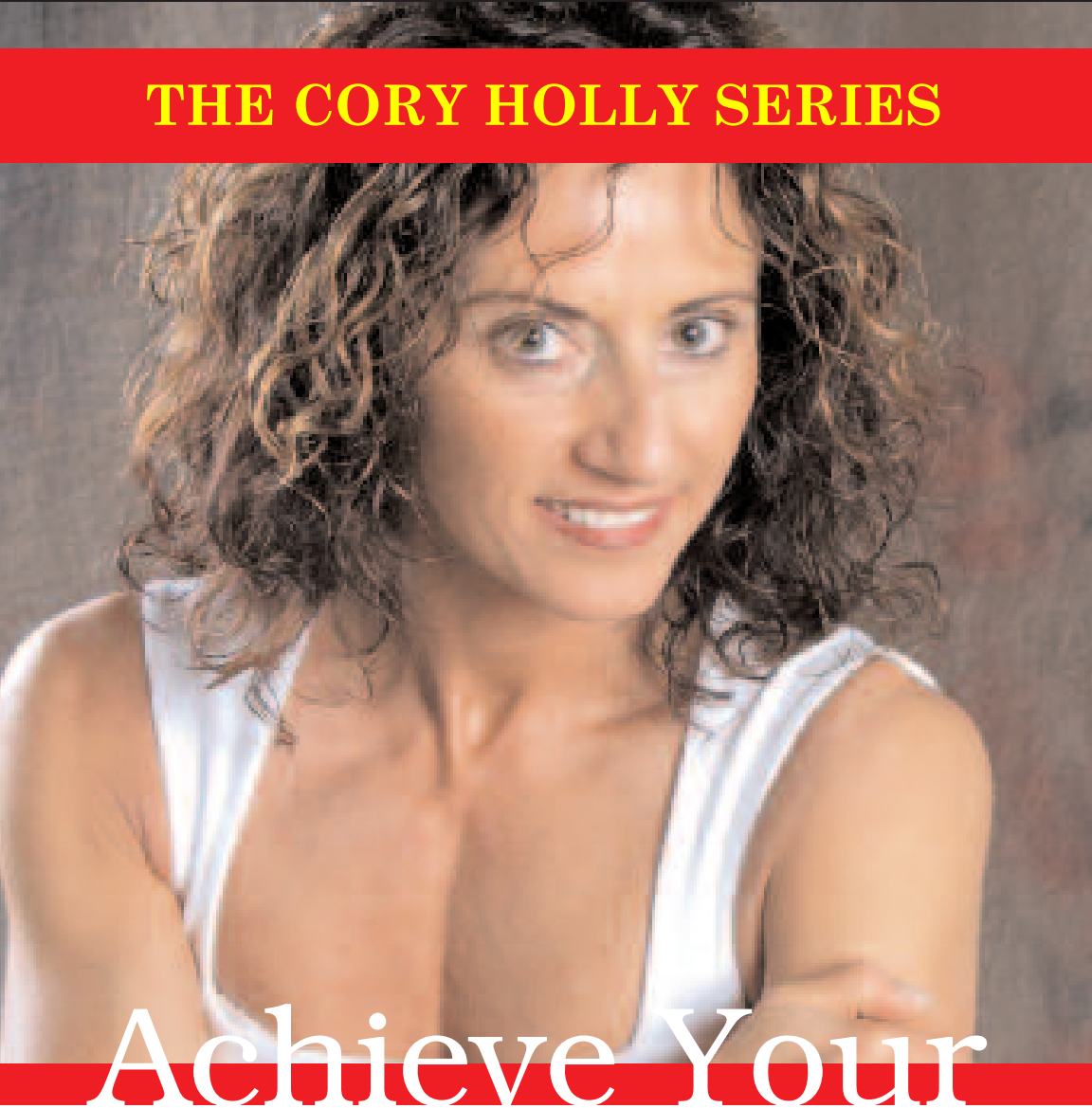
THE CORY HOLLY SERIES



Achieve Your Ideal Bodyweight

THE SCIENCE OF REDUCING BODYFAT & BUILDING MUSCLE

Book Five

Audio eBook Series

The Cory Holly Series

Achieve Your Ideal Bodyweight (Book Five)
The Science of Reducing Bodyfat & Building Muscle
by Dr. Cory Holly

Also available in audio format (MP3)

Publisher

Cory Holly Institute Inc.
204-3611 27 Ave
Vernon BC V1T 1S5

CoryHolly.com/Bookstore

Cory Holly Institute Inc.

First Edition Edited by Dr. Cory Holly

Copy Editor: Tracy Kaye Holly

Cover Design: Randy Ellis

The CoryHolly SERIES

Achieve Your Ideal Bodyweight

The Science of Reducing Bodyfat & Building Muscle

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Introduction

As someone who has spent countless hours observing people, I've noticed that most overweight people hide behind comedy and a personality layered with humor and laughter. But excess body fat is not funny. Obesity rates in North America have reached epidemic proportions and it's no laughing matter.

Obesity is a tragedy of health and represents a strong departure away from the ideal of living free from disease. There's no defense against the fact that excess fat and obesity is a terrible sickness that requires holistic intervention and specialized medical treatment.

Excess fat reacts with the oxygen we breathe and creates billions of free radicals in the form of harmful peroxides. These substances attack our arteries and vitals organs, causing massive damage to every cell in the body over time.

Fat is a secretory organ. Excess, non-essential fat produces pro-inflammatory cytokines. Cytokines are small cell signaling molecules that in this particular case, promote a phenomenon called silent inflammation. Silent inflammation is recognized as a primary instigator of cancer, diabetes and heart disease.

