one does is to guess at what weight to start with. You want to pick a weight that, in a beginner's case, allows you to easily complete 8 repetitions in good form because our purpose is to break in gradually and learn proper form so that when the weight gets heavier later, we keep using good form.

So, in the above illustration, it seems our trainee guessed at the weights about right, and got a little soreness on Tuesday, so he worked out again without increasing any of the weights. Because of the soreness and fatigue, he really didn't feel like adding weight, so he simply repeated the same workout. This is ok and has value too. This is a key concept that I will make later, that you don't necessarily have to increase the weight each workout to have a purposeful workout. On Wednesday, after a good night's sleep, he felt like he could handle heavier weights, Then on Friday he increased some of the weights again after a good day's rest on Thursday.

For the next few weeks, your purpose is to keep gradually increasing the weights on each exercise until you get to the point where you cannot increase the weight anymore. This initial period, when you first start lifting weights, I call the beginner's phase. In it, you will make your most rapid gains, and often you will be able to add weight on each exercise every workout. If, by chance you still feel tired from the last workout when it's time for another workout, simply don't add weight and repeat the previous workout, then add weight in a later workout when you feel like you can handle it.

In summary, the goals of the beginning phase of the first few weeks of working out are to (1) learn proper form, and (2) gradually increase the resistance used until you get to the point where you feel you can't increase anymore each workout, then you're ready for instructions on how to workout in the intermediate training section in the next chapter.

Chapter 21 – Intermediate/Advanced Training

In intermediate training and beyond, it's important to have a thorough knowledge of the human muscular adaptation examples I gave in Chapter 20 for this is where you use them. This is also the point where I introduce my departure from the traditional High Intensity Training philosophy of "training to failure." So let's start with the human muscular adaptation examples, which will lead into my departure of training to failure.

First, realize that there is a limit to human muscular strength. If there wasn't, then people would out-grow the exercise machines in the gym and go outside in the parking lot and be lifting their cars! Seriously, if you look at the weight stack on the exercise machines, there is a range of strength that is commonly used by most people. People's strength levels will rapidly increase to these levels during the beginner's phase, then level off during the intermediate and advanced levels, each person's ultimate strength being different due to their individual physical design.

The first reason strength increases rapidly during the beginning phase is that frequently people start with weights that are far below their maximum capacity, so they increase the weights, though necessary, but it gives the false appearance of progress.

Second, the light weights a beginner uses don't tax his recovery ability enough to slow his progress down. When we lift a weight, the body immediately starts an adaptation process to become strong enough to lift that weight on a regular basis, and this takes time. As you increase to greater levels of strength though, instead of taking perhaps a few hours for the body to adapt, it begins to take days. So if you workout on a Monday and you load yourself up with huge increases in weight that the body will require several days to adapt to, when you go to workout on Wednesday again, the body hasn't had sufficient time to adapt yet. The result? You can't handle further weight increases, you feel weaker, and fatigued. Think about it logically: the time it takes the body to adapt to lifting 1 lb. more than usual is going to be a lot shorter than if you ask the body to lift 50 lb. more than it is used to. This is why I strongly suggest small increases and not to overload your body in a single workout.

So here's my departure from traditional high intensity strength training which states, basically, that you must carry each exercise to a point of muscular failure, which means to the point where you can't do any more repetitions, or else doing the exercise is of no value to you. I say that is false. As an intermediate/advanced trainee, I have found that I simply can't add weight to each and every exercise every workout like I did as a beginner. If I try to go to failure on each and every exercise every workout like the high intensity school of thought says, then I find that every time I've tried this, after about a 2 to 2 ½ week period, I'm so tired and exhausted that I'm forced to take a layoff. My body simply can't take it! This then is my definition of overtraining: asking your body to adapt faster than it is able to, and the body responds by actually getting weaker because it becomes exhausted, and you'll become so tired that you will lose all interest in working out.

So I've used two solutions in the past, one works, and one doesn't. The first is to take a 10 day layoff and repeat the process again. This is like getting on a treadmill: it takes you right back to the point of overtraining again, forcing a layoff again in a few weeks. Doing this I was merely repeating the mistake of overtraining over and over again.

The successful approach is when I increase the resistance level to the point of near overtraining, and then simply stop adding resistance. Simply repeat the same workout again and again, at the same frequency of 3 times per week, and let the body adapt. This is where knowledge of the human muscular examples in the chapter on the dynamics of muscle growth need to be remembered. Do you remember the example of the carpenter? He doesn't go to work for just one day, rest several days until all the soreness and fatigue go away, then go back to work for a day. No, he goes to work every day and his body adapts to the same workout load. Notice I said the same work load. This is where the carpenter differs from the weight trainee, and where strength training differs from manual labor.

The carpenter is doing the same work load every day. He's lifting 2 x 4's, pounding nails, moving around. Sure. it may vary a bit, but for the most part, it's the same work load. The 2 x 4's all weigh the same, and he does it for 8 hours in a day. The strength trainee is different in that he's asking the body to lift heavier and heavier weights. It would be as if you asked the carpenter to lift 2 x 4's on Monday, 2 x 8's on Tuesday, 2 x 12's on Wednesday, then 90 lb. bags of cement on Thursday, and on and on. Instead of adapting, he would become exhausted and have to take time off work, the same as the weight trainee being forced to take a layoff.

The solution then, is for the weight trainee to get to a level just before the point of exhaustion, then like the carpenter, keep repeating the same level to let the body adapt. This usually takes about 2 weeks, but I have pushed myself so much in the past that I have required almost 4 weeks to adapt.

So the purpose of intermediate/advanced training is to take your routine and get the weights as heavy as you can in good form. Then when you find that you can't increase the weights any further, just repeat the same workout with the same weights for about 2 weeks. Then, it's up to you, by how you feel about your resistance levels in the exercises you're doing, to decide if you are able to increase the resistance any further. Typically, you will find that in some exercises, you simply cannot add any more weight. In other exercises, you may feel that adding another 5 lb. is no big deal. If you feel that you can add weight to all your exercises, you're either very lucky that you're getting stronger on all of them, or you simply haven't gone heavy enough on them yet. In either case, you must decide how many exercises you want to increase the weight on. It will depend on what's going on in your life because if you choose to add weight on all the exercises, realize that you could be very fatigued the next day. Instead, I found it best to add weight to maybe 2 – 4 exercises, even though I could add weight to more exercises, to prevent any possibility of overtraining. This way, if my body could have handled increases on more exercises easily, well, I can always add weight to those exercises next week. In my mind, and speaking from the experience of overtraining, it's better to add weight to fewer exercises than too many.

Now we're ready to talk about that beginner's routine from the last chapter and see how to advance it into an advanced routine that will give you more muscle size. Strength will come along with the size, but I'm primarily concerned here with providing you a routine that gives increased muscle size so you don't look like a skinny raw feeder. So, with the above routine so far, your goal has been to increase the weight on each exercise to the point where you are using as much weight as you can comfortably handle. I say this because if you keep increasing the weight, you will be using weights that are just too cumbersome to use – meaning the reps begin to slow down and the weight is just not manageable. So don't go that heavy! The best description of how heavy of weights to use comes from one of famous bodybuilder Franco Columbu's books. He describes the proper weight to use for each set as such: "heavy enough that you have to work for the last couple reps of a set, but not struggle for them." I always strive to keep this in mind.

