



The 3 Keys to **MAXIMISING** Your Hypertrophy

In order to maximise your muscle growth, you first need to understand the mechanisms that cause hypertrophy - It makes sense right?

But do you actually know what they are and what they mean?

Didn't think so. So let's get stuck in

There are 3 gait ways that elicit musculature hypertrophy

1. Metabolic Stress/Fatigue
2. Mechanical Tension
3. Muscle Damage

Metabolic Stress

This type of training (the cardio of the weight world) are the sets that get you sweating, the sets that get your heart rate jacked, the sets that give you hyperplastic hypertrophy - the "Pump". As you contract the muscle over and over there will be a gradual build up of metabolic byproducts (metabolite accumulation) in the body followed by a rush of blood pooling in the muscle. It's important to note that metabolic stress is not specific to the muscle being trained but a metabolic build up that affects the entire body.

Mechanical Tension

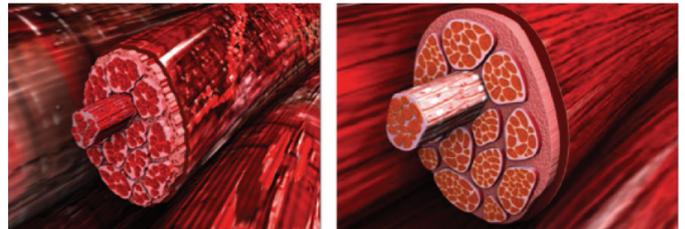
Mechanically induced tension is produced by force generation and stretch to the muscles being used. For example the higher the weight the higher the tension and the greater the motor unit recruitment will be.

The more muscle fibers in a motor unit the more force and power that total muscle will be able to generate.

Muscle Damage

This is just what it sounds like, and what most people think about when training for hypertrophy. Muscle damage in this scenario usually occurs on a very small scale (myofibril or single muscle fibers). The damaged fibers causes acute inflammation believed to lead to the release of various growth factors. Protein syntheses is also required to repair and build the muscle back up (hopefully to a stronger more resilient state)

** This does NOT mean you need to be consuming copious amount of protein every day but that's another story...



Now that you understand the 3 gaitways for anabolic signaling, let's start applying this knowledge to your training and get those muscles jacked!

To get your muscles to grow, your training needs to involve at least 1 of the 3 mechanisms involved in hypertrophy preferably 2 and occasionally all 3.

What does this mean for you and your training program?



Well hopefully by now your eyes are starting to widen and you can see how training within that small narrow minded text book version of hypertrophy (8-12 reps at 60-75%) may be exactly what is holding your back your gains!

As your eyes widen you may also realise that muscle soreness is not a direct indication of musculature growth, **YOU DONT HAVE TO BE SORE TO HAVE GROWTH** you just have to simply 'activate' growth through the mechanisms listed above

Objective	Reps/Set	Time	%Range	Energy System
Maximal Strength	1-3	4-10 sec	85-100%	ATP/PC
Strength	4-6	10-20 sec	75-85%	ATP/PC Anaerobic Glycolysis
Hypertrophy	8-12	20-45 sec	60-75%	ATP/PC Anaerobic Glycolysis
Muscular Endurance	15+	45+ sec	<60%	Anaerobic Glycolysis Oxidative

Metabolic Stress

Mix up your repetitions Yes it is OK to step outside the 8-12 rep range you've been using for the past 4 years. Not only is it OK but it is actually

recommended for muscle growth! You can get bigger from lifting light weights. Let me say that again YES you can get bigger from light weights, as little as 30% 1RM in fact! Play around, do some sets of 50,100, 20, 25....don't just think yeah maybe I could.. ACTUALLY DO IT

Mechanical Tension

Mix up your repetitions Sound familiar? Here we go again, step outside of the 8-12 rep range. Train with intensity, intensity in this case refers to the % of your 1RM you are lifting not how much effort you put into your training. Do some sets of 1's 3's 5's especially if you are actually wanting to maximise your strength as your muscles grow.

Mix up the speed of your lifts as well. The hypertrophic responses are fibre-type specific - if you want to get as big as possible you need to also mix up the speeds at which you lift the weights

Muscle Damage

As your body adapts (which it will), think the SAID principle - Specific Adaptations to Imposed Demands, the same stimuli over and over will no longer result in localised damage to the muscle tissue needed to create a hypertrophic response. This is so easy to manipulate, you all know it works you've felt it work before but yet you've never really embraced it. Let's look what you have to play with:

- Rest Intervals
- Training intensity
- Volume
- Exercise Selection
- Training to failure
- Repetition speed

For example,
Let's look at a set of squats and see how through just the manipulation

of the rest intervals can dramatically change things around...

Imagine doing this set of Back Squats:
6x6 with 3 minutes Rest
(YES this will still help your muscles grow)

Mechanical Tension HIGH

The longer rest periods allow you to push a larger weight, recruit more



motor units, move at a faster speed, potentially lift with improved form - which will affect what muscles are activated, allow enough time for metabolites to clear, ATP to be restored etc

Metabolic Stress MODERATE

As there are quite a number of sets in this example there will still be significant metabolic stress as you fatigue

VS

6x6 with 45 seconds Rest

Mechanical Tension MODERATE

This would be hell to complete if you selected the right intensity. The shorter rest periods would mean that the weight moved would be less, less motor unit recruitment, the speed would be slower, potential decreased form, missed reps etc but the metabolic stress would be far higher

Metabolic Stress HIGH

Far greater metabolic build up due to the limited rest interval

As you can see BOTH examples involve two of the three mechanisms of muscle hypertrophy (TENSION AND STRESS) just in differing ways. I'd also be willing to bet if you were to try both these examples you would experience significant MUSCLE

DAMAGE from each (the third mechanism)

All that from just manipulation your rest periods...

Now that you understand the mechanisms that cause hypertrophy, it's time for you to start thinking about other ways in which you can start manipulating them - just like in the above example. Doing this will maximise your anabolic signaling and growth!



If you are struggling with any of this stuff reach out and get in touch with me

Get Strong

Ben