4. Why Strength Training? (or *Why Cardio Is a Waste of Your Time*)

WHETHER YOU WANT TO LOSE FAT, gain muscle, or do both, strength training should be the core of your conditioning. Aerobic activity, on the other hand, is inefficient and ineffective no matter your goal.

It is a myth that doing prolonged steady state training—usually maintaining a target heart rate for 30 to 60 minutes—like aerobics or "cardio" is the best way to burn calories and achieve cardiovascular health. Ever plod along on a treadmill that tells you the number of calories burned? You might go 45 minutes before you hit 300 calories. Well, guess what? That's 300 *total* calories burned in that time, and not 300 calories above what your baseline metabolism would have burned anyway, even while at rest. That's the reason the exercise machine asks your weight: To calculate your baseline metabolic rate. The average male burns 105 calories at rest in 45 minutes. Those 195 extra calories that the exercise *actually* burned—only 195 calories more than if you had been taking a nap—can be undone by half a plain bagel in half a minute. And aerobic exercise typically spurns your appetite enough to more than offset those few actual calories burned.

Here's the skinny: One pound of fat can fuel the body for up to 10 hours of continuous activity. If we were so metabolically inefficient as to burn calories at the rate the exercise equipment advertises, we would never have survived for so long, and certainly not endured the hardship of the Ice Ages. The calories expended hunting and gathering would have caused us to die of starvation long before we ever found a Wooly Mammoth. By today's standards, we would hardly have enough metabolic economy to survive a trip to the super market, let alone hump it across enemy lines for a week-long reconnaissance mission with 120 pounds of gear.

More bad news for aerobic activity: Whether it's running, cycling, or a step class, the main reason it gets easier the more you do it, is *not* because of improved cardiovascular conditioning, but because of improved economy of motion. For the most part, it doesn't get easier because of muscular endurance, but because your body is becoming more efficient at that particular movement. You require less strength and oxygen than you did be-

fore because your body's nervous system is adapting. Wasted movements are eliminated, necessary movements are refined, and muscles that don't need to be tensed are relaxed and eventually atrophied. This is why marathon runners will huff and puff if they cycle for the first time in years.

Aerobic training actually causes muscle *wasting* because the body is programmed to adapt to whatever demands we place on it. Long low-intensity aerobic training only requires the smallest and weakest, "slow-twitch" muscle fibers to fire off again and again. The other, stronger and larger, "fast-twitch" muscle fibers are not necessary for the task and become a burden to carry and supply with oxygen. The body has no demand for extra muscle beyond what is needed to perform a relatively easy movement over and over. So your body adapts by actually burning muscle.

The reason many people gain weight as they age, especially beginning in their 30s, is because they have less muscle than they had in their late teens and early twenties. As we age, our bodies naturally lose muscle, especially as we are less active in our lives. This muscle tissue loss results in a decreasing metabolic rate. And then, if you continue to eat like you did when you were younger... well, you'll slowly gain weight, pound by pound, month by month, year by year, until one day you look in the mirror and wonder, "What happened?" The key to eliminating accumulated body fat is regaining your youthful metabolism by regaining your muscle.

Muscle is the most metabolically expensive tissue we have: It takes between 50 and 100 calories a day just to keep one pound of muscle alive, for both men and women, even if you are completely inactive. An extra five pounds of muscle can burn up to 15,000 calories in a month—that's the equivalent of two pounds of fat. Muscle is the single greatest tool for weight loss. Increased muscle mass let's you lose weight with less attention paid to calorie counting and food selection.

But with consistent aerobic exercise, over time, you're far more likely to *burn* five pounds of muscle. That means your body will burn *at least* 250 *less* calories a day. And as your body becomes more efficient at running, that 195 calories you burn on the treadmill will decrease to about 125. So let's do the math: You burn 125 calories above your resting metabolic rate each day you do aerobic exercise. Then add the minimum 250 calories you do not burn due to muscle loss caused by this exercise. After all your huffing and puffing you are now 125 calories in the wrong direction!

THE ANSWER: INTERVAL STRENGTH TRAINING

Interval training is the repeated performance of high-intensity exercises, for set periods, followed by set periods of rest. Intervals can consist of any variety of movements with any variation of work and rest times. It burns far more calories and produces positive changes in body composition with much less time than aerobic training.

This is not only because of the muscle it builds, but also the effect it has on the metabolism *following* the workouts. Strength training gives your metabolism a boost far beyond the duration of the actual workout, for as long as 48 hours. In contrast, after aerobic training your metabolism returns to normal almost immediately. So with interval training we're not only building muscle, but we're also able to kick up our metabolism for the rest of the day—even when sleeping!