But why do we attempt to keep increasing the weight? It's because we've been told over and over again that the heavier weight you use, the bigger muscles you will get. This, of course is true – but only to a point. It's true if you stay on a 3 times per week lifting schedule, but false if you attempt to workout once a week or less and keep increasing the weights more and more.

So, in keeping to a 3 times per week workout schedule, here's what that beginner's routine looks like now:

Calf raise	80 lb
Deadlift	120 lb
Squat	120 lb
Bench Press	200 lb
Pulldown	200 lb
Overhead Press	70 lb
Bicep Curl	40 lb
Triceps	60 lb

You're a lot stronger now, aren't you? But, the downside is that you want to add more muscle and these weights are just so heavy that even after several weeks of trying to increase the weights, they're stuck – just won't go up.

So what do you do now? You're at a crossroads. You realize that you can't do less, because you just made great progress by getting to this point and to do less would be to go back to where you came from. And if you continue to do the same, you'll just stay where you are - so that won't lead to more progress. So the only solution is to do more – but more what? You can't do more weight, so the only solution is to do more sets, and here's how to do that.

The next step would be to expand your routine and add some isolation exercises. For some muscle groups like calves, it already is an isolation exercise and there are no compound exercises, so we just add another set. So now your routine could look like this:

Calf raise	1 x 15	80 lb
Hip extension	1 x 8	80 lb
(if no hip extension do low back machine)		
Deadlift	1 x 8	120 lb
Calf raise	1 x 15	80 lb
Leg Extension	1 x 8	60 lb
Squat	1 x 8	120 lb
Chest fly	1 x 8	60 lb
Bench Press	1 x 8	200 lb
Nautilus Pullover	1 x 8	120 lb
Pulldown	1 x 8	200 lb
(if no pullover do another exercise like compound rows)		
Lateral raise	1 x 8	20 lb
Overhead Press	1 x 8	70 lb
Bicep Curl	1 x 8	40 lb
Pulldowns	1 x 8	150 lb
Triceps ext.	1 x 8	60 lb
Dips or chest press	1 x 8	100 lb

Now your routine has grown to 16 sets and you should be able to complete this routine in 30 minutes or less. For the new exercises, you will need to start light and gradually add weight each workout until you get to the point where the weights are as heavy as you can handle, just like on the exercises you have been doing. Keep in mind that you don't have to add all the exercises at once – build up to it because keep in mind that everything you add will make you tired the day after the workout. So to avoid this, judge how you feel the day AFTER the workout in deciding when to add sets or weight. As for the exercises you have been doing, if you are capable of going up on them, then do so, otherwise, to keep using the same weights is ok.

When you get to the point where you cannot increase on any of the new exercises, the next step is to keep all the weights where they are and keep working out on a 3 times per week schedule, until you get to the point where you don't feel fatigued on the days off between workouts, this signals that your body has adapted to this routine and is ready for more. In fact, this is a key point that you want to keep in mind as you add weight to all the new exercises in this routine, that is, as you add weight to the new exercises, only do so if you don't feel tired from the last workout. Here's an example: You workout on Monday and if you are tired from it

on Tuesday, then don't add anything on Wednesday. If on Tuesday you don't feel that tired from Monday's workout, that's your signal you can go ahead and add weight on Wednesday.

So now you have made some progress and are handling heavier weights on the new exercises we added, but have reached the point where you feel you can't go heavier, so let's add some sets so your routine now looks like this:

Calf raise 1 x 15 80 lb

Hip extension 1 x 8 80 lb
(if no hip extension do low back machine)

Deadlift 1 x 8 120 lb

Calf raise 1 x 15 80 lb

Hip extension 1 x 8 80 lb

Deadlift 1 x 8 120 lb

Calf raise 1 x 15 80 lb

Leg Extension 1 x 8 60 lb

Squat 1 x 8 120 lb

Leg curl 1 x 8 60 lb

Leg Extension 1 x 8 60 lb

Squat 1 x 8 120 lb

Leg curl 1 x 8 60 lb

Chest fly 1 x 8 60 lb

Bench Press 1 x 8 200 lb

Nautilus Pullover 1 x 8 120 lb

Pulldown 1 x 8 200 lb

(if no pullover do another exercise like compound rows)

Chest fly 1 x 8 60 lb

Bench Press 1 x 8 200 lb

Nautilus Pullover 1 x 8 120 lb

Pulldown 1 x 8 200 lb

Lateral raise	1 x 8	20 lb
Overhead Press	1 x 8	70 lb
Bicep Curl	1 x 8	40 lb
Pulldowns	1 x 8	150 lb
Lateral raise	1 x 8	20 lb
Overhead Press	1 x 8	70 lb
Triceps ext.	1 x 8	60 lb
Dips or chest press	1 x 8	100 lb
Bicep Curl	1 x 8	40 lb
Pulldowns	1 x 8	150 lb
Triceps ext.	1 x 8	60 lb
Dips or chest press	1 x 8	100 lb

Again, like the last time we added new exercises, this is a lot of sets to add, so like the advice I gave last time, take your time and add a set here and a set there, but not all at once. The guideline is to add sets by how you feel the day AFTER the workout, based on if you're tired or not.

If you follow this routine and get to the point where you're doing the final routine here – that's about 33 sets, which you should be able to complete in about 30 to no more than 45 minutes, you will see an increase in your muscle mass.

Chapter 22: Avoiding overtraining – The Key to Success

What is the most common error and roadblock to progress in a weight training program? Without a doubt, it's overtraining. But, I myself included, most people don't think they're overtraining, when in fact they are. So here's a little story about how I came to realize that I could easily overtrain and how I came to this conclusion.

I first started working out in my dad's garage in 1974. I read all the muscle magazines and every month I put together the latest and greatest routine guaranteed to give me the best results based on the new knowledge I gleaned from the latest bodybuilding magazine. I remember starting out doing squats with my bodyweight of 125 lb. I added 5 lb. to the bar each workout, training on a 3 times per week schedule. It felt great to be adding weight to the bar which meant that I was getting stronger and bigger muscles. I gained 10 lbs of bodyweight that first month.

I also felt great after each workout and was ready to keep adding weight to the bar. But then, when my squat weight hit 175 lb. something happened. I got stuck. I couldn't add weight

to the bar, it was getting too heavy, and my progress stopped. Although I didn't know what I was capable of ultimately, now I do. I eventually went on to squat 335 lb for 8 reps at my peak several years later. But in the meantime, I was stuck, so I changed my routine and started over. This allows one to rest by using lighter weights until you build back up to your sticking point again.

Then I joined a commercial gym. I worked out with the owner who quickly added lots of sets to my routine, up to 10 sets per body part working out 5 days per week. I remember being tired all the time, but kept up with him the best I could. I even started entering some bodybuilding contests but didn't win.

Then a well meaning friend who observed my workout fatigue and lack of progress that I desired, and realized my aptitude for building an above average bodybuilding physique, gave me these "Nautilus Training Bulletins" number 1 & 2 written by Arthur Jones to read. "The problem he told me, is that you're overtraining – you're doing too much. Cut back on the amount of your workouts, but increase the intensity by how hard you work and you will continue to make progress."

