CHAPTER 1

Getting the Proper Perspective on Training

THE MUSCLE FACTOR

Of the many factors which determine the realization of a lean, muscular physique, one of the most important is *muscle*. Why muscle? Muscle is what helps us get lean and stay lean, by raising our metabolism. Want to burn more calories? Build more muscle! Muscle is what makes men look rock solid and masculine and what makes women look shapely and toned. Muscle is what helps our body to function at its highest capacity. Want proof? Just look at the effects of muscle atrophy (loss) on people as they grow older: They gradually become weaker, have less energy and lose structural support, leading to many neck and back problems.

You are probably already aware of the many benefits of having muscle, which is why you work out in the first place. But what people have lost sight of amidst the pills, products, and bad information is how to *actually* build muscle. In other words, what makes a muscle grow? If you asked 10 people this question, you would probably get the same answer from each: lifting weights. And, although this is a good answer, it's incomplete.

HOW MUSCLE IS REALLY BUILT

The secret to building muscle lies in the relationship between the total demands (stress) placed on the muscle through resistance training and the time between, and frequency of, these bouts of stress (recovery time). Basically, muscle building is contingent on the effectiveness of a workout in stimulating growth and the time given to recover from the workout. Muscles require a stimulus which is strong enough to induce an adaptive response (viz., a change in size or functional ability) and ample time to recover from the stimulation and reap its full benefits (adaptation). If the stimulus is not strong enough, or the recovery time is not long enough, or both, then muscle development cannot occur.

Those who have been training for a number of years have probably heard before that muscles do not grow while they are being trained, but rather while they are being rested. Training is nothing more than a stimulus (cause) for development (effect) and only one-half of the equation. Yet, most people focus solely on training and give little consideration to rest and recovery. Even though the significance of rest between workouts has been well-documented, it is clearly misunderstood and/or underestimated, based upon the number of trainees who do not get enough of it, and whose potential is being hindered because of this.

Over the years, I've worked at many different gyms and at every single one I've seen many different people making the same mistakes. For the five or six days a week I would work, I would see the same people training nearly every single day. From Monday to Friday, I could count on seeing the same individuals at the same exact time with the only difference being the muscle groups being trained. I'm sure many of you reading this have witnessed the same thing and if you have, you are probably guilty of it yourself, unless you actually work at the gym.

With this constant bombarding of the muscles, as well as the tremendous strain it places on the body as a whole, it is no surprise better progress is not made by the vast majority of those who train regularly. I know that some will say, "I only hit each muscle once a week, they get plenty of rest (seven days) before being trained again. You mean this is not enough recovery time?" The answer is, no; in many cases it is not enough time and the reason has to do with what's called the indirect effect, which will be discussed later.

To better understand how muscle is built, one thing must be clear…

EXERCISE IS A STRESS

Even though exercise can have a positive impact on your physical and psychological state, the act of exercising places a negative stress on the body. A stress is *any physical, chemical, or emotional factor that causes bodily or mental tension, or may be a state resulting from bodily or mental tension and may be a factor in disease causation.*[1]. Because exercise temporarily degrades the body's normal functional ability, it is considered a stress.

In response to *any* stress, the body will always respond by running through specific stages. These stages were first uncovered by Dr. Hans Selye, author of the book *The Stress of Life*[2], whose research showed that whenever the body is presented with any stress that disrupts its homeostatic state (state of equilibrium), there would be a specific outcome. The stages leading to this outcome are the Alarm Reaction, Stage of Resistance, and Stage of Exhaustion, collectively referred to as the General Adaptation Syndrome

or G.A.S. As it relates to exercise, there is not just a General Adaptation Syndrome that affects the entire body, but a Local Adaptation Syndrome[3]. Here are examples of both syndromes and how they affect us:

LOCAL ADAPTATION SYNDROME

ALARM REACTION: At the start of a set, or the moment the weight is bearing down on the muscles, a signal is sent out indicating that a stress is being imposed.

STAGE OF RESISTANCE: As the set continues, fatigue begins to set in and the threat of muscular failure increases with each subsequent repetition. The muscle will try to combat the stress being placed on it by recruiting a larger number of fast-twitch fibers and using more chemical and electrical energy.

STAGE OF EXHAUSTION: This is the point at which the muscle is no longer capable of generating enough force to move the weight. It is referred to as *muscular failure*.

GENERAL ADAPTATION SYNDROME

ALARM REACTION: When the muscle has reached failure or has at least been sufficiently exhausted, it signals the release of cortisol to fight off the inflammation in the muscle.

STAGE OF RESISTANCE: Following the workout, the body enters a two-part recovery phase; *compensation* and *overcompensation*. Compensation occurs when the body recovers or restores its depleted resources and returns to its original strength and performance levels. Overcompensation is full recovery with increase in muscular size, strength and functionality.

Understand that the body cannot enter the overcompensation phase until it has first compensated. For this reason, enough time must be allowed between workouts (bouts of stress) to allow completion of both phases. If the compensation phase is not completed, or has barely been completed, and another exercise session takes place, then overcompensation cannot occur.