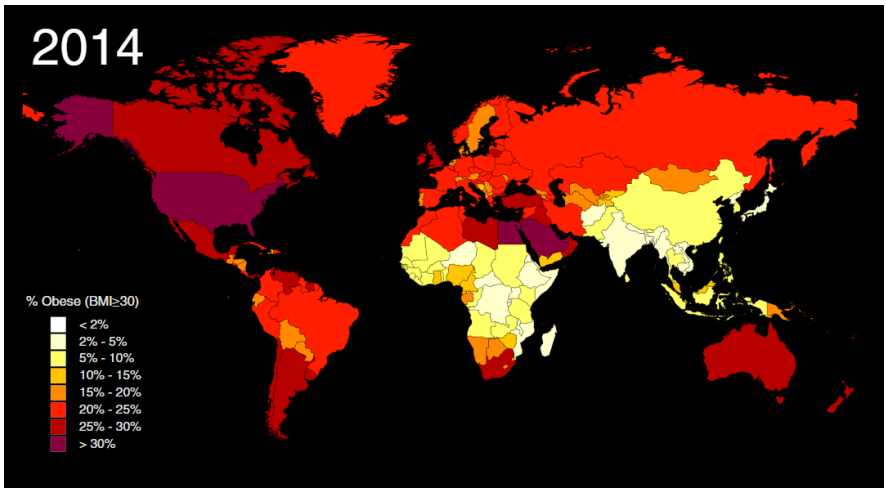
Excess fat is also a great liability in sport. Fat doesn't contract. Excess fat is an enemy to great performance. It slows everything down except disease, decay and chronic inflammation. Obesity is now recognized as an independent risk factor for all cause mortality and is equal to tobacco smoking in terms of lethality.

More than one sixth of the world's population are fat. That's well over 1 billion people. In North America 80 million people are overweight, 50 million are obese. 10 million people are morbidly obese.

Eight out of ten people over 25 are over fat and 80% of the population are not meeting the most basic activity level recommendations. 25% are completely sedentary.

Obesity is related to almost every disease either directly or indirectly. 80% of type II diabetes, 75% of cardiovascular disease, 42% of breast and colon cancer, 30% of gall bladder surgery and 26% of everyone with high blood pressure are obese.

It's time to change things…NOW!



Chapter One

Fighting the Battle of the Bulge

Obesity is a disease of mind and body and it's preventable. No pill will cure it. Its primary cause is physical inactivity and poor nutrition. It's as simple as that. What's makes it complex is the conflict between reason and emotion.

But with the right information and a desire to turn things around, almost anyone can change the composition of their mass. We're all stuck with our skeletal structure, the length of our bones and our height as adults. But the flesh attached to it is something we have a degree of control over. We can tone, build or maintain muscle through exercise or let nature dematerialize us prematurely through inactivity, stress and oxidation.

Temptation is hard to resist, so we need a strong defense. To do it right requires knowledge, devotion and a strong sense of self-esteem and self-worth. It takes time to learn and patience to put the right gear in motion. Many of us will have to undo years of negligence and abuse. But the remedy isn't nearly as complicated as putting it in motion day-in and day-out. The hardest part is staying on track.

In the practical sense it's eating, training, sleeping and living in sync with what has to be done, and should be done, as opposed to what you feel like doing. It's like telling children why they need to brush their teeth or do their homework. Without direction and discipline, children will seldom do anything except play, watch TV and continuously eat junk food. Any parent can confirm this.

The majority of people in North America tend to have a slow metabolic rate. Each one of us has a 'set-point', or what is known as a genetic predisposition. It's estimated that only 20% of the population can't gain weight regardless of how much food they eat. They are called hard gainers and have what is known as an ectomorphic body type.

The rest of us have to fight the battle of the bulge and tend to gain body fat without much effort. This is known as the endomorphic body type. Endomorphs have the ability to store unlimited amounts of excess energy known as fat.

A very limited number of people are blessed with an ideal and balanced biochemistry; they seem to gain muscle quite quickly as a result of resistance or weight training and appear more muscular than the average person due to a relatively low percentage of body fat. This lucky bunch have what is known as a mesomorphic body type. Hercules and Red Sonja are both mesomorphs.

Differences in bodytype are important to understand. So before you go ahead and design any workout or special diet program, get in touch with yourself. Identity your body type. Don't try to be something you're not because no one can defeat Mother Nature.

Failure to differentiate between weight and mass is a significant cause of frustration and defeat. It sets the weight conscious individual up for failure right from the start. When I hear someone say, *"I need to lose weight",* I know right away they're doomed to lose more muscle and water and rebound from whatever form of deprivation they've managed to convince themselves to follow.

And the sad fact is that they will most likely end up with more body fat compared to when they started, after the diet has failed.

Our lean mass must be distinguished from non-essential body fat, and under no conditions do we want to lose essential body fat, bone mass, muscle, organ tissue or cartilage as we age.

What we're made of tells a more accurate story of health and potential function than weight alone. For example, a woman in her 40's might weigh only 115 lbs (52 kg) and look good with her clothes on, but underneath her veil of clothing, her flesh could lack muscle tone and appear soft and flabby. She could even have cellulite!

It's amazing how much attention is given to fashion when what's underneath is really what counts! For the most part in today's fashion conscious society, fashion is nothing more than a deceptive, attractive cover for what lurks behind the veneer.

Muscle is denser than fat. A pound of each weighs the same, but fat takes up about 5 times more space. Without an accurate body composition analysis, you can't determine how much protein you need, and you can't tell by looking, so it's left to guesstimation.

Even experts have a hard time estimating body fat percentage without using some form of technology. But once you know what percentage of your body is storage fat, you can then set specific goals and measure your progress along the way.

Focus on using stored fat as a fuel source. Think of it as stored energy. Keep your blood sugar and insulin in the zone. Train consistently, lift weights to build muscle, use aerobic exercise to condition your heart and lungs, stretch to stay loose and limber, and by modifying your intake of carbohydrates and fat, your body fat percentage will drop and stay down just as long as you continue with the program.

Say to yourself, *"If it's going to be, it's up to me!"*

A report from the National Institutes of Health concluded that obesity should be viewed as a chronic, degenerative disease because there are multiple biologic hazards of premature illness and death at surprisingly low levels of excess fat, meaning as little as 5 to 10 lb above desirable weight.

IDEAL BODY FAT PERCENTAGE CHART (American Council on Exercise)		
Description	**Men**	**Women**
Essential fat	2-5%	10-13%
Athletes	6-13%	14-20%
Fitness	14-17%	21-24%
Average	18-24%	25-31%
Obese	25%+	32%+

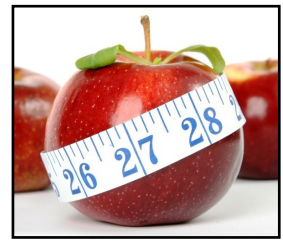
In the bodybuilding world there are seven possible levels of physical appearance described as follows: (1) fat (2) soft (3) lean (4) hard (5) cut (6) ripped and (7) shredded.