Well, it all sounded good, and I have been attracted to that message ever since then, but the advice has shown over the years to deliver minimal results beyond what I was doing with the longer routine.

Why, you ask? It makes so much sense, it's so logical, after all, if you're doing too much to allow your body to recover from overly long workouts, wouldn't it make sense to just work out shorter and harder so there's less to recover from and more room for the muscles to recover from the workout allowing growth to occur? Well, yes, at first glance it does, but in practice it doesn't, and it's because of what they don't tell you because of what they don't understand.

You see, it appears that decreasing the amount of exercise will allow you to recover and grow, and that would be true if you didn't increase the weights. But what happens is now that you're doing less, you're also lifting heavier and heavier weights – and here's what they don't tell you: yes, doing too many sets can lead to overtraining, but it's also possible to overtrain just as much or worse by lifting too heavy because lifting heavy weights is very demanding on the body, as is adding sets or weight too rapidly.

So here's what happens when one starts out on a brief high intensity program: You make progress initially, then you hit a point where the body cannot recuperate between workouts and you start the next workout weaker than the previous workout. The result is that on this program you will get stronger, peak, then begin to get weaker as you overtrain. And you'll wonder what happened. "How could I be overtraining – I cut back on the amount of sets I was doing?"

Well, it's because you didn't understand intensity and what it is, so I'll tell you. For all practical purposes, intensity is the amount of weight you use in a set. Volume is the amount of

sets you do. I've come to respect intensity and what it can do as far as causing overtraining. I've found that as I get stronger, I can overtrain myself in as little as 30 seconds of exercise, and here's an example of how you can do it: get as strong as you can, then instead of your regular workout, simply do a set of deadlifts with as much weight as you can. I did this once when I was typically using about 300 lb. for deadlifts in my workouts. What I did was load 405 lb. on the bar and did only 4 reps – less than 30 seconds. The result – I was tired and fatigued for 3 or 4 days – overtraining.

I recently overtrained again using deadlifts. This time it was from consecutive workouts of adding too much weight to the bar. Here's how it went: Monday 180 lb for 8 reps, Wednesday 190 lb for 8 reps, Friday 200 lb for 6 reps, Monday 210 for 6 reps, Wednesday, 220 lb for 4 reps, Thursday & Friday I was so tired and exhausted that for two days I could not even hold down a job – I only wanted to sleep all day, sit in bed and do nothing.

This illustrates also where the present day high intensity trainers and advocates are going wrong. I am now aghast at the practice by some trainers of bragging how hard they can train their clients with just one to three exercises and once a week or less, that the client requires 30 minutes or so of "carpet time" that is, time spend on the floor feeling sick and recovering from the workout. And of course the client has nothing to show for it because of these workouts in the way of muscles because of the overtraining and infrequent workouts, yet these people because of their ignorance routinely pay \$35 to \$70. per workout for this type of abuse. The client's justification for it is always something along the lines of "but look at all the weight I'm using – because of that trainer's guidance, I'm so strong now I can use the whole weight stack on the machine." To which I respond: "so what, where's your muscles?"

Now I ask you, for all the benefits weight training has to offer, is it really worth it to put your entire life on hold just so you can lift a few more pounds? Well, I've come to the conclusion that it isn't, and after that experience, which I have repeated many, many times in my bodybuilding career in the name of "making progress" I decide that I shall never ever again workout so hard that I cannot function the next day.

In fact, I've gone beyond that even – and here's my recommendation for you and me. I've changed the criteria for when to add sets of weight to a bodybuilding routine. Let me explain. Typically, during a workout we feel strong and during the workout make the decision to add sets or reps or weight to the bar to make progress. The problem with this is that you are only guessing at how much to add, for if you add too much, you risk being tired the next day from adding too much.

So here's my solution: instead of judging how much weight to add during the workout, judge whether to add to your workout by how you feel the day after the workout. This is a very, very important concept, so read carefully and I'll explain it again.

On a Monday, for example, you workout. If on Tuesday you say, "wow, I'm full of enthusiasm, I'm full of energy, and that Monday workout was good, but it was too easy!" Ok,

then on your Wednesday workout you could go ahead and add some weight, sets, or reps to your workout. Then on Thursday you would again judge whether to add to Friday's workout based on how you feel. If you're not sure, maybe a little fatigued, or definitely if you're very fatigued on Thursday, by all means don't change Friday's workout, keep repeating Wednesday's workout until you feel ready to add.

So my conclusion to absolutely avoid overtraining is to judge how you feel the day after a workout. I say that you want to keep your energy level as high as possible the day after a workout and ideally you want to keep yourself in the zone of always feeling like you're not quite working out enough, keeping yourself in the realm of undertraining just a bit. By doing so, you will not only be happier and full of energy, but will assure yourself of continued progress, for as Arthur Jones explained in his Nautilus Bulletins, the body will always adapt to a workout by becoming bigger and stronger if it can. Those last three words are critical. By avoiding overtraining you will assure yourself that your body will and can continue to adapt to each and every workout for your continued progress.

Chapter 23: Questions on Bodybuilding Training

Q: In your previous chapter on advanced training, could you give me a simple routine that I can do with only a bench and maybe a barbell and some dumbbells at home? I don't have a low back machine or pulldown or all the fancy machines they have in a commercial gym.

Sure. I would like to point out that you can make some fantastic gains with just such equipment working out at home. The main reason to workout at home is to save money on gym memberships, but also there's the time factor. When I belonged to a commercial gym, there was time spend traveling to and from, changing clothes, showering, and waiting for other people during the workout. I was spending 2 hours or more for what would have taken me 30 minutes at home.

Ok, here goes:

Calf Raise with dumbbell
Deadlifts with dumbbell or barbell
Squats with dumbbell

Calf Raise with dumbbell
Deadlifts with dumbbell or barbell
Squats with dumbbell

Dumbbell bench press
Bent rows with dumbbell

Dumbbell bench press
Bent rows with dumbbell

Lateral raise with dumbbell
Overhead press with dumbbell
Biceps curl

Lateral raise with dumbbell
Overhead press with dumbbell
Biceps curl

Overhead triceps extension with dumbbell
Dips, chest press, or overhead press

Lateral raise with dumbbell
Overhead press with dumbbell
Biceps curl

Overhead triceps extension with dumbbell
Dips, chest press, or overhead press

I want you to observe that when I put a routine together, I like to alternate pushing and pulling exercises. This gives a muscle group a rest while the opposing muscle group is being worked and allows you to keep on exercising instead of standing there resting between contiguous sets.

Here's how it works: for chest and back exercises, I alternate chest press which uses the triceps, with rows that use the biceps. Overhead press using the triceps is alternated with bicep curls. For the legs we don't have a leg curl to alternate with squats and deadlifts, so we simply do calf raises instead so the thighs have a chance to rest.

Q: How important do you think the short rest between sets is in regard to your results (size and hormonal release and/or cut)? I can see that you do have great abs even though you don't do cardio—I don't have great abs and my knees hate cardio. I've been doing "pseudo-HIT" with longer rests between sets to emphasize strength, but after reading about the Colorado Experiment and such, I'm considering dropping the rest between sets to about one minute. Do you have any thoughts or recommendations on that?