Also, bear in mind that to overcompensate, the stress must be of a magnitude great enough to disrupt homeostasis. Quintessentially, there must be a reason for increase in size, strength and function. If the stressor is tolerable or not strong enough to cause a disruption worthy of physical development, the body will do no more than compensate.

STAGE OF EXHAUSTION: This is when physiological function stagnates or even regresses, as a result of overtraining, or the individual reaches the limits of the ability to recover and tolerate exercise stress. This situation is most typically the result of too many consecutive bouts of exercise (stress) in which the recovery time between is insufficient for compensation.

Some signs of being overtrained are reduced muscular strength, size, and performance, sleepiness or insomnia, constant soreness and joint stiffness, feeling fatigued, headaches, loss of appetite, prolonged recovery, depression, loss of interest in exercise, lack of concentration, feelings of nervousness, stress and decreased self-esteem, flu-like symptoms and one-day colds.

As you can see, being in a state of exhaustion is the last place you would want to be. Yet, many trainees live here year-round. The reason is many people train too frequently, not allowing enough time to compensate (replete), let alone overcompensate (grow larger and stronger). The stress accumulated from constant bombardment of the muscles and the entire system gradually becomes too great. The trainee erroneously places the need to work out before the need to recover. To avoid entering an exhaustive state, there must be a balance between exercise stress (training) and recovery time. If already in an overtrained or exhaustive state, the only way to emerge from it is a complete layoff from training.

THE APPROACH

A training program must meet your specific needs for it to have a significant impact. To produce the best results relative to your goals, ability, and limitations, the most effective and rational approach to training is to perform the least amount of exercise necessary to achieve the best and/or desired response. The reason for taking this approach is simple: too much or too little exercise will negatively affect your ability to develop your physique and will stall any progress you have made already. Much of the discussion throughout this book will focus on how to accomplish this objective of performing the least amount of exercise to meet your needs.

Many people do not take the time to think about how they should train to reach a particular goal. Often, people just show up and start lifting. They do a little of this and a little of that and hope that things will work out the way they'd like. Some individuals

follow a routine outlined in a magazine, book or internet site. The trouble with this is one cannot be certain that any program which provides exercise specifics (the kind of exercises, the number of repetitions, sets, and frequency) will meet the needs of each and every individual. This is a prime example of trying to fit people into programs as opposed to fitting programs around people.

It would serve you much better if you first made clear exactly what you want, and then devised a strategy of your own for getting it. This does not differ much from how many of us plan our finances. We first determine where we would like to be, say, 10 or 20 years from now, and then come up with the most effective and efficient means for achieving our objectives. Unfortunately, when it comes to fitness, people gamble on different training methods, fad diets, and gimmicks in the hope of meeting their goals, instead of devising an effective long-term plan. Basically, they are looking to "hit the jackpot," but just like in Vegas, the odds are stacked against them.

QUALITY VS. QUANTITY

QUALITY: **noun** (pl. **qualities**) **1** the degree of excellence of something as measured against other similar things. **2** general excellence. **3** a distinctive attribute or characteristic[4]. As it applies to our discussion of exercise, quality refers to the effectiveness of our training in making inroads (i.e. reductions) into our muscles' ability to function for the purpose of stimulating an adaptive response whereby the muscles will increase in size and consequently strength.

QUANTITY: **noun** (pl. **quantities**) **1** a certain amount or number. **2** the property of something that is measurable in number, amount, size, or weight. **3** a considerable number or amount[5]. In the world of exercise, quantity refers to the number of sets performed in a workout, how long a workout lasts or how many workouts are performed in a week.

Typically, people take the *quantity* or *more-is-better* approach to training. They believe that doing "a lot" of exercise, whatever that might be, is the key to success. Unfortunately, these individuals fail to realize that it is not just how much you do, but what you do and how you do it, that is going to determine your result. Poor quality of exercise in large doses cannot make up for the effectiveness of an adequate amount of high-quality exercise in garnering noticeable results.

Ideally, your training should be centered on getting the most from the least amount of exercise necessary. To accomplish this, your training must be of the highest quality. By performing only the necessary amount of exercise to elicit a specific response, you can avoid the common pitfall of most training programs: overtraining. Doing more sets or exercising more frequently than needed does not help muscles grow or develop more. It only adds to the overall stress placed on the system (you), inhibiting your recovery ability and, consequently, your development.

As a trainee who emphasizes quality work, you will be required to focus all your energy and effort into every rep of every set during the entire workout; you'll be working at your highest intensity from start to finish. You might not perform as many sets or spend as much time in the gym as the next person, or as you yourself used to, but that is because the work you do now will be much more demanding, which is fundamental to triggering muscle development. Ultimately, quality exercise comes down to one thing: hard work.

Please note that I am not insinuating that the quantity of exercise performed bears little importance. Quite the opposite; it is of tremendous importance. However, determining the volume of exercise performed must be preceded by determining the quality of exercise.