Many people believe aerobic activity strengthens their heart, and decreases the chance of things like coronary artery disease. Yet, after much research, even U.S. Air Force Cardiologist Dr. Kenneth Cooper—the very man who coined the term "aerobics"—now believes there is no correlation between aerobic performance and health, longevity, or protection against heart-disease.

On the other hand, aerobic activities do carry with them a great risk of injury. Most, even so-called "low impact" classes or activities like stationary cycling, are not necessarily low-force. And things like running are extremely high-force, damaging to your knees, hips and back. Aerobic dance is even worse. Sure, you'll hear the occasional genetic exception declare that they've never ever been injured doing these exercises. But overuse injuries are cumulative and often build undetected over years until it's too late, leading to a decrease or loss of mobility as you age, which, in turn, too often leads to a shortened lifespan.

Any effect you are seeking from aerobic activity can be achieved more safely and efficiently with high-intensity strength training. Remember, your cardiovascular system supports your muscular system, *not* the other way around. An elevated heart rate means nothing by itself. Being nervous before a full combat equipment nighttime High Altitude Low Opening (HALO) formation jump always sent my heart rate skyrocketing, but it didn't make my belt any looser. And even if you insisted on measuring the efficacy of an exercise by an increase in heart rate, I dare you to get it up higher than with my "Stappers."

So there we have it: Interval strength training is superior to aerobic activity in burning fat, as well as building strength, speed, power, and even cardiovascular endurance. All this in far less time than tedious "cardio" sessions.

Hooya!

Dr. Angelo Tremblay and his colleagues at the Physical Activities Sciences Laboratory, in Quebec, Canada, tested the popular belief that low-intensity, long-duration exercise is the most effective program for losing fat. They compared the impact of moderate-intensity aerobic exercise and high-intensity interval training on fat loss.

Skinfold measurements revealed that the interval training group lost more body fat. Moreover, when they took into account the fact that the interval training used less energy *during* the workouts, the fat loss was *9 times* more efficient in that program than in the aerobics program. In short, the interval training group got 9 times more fat-loss benefit for every calorie burned exercising. How can that be?

Because, after taking muscle biopsies, measuring muscle enzyme activity, and lipid utilization in the post exercise state, they found that high-intensity intermittent exercise caused more calories and fat to be burned *following* the workout. In addition, they found that appetite is suppressed more after intense intervals.

Throughout the book you'll find ***Hooya!*** boxes with information, facts, studies, and ideas. SEALs and Special Tactics Operators yell "*Hooya!*"—an American Indian war cry meaning "Give me more!"—when they drive through their personal comfort to achieve the seemingly unachievable.

Hooya!

Izumi Tabata and his partners at the National Institute of Fitness and Sports in Tokyo, Japan, compared the effects of moderate-intensity endurance and high-intensity interval training on maximal aerobic capacity—the best indicator of cardiorespiratory endurance. They conducted a six week study with two groups of randomly picked males.

Group 1 did one hour of steady state training five days a week. Group 2 did *only 4 minutes* of interval training five days a week. At the end of the six weeks, Group 1 had an increase in maximal aerobic capacity of 10% and Group 2 had an increase of 14%. Not only did the interval group have a 40% greater gain in aerobic capacity, they had an increase in strength of 28% percent, as opposed to the Steady state group which had no gains in strength. And all this with just *four minutes* of interval training a day.

Similar studies have confirmed that interval training produces higher gains in aerobic fitness, greater decreases in body fat, and gains in strength as opposed to the muscle wasting that occurs with much longer sessions of steady state training.

7. Common Strength Training Myths

Spot Reduction

Ah, yes, that old belief, constantly reinforced by glam mags every summer, that fat loss can be isolated to a particular area of the body. "Want to lose belly fat? Just do some Sit Ups!"

Well, it doesn't work that way. Not at all.

The reality is that if you have fat on your tummy, doing Sit Ups is *not* going to give you a 6-pack. While doing hundreds of Sit Ups every day will indeed build strong abs, it will do nothing to reduce fat in that area alone.

Fat loss can only be achieved in all areas of your body at once, and it can only be achieved by burning more calories than you ingest, and you burn calories most effectively by building muscle. In fact, working your thighs or shoulders will do as much, probably more, than Sit Ups to make you lose fat on your belly (and everywhere else), since they are bigger muscle groups.

Unless you get rid of enough fat all over your body for your abdominal muscles to show through your skin, building strong abs will only push your belly fat out further.

So how do you loose love handles, flabby glutes, or a soft tummy? Eat well and build muscle through strength training. Then, the rate at which each area looses fat is determined by genetics.