First, I want to respond right away to a bodybuilding myth you mentioned, and that is, that having great abdominals has absolutely nothing to do with doing "cardio." People are under the mis-guided perception that by doing lots of low intensity exercise they will burn calories off their midsection revealing this great set of abdominal muscles – this is absolutely false. The truth is that when you do this you put yourself on a "treadmill" of getting an increased appetite from all that exercise, which causes you to want to eat more, which makes you hungrier because you're trying to eat less to lose, and you will fail because no one can go hungry the rest of your life – your appetite will win in all cases. So what is the answer to great abs? Simple – get off the treadmill and get into the weight room, build some muscle (which cardio won't do) and get off the junk food by eating a healthy raw food diet.

Yes, the shorter the rest between sets, the higher the intensity of the workout. Remember, my definition of intensity is how hard the muscle is working *per unit of time*. This means that not only is the speed of each set important as in lifting 500 lb. lifted 10 times in 20 seconds being more intense than 500 lb. lifted 10 times in 40 seconds; but a workout is more intense when 10 sets are performed in 10 minutes instead of 30 minutes. The intensity of a shorter workout has an overall effect on the entire body, not just individual muscle groups. There is such a thing as overall or indirect effect. This means that when the largest muscles of the body are worked hard enough to stimulate growth, the entire body grows, even smaller muscle groups that were not directly exercised.

From studying bodybuilding books, I remember reading that Arnold, in pre-competition training went to 30 seconds (or less) of rest between sets. He performed “super sets” – alternating sets between opposing muscle groups such as biceps and triceps. He did “giant sets” four different exercises back to back before resting, all done “to save time” (translation - it raised the intensity of his workouts). The result was that he increased his definition and cuts, (translation – he reduced his bodyfat by decreasing his food intake and at the same time his muscles grew from the increased intensity.)

Franco Columbu’s reported training in his books was also at a fast pace of 60 to 90 sets per hour, as I remember reading.

Also, consider some of the routines that Arthur Jones (inventor of the well known Nautilus Exercise machine who revolutionized the field of exercise by promoting short and intense workouts) was using on bodybuilders in the 1970’s when he was training bodybuilders.

Here’s a torso routine from a Nautilus advertisement in the 1970’s that Sergio Oliva was using in preparation for an upcoming contest:

- 1 – One set of 15 repetitions Nautilus Pullover
- 2 - One set of 12 repetitions Nautilus Behind the Neck (isolates lats)
- 3 – One set of 12 repetitions Pulldown to behind the neck
- 4 – One set of 10 repetitions Pulldown to chest

And here’s what Arthur Jones had to say about the above routine: “The above exercises – performed “in cycle” . . . requires a total of less than 4 minutes to perform (sounds like the workout pace I described: one set per minute). Sergio will perform TWO such cycles in each of three weekly workouts – with no rest at all between exercises in the cycle, and with only one minute of rest between cycles. Thus his total training time for the back is 8 minutes per workout, or 24 minutes per week.”

And here’s an arm routine from another Nautilus ad from the 70’s. I’m including it here in case you wish to try it:

1 x 10 Barbell curls

1 x 12 Triceps isolation machine
1 x 12 Bicep machine
1 x 15 palm up wrist curls
1 x 15 palm down wrist curls
1 x 12 Triceps isolation machine
1 x 10 parallel bar dips, (immediately after triceps machine)
1 x 10 Bicep machine
1 x 10 palms up pulldown to chest (immediately after bicep machine)
1 x 15 palm up wrist curls
1 x 15 palm down wrist curls

Here's Arthur Jones' instructions: "Properly performed, the above arm workout requires approximately seven minutes and twenty seconds of elapsed training time, and best results will always be produced if the entire workout is completed in less than eight minutes. Training at a slower pace will reduce results – and performing more sets will also reduce results in almost all cases. Many of our trainees are producing very good results from arm workouts of approximately half the length of the above outlined training program."

Notice that Jones was using more sets in those days when he was working with actual competition bodybuilders, when gaining muscle tissue was an necessity.

My own training confirms the best results in mass increases when working out at the same fast pace. I will caution you, though, to reduce the rest between exercises gradually, for merely racing through the workout and reducing the poundages because you're out of breath will only result in reduced size. Sure, you may be using too heavy of a weight and need to reduce it to a manageable resistance, but going ridiculously light is over doing it.

Q: Have you ever used Static contractions or negative only in your training and obtained any results using them?

I've tried them on several occasions with absolutely no results. I studied a book on it and applied what they said. It was funny, but the book had the results of this study they did and one subject gained something like 29 lb. of muscle in 8 weeks or so. To me, that's an amazing success, and if I published the study, I'd be darn sure to have standardized before and after photos of each of the subjects in the study, especially the subject who gained 29 lb. But, there were no photos, and coupled with my own experience, I don't believe the book or the results of their study.

Negative only training I've used in this manner: I strapped about 100 lb. around my waist and did the lowering portion of chin-ups only, then I would climb up steps (on a Nautilus multi-exercise machine) and lower myself again. I would repeat until I could no longer control the speed of descent safely. I would perform 8 to 12 repetitions. I've used them enough to determine that they don't contribute much to results, and I've found normal repetitions to be more valuable.

I've come to the conclusion that negatives don't produce increases in muscle size for me because they exhaust the muscles too completely, causing the body to need too much recovery time. You just can't train with negatives on a 3 times per week routine – it is just too much to recover from. Standard repetitions where you lift and lower the weight are more than adequate to produce great results so that's what I stick to.

Q: Why don't some of your routines have squats, the best overall exercise in the world?

For several reasons. First, although squats are a very good exercise, in my opinion, they are not essential, due to a few disadvantages.

The disadvantages are that many people don't use proper form, thus leaning forward too much and venturing toward injuring the low back. The bar can compress the upper thoracic vertebra, people can fall or trip coming off the squat rack, and sometimes home gyms don't have the set-up for them.

To get around these disadvantages, I've found that if you really want to do squats, the best way is to do dumbbell squats. Hold the dumbbells in front of your shoulders as you squat. This shifts the center of gravity of the weight from your back to your front, causing you to hold your torso straighter during the exercise putting more emphasis on the thighs, rather than using the low back. Thus it really becomes a "front squat" exercise, as if you were holding a barbell to the front of your shoulders. If you need dumbbells that are too heavy to hold this way because you're so strong you need a lot of weight, then do a set of another thigh exercise such as leg extensions, leg press, or deadlifts immediately prior to the squats. You could even do a complete cycle of deadlifts, leg extensions, and then squats – this will decrease the weight of the required dumbbells substantially.

Q: You mentioned that squats were not essential?

Yes, that's right, they're not. You could replace squats with a combination of either leg extensions and deadlifts, just leg press, or just deadlifts.

I want to point out an important and rather overlooked exercise, and that's just regular deadlifts. It is perhaps the most valuable exercise there is, and if I had to pick just one exercise to do for the entire body, it would be regular deadlifts. It is thought of as a low back exercise, but it also works the trapezius and latissimus of the upper back, and the front thighs and glutes. It also works the hamstrings, so a leg curl machine is not essential, particularly if you have a home gym with limited equipment.

