

# FUNDAMENTALS OF BUILDING MUSCLE

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WITH A SCIENTIFIC APPROACH

WRITTEN BY  
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**Hello and welcome!**

My name is Josh Williams and I'm a MAXX International Certified Personal Trainer, Ex Cruise-Line Fitness Director, Ifbb National champion and sponsored athlete. I've been featured in articles such as Men's fitness, Daily Mail, Muscle and fitness and several other publications explaining my training and nutrition protocols that get my clients such huge success.

I've been applying the fundamentals of math and physics to the issues of strength training and bodybuilding. I'm an advocate of science, measurement and analysis of what really works in the gym and take a calculated approach to training and finding ways to make training more efficient and effective.

Thanks to the Internet, there's an enormous amount of information available on bodybuilding and strength training. However, a lot of that information comes from the opinions and anecdotes of individuals, rather than from the more valuable knowledge gained by working with thousands of people. An article about "here's what worked for me" is not as broadly applicable as, "here's what worked for thousands of trainees." In this E-book I'm going to show you what is necessary for everyone.

So what you are about to read is fact, not hype. And it's not based upon what worked for some guy, somewhere, this applies for all humans of normal, healthy physiology. These are the three indispensable elements of muscle mass and strength gain.

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## 1. High Intensity

Muscles grow larger in response to high intensity overload. This is a very simple element of human physiology that has been in operation for (according to anthropologists) over three million years... Before fancy exercise equipment, before training “systems” and before nutritional supplements.

The muscles of the human body respond to the intensity of overload in a similar way that skin responds to the intensity of sunlight. Muscles adapt to the stress of overload by getting larger; skin adapts to the stress of over-load by getting darker.

Each of the 600+ muscles in your body is accustomed to operating at a certain level of output during normal daily activities. To cause new muscle to grow you have to force your muscles to operate beyond their normal level of output. That's why we lift heavy weights to build muscles....it delivers a higher intensity of overload.

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Building new muscle is actually nature's way of keeping you healthy. A demanding, high intensity workout sends a message to the central nervous system that says, in effect: "This much work is so draining that our existing muscle strength can't sustain it...we better build some new muscle so working at this intensity isn't so taxing." And after the new muscle appears, you can repeat the process with a new, higher intensity workout and build even more muscle.

Once you realize that all muscle building progress stems from high intensity overload, you'll begin to understand why I've had such a fixation on trying to quantify it. For example, which is more intense: two reps with 150 pounds or three reps with 135 pounds? What about one set that takes one minute versus three sets that take five minutes? Which has more intensity?

Trying to find a way to quantify this all important intensity of muscular output is what led to the creation of Leflex fitness, and ultimately becoming the more 'calculated' go to trainer.

Anyway...the first thing you must know if you want to build mass and make strength gains is that high intensity overload is absolutely indispensable!!

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## 2. Progressive Overload

Suppose you go to the gym today and determine that the highest intensity overload you can generate for, let's say, your triceps, is 10 reps with 150 pounds doing a close-grip bench press. Great. But if you go back to the gym and do that same routine every workout you'll never get bigger, stronger muscles!

Why?

Because the overload must be progressive. This is one of the most overlooked elements of strength training. I know people who have done basically the same workout month after month. I don't mean the same exercises each time...I mean the same amount of overload for each muscle group.

In fact, I know people who still believe you have to "cycle" your intensity...so they go back to the gym and do less intense exercises...that's regressive overload! That's like having a fairly dark tan then sitting in the shade during your next tanning "workout" and somehow hoping the reduced sunlight intensity will deepen your tan. That would defy the laws of physics!

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The truth is, no two workouts should ever be the same. (Unless you are trying to just maintain – not build – muscle mass.) To be productive, every exercise in every workout should be engineered to deliver at least slightly higher intensity than the last workout.

Can you make progress every workout? Of course! Consistent progress is exactly what is supposed to happen! Bodybuilding and strength training have become so fooled with unscientific reasoning that now people find it hard to believe every workout can be productive. But what would be the purpose of going to a gym and lifting really heavy weights if it didn't move you measurably closer to your goal of gaining more mass and size?