Muscle Can Turn into Fat

Fat cells and muscle cells perform completely different and separate functions, and one will never transform into the other. When someone becomes "soft" and overweight after being "hard" and muscular, it is because the calorie output no longer exceeds the calorie intake. Largely, this is due to a decreased metabolic rate from the loss of muscle. The loss of muscle is caused by the lack of necessary stimulus. There is no magical transformation of muscle into fat, just a loss of muscle mass and an increase of body fat.

Your Muscles Will Get Too Big If You Do Strength Training

I've heard it from women especially, all over the world: "I don't want to get too muscular." Some have seen the initial results of strength training and then shied away in fear of becoming the next Ms. Olympia. First off, in case you didn't already know, male and female professional bodybuilders (and most likely some of the bigger guys at your gym) all use steroids and other illegal substances. The human body—yours included—simply will not accrue that kind of muscle mass without serious drugs.

For men and women, the initial gains in muscularity that are common within the first couple of weeks of strength training are largely due to an increase in circulation within the muscles. Similarly, the jumps in strength are mostly due to the body's neurological adaptation to new movements rather than added muscle mass.

The fear that you will accidentally become more muscular than you intended or that you will start growing uncontrollably is unfounded. For women, consistently gaining a half pound of muscle a month is outstanding progress. For men, a pound and a half is comparable. Keep in mind, this will occur under ideal conditions only. A muscular body is built through consistent dedication to strength training and proper nutrition. It won't happen overnight or accidentally.

This brings us to another myth...

Women Should Train Differently Than Men

A common misperception is that women will get bulky from strength training. They won't. Not unless they start popping pills and sticking needles in their buttocks.

There is no reason to train differently based purely on your sex. Both sexes gain and lose muscle and fat the same way. It's true, men and women often have different goals. But surprisingly, these different goals can be achieved with the same program.

Most women aren't looking to develop big chests and arms, but rather to firm and tone their entire body, especially their legs and glutes which tend to be the hardest things to maintain as they age. The ironic thing is that they should do exactly the same thing to achieve these goals as men should do to bulk up. Women too often just take their arms along for the ride when they workout. Remember, men and women's muscles are identical, the only difference being in size. It's virtually impossible that a woman would get bulky, muscular arms from doing upper body exercises. Even most steroid-saturated professional female bodybuilders don't have huge upper bodies. Some women continually fail to understand that if they exercised their upper bodies as much as their lower, their tummies would just be that much flatter, and their glutes that much tighter, because they would be increasing their overall lean muscle mass. Again, building and maintaining muscle, alone, is the most effective way to burn fat and calories.

In contrast, the manly man has been taught to hit the bench press, lat pull down machine, squat rack, and other contraptions of bodybuilding that achieve less functional and less physically attractive results than the full array of bodyweight exercises in my programs.

More is Better

For some it's intuitive: They think the more you workout, the more you'll grow, and the longer you workout, the better. Since muscle is the most effective fat burning tool we have, we should train without making compromises to our muscular development due to poor nutrition or overtraining. Remember, your muscles grow while you rest.

Overtraining and poor nutrition are easily the most common pitfalls that beginners and experienced fitness enthusiasts alike fall into. It's not possible to say exactly how much is too much, since many factors such as genetics, diet, sleep, training intensity, frequency, and duration all play a role. It's best to watch for the following signs of overtraining: A halt in progress, chronic fatigue, decreased motivation, frequent injuries, and an increased resting heart rate, which is measured first thing in the morning before getting out of bed.

If overtraining is suspected, adjust one or more of the following: Diet, amount of sleep (you should try for 7 - 8 hours per night), training intensity, duration, and frequency.

You Can Reshape a Muscle by Doing Isolation Exercises

Nope.

Your muscles can only get bigger or smaller. The shape that your muscles take, as they change in size, is determined not by the specific exercises you do, but by genetics.

Strength Training Makes You Big and Cardiovascular Training Makes You Lean

Again, dietary intake is the major factor that regulates body composition. While prolonged moderate pace exercise such as aerobics will help slightly increase your caloric expenditure, it will do little to build muscle. Without strength training, you are neglecting the best fat burning tool in your arsenal: More muscle! I'm sure you're getting the idea by now... Nothing raises the body's resting metabolic rate more effectively than muscle. A few extra pounds of lean muscle will burn approximately the same amount of calories throughout the day that the average aerobics class will. Added muscle makes you burn more calories even while you sleep.

To gain weight, increase your calorie intake and build muscle through strength training.

To get lean, decrease your calorie intake and increase your resting metabolic rate by building muscle.

You Can't Build Muscle and Lose Fat at the Same Time

If you're just beginning this program after a long period without much exercise, with proper nutrition, you'll experience gains in strength while losing fat at the same time. For those more advanced athletes, it's tough, but *not* impossible. With a perfect balance of complex carbs, good fats, and enough protein, your body can achieve these seemingly separate goals.