For myself, since my frontal thighs have always been my strong point, and grow rather easily, I find that just doing deadlifts is enough to work my thighs. For people whose thighs are not their strong point, then I would recommend doing more such as squats followed by deadlifts, or leg extensions, squats, then deadlifts.

Q: What do you consider to be “good form?” There are those who advocate very slow repetitions, and those who advocate “normal” or faster speed repetitions. Which do you find works best?

All my training career I just worked out like everyone else with a “normal” speed of repetitions, but then in 1999 I became a Master certified instructor by a fitness organization promoting a very slow speed of training on a very infrequent basis.

I entered all my bodybuilding contests when I was training using a normal speed of motion, not extremely slow such as 5 or 10 seconds to raise and lower the weight, and I’ve since formulated the opinion that a normal, or faster speed of movement is much better for producing muscle tissue gains than a slow speed of movement. Please get my point very carefully here- I’m not advocating throwing weights around with extremely fast and sloppy repetitions, no, I advocate lifting in a controlled manner, and in doing so, a set of 8 repetitions should take you about 20 to 30 seconds to complete. In the reading material promoting slow speeds, they associated increased strength with increase muscle size. I found that I did get much stronger training slow, and I worked out less frequently at a once per week interval. I even experimented with less frequent training intervals and found that my muscles shrunk to their smallest levels.

I’ve since went back to a normal, speed of motion, and noticed better results, without any injuries. One of the main benefits proclaimed by advocate of the slow method of weight lifting is that it eliminates any momentum, thus preventing injuries while working out. They say that if you workout fast, it’s impossible to avoid momentum, and instead of lifting the weight, you’re really throwing the weight and the muscle isn’t working as hard as if you were to slow down and eliminate momentum. I now believe that a faster speed of movement is preferable because it produces better results, and I’ll explain why.

One day I was walking up a steep hill going from a boat ramp to a parking lot. It suddenly occurred to me, that there’s a difference between walking up this hill slowly, and trying to run up it as fast as I can. If I take my time and walk up the hill slowly, I can travel the entire distance without having to stop and rest or even raising my pulse! If I run up the hill as fast as I can, within about 20 seconds I will be forced to stop and rest several times (because I’m breathing so hard) before I reach the top of the hill.

So what’s the difference between walking up the hill and running up it? All in all, I’m doing the same amount of work, aren’t I? I’m moving my 150 lb. bodyweight up about 1/8 of a mile on an uphill grade. The difference is the speed in which I’m doing it. In walking, it takes me about 5 minutes to do it, whereas in running, if I could do it without stopping, I would be doing the same amount of work in much less time, maybe only one minute.

This real life experience helped me formulate my definition of intensity, that being that intensity is the amount of work performed *per unit of time*. That is, the more work performed

in the shorter the time, the greater the intensity. Intensity is the same with the sun causing a tan, the greater the intensity of the sun, the shorter the time period required to produce a sunburn.

So I took this real life experience and applied it to what I saw in the gym. I observed that using slow training, by lifting the weight in 10 seconds and lowering it in 10 seconds, that one repetition took 20 seconds to complete. A complete set took anywhere from a minimum of 1 minute and 20 seconds (80 seconds) for 4 reps to a maximum of 2 minutes and 40 seconds (160 seconds) for 8 repetitions. During a set of leg presses, for example, most clients performed 8 or even more repetitions, as in this exercise they couldn't handle a weight for only 4 repetitions as it would be so heavy that they wouldn't be able to handle it and their form would crumble making them prone to injury with even this extremely "safe" way of lifting weights very slowly. By the end of the set, the client is usually breathing hard from a set of leg presses.

In contrast, using a faster speed of movement, I found that I could perform a set of leg presses in only about 20 seconds! How did I determine 20 seconds? I timed it. I also watched videos of Casey Viator working out, and timed many of his sets, and on average, a set takes him about 20 seconds to complete about 8 repetitions.

The difference I noticed between the two protocols was very similar to walking versus running up that hill at the boat ramp. After only 20 seconds on the leg press, I finished my set breathing hard and with an elevated pulse. I also notice that if we were to interrupt the set of leg presses using the slow method after only 20 seconds, we would find that the breathing and pulse are no where near as elevated as doing the faster repetitions after 20 seconds. Why?

Yes, why? The slow method is purported to work the muscle more thoroughly and be more efficient. Upon my closer examination, I determined that with the faster speed, *even though some momentum is involved*, the muscles are still working harder. Just how do we know the muscles are working harder? Immediately we can see that the breathing and pulse are elevated more in less time, this being conclusive proof that the muscles are working harder.

I also need to explain the role of the heart and lungs and the fallacy of "cardio" training. When people do "cardio" work, their goal is to work the heart and lungs. They frequently forget that what they're really doing is simply working the leg muscles, and in response to the leg muscles working, the heart rate increases to supply more blood, and the respiration increases to put more oxygen in that increased supply of blood. It's impossible to work the heart and lungs without involving the muscles, it can't be done.

The harder we work the muscles, the greater the pulse and rate of respiration. The harder the muscles work, the greater is their demand for blood and oxygen. This is a fact.

Strength training can work the muscles so intensely that Arthur Jones said that after you complete a set of leg extensions followed by leg presses on his compound leg machine, that you

should be breathing like “you just climbed a tall building with your car tied to your back.” (That’s what I enjoy about his writing, is his colorful analogies.)

So I have evidence that proves to me that one of the claims for the benefits of slow training is false. The truth I found is that using a faster speed of movement causes the muscle to work harder during a given period of time than a slow speed, thus the intensity is higher with a faster speed of movement.

After spending a period of time following the slow training procedures, I changed back to a fast style of training keeping the analogy of running vs. walking up the hill in mind. I trained with fast repetitions and with short rest between sets, and my upper arms gained 7/8” and I got in shape to enter a bodybuilding contest at age 48.

I also read articles by the promoters of the slow style of training who said that this training was so efficient and so logical, that if I didn’t build any muscle then I didn’t have the genetic potential to do so, as it was the fault of my genes. What caused me to look for an answer and to push forward on my theories is that I knew this argument was false because my muscles were much bigger when I was younger, and if it worked, then I should at least see some improvement, not losses!

What about injuries, you ask? The slow method people proclaim that if you use fast repetitions, you’ll almost instantly cripple yourself by ruining your joints. I have to report that I sustained absolutely no injuries. I agree, I have been in many gyms and I see people in there really throwing the weights around, and I agree that these people are in danger of injury and frequently do get injured. But, *even though I admit that some momentum is involved in faster repetitions*, the amount of work the muscles are doing is still of high intensity, and by using good form (lifting faster but in a controlled style), I personally have sustained no injuries.

As for injuring the joints, I believe that there is hope in the raw food diet. Degenerative joint disease, to me, is not “normal,” it is the result of eating animal products, and then the joints are unable to repair themselves from normal wear and tear, unable to continue running and exercising as we get older. Instead, I have hopes for the raw diet not causing degenerative joint disease like an animal product based diet does.

If I use a faster speed, isn’t momentum doing all the work and the muscle doing nothing, you ask? No, that’s not true at all, for if momentum were doing all the work, then you could continue a set all day long, for the muscles aren’t doing any work, and you would never get tired! Further, if you aren’t doing any work, then you wouldn’t experience a burn in the muscles, and your breathing and pulse wouldn’t be elevated either, would they?

