

Achieving muscle hypertrophy essay



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Achieving Muscle Hypertrophy The increase in mass or girth of a muscle called hypertrophy can be triggered by a handful of stimuli.

Weight-lifting is the prime example of such. Hypertrophy affects the entire human system in a holistic way. In terms of neural response, The primary measurable effect would be the increase in the neural drive which stimulates muscle contraction.

In a matter of days, a neophyte can achieve insurmountable strength gains which results from learning to use the muscle. In terms of genetic outcomes, The muscle continuously receives increased demands and the synthetic machinery is upregulated. The idea of upregulation begins with the ubiquitous second messenger system which includes protein kinase and phospholipases. It activates the family of immediate-early genes which includes c-fos and c-jun. Genes which appear to command the contractile protein gene response. After this, protein synthesis is imminent.

The message filters down to alter the pattern of protein expression and takes as long as two months for actual hypertrophy to initiate. Excess contractile proteins appear to be incorporated into existing myofibrils which appears to be some limit to how large a myofibril can be and at times can divide. Such process occurs within each muscle fiber. Hypertrophy is the result of the growth of each muscle cell. Loading Parameters for Functional Hypertrophy : Your workout will be divided into 3 groups of sets that I will term a 'complex'.

In the first one you will perform 4-6 sets, in the second 2-4, and in the third 1-3. You will choose one exercise per complex, or you may use the same

exercise for all sets of the workout. Complex 1: Sets: 4-6Reps: 1-5TUT: Less than 20 secondsRest: 3-5 minutesNotes: In this complex, the concentric portion of each rep be performed as explosively as possible. Now the bar may move slowly, that's fine, as long as you're attempting to move it explosively. I'm not overly concerned with the eccentric tempo in this complex as the load will usually prevent you from letting it free fall.

Complex 2: Sets: 2-4Reps: 3-8 (6-8 unless slower tempos are used)TUT: 20-40 secondsRest: 3-5 minutes.; ReferencesBourque, P. (2005). HST for dummies. Retrieved February 10, 2008, from [http://www.](http://www.bodybuilding.com/fun/paul4.htm)

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