

Get the Facts: Weightlifting Sets

Myth:

To get big I have to lift _ number of sets and _ number of reps with very heavy weight.

Fact:

If you search online for a workout routine to build muscle you'll most likely find a plethora of plans claiming to be the best. If there are so many plans, why haven't we found that perfect combination? This myth is tough in the sense that it is still under active investigation (not uncommon for the exercise science field). For decades, people have been trying to figure out that perfect combination of weight and reps to maximize their #Gainz. So far the short answer is there is no perfect routine. However, I will take you through some of the current literature.

What we do know pretty well is muscle physiology. I won't bore you with the mechanism of sarcomeres and how ATP plays a role in myosin binding, but in a larger sense there have been three main criteria identified for muscle repair:

- ◆ Mechanical tearing of muscle fibers
- ◆ Myocyte (muscle cell) ischemia (lack of oxygen)
- ◆ Energy depletion and metabolite (lactic acid) build up

Most try to hit all three within their program but usually end up leaning toward one side. For example, an exercise including many repetitions with lower weight (high volume, low intensity) may not tear the muscle fibers as much as a routine with extremely high weight and lower repetitions (high intensity, low volume) but it will increase the ischemia and metabolite build up in the muscle. So the question becomes, which routine is better?

Well it has been "known" in the fitness realm that for endurance training, low intensity high volume is best and the opposite is best for strength training. Thinking about the three criteria for muscle growth, it would be more accurate to say that maximizing all three would yield the best results for muscle growth. And indeed, recent research has agreed. In Schoenfeld's 2014 article on muscle hypertrophy, a comparison of a powerlifting routine with that of a bodybuilding routine showed similar results in muscle size. These programs are inherently different in volume and intensity yet no significant differences in results were noted. This negates the thinking that muscle building requires one style and endurance training requires another, but, this past notion is rooted in a strong foundation. It follows the principle of specificity stating stimulus of a particular nature dictates the adaptation. This holds true to the extremes. For example, a rower vs a bodybuilder - both building their lats. The rower will not gain nearly as much size or strength but will exercise as much if not more, but the rower has adapted to be able to perform the task much longer and more efficiently.

Conclusion:

The perfect lifting program is your own personal lifting program. More importantly than the sets and reps of a routine is the adherence to it. As long as you don't go to one extreme or another, stick to the program, lift to failure (whether it be at rep 1 or 10), and enjoy yourself, the routine will work for you. Note: This may not apply for a very specific sports/athletic goal (powerlifting, sprinting, etc.). This is focused on muscle building in general.

For more information about this or other fitness/nutrition questions, feel free to contact me at

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References: Schoenfeld, B. (2014, October 1). Effects of different volume-equated resistance training loading