

Enough Resistance is Important

There are levels to “successful.” The average Major League Baseball player made \$4.4 million in 2016. According to his net worth, Facebook founder Mark Zuckerberg has made \$4.4 million for *every day he’s been alive!* While most of us would consider both baseball players and Mark Zuckerberg financially successful, one has achieved much more than the other.

Strength training, as you know from both experiencing it and from reading these newsletters, is successful in helping to improve your health and physique. As the word continues to spread about what it bestows, strength training will continue to draw new advocates.

As it grows, a question will become increasingly popular: *why use equipment?* Strength training using bodyweight or even household items is simple and portable. Why are machines useful when you can just perform squats, crunches, push-ups, and other exercises with little to no equipment? Success has different levels, and to achieve the greatest levels of success from strength training, using enough resistance is essential.

According to a new study, the amount of resistance you train with is critical. Your muscles know the difference between many reps with a light resistance, such as