Studies demonstrate an undeniable link between excess bodyfat and impaired cardiac function, hypertension and stroke, adult-onset diabetes, renal disease, pulmonary disease, osteoarthritis, degenerative joint disease, several forms of cancer, menstrual difficulties and an enormous psychological burden.

An ideal standard of 15% bodyfat or less for men and 20% bodyfat or less for women is appropriate. Age is a correlate, not a causative mechanism. There is no such thing as an obese or fat centenarian.

“A trim waistline is a reflection of a long lifeline.”

Chapter Two



Diets Don't Work

The percentage of body fat each of us carries is always relative to what we eat, when we eat and how we eat. Of course our expenditure of energy through physical movement makes a difference. What and when we eat is often a function of what is eating us.

Emotions play a very large role in food addiction, eating disorders and disordered eating. So do allergies. Perhaps today more so than ever before, food has become a weapon of mass destruction.

Refined carbohydrates, denatured protein and altered fats form the basis of the Standard American Diet, along with chemical preservatives, colors and dyes. Food must be chosen with health and performance in mind, or we will succumb to disease caused by weakness of the immune system and the slow, gradual poisoning of every cell, membrane, tissue and organ.

Empty calories devoid of enzymes, vitamins and minerals are deadly and can only serve to weaken the resources we need to offset the effects of living.

Counting calories is passé, weighing food is ridiculous. Instead count food quality. You must learn how certain foods react within your system biochemically. Unlike the ectomorph, or the 'hard gainer', endomorphs can't eat unlimited amounts of food or consume starch as a major staple. The biological metabolic demand simply isn't there.

Endomorphs love food however, especially things like cheese, bread and sweets. Problem is they end up wearing most of it and this leads to frustration and depression. Depression, I once read, *is "anger without enthusiasm".*

Diets don't work is the current theme of the day, yet millions continue to follow some of the most absurd and abstract dietary constructs imaginable. In the relative sense, most of us associate 'dieting' with a restrictive low-calorie food regimen designed to promote weight loss.

But in the absolute sense, 'diet' relates to any course of nourishment. It defines what a person eats and drinks habitually. Everyone is therefore on a 'diet', so the real question to ask in the context of health & fitness is, *"Does the diet supply the biological demands of the individual and what can we expect in terms of outcome?"*

Wheat flour is a major culprit. It's one of the highest on the scale of carbohydrate density, which means that in terms of mass it is low in water and therefore relatively high in carbs, or energy or calories. Call them what you will. I'll often refer to calories but think in terms of potential energy that exists in food.

In fact here's where I want to change your entire perception of food.

"Food is like a bar code, a unique form of digitized electromagnetic information that directly influences gene expression." Dr.C

Most heavy-set people challenged by gravity love to eat pasta, bread, muffins, bagels, cookies, cakes, pretzels, mixed salted nuts, chips, pizza,

etc... They can be compared to drug addicts driven by an addiction for more of what they crave and associate with a pleasant experience.

Heavy, refined carbohydrates and even natural unrefined carbohydrates eaten to excess without the appropriate quantity of protein can have an undesirable effect on insulin levels. This creates blood sugar instability and increases our capacity to store more and more fat.

We know that when insulin levels elevate in response to the consumption of a high carbohydrate meal, especially high-glycemic carbs, an enzyme called lipoprotein lipase increases, inhibiting the oxidation of fat. Elevated insulin is toxic and can even be converted into fat.

Avoid eating after your evening meal. This principle ties in with the concept of retiring early and rising early or what is now technically known as time-restricted eating. Time-restricted eating is straight forward. You simply choose a certain number of hours during which time you consume all your food each day.

For example, you might begin eating at 8:00 am and finish at 6:00 pm for a total period of 10 hours. Preferable you call it quits several hours before hitting the sack.

Late night television will set you up for snack patterns that will destroy your progress. The body needs an opportunity to cleanse itself and loading up on junk food before going to bed poisons the blood.

Drink small quantities of fluids after dinner like mineral water or herbal tea. If you wake up feeling sluggish and exhausted, take a look at what you consumed the night before. For many, the last meal should be 3 - 4 hours before bedtime.

If you go to bed on an empty stomach, you will actually metabolize some bodyfat and use it as a source of fuel while you sleep, as your body is detoxifying. Once you achieve your ideal body composition, a small quantity of low-glycemic carbs combined with lean protein will make a good bed-time snack and prevent muscle wasting, as do protein shakes. Dinners should also be 'serving restricted.' Watch the carbs if you want to be lean.

I'll mention two dietary approaches here that are remarkable when it comes to the goal of reducing body fat. They include the Paleo (Paleolithic) Diet and the Ketogenic Diet.

The Paleo Diet is based on a hunting and gathering model. It emphasizes whole foods, lean proteins, vegetables, fruits, nuts and seeds and healthy fats. It excludes things like bread, pasta, cereal grains, dairy, legumes, potatoes, refined sugar, refined vegetable oils, salt and all processed foods. www.thepaleodiet.com

The Ketogenic Diet is a low-carb, high-fat diet that puts your body into a metabolic state called ketosis. This approach lowers blood sugar and insulin levels while shifting the body's metabolism away from carbs towards fat and ketones. www.theketogenicdiet.org

Chapter Three

Hydration & Blood Sugar Stability

It's important to remember that for most of us, it took years to put the excess bodyfat on...it doesn't happen overnight. The key is to recognize that the body needs time to change its composition and reach a level that we feel comfortable with.

Many of us look at fat (adipose tissue) with remorse, allowing our emotions to override our intellect and objectivity. Adipose tissue is a living, breathing part of who we are. Our body does what it is metabolically designed to do given its circumstances.

"As the habitat goes so go the inhabitants". J. Chestnut

Hydration is essential to the excretion of all waste; therefore our intake of water must be in the very least equivalent to what we lose through daily output. Water is excreted through respiration, sweating, urine and in feces.