Also, If fast training is ineffective, then why do I get so fatigued the next day? Fatigue is a sign of an effective workout, and that the muscles are growing.

Selecting the correct exercise poundages can make a big difference, and I believe that a common mistake is using weights that are too heavy. So now when I select an exercise

poundage, I think of a bell curve. On the left are ridiculously light poundages; in the center, manageable poundages that can be used for faster repetitions; and on the right, heavy poundages that make for very slow repetitions. In the past, I would select as heavy a weight as possible, causing me to slow down the rate of the repetition. Now, I select a lighter, more reasonable repetition, because I understand that I can lift more in the same period of time with a lighter weight, and maybe with higher repetitions.

I also keep in mind that I'm in the gym to build strength, not to demonstrate it. Yes, there is a correspondence with increased muscle size and the amount of weight that is used, but now I know that this is only within the context of achieving lifting more weight in a given period of time.

And finally, here's an example you can try using fast and slow speeds on the calf raise, which is perhaps the best exercise to do this on. As you perform a set of calf raises, striving to reach 30 reps, you'll notice that as you pass 20 reps, if the weight is right, you'll start to get tired and slow the reps down. At this point, instead of allowing yourself to slow down, try as hard as you can to speed up! You'll notice that as you speed up, the calf muscle starts to burn, indicating its working hard and fatiguing. Then, as you start to get a burn in the calf muscle, slow the reps way down and feel the burn start to diminish. Pause in the bottom position and stretch. Do a very slow rep, the burn can go away. At this point, raise your heels to the very top position and perform what are known as "burns." These are short 1 inch movements at the very top range of the calf raise. To perform them, drop your heels only about 1 inch, then go back up. Repeat these burns as fast as you can and you'll find out real quick why they are named burns!

This example using calf raises demonstrates the effectiveness of fast repetitions when exercising a muscle, because when you can make a muscle burn, it's a good indicator that you're working that muscle hard enough to stimulate growth, in addition to workout progression of weights used and workout time.

Q: Are size and strength related? That is, is a stronger muscle always a bigger muscle?

From my experience I can say that you can have what appears to be a stronger muscle, but not a bigger muscle. I say this from observations and my own experience.

While exclusively doing slow training protocol I mentioned in an earlier question, my exercise poundages went way up, but at the same time, to facilitate these "increases," I worked out using fewer exercises and less often. Even so, you would think that using heavier weights would cause some increase in muscle size, but it didn't happen. Not only in myself, but in observing all the clients that worked out with the slow method, my first reaction is that "these people look like they don't work out."

So I would say that if you want to increase your "strength" and don't want to see any increase in muscle size, then use a slow training speed and workout once a week or even less, such as once every 7 to 10 days.

Q: How do I monitor my progress and tell if I'm gaining or losing either fat or muscle tissue?

There are several methods to do this.

You can take measurements, taken at the same time of day, and compare them. The best indicator of gaining muscle is if your waist, hip, and thigh measurements are decreasing or staying the same, and arm measurements are increasing.

You can use fat calipers to do a pinch test to see if your fat is increasing or decreasing. A body fat measuring scale using electrical impedance can give you an estimate of your body fat percentage. A plain bodyweight scale will tell how much you weigh.

You can take photos which are standardized as much as possible using the same camera height, distance from the subject, and lighting.

The best method of judging your progress is to use as many of the above methods as you can, then sit back and compare all the results to get an overall picture of where you are headed.

Q: What's proper breathing while lifting weights?

Simply exhale when you lift the weight, and inhale as you lower it. Avoid holding the breath even momentarily.

Q: I would think you would need to do more than 8 exercises in 10 minutes. To me, that isn't enough exercise to get stronger.

Ok, let me ask you a question. What if you did only one exercise? Would the body respond by getting stronger or would it refuse and say "it's not enough, you're going to have to do more?"

My response is that if you only did one exercise, one set that took you about 20 seconds, and endeavored to increase the weight on a regular basis, yes you would get stronger. The principle is that it's not the amount you do, it's the asking the body to adapt and grow stronger by lifting heavier over time as the body adapts, and it will.

The reverse of your question is quite true though, as it is quite possible to do too much exercise, or physical activity so much so that the body simply can't recover and replenish itself.

Q: What are the best conditions to work out in?

The gym should be cool, under 70 degrees, and with low humidity if possible. The optimum temperature is about 61 degrees. You should wear a T-shirt and shorts to avoid overheating.

When you workout intensely, your body will generate a lot of heat, and if you allow yourself to overheat, you will lose the desire to train hard enough to exceed the performance of your previous workout, so stay cool. A fan aimed directly at your body while working out will help a lot too, as moving air will carry more excess heat away from your body than non-moving air.

Q: The foundation of High Intensity Training is training “to failure,” and you’re telling me that training to failure isn’t necessary? How is this so?

First it will be necessary to define what training to failure is. If you were to perform any exercise, and you did as many as you could, say 12 repetitions, this means you were unable to get 13 repetitions, though you tried as hard as you could. So we say you “failed” at 12 reps. This is really not failure, but more of a success in that you are assured that you did as many repetitions as you could. Looking at your workout chart, it would perhaps tell you that you performed 8 repetitions the previous workout, and today you made progress and performed 12 repetitions.

The reason I say that training to failure isn’t necessary is simply because it isn’t, and I’ll explain. In my chapter on the dynamics of muscle growth, the summary of that chapter states: *Human skeletal muscles grow in size and or strength when you perform tasks with them that are above and beyond what they have been doing.* So if we apply the philosophy of muscle growth being above and beyond what your muscles have been doing to the example in the previous paragraph, we see that in order for your muscles to grow, you only have to do more than what you did in the previous workout. So if you did 8 reps in the previous workout, that means in order to ask your body to grow bigger and stronger, you need to either add weight or perform more repetitions such as 9 or more reps this workout, 10 or more reps the next workout, 11 or more the next workout and so on. Sure, going to failure and doing 12 reps would give you *faster* results, but results are results, and sometimes slow and steady wins the race, and going to failure too often can lead to overtraining or stagnation, and cause you to quit. This is why I say that your goal is to not only train hard, but to train smart and pace yourself and make steady progress.

Also, keep in mind that progress is not going to failure. Progress means using heavier weights within the same time frame. For example, if your workout contains 8 exercises performed in 10 minutes as I suggest, then if you are able to eventually use 10% heavier resistance on most of the exercises and are still able to perform the workout in under 10 minutes, then that is real progress, and your muscles and body will show it.

So to keep your training on track and progressing, a workout chart is essential. Keep track of the exercise sequence, the weight used, number of repetitions performed, and the time it took to perform the entire workout.

If you have a workout partner, that’s great, he holds the chart and works you out, then you hold his chart and work him out. If you don’t have a workout partner, then the next best thing is your workout chart. With the chart you compete against yourself striving to surpass what you

did in the previous workout, that's why it's essential. If you don't keep a chart you're lost, not knowing where you've been or where you're going.