Every workout taxes you and depletes your body of precious energy reserves. You should never spend that energy unless you get measurable and sustainable results from it. You can and will get measurable results from it every time if you train rationally.

Progressive overload can/should be applied in the following ways:

- ✓ increase in reps or sets
- ✓ Increase in weight during sets
- ✓ Increase in time of stress applied during sets
- ✓ Decrease in rest time between sets
- ✓ Increase in intensity by applying technique variations

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## 3. Variable Frequency

High intensity and progressive overload are absolutely, positively necessary if you want to make gains in lean muscle mass and size.

There is just one catch...you can't accomplish both of them on a fixed training schedule.

Frequency of training is one of the most misunderstood elements of productive bodybuilding.

Why?

Because you can't have both PROGRESSIVE overload and a FIXED training schedule. Your body won't tolerate it. The stronger you get, the more rest you need between workouts. Fixed schedules are the single biggest reason why trainees quit going to the gym after a few weeks, get injured or catch a cold or flu after training a short time.

Even if you manage to clear all those hurdles, you'll soon hit a plateau and stop making progress with your physique.

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A consistently productive program requires a variable training frequency and/or variable exercise techniques, eg. One week you may do 5x5 training for strength and size and the next week you do HVT (High Volume Training) to ensure that, not only does your bodies type 2 muscle fibers get a chance to rest, recover and grow but also, your bodies less prone to adapt to the type of stress you apply to the muscles in the following week. You need to analyze your recent rate of progress track your workouts and adjust your training frequency/techniques to ensure full recovery and growth before your next workout.

Some people like to workout as often as possible and some want maximum efficiency. (i.e. to workout as little as possible while still achieving their goals.) Fortunately for some, when you complete a workout there is a range of time over which your next productive workout can occur. The limits of the range are the first day you can return to the gym without over-training and the last day you can return to the gym without under-training.

For example, if today's chest workout was on the 1st of the month, you might be able to return to the gym fully recovered and train chest again as early as the 6th and perform a productive workout. But you might also have to wait until the 12th of the month before losing the benefit of your last workout. You see? So whether you return on the 6th, 12th or in between is a matter of time, pre determination and self examination. Either way it is absolutely imperative that you rest enough time for your body to fully recover.

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**Recovery must be complete before new growth can occur.**

Think of it this way... suppose you had a battle to the death with a Lion and after the fight you lay on the ground totally exhausted.

What is the first order of business for your body in order to ensure your survival? A) re-supply your existing tissues and organs with what they need to get you to safety, or B) build you some new muscle just in case you have a similar struggle in the future. Fortunately for us, the brain gives the first priority to immediate survival.

So when you leave the gym after having a battle with the leg press, your brain first takes care of your full recovery. The actual muscle growth process is quite brief and studies reveal most of it occurs while you're sleeping, but if you never fully recover, and return to the gym for another depleting workout, you'll never experience real muscle growth and without a variable training frequency, eventually you will reach the point where you never fully recover between workouts and therefore will never get any real results.

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I train with various clients from beginners to advanced and the most effective way to incorporate these must do elements of training, is by having a well calculated split training program. To learn more visit - [Limitlesswarrior.co](http://Limitlesswarrior.co)

## CONCLUSION

Next time you go to the gym, ask yourself:

Is this exercise delivering the highest possible intensity to the target muscle(s)?

- ✓ How do I know for sure that today's intensity on each exercise will be greater than last workout's intensity
- ✓ How do I know if I'm delivering progressive overload?
- ✓ How will I know that I've fully recovered from my last workout?

If you're unsure how to do this and haven't already, head to [limitlesswarrior.co](http://limitlesswarrior.co) to get practical, personalized programming.

Imagine walking into the gym everyday knowing what workouts to perform and everyday knowing what food to eat for your specific body type?

That's how you get REAL RESULTS.