Restrictive Diets

People often starve themselves in order to loose weight. That's a no-go!

The body is very resourceful, and it will slow down its metabolic rate in order to compensate for the lack of calories. It tries to hold onto every calorie you consume, since it is unsure when it will be fed again. Then, once you resume your normal caloric intake, your metabolic rate remains slowed down. This is why people who try restrictive diets usually gain their original weight back and often some more too.

The good news is that if you want to lose weight, you should never be hungry. A well balanced diet consisting of small frequent meals (every 2.5 - 3.5 hours) is the key to long term success.

5. So What Is "Fitness," Anyway?

SURPRISINGLY, THERE IS NO CLEARLY DEFINED, universally accepted standard for fitness. In the decade I spent honing military units assigned to carry out the most dangerous missions, it was always my experience that the individual with the best development in all areas of physical ability succeeds the best operationally. Similarly, it is diverse ability that makes us attractive.

Not to offend anyone, but I think most people would agree that a sprint athlete looks more attractive than a powerlifter, a ballet dancer better than a marathoner. The sprinter and the dancer have a higher level of fitness than the bodybuilder and marathoner. Their muscles tie together in a functional way. Most people would agree that it's the physiques with the most development across a spectrum of physical qualities that are most attractive, as opposed to those that have very limited usefulness. It is diversity in physical ability that is most useful and functional, not to mention beautiful. In contrast, those who are extremely developed in a certain area almost always have a weakness equivalent to their strength. The super fast, skinny runners lack strength, and the bulky bodybuilder types have little endurance.

So, my program develops the entire spectrum of physical skills: Muscular Strength, Muscular Endurance, Cardiovascular Endurance, Power, Speed, Coordination, Balance, and Flexibility. The degree to which you possess these eight physical qualities defines your level of fitness.

It is only by focusing on these seven skills, rather than appearance, that you will make your best gains, in ability, well-being, *and* in appearance. The washboard stomachs, big chests, round shoulders, and shirt-sleeve-stretching biceps of my men are testament to that, as are the toned legs, tight triceps and abs of the women I've trained.

MUSCULAR STRENGTH: Your ability to exert a force through a given distance. Muscular strength can be determined by the difficulty of an exercise that you are able to perform for a single repetition. For example, if Jane, with maximal effort, can perform one Classic Push

Up and Tarzan can perform a Handstand Push Up, then Tarzan has greater muscular strength.

POWER: The amount of force you can exert in a specific amount of time. Power = Work/Time. If Tarzan and Jane are both able to perform only one Pull Up with their maximal efforts, but Jane is able to perform that one Pull Up faster, then she has more power even though they have the same strength.

MUSCULAR ENDURANCE: How long you can exert a specific force. Jane and Tarzan could compare their muscular endurance by seeing who can hold the peak position of the Pull Up the longest.

CARDIOVASCULAR ENDURANCE: Your body's ability to supply working muscles with oxygen during prolonged activity. Jane and Tarzan challenge and improve their cardiovascular endurance by performing 200 non-stop Squats together.

SPEED: Your ability to rapidly and repeatedly execute a movement or series of movements. If Jane can do 45 lunges in 30 seconds and Tarzan can do only 25, then Jane has greater speed.

COORDINATION: Your ability to combine more than one movement to create a single, distinct movement. For example, performing a simple jump requires that you coordinate several movements. The bend at the waist, knees, and ankles and then the correct extension of those joints must all be combined into a single movement. Your ability to combine these movements, with the proper timing, into one movement determines your coordination, and in turn, how well you can do the exercise.

BALANCE: Your ability to maintain control of your body's center of gravity.

FLEXIBILITY: Your range of motion. If Jane, while doing a squat and using good form, can go down until her butt touches her heels, and Tarzan can only go until his thighs are parallel to the ground, then Jane has greater flexibility.

Simply put, fitness is the degree to which a person possesses these seven qualities.

Now, you may be thinking, "Okay great, now we know what fitness is, but what does that have to do with the real reason I bought this book?"

I know that most people are reading this book because they want to look and feel better, not to improve their balance, flexibility, and coordination. Herein lies a common mistake: Most programs put the cart before the horse. It is by focusing on the development of these seven skills, rather than appearance, that you will make your best gains, both in abil-

ity *and* in appearance. Form follows function. Well-being and healthy, attractive physiques are tied together, and they are best created through my program that develops all the qualities that make up fitness.

Naturally, those with the greatest all around level of fitness have always possessed the greatest ability to survive. And it only makes sense that we would evolve to find those with the greatest ability to survive the most attractive.

So how are all these levels of fitness developed? Through the use of short strength training sessions using bodyweight exercises and a sound nutritional plan.