Here's a sample of my own workout progress on the routine I'm using in April of 2008. I just took a 5 week layoff to work on my house doing heavy physical labor (so I didn't feel like working out for a while). Here's what my progress looks like:

Week 1	4/8 Tue.	4/10 Thurs.	4/12 Sat.
1. Calf Raise	BW x 20	BW x 20	BW x 20
2. Deadlift	130 x 8	130 x 8	130 x 8
3. DB Squat	45 x 12	45 x 12	45 x 12
4. Dips	BW x 8	BW x 8	BW x 8
5. Tricep	30 x 8	30 x 8	30 x 8
6. Chin up	BW x 8	BW x 8	BW x 8
7. Bicep	30 x 8	30 x 8	30 x 8
8 Overhead press	20 x 8	20 x 8	20 x 8
Time:	6:41 min.	6:20 min.	5:58 min.

Commentary on week one: This being the first week I worked out for a while, I reduced the weights from where I left off 5 weeks ago, and didn't increase the weights at all, to prevent soreness and become conditioned once again. You will notice that I did make progress by decreasing the time to complete the workout.

Week 2	4/14 Mon.	4/16 Wed.	4/18 Fri.
1. Calf Raise	BW x 30	BW+ 5 lb. x 30	BW + 5 lb. x 30
2. Deadlift	130 x 12	130 x 15	130 x 15
3. DB Squat	45 x 12	45 x 12	45 x 12
4. Dips	BW x 15	BW + 5 x 15	BW + 5 x 15
5. Tricep	30 x 8	30 x 15	30 x 15
6. Chin up	BW x 8	BW+5 x 12	BW+5 x 12
7. Bicep	30 x 8	30 x 10	30 x 10
8 Overhead press	25 x 10	25 x 12	25 x 12
Time:	6:45 min.	8:30 min.	7:18 min.

Commentary on the second week: On Monday, I increased the number of reps performed on calf and dips, and added 5 lb. to each dumbbell for the overhead press. Note that it increased the workout time because of the need to rest.

On Wed, I increased calves again, added weight to the dips, chins, and reps to the triceps, biceps, and overhead press, and see how much it added to my time. On Friday I repeated Wednesday's workout but made progress by reducing the time of the workout.

Week 3 4/21 Mon.

1. Calf Raise BW + 10 x 30,
2. Deadlift 130 x 15
3. DB Squat 45 x 12
4. Dips BW + 10 x 15
5. Tricep 30 x 15
6. Chin up BW+5 x 12
7. Bicep 30 x 12
- 8 Overhead press 30 x 10

Time: 8:10 min.

Commentary on week three: Today I felt rested from a weekend off, and added 5 lb. to the calf raise, dips, and each dumbbell in the overhead press. I consider progress made in the triceps because after adding weight for the dips, which uses the triceps heavily, the triceps stayed the same. I also went up 2 reps in the biceps.

The results so far for these 7 workouts is that first, I look more muscular, which is a sign of losing bodyfat and gaining muscle tissue at the same time. I have gained 2 lb. of bodyweight, and I'm monitoring my measurements which have stayed the same, but I have gained ¼" on my thighs indicating muscle growth in the largest muscle groups, the thighs.

Commentary for women:

Now I can just hear women exclaiming that they don't want bigger thighs. What I'm suggesting to women is to increase their muscles like I'm doing, and lose enough fat to keep the circumference of your thighs from growing, which will result in your appearance becoming firm and toned, not flabby. You sculpt your body in this way: if your thighs or whatever muscle is too large for your taste, then don't add any more weight or decrease it. You can keep on with all muscle groups in this way, adding or decreasing to control the size of the muscles to achieve the ultimate look you want.

Q: So why don't you just train to failure each workout, if it's the fastest way to make progress, then just reduce how often you workout, as is the latest trend in High Intensity training circles?

Another excellent question! The answer is that going to failure is not the fastest way to make progress!

The reason I stay with the workout frequency of 3 times per week is that it has stood the test of time for me and produced the best results. When I experimented with training twice a week, then once a week, then once every 10 to 14 days, in all cases yes, I gained strength but lost

muscle size. So the problem with the current trend in high intensity bodybuilding where one works out to absolute failure but only once a week or less, is that the workout frequency is not often enough to maintain muscle mass. It's deceiving because yes you get stronger, but at the same time you lose muscle size.

This is where I compare workout frequency to the frequency of exposure to the sun in order to get a tan. As you get a tan, in order to get a darker tan, if you reduced the frequency of your exposure, and also increased the intensity of your exposure by going to a suntan booth, you would find that you would experience a sunburn every time you went to the suntan booth, and that your tan would fade, for as you decrease the frequency, you also become "de-conditioned."

The same holds true for working out. If you were to decrease the frequency to once per week or even less, you'll find that each time you workout you will again have to go through the initial re-conditioning phase, and you will get sore again as if you were a beginner just starting out. Also, you'll notice that your muscle size will decrease.

There's also a reason to not decrease your workout frequency which is what I term "logical progression," as promoted by the current trend in High Intensity training. Here's how it goes: as you progress and get stronger, you would first (as an example) workout once per week. Then you plateau, so you reason that in order to get stronger, you need to workout less often, so now you workout once every 10 days. Then you plateau again, and workout every 14 days, then every 21 days, then once a month. The logical progression of this is that eventually you'll be so advanced that you'll only need to workout once a year, then eventually you'll be so "advanced" that you won't need to workout at all! Of course this is ridiculous and when you think about it in this manner, decreasing the frequency of your workouts makes absolutely no sense whatsoever, and in practice it just doesn't work. So I stick with what has produced the best gains in muscle size for me every time I return to and use it, and that is training 3 times per week on Monday, Wednesday, and Friday.

Q: Can you tell me how to set up a home gym?

Yes, I feel that working out at home is often more effective than a commercial gym because you can have everything set up and not have to work around other people, and you save money in the long term too.

My own home gym is very simple. It takes up a space only 8 x 8 feet square. I have a barbell with over 200 lb. of plates for doing deadlifts, tricep extensions, barbell curls and overhead presses; 2 – 45 lb. dumbbells for doing dumbbell squats, curls, and overhead presses too; a flat bench for doing tricep extensions and to sit on for seated overhead presses; a calf block I use for calf raises made out of 2 x 4's that is 3 ½ inches off the floor so when you go down on the calf raise, your heel doesn't touch the floor; and I use the poles on the tent I'm in (this is in temperate Hawai'i) for a chin up bar; and finally I use two 1" diameter pipes I prop up on a

ladder on one end and a pallet on the other for dipping bars. I made a weight strap out of polyester belt webbing with a hook to hold weight around my waist for chins and dips.

If you don't have a chinup bar or pulldown machine, you can do one arm dumbbell rows, or barbell rowing. If you don't have dipping bars or a bench press rack, you can do dumbbell bench presses or pushups with your feet raised up on a bench for added resistance.

With creativity, you can create a custom home gym and this is what I did recently. First, I built a calf machine which is essentially a lever arm with weight at one end and a pivot at the other. To this I attach a weight belt that goes around my waist so that I can do calf raises with the weight attached to my waist and not sitting on my shoulders which is the safest method to add weight for calf raises. I then went on to build an actual replica of an early Nautilus plate loading pullover machine, all made out of 2 x 4's ! It even has bearings for the pivot points so it is very low friction. After my success in building this machine, I went on to build a compound row machine, overhead press machine, and a simple power rack to do bench presses and chins. All made out of 2 x 4's. I have posted videos of these machines on "you tube." You can see them by searching for "charliesgym" on you tube.

