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THE REQUIREMENTS OF MUSCULAR GROWTH

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Three requirements are necessary for muscular growth to occur. If these three conditions are met, a muscle will respond by increasing in both size and strength. The degree to which a given muscle will grow then becomes a function of an individual's genetic profile, most noteably his insertion points, limb lengths, predominant fiber type and neurological efficiency. Genetics are the reason why two individuals can have a different response to training despite using the same strength program.

PROGRESSIVE OVERLOAD: The first requirement is that a stress or a load must be applied to a muscle using some form of resistance. Your muscles don't have eyes and, therefore, don't know what you're lifting. In other words, it doesn't matter whether the resistance is being supplied by a barbell, a machine, a partner or even a cinder block.

What matters, however, is that the load must be great enough to provide a sufficient stimulus for growth to take place. Failure to 'overload' a muscle with sufficient stress will result in submaximal gains. Unfortunately, no one knows exactly how much stress is necessary to stimulate growth. The only way you know that a muscle received enough stress is by training with maximal intensity. The following example should make things more clear:

Did you ever have a coach who asked you to do a drill at 75%? Naturally, the coach implied that he wanted you to work with somewhat less than maximal effort. However, it's literally impossible to measure any level of effort...except for maximal effort. Let's try to draw a parallel between this situation and strength training. Suppose 85% intensity created adequate stress for a muscle to get stronger. How do you know if you are training with 85% intensity...or 90% intensity...or any other level? The fact is that the only level of effort that you can measure accurately is 100% or an all-out effort. Therefore, the only way to ensure that your muscles have received an overload is by training with maximal intensity. This is typified by lifting to the point of momentary muscular failure (when no further repetitions are possible).

Lastly, the overload must be progressive. Every workout, you should attempt to perform one more repetition than the last time, use more resistance than the previous session or both.

ADEQUATE RECOVERY: A second requirement is that your muscles must be allowed to recover from your strength workouts. It is during the recovery period that a muscle adapts to the imposed stress. If a strength training program does not provide for adequate recovery, you will gradually reach an overtrained state with a resulting loss of size and strength.

Some individuals have a high tolerance for exercise and recover quickly; others have a low tolerance for exercise and recover slowly. You can determine if you have a low tolerance for exercise by monitoring your progress in the weight room. You may find that you need a little more recovery time than most people.

Generaly speaking, most individuals require 48-72 hours of recovery time between strength workouts. This means that you should strength train 3 times per week, (every other day).

PROPER NOURISHMENT: The last requirement is that the body receive proper nourishment as a fuel for growth. Remember, you can have a car with the most powerful and finely tuned engine in the world, but it won't respond properly with lousy fuel.

It should now be evident that strength training doesn't have to be complicated. You simply need to train each set with maximal effort, allow yourselves a recovery period and eat properly. In short, for a muscle to get stronger you must stress it, rest it and feed it. The result will speak for itself.