Few people consume enough water through food and liquids to compensate, so many of us are chronically dehydrated. This interrupts the body's energy activities, delays excretion of waste and recovery and encourages a reduction in thermogenesis (fat burning). This can make you feel heavy, sluggish and bloated.

Drink between meals and sip on water throughout the day at your desk and while driving. Drinking water directly from a cup forces the simultaneous consumption of air and as a result, some people experience gas and bloating. This can be avoided by using a straw.

How much clean filtered water should we drink everyday? 30 ml or 1 oz per kilogram of lean body mass per day, not total body weight. We also need an additional 1-2 liters to compensate for elevated body temperature and lost fluids caused by sweating due to physical labor, sport and workouts.

This quantity of clean filtered water will keep your body well hydrated, reduce fatigue, prevent injuries in sport and best of all; it will help you lose bodyfat.

Coffee and caffeinated teas function as diuretics and actually contribute to a chronic state of dehydration. Alcohol is metabolized in the liver and substantial amounts of water can be lost depending on the amount ingested. The effects of 'hangover', especially the morning headache, are caused almost exclusively by water loss.

The glycemic index is a relatively new system that measures how food influences and raises blood-sugar levels. In simple terms, a food with a higher glycemic value raises blood glucose faster and is less beneficial to blood-sugar control than a food which scores lower.

Foods with lower glycemic values tend to release their energy into the blood stream more evenly over time. This helps to keep blood sugar stable and even throughout the day.

Avoid dairy products and significantly reduce starches like bread, pasta, cereal, potatoes and rice. Consume plenty of high-water volume low-glycemic foods such as colored vegetables, green salads and fresh organic fruit.

Eat a variety of high quality low-fat proteins. Drink plenty of water, preferably before or 1-2 hours after eating, but not during meals. Many athletes commit themselves to working out regularly, but never lose

unwanted bodyfat because a high percentage of what they eat consists of enzyme-deficient, lifeless foods.

Living foods are vital to achieving an ideal body composition.

Not all bread is 'bad', but most varieties fail to make the grade, especially if you're looking for density, fiber, wholesomeness, nourishment and something with a low to intermediate glycemic index.

Choose black bread, pumpernickel and sprouted grains over commercial wheat and white breads. Fermented whole grains are also acceptable, as the lactic acid present in sourdough helps modify blood sugar like lemon juice and red wine vinegar.

Most commercial multi-grain breads and many so called 'health-breads' are loaded with white flour, chemically altered fats and salt. Always read the label.

THE BREAD TEST

1. Hold the loaf in one hand and feel its weight. It should 'feel' heavy and look dense, like an iron dumbbell.

2. Put your fingers and thumb around the top of the loaf. If you can squeeze the loaf from the outside more than an inch towards the center with very little pressure, it fails the test.

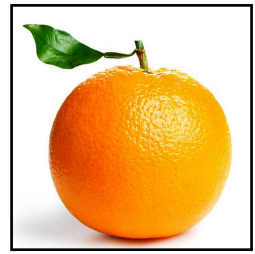
3. Find the ingredient panel on the label and examine the contents. If the bread contains white flour, sugar, hydrogenated fats and salt, it fails the test.

Many of my clients who struggle with weight management find that when they cut bread and dairy products from their diet and substitute

live food and complex, fibrous carbohydrates, mostly vegetables and a small quantity of fruit or whole grains, they are much more successful in their approach. In some cases the difference in outcome is phenomenal.

Once stability of blood sugar and insulin is achieved, the mind functions with clarity and energy abounds. But stability and that feeling of being in control when it comes to food has a price. Gratification must be delayed at times, and eventually even the desire to eat refined food dissipates. Once you reach this state you know you have victory over what some call ‘the devil inside’.

Chapter Four



Whole Foods & Enzyme Chemistry

Whole foods are non-denatured, non-processed and unchanged from the soil or the vine. Whole food is food in its most basic natural form, including both plant and animal food. Fresh, organic whole foods are those traditional evolutionary substances from which the human race and all animal life was spawned from originally on planet earth.

Hunting and gathering societies sustained themselves on fresh organic food and it's still the best quality and most virtuous food in the world. Whole foods possess great quantities of life-giving micronutrients as designed by nature in response to adaptation and natural selection.

Made from water, pure light and the elements, plants and the animals that eat them simply translate more potential energy into the body than refined foods. Devitalized, empty sterile foods created for profit lack the vibrational energy the body needs to keep its defenses high.

Regarding body composition management, keep in mind that the vast majority of children and adults have a relatively low tolerance for carbs and fats, especially refined high-glycemic carbs and fats damaged by heat. Yet these are the things they tend to eat in great quantity.

Reduce bread, bagels, muffins, crackers and pasta and consume more green and multi-colored raw vegetables. Vegetables tend to be lighter or lower in carbohydrate density, more concentrated in water, easier to burn and contain more vitamins and minerals to catalyze the chemistry of beta-oxidation or fat-burning.

Watch the consumption of seeds and nuts as they are difficult to digest and are 'super-concentrated' in fat. The best way to consume raw nuts and seeds is to sprout them, or grind them with their skins into a nut or seed butter like sesame tahini or almond butter.

Fat has virtually no thermogenic impact on our metabolism. When consumed fat doesn't raise our metabolic rate like protein. Different macronutrients possess a "thermic' effect, the magnitude of which varies between two and thirty-five percent of the ingested food.

Once optimum body composition has been achieved, it's possible to re-introduce limited amounts of flour containing foods, provided they consist of whole meal or whole grain, but for most endomorphs and those prone to gaining fat, there will always be a limited tolerance for many of these foods, because of who and what they are.

"Can the Ethiopian change his skin, or the leopard his spots?" Jeremiah 13:23

Enzyme chemistry is important to consider. Acid-alkaline balance is also frequently overlooked and seldom considered. Many athletes have a diet dominated by acid-forming foods. Common acid-forming food staples include flour, pasta, breads and most grains, over-cooked tissue protein, beans & nuts, sweeteners, alcohol and junk foods, like pizza, hamburgers, chips and candy.