Q: I've tried your program for three weeks now, where's the results? I've also been running 3 to 5 miles a day to lose fat.

I'm not promising super fast results as the high intensity promoters do, but I will say that for myself, usually after 3 or 4 weeks I can see some changes. Try taking standardized photos once a month, you may be surprised at what the camera can show you versus only what you see in the mirror. If it only shows you that you that there is no change, it can be a dose of reality when you think you're making great progress and the camera says differently.

You'll see that nowhere in this book do I mention running, because it has no place in a muscle building program. Endurance activities that are very demanding such as long distance running, swimming, cycling are not compatible with building a lot of muscle because they take from your recovery ability what you will need for building muscle. So choose one or the other, you'll find if you attempt both, your gains in size and strength will be minimal.

Q: Wow, you really stress the avoidance of overtraining, is it really that important?

Absolutely it is that important, so let me stress it again here. I will even go so far to say that exercise itself is bad for you, that's right exercise is bad for you and can even kill you if taken to an extreme.

So how can I say that exercise is bad for you? Well, look at it this way. Let's do a little experiment to demonstrate what exercise does and how the body responds. We'll do this by using the body's response to form a callus on the palm of your hand.

So we start with a file, and every day we rub the same spot on your palm with the file. We find out that rubbing the palm 3 times every day does nothing, but if we rub it 15 times daily, a callus begins to form. The file represents exercise, and rubbing it everyday on your palm represents the frequency and extent of exercise. The body in response, senses the skin becoming thinner in response to the file (exercise) and protects itself by forming a callus to protect itself. You see this all the time on the palm of anyone who does any manual labor, it's an everyday occurrence.

So how can I say that exercise is bad for you? Because if we were not careful, we could easily take that file and rub a hole in the skin, and this is what happens when you get a blister on your hand from using a shovel or something. It is possible to wear the skin down much faster than the body can repair itself.

When we do high intensity bodybuilding where we workout so hard that it takes one or two weeks to recover from a workout, it's as if we threw away the file and took a high speed grinder to our palm and removed the skin. We didn't stimulate a callus, we created a wound. In much the same way, I have heard of people actually dying from some coach working them into the ground from too much exercise.

So to conclude, I will say that exercise is a bad thing, or stress to the body. The only benefit from exercise is, and listen carefully here, the only good thing from exercise is the extent to which the body can adapt to it. This is why it is so important not to overtrain, and err on the side of undertraining to be sure.

This seems to be a natural law – that you can't force someone or the human body to do what you want it to do – you must ask by gently coaxing and giving the person or the body a gentle reason to make a change. Force doesn't work – persuasion does.

Q: What do you do for workouts when you're sick with a cold or flu type thing?

When we get a cold or flu, you'll notice that you feel achy and like climbing into bed and resting. This is your body talking to you. In these situations I don't work out at all and don't resume workouts until my energy level and enthusiasm for working out returns, usually in a week or so. Then, because I haven't worked out for a while and don't wish to get sore again, but at the same time don't want to wait too long and lose my gains, I reduce my workouts slightly, based on how I feel, and rapidly increase each workout back to where I was, usually within a week. This is another reason for keeping a workout chart so that I can see where I was and know when I've returned to my previous level.

Resources / Recommended Reading

Dr. Lorraine Day at www.drday.com overcame cancer without drugs. Her website tells her story and she has many useful reading materials available.

From Dr. Doug Graham at www.foodnsport.com

1. The New High Energy Diet Recipe guide, the only raw vegan recipe book to use proper food combining.
2. Grain Damage, talks about why grain products don't belong in the human diet.
3. The 80-10-10 Diet, His latest book covers the facts about a diet consisting of 80% carbohydrate, 10% protein, and 10% fat.

Living Nutrition Magazine is changing its name to Vibrance with the Spring 2008 issue. It can still be located at www.livingnutrition.com It is the most informative magazine on raw foods and Natural Hygiene that I have found. The bookstore has Dr. Graham's books and an excellent food combining chart.

"The Pleasure Trap" by Dr. Alan Goldhamer and Douglas Lisle, is available from www.healthpromoting.com In it, you will learn the concepts of not only the pleasure trap, but Neuro-adaptation, conservation of energy, and more. Also purchase "The Health Promoting Cookbook" the best collection of cooked vegan recipes without added oil, sugar, or salt. There is also a Pleasure Trap DVD which has the complete lectures I heard from Dr. Lisle causing me to begin my journey into veganism and raw foods.

"Errors in Hygiene" by Dr. Vivian Vetrano, is available from <http://vetrano.cjb.net/> It tells the complete story of protein deficiency. It is also available as a reprint in a shorter version from LivingNutrition.com titled "Genuine Fruitarianism."

The Essential Natural Hygiene Course can be found at their website: www.transformationinstitute.org There is a sample chapter you can download at their website too. Highly recommended.

Arthur Jones started the High Intensity Bodybuilding revolution, and you can google him and find many of the articles he published in Iron Man magazine in the 1970's. His first publications which are good for historical value are titled, "The Nautilus Training Bulletins (#1 and #2). Google them and they are available at several sites online.

The Colorado Experiment can be googled or found online at: <http://www.musclenet.com/coloradoexperiment.htm> It is so important because it documents the greatest increase of muscle mass I've ever seen: Casey Viator gained 45 lb. of bodyweight, lost 17 lb. of fat, for a total muscle mass gain of 62 lb. in only 28 days.

Natural Bodybuilding.com is the website for the Natural Bodybuilding association that puts on strict drug tested competitions all over the world, and the organization whose contest I entered because of their integrity.

Consultations with the author via telephone or email are available by telephoning the author at 808-990-4468 or charliesgym@sbcglobal.net. The current rate is \$100. cash (gold & silver accepted too) for one hour or 4 email responses. After payment is received, I will contact you to make an appointment for the phone consult. Please contact me with questions about the material herein as for clarity, alternate routines, or comments on what you would like me to write about or take out of this manuscript. I would like to hear from you as far as your results, good or bad – how else am I going to improve it?

Introducing: The Hawai'i Raw Food Bodybuilding Experience

If you would like to make a trip to the Big Island of Hawai'i to experience the tropical climate, relax and see the attractions, and taste the wonderful variety of tropical fruits available here, please contact me.

I would be happy to let you see how I work out, and work you out too. I can give you classes in Natural Hygiene while you're here. I can locate any type of hotel for you to stay at, or I can make accommodations for you to stay on my land in my guest "jungle tent" if you're on a budget, or want to "rough it" and experience the tranquility of life in the Hawai'i jungle.

I can pick you up at the Airport and show you the many attractions: Akaka Falls, the current Volcano eruption, lava tubes, the nude beach at Kahenna, the black sand beach, the beaches with spinner dolphins, and show you the whole Island if you wish.

Another advantage is that I can have the best of all the fresh, ripe, organic fruit you will need ripe and ready for you. Normally when people visit, they don't know where to buy the best organically grown produce, and if they do find something good, they may not be here long enough to have it ripen so they can enjoy it. You can set your own agenda. I can assist you to any degree that you desire. Contact me via phone or email listed above.

Here's my photo album showing from studio photos taken in 2005 after 3 years on the raw vegan diet.