At this point you might ask, "What if I performed a high quantity of high-quality work?" This, indeed, could provide a great stimulus for development if it is done infrequently and with sufficient recovery time. More on this later.

It becomes increasingly difficult to sustain/tolerate very high levels of hard work for an extended period, which is why large amounts or frequent bouts of hard exercise should be performed only on a short-term basis. Naturally, as a person performs any activity for great lengths of time, fatigue inevitably sets in which, in turn, diminishes one's ability to sustain peak performance. In weight-training, fatigue usually sets in faster as compared with other activities because of its demanding nature. For this reason, a high-quantity of high-quality exercise is impracticable for long-term progress.

Try to find out how much exercise *is* needed, not how much you *think* or *believe* is needed. I used to think I needed to train my chest (as well as other muscle groups) at every conceivable angle for three or four sets per exercise during each and every chest workout. This inevitably led to me doing anywhere from 16-20 sets for chest alone in a single workout! When I finally took the path of self-discovery, I learned that I required only three to five hard working sets to get muscle-producing stimulation. That meant I was sometimes doing 17 more sets than needed. Think of all the time, effort, and energy I wasted on those 17 extra sets (which were doing nothing to stimulate *more* muscle growth) and how it all could have been used for another one or two muscle groups or, more importantly, for my recovery phase.

Some might argue that because we are all physiologically the same, it is okay to make generalizations concerning exercise. Such as, if you want to increase muscular size and power, lift heavy weight for only three to six reps. Or if you want muscle tone

without size, perform 12-15 repetitions[6]. Unfortunately these types of generalizations are what prevent so many people from realizing their true potential because they fail to discover *specifically* what is right for them. Generalizations can be helpful in establishing a starting point from which you can build and learn. They should not be regarded as *the rule* and adhered to without finding out if they hold true for you.

Everyone is made up of the same muscles, bones, and organs, all of which function the same way. This much is true. However, the degree to which they function, or the efficiency with which they function, varies across a broad spectrum. These small differences can have big implications, which is why discovering what is best *for you* will be important to your success.

TRAINING EFFICIENTLY

If there is one thing that I personally value more than any other when it comes to exercise, it is efficiency. Ask any client of mine and I'm sure each will admit that what is probably more amazing than their results is how little they needed to do (compared to mainstream beliefs). Not that the workouts are easy. On the contrary, they are quite hard, but the fact that they do not have to do long, monotonous workouts five to seven days a week and instead need to train for only 30-40 minutes, no more than two to three times a week, is inconceivable to most. When we first started, many of my clients would say, "Are you sure we're doing enough?" A month or so later they were not wondering if they were doing enough. They *knew* they were doing enough because the results spoke for themselves.

Training efficiently boils down to structuring your training in a way that will allow you to produce the best results in the least

amount of time and with the least number of workout sessions. In effect, you must view the cost/benefit ratio of your training (i.e. is what you are putting into your training [time/effort] versus what you are getting out of it). Developing a lean, muscular physique is not dependent on the *quantity* of exercise performed, but rather the *quality*. It is not about how much work you *can* do, but how much work you *need* to do.

Plenty of men and women work out nearly every day for hours on end and yet many of them find themselves unable to attain the look they are after. They place their faith in *how much* they exercise instead of *how well* they exercise.

THE IMPORTANCE OF TRAINING EFFICIENTLY

To better understand why it is important to train in an efficient manner for optimum muscular development, imagine your body as a holding tank for all the *resources* you need to develop your physique. These resources fuel your workouts and play an important role in recovery and development from those workouts. Unfortunately, they are in limited supply. From the time you are born, your body uses these resources to help you fight any type of stress that threatens your ability to function normally. Illness, anxiety, drugs, alcohol, exercise, or anything else which places even a modest amount of stress on the body will exhaust your resources. As we age, we notice that our ability to bounce back quickly from being sick, or a night out partying, or even an occasional pick-up game of basketball, drops off dramatically. This is because our supply of recovery resources is much lower than it once had been. Every year resources are depleted and cannot be replaced. This is why it is important to exercise in a manner that does not add more stress than you can tolerate or are capable of recovering from.

Aside from the aesthetic reasons, exercise is meant to help build and strengthen our bodies so we can better defend ourselves against outside stressors and continue functioning at an adequate level. So, it is ironic that what we use to build up our bodies is the same thing which can tear them down. The more we exercise, the more resources we exhaust and the fewer are available in the future when we need them the most. That's why it's important for our training to be effective in getting us the results we want without exhausting our resources.

From the very first rep of your workout, you begin to use the resources (or fuel) in your tank. The more exercises you perform, the more resources you exhaust, as well as increasing wear and tear on the joints and tendons. Many of the pains experienced by advanced trainees: tendonitis, bursitis, worn cartilage, are the direct result of overuse--performing too many sets too often relative to the joint's ability to remodel itself following trauma. This alone should be reason enough to perform the least amount of exercise necessary.