Metabolic enzymes involved in the oxidation of fatty acids for fuel and conversion into ATP, the body's principle energy currency, are inhibited when the blood, lymph or fluid compartments in the body become too acid-dominant. There are many control systems in the body that help buffer acid, but over time, they begin to fail as a simple function of long-term overload.

One of the simplest ways to improve our buffering capacity for acid is to increase our intake of dietary alkaline minerals including potassium, calcium, iron, zinc and magnesium. Here again is another important reason to consume more alkaline-forming foods, such as fresh organic fruit, raw vegetables and freshly squeezed juices.

All the exercise in the world will not improve an acid-dominant situation if the cause is nutrition. From a body composition, weight management point of view, your body chemistry cannot support fat reduction objectives if the pH of your body fluid is constantly under attack by heavy artillery from acid waste.

Under these conditions we tend to scavenge amino acids from muscle, and in the process, this can cause a temporary shift in water balance, and even a loss of 'weight' in the form of water through the action of hydrolysis, deamination, nitrogen shuttling and the formation of urea from ammonia. In the end however, the fat still remains.

Although not classified as essential, meaning 'indispensable to life', fiber can be extremely beneficial. It's an important bulking agent that aids in the systematic elimination of waste through the intestinal tract. Fiber or roughage is a form of carbohydrate. It's the indigestible portion of plants that generally resists the action of digestive enzymes in animals with single stomachs.

It's now understood that through the action of certain bacteria in the large intestine, fiber can be modified and converted into short-chain fatty acids such as acetic, propionic and butyric acids that have many healing and anti-inflammatory properties. Short chain fatty acids play an important role in the health of our microbiome (intestinal flora).

Sources of insoluble fiber include fruits, vegetables, dried beans, wheat bran, seeds, popcorn, brown rice, and whole grain products such as

breads, cereals, and pasta. Soluble fiber is found in fruits such as apples, oranges, pears, peaches, and grapes; and also in vegetables, seeds, oat bran, dried beans, oatmeal, barley and rye. Prunes provide a high source of soluble fiber.

Fiber is useful in body composition management, as it greatly improves the transit time of waste through the colon, modifies the glycemic index of food and provides the sensation of fullness when eating. Fiber has been called the 'weight watchers dream' as cellulose and hemicellulose take up space in the stomach, making us feel full.

Normally the sensation of fullness brings food consumption to a halt, therefore food intake is less. When it comes to eating, high-fiber food slows you down. Compare the weight and density of white bread to really heavy black rye.

When it comes to elimination, fiber speeds you up. Low fiber diets are typically high in fat and sugar and are associated with constipation and many gastrointestinal related diseases including hiatal hernia, hemorrhoids, diverticulitis and diverticulosis.

For the bowels to work properly, a lifelong daily intake of 25-30 grams, or about one ounce of dietary fiber daily is required. The national daily average is about 10 grams and for many 40-60 grams is probably ideal.

Non-refined, naturally occurring complex carbohydrates are denser in micronutrients than the refined simple sugars found in processed food or the carbs typically derived from flour grain.

A portion of raw broccoli or celery for example, provides more water, antioxidants, minerals, vitamins and phytochemicals than the equivalent caloric (energy) value of whole wheat bread. Even though bread

contains some water, the net effect after digestion in terms of hydration is marginal.

Ever try juicing a loaf of bread? To prove my point, I actually tried stuffing a loaf of whole wheat bread down the throat of my champion juicer and it clogged in seconds!

Think of food as a 'drug' or 'chemical information'. It's made up of thousands of complex biochemicals that interact in our own personal walking-talking living pharmacy.

Understanding the impact of food as it relates to quantity and quality is of enormous value and importance to weight and body composition management. Saturated fats derived from high-fat commercial red meat for example could make you fatter because they lack the thermogenic effect of carbs and protein, but essential fatty acids can speed up your metabolic rate.

What about eating live foods for their enzyme value and effect on the body? Live foods enzymatically contribute to their own digestion, and the enzymes they contain are actually recycled, because enzymes are not used up in these reactions.

Enzymes by definition catalyze chemical reactions without being destroyed or altered in the process. Enzymes can be recycled in the blood and contribute to the body's overall metabolic enzyme pool. Enzymes are essential to energy transfer and every cellular function in the body.

You can take anyone who is over-fat and increase their metabolic rate almost immediately, simply by reducing cooked, carb-rich foods like bread, pasta, bagels and muffins, and replacing them with the exact same caloric quantity of fresh green and multi-colored vegetables.

Food intolerance and food allergies are common. Wheat and dairy products contain many common allergenic substances. Gluten is a major component of wheat endosperm, which consists of several protein fractions, including gliadin and glutenins.

Failure to completely digest these proteins is linked as a causal mechanism to celiac disease, autism, chronic fatigue, thyroid abnormalities, diabetes, skin problems and many psychiatric disturbances.

Wheat gluten has demonstrated opium-like activity, and is believed to be one of the factors responsible for some types of schizophrenia.

Lactose and casein in dairy products also cause problems for many people. Casein has been implicated as a possible causative agent in Type-I diabetes and autism. Both lactose and casein are frequently blamed for gastrointestinal symptoms, such as bloating, gas and stomach cramps.

Symptoms of chronic water retention and edema are also very common and are frequently eliminated by reducing consumption of dairy products derived from commercial cow's milk.

Although lactose or milk sugar and casein, the main protein in milk curd, are entirely different substances, both require metabolism by enzymes specific to their chemical composition. Casein is a protein that determines cheese yield in milk. There are four different casein proteins that combined make up around 80 percent of milk protein. Lactose is synthesized in the mammary gland by the enzyme lactose synthase.

Drinking skim milk causes more sugar to be formed in the blood than whole or fat reduced milk. Skim milk contains more lactose than an equal volume of milk with a higher percentage of fat.

With less fat there is simply more space for lactose, and with more lactose there is more glucose available to store as fat. So the concept of drinking skim milk for weight loss is a fallacy.

Cottage cheese, feta cheese or plain yogurt is easier to digest as much of the lactose has been converted into lactic acid through bacterial fermentation. Limited quantities of cultured dairy products from bovine sources are therefore acceptable if and when there is a tolerance for them.

Cheese tastes great, but it's loaded with saturated fat, which can decrease insulin sensitivity. Always choose goat or sheep over cow. Decreased insulin sensitivity makes it harder and harder to metabolize glucose efficiently as we age.

Commercial cheese from cattle raised in CAFO's (concentrated animal feeding operation) on GMO grains provides negligible sources of omega-3 fatty acids. Choose pasture rasied grass fed. Cheese is also a common source of mold, which can aggravate yeast problems.

"We are what we eat, eats…" M.Colgan

Chapter Five

Exercise & Physical Activity

Did you know that going for a walk isn't exercise? Neither is golfing, gardening, soccer, hiking, dancing or any sport for that matter. Let me explain…

Physical activity refers to any expenditure of energy brought about by bodily movement through the contraction of skeletal muscles. This includes a wide and complete spectrum of activity ranging from very low resting levels to maximal exertion.

Exercise is a component of physical activity, but here is its distinguishing characteristic. Exercise is planned, calculated and structured progressively in relation to the science of exercise physiology and organized to develop and maintain total physical fitness for the benefit of health and performance.

Think of exercise as a science that overcomes the effects of sarcopenia, a term that defines the loss of lean mass that everyone experiences as they age. The degree to which we experience sarcopenia however, depends a great deal on what we do to minimize it.

Exercise is the means: physical activity is the end. Resistance training, aerobic conditioning and stretching all strengthen and condition the body so it can be used without limitation according to its natural design.

When performed correctly and routinely exercise provides complete physical fitness. No single sport or physical activity provides total physical fitness.

Both exercise and physical activity generate heat inside the body. This thermogenic effect enhances the oxidation of fat. Exercise naturally suppresses the appetite. Most people don't eat and exercise at the same time.

For overeaters exercise provides a legitimate distraction from food. The effects of exercise also cause an expenditure of energy; this forces the body to utilize fat as a fuel source provided the chemistry of the body is not sabotaged by disordered eating either before or after the workout.

In general the best time to train is early morning. Less of life gets in the way and the post-metabolic lift can help reduce bodyfat for up to 12 hours. Fatigue often gets in the way of workouts scheduled after work.

If you get to the gym early in the morning, you'll feel great for the rest of the day and benefit from the overall impact both mentally and physically. After a morning workout the rest of the day is easier to take because the body is cleansed and the mind is clear.

Choose a wide variety of exercises that involve all the primary muscle groups, especially the lower body. Add some aerobic activity; this is a proven and effective method for fat-burning. Fatty acids are oxidized primarily in skeletal muscle cells. Engaging more muscle improves muscle tone and creates symmetry and balance. Muscle is the health engine of the body.

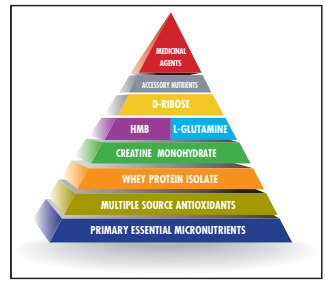
Train five days per week. Start with moderate weights, medium rep range and moderate intensity. Over time raise the intensity and increase the challenge of exercise. With a physiology created by nature to store bodyfat without much effort, an endomorph has to compensate with plenty of physical activity.

Weight-bearing exercise should be an essential part of your lifestyle, as building lean muscle tissue will keep you fit for life and continue to burn calories for many hours after your workout is done.

Cardio is a supplement to the weights. Always do your cardio in the gym after weight-training, not before. Incorporate aerobic exercise for 20-30 minutes or try some interval training. Brisk walking and other activities like dancing, swimming, hiking and rollerblading should become a way of life. Get out and get some fresh air.

Chapter Six

Supplements to Aid Weight Loss



To ensure a foundation of essential micronutrient support, I recommend covering all of the essential vitamins and minerals before anything else…either take a good multivitamin and mineral or better yet, get the basics in high-quality individual form, such as the carotenoids and vitamin A, B complex, C, D, E, minerals, and some of the super food concentrates.

Elevate vitamin C and E to dosages that compensate for the uncontrolled production of oxygen radicals. Anyone trying to alter their body composition correctly should be training, and training, however necessary and beneficial, increases the production of free radicals.

Determine optimum protein amounts based on the analysis of your lean body mass in relation to your frequency of workouts and intensity of exercise. Hit the numbers like a good mathematician. Most of us need at least 2 grams of high-quality lean protein per kilogram of lean body mass per day.

Drink a glass of clean filtered water when you wake-up in the morning. Prepare a light pre-workout protein shake. Add a scoop or two of whey protein isolate to water and mix with 1-2 T. of an omega-3 rich sport oil and some frozen berries. I squeeze a grapefruit and use the fresh juice as a base and source of low-glycemic carbs for my pre-workout shake. I add 2 T. of my sport oil and 1 teaspoon of glutamine, ribose, MSM, blue-green algae and calcium ascorbate. I also take a handful of nutrients, herbs and antioxidants designed to enhance cognition and increase thermogenic activity.

Effective body composition management depends on eating consistently throughout the day. First you need to determine how much protein you need because protein is the anchor. Then you need a diet plan that provides it.

I think missing your protein hit first thing in the morning is a mistake. It's the high-density carbs and factory food that we have to worry about, not a pre-workout shake designed to raise energy, metabolism and shift the body into a glucagon driven fat-burning mode.

After a satisfying, delicious, nourishing, alkaline dinner, one that features a raw salad w/homemade dressing, steamed greens and a high-quality, low-fat protein, try fasting for the rest of the evening.

If you need to lose a significant amount of bodyfat, fasting will support a natural detoxification process. Obviously, binging on fats and carbs at night isn't going to help us reach our objective of reaching the shape and appearance we desire, and there isn't a soul out there that can't understand that. The challenge is control of our own behavior driven by desire for pleasure.

After dinner, drink a herbal detox tea. There are literally dozens to choose from. One of my favorite combinations consists of sarsaparilla, milk thistle, red clover, dandelion, yellow dock, burdock, hibiscus, Echinacea augustifolia, fenugreek, ginger and cascara sagrada. Or use a single botanical such as Taheebo, aka Lapacho or Pau D' Arco.

