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# Effort key to strength training



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The most important factor that determines your results from strength training is your genetic (or inherited) characteristics (such as your predominant muscle-fiber type.) Unfortunately, you cannot control the genetic cards that you were dealt.

The most important factor that you can control is your level of effort (or intensity). In order for you to achieve optimal improvements in muscular strength (and size), you must produce a minimum level of muscular fatigue. Your effort must exceed this "threshold" to trigger an adaptive response by your muscles, namely an increase in strength (and size).

In a sense, this notion is somewhat similar to aerobic training. Did you ever take a group-fitness class such as a Spinning Class or some type of "Boot Camp" Class? At one point or another, the instructor probably had you check your heart rate. Why? Well, this is done to gauge your level of effort. In the case of aerobic training, you should get your heart rate above a threshold that's 60% of your age-predicted maximum heart rate.

The basic idea of producing an adequate amount of fatigue is the same for strength training as it is for aerobic training. The difference is that with aerobic training, you're trying to fatigue heart (cardiac) muscle; with strength training, you're trying to fatigue skeletal muscle.

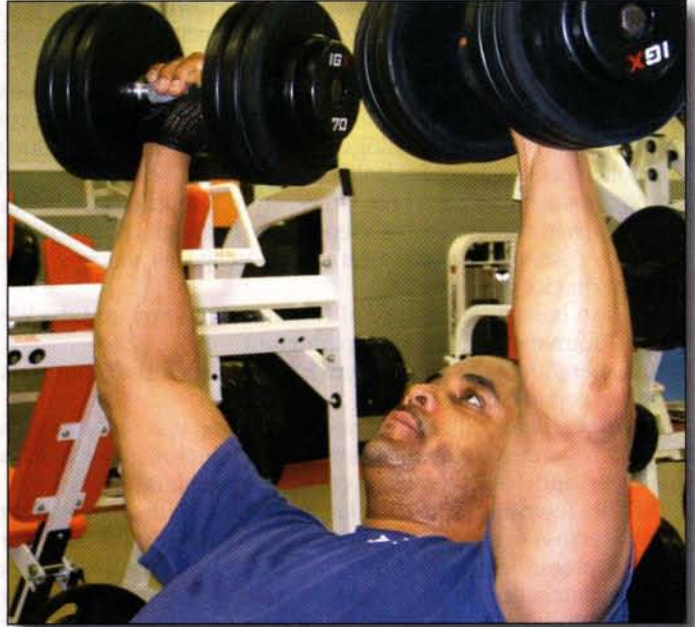
## PRACTICAL APPLICATIONS

The fact of the matter is that a high level of effort is necessary for maximizing your response to strength training. Simply, exercise that doesn't produce enough muscular fatigue doesn't stimulate muscular growth. When lifting weights, your effort in each exercise should produce or approach "muscular failure." This means that you should train to the point where you can no longer perform any more repetitions (with good technique).

Understand that you must produce just the right amount of muscular fatigue. If you produce too little fatigue, then you may not have stimulated any muscular adaptation. But if you produce too much muscular fatigue, then you may not have permitted any muscular adaptation; it may even cause a loss in strength (and size). Too much fatigue can be created by doing too many post-fatigue repetitions at the end of a set (such as negatives) and/or doing too many sets.

Therefore, your level of effort should be high . . . but it should also be appropriate. To better appreciate the concept of using an appropriate level of effort, consider this analogy: If you used a shovel on a regular basis for short periods of time, you would form calluses on your palms. Basically, the calluses are a compensatory (and protective) adaptation to frictional heat. If you shoveled for a long enough period of time, however, you'd develop blisters instead. Here, the excessive demands have surpassed the adaptive ability of your tissue because the stress was too much and too frequent. In short, you should train with a high level of effort without overdoing it.

How do you know if the demands on your muscles are too



much or too frequent? You should monitor your performance in terms of the resistance that you use and the repetitions that you do. If you're making progress, then the demands are appropriate; if you're not making progress, then the demands are excessive.

Something else to consider is the relationship between two training variables: the length (duration) of the effort and the level of the effort. These two variables are inversely related. In other words, as one variable increases, the other decreases. In practical terms, you cannot train with a high level of effort for long periods of time. So if your workout is to be intense, then it must be relatively brief.

The fact that your response from strength training is directly related to your level of effort shouldn't come as much of a surprise. It's like anything else in life: How hard you work at your other types of physical training, your job performance, your marksmanship skills and even your relationships largely determines your success at those endeavors.

## THE BOTTOM LINE

The main reason why most individuals fail to realize their strength (and size) potential is simply because they don't train with a high enough level of effort. Simply, a sub-maximal effort yields sub-maximal results. Keep in mind, too, that "you play like you practice." If you perform your strength training with a low level of effort, will you be able to ratchet up your intensity when you're in the line of duty and circumstances warrant an aggressive response? ♥

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