Many people feel tired and lethargic after a meal. After analyzing what they've eaten, it's no wonder why. The meal is almost always too high in carbs and consists of cooked, acidic, refined, high-glycemic, high-density carbs. Protein quantity is either inadequate or the biological value is destroyed and denatured by excessive heat and loss of moisture.

It's not uncommon to miss meals during the day, especially for men, and then coming home only to binge at dinner with 2 or 3 huge helpings of carbs. I've done this myself and felt like a lump of lard afterwards.

Few people double up on kale or green beans when bread, white rice or pasta is within reach. It takes a logical mind committed to long-term good health to pass over the temptation of using food for pleasure alone.

Missing meals almost guarantees a binge, as hypoglycemia is a powerful force to reckon with. When blood sugar hits rock bottom, some people turn into ravenous maniacs. It's almost like they're demon possessed.

Try and eat at least five times a day, and avoid the psychological triggers at night that lead to bingeing or eating incorrectly. One of the biggest triggers is television. Go for a walk and force yourself to do something positive that distracts your attention from food.

Every one of us is drawn away when we are enticed and baited by our own lust and passion. When our desire for immediate gratification is conceived, it's very difficult to resist, especially when it's driven by emotion and the thought of obtaining pleasure in a state of pain or mental discomfort. Don't blame your behavior on anyone but yourself. Take responsibility and simply make a better choice.

All oils that I recommend are live, fresh and preferably organic. The emphasis with flax, hemp and fish oils is on omega-3 because of widespread omega-3 deficiency. Using 2-4 T. of a good sport oil a day works extremely well when combined with protein shakes.

Like EPA, GLA is found in very few foods, specifically of plant origin. Taking evening primrose oil, borage or hemp seed oil for GLA helps enhance beta-oxidation of fatty acids by stimulating brown fat activity

up in the trapezius muscle or traps. This is believed to be a significant controlling center of fat oxidation in the body.

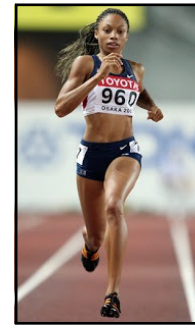
A preparation from the seeds of a woody climbing shrub of Brazil, guarana seeds, contain tannin and caffeine and are used as a weight loss aid by stimulating the process of thermogenesis. This increases metabolic rate to help burn stored body fat for energy. It also acts as a mild appetite suppressant, which is an important aspect of the dieting process.

Green tea extract is a mild thermogenic. Several catechins are present in significant quantities; the most well known is called epigallocatechin gallate or EGCG. EGCG makes up about 10-50% of the total catechin content and appears to be the most significant of the catechins regarding antioxidant activity.

CLA (conjugated linoleic acid) is a fatty acid found in beef and dairy fats and can be taken throughout the day as a supplement in capsule form. Conjugate means to come together. Clinical data derived from animal studies suggests that adding CLA to the diet can cause a decrease in fat mass, improve insulin sensitivity and enhance beta-oxidation of fatty acids.

Coleus forskohli is another supplement worth mentioning. Forskolin extract increases the amount of cyclic AMP in cells by activating an enzyme called adenylate cyclase. The breakdown of fat for fuel is regulated by cAMP. Forskolin has been shown to enhance lipolysis and inhibit fat storage.

It also has a reputation for stimulating thyroid hormone production and release. Thyroid hormone controls metabolism and can enhance metabolic rate, which may translate into more fat loss.



Chapter Seven

The Science of Reducing Body Fat

Make an appointment with a personal trainer or an exercise physiologist and put your health and fitness to the test. See what you're made of! Check with your local gym or fitness centre or try the kinesiology or physiology department of any local university.

Start with a standard fitness appraisal, and expect to pay around $35-75 dollars. It should include an assessment of your blood pressure and heart rate, a body composition analysis, an aerobic test, and a measurement of your muscular strength, muscular endurance and flexibility.

I promise if you commit to such an event your level of self-awareness will improve, and you'll discover that exercise in this modern age of computers, cell phones and laser technology, is not an option. Your whole outlook in life will change for the better because of what you'll learn about yourself from the experience.

It's imperative to face the facts. Knowing our lean body mass can help us determine how much protein we need, which in turn will protect against muscle loss when dieting or exercising to increase beta-oxidation (fat-burning). It also tells us how much of our body is comprised of storage fat and knowing this, at least from a fat conscious point of view, can help motivate us by keeping in mind that too much bodyfat is deleterious to health and athletic performance. The esthetic aspect of our body composition is important, but risk of disease should always take precedence from a functional and logical point of view.

A body composition assessment performed every one to three months will give us important feedback and a means of measuring our progress. This is extremely important for continued motivation, as the most difficult part of any 'fat loss' program is staying on track long term and 'holding on' until the goal is reached.

It's easy to lose 10 pounds on some crazy weight loss scheme if you're fifty pounds over-fat but the last 10 pounds after losing the first forty, well that's a completely different story. It's like comparing the first mile in a marathon to the last. Which do you think is more difficult?

Fat should be lost slowly and continuously, and it will, if the procedures outlined in this book are applied with consistency. The immune system and the complex biological and neurological mechanisms that maintain homeostasis and control our weight and mass are challenged when we attempt to change our body composition.

When we increase our demand for fuel and energy through physical activity and simultaneously restrict our intake of food, we can actually traumatize the cells that store fat, and challenge the control centers that manage our 'fat-point'.

Most diets cause a loss of water and muscle, especially when they're not reinforced with resistance training. The marketing hype and focus is on time; lose weight fast, 10lbs in 10 days or even 2 days!

Unfortunately, such an approach is seldom successful long term and a red warning flag should go up in your mind immediately as soon as you hear this. Sure, weight is lost initially, but then more weight and fat is gained after the imperfection of the approach is revealed.

Chapter Eight

The Psychology of Living Lean

When it comes to achievements in your life, a dream or a wish is not the same as a definite goal. We need dreams and wishes, for many of us, our everyday lives depend on them. The key to remember is this, *"If you have the desire, then you have the power to make it true."*

This is where goals come in. Plan your strategy, write it down, and make it come true. You can achieve your goals much easier with efficient and effective strategic planning.

Exercise is the anchor and nutrition is the chain attached to it. The ship is your body. Let your training slide and your diet will slide…guaranteed.

Take control of your metabolism, induce a steady state of thermogenesis, get physically active, eat nutritious food routinely, focus on quality and micronutrient density, use protein to your advantage, drink plenty of pure water, and guess what? The results will come because you're in sync with the law, and when you live according to the law through the spirit of goodwill and self-control, there is no penalty. Energy abounds and athletic activity is a joy.

Living lean equates to thinking lean. It's understanding the science of how to utilize fat as a fuel source and integrating the most logical lifestyle according to your objectives and goal. You simply cannot manage body mass effectively if your food table is not designed according to your lean mass, genetics, and other variables that regulate your unique form and function.

Ideally, the food you eat everyday should be compatible with your body type, metabolic and biochemical needs. Again, taking the slow approach to losing fat is the permanent approach. You have to be patient and go into the program understanding this concept or else you'll lose your focus, become very impatient, regret the whole thing, binge and then stop training. I've seen this happen many times.

It takes years for most people to gain fat so don't expect to lose it overnight. If it took 10, 20 or even 30 years to accumulate X amount of fat, get into the program with the expectation of losing approximately ½ pound a week or about 1 kilogram a month.

During the process you'll also gain some fresh new lean mass, strengthen the entire body and tone up any pre-existing tissue. Expect to keep the fat off forever because you are integrating a consciousness of training and eating for health & wellness based on science. The old ways and destructive habits are gone. Your new lifestyle is setting a new and higher standard of health as you utilize your inner strength and personal power to take affirmative action every day.

It's really an issue of healing the mind and changing your attitude about yourself, your self-awareness, and your lifestyle choices. We are creatures of habit, so we have to recognize which of our habits are destructive. But it's more than just a process of elimination. We must replace old habits with positive alternatives, and once formed, they will set in motion a huge kaleidoscope of positive outcomes.

New habits aren't easily formed, so like the athlete, we must stay on top of our game and prepare for victory. We must be vigilant and keep the inner eye ever open.

Recognize the emotional connection to overeating if that is a problem. Guilt, anxiety, fear and low self-esteem are common among overeaters.

Treat this self-destructive behavior the same way as an alcoholic or drug addict would if the desire for change is genuine. Tell someone you can trust or talk to a health professional. Ask for help. Attend workshops or group therapy. Seek progress not perfection.

The refined foods we have access to today are more like drugs than food, many of which are highly addictive. Confession is good for the soul, but follow-through consistent action is required. It's human (animal) nature to overindulge, but we must show some restraint. Only through awareness, knowledge and self-discipline can this problem be monitored and managed successfully.

Any new regimen, especially one focused on reducing bodyfat, should leave you feeling healthier than you were before you started. If this isn't the case, you've deprived yourself in some important aspect and in the long-term, this will not be beneficial or sustainable.

By completely re-educating your appestat and metabolism so that future accumulation of adipose tissue is prevented, you can slowly convert your body into the size and shape you desire.

Motivation is crucial during any time of transformation. Control everything that goes into your mind. Fill it with uplifting, high-energy constructive information. Stay focused on the potential rewards and the potential outcome. Stop watching the news!

Use your ingenuity and the power of human conceptualization. Once you get into a regular pattern of eating healthfully and exercising routinely, expect to feel better day by day. It's going to take time to reach your final goal, but in the end the results you achieve will more than satisfy you're longing because the new 'you' you create, will possess a greater capacity for life.

Afterword

Our bodyweight is only a reflection of the mirror within our mind. To achieve ideal body composition we must get our minds off our weight and on to health. We must learn how to think lean if we want to look and live lean. Excess bodyfat is a disease. Accept that. It cripples function and provides no health advantages of any kind. The best body is the one you live in. Take care of it, work it hard and nourish it well.

This book is the fifth in a series of many to follow, each forming a link in the Cory Holly Series. I invite you to join me on this journey of self-discovery and in the meantime please move on to the next book in the series, book six, titled The Enigma of the Ectomorph.

The Enigma of the Ectomorph teaches those who are naturally lean how to gain weight the natural way. Hardgainers often struggle with emotions connected to their slight build and small frame. This program explores the mindset of the ectomorph and provides a step-by-step plan based on science and my experience working with hundreds of hardgainers in the gym. The focus is on training and nutrition and developing the mental habits of thought that are crucial to apply long term.

Remember, to stay well and live long with vibrant health we must make exercise a top priority and nourish our bodies with the best possible food and natural health products we can find.

This is Cory Holly wishing you all the very best of health and wellness for life.

Stay well and live free!

About the Author

Dr. Cory Holly is the Founder & President of the Cory Holly Institute (CHI). Cory completed his Doctor of Naturopathy degree at Clayton College of Natural Health in 1992. He studied exercise physiology and biochemistry at Western Washington University and apprenticed at the Colgan Institute of Nutritional Science for seven years. He currently studies philosophy, physics, biology, biochemistry, physiology, molecular genetics and human psychology online at MIT, Standford, UCLA and the Ayn Rand Institute.

As Canada's Ambassador of Sports Nutrition, Health & Fitness, Cory's objective is to strengthen sports nutrition awareness worldwide and bridge the enormous gap that exists between nutrition and fitness. Cory is the recipient of the 2003 CHFA Sports Nutrition Hall of Fame Award. The CHFA (Canadian Health Food Association) is Canada's largest trade association dedicated to natural health and organic products.

Cory has competed in a great variety of competitive sports including hockey, soccer, football, basketball, lacrosse, wrestling, track & field, tennis, table tennis, badminton, volleyball, triathlons, running, swimming, diving, gymnastics, handball, rowing, Tae Kwon Doe, boxing, bodybuilding and power lifting. He was awarded Athlete of the Year in both Junior High and Senior High School.

Cory currently competes on Canada's Masters National Team in track and field (hammer throw) and has several Natural Masters bodybuilding titles including CNBA Canada (Gold) INBA Universe (Silver) INBA Olympia (Silver) and INBA Hawaii (Gold). Each year in Vernon BC he also hosts the Cory Holly Classic (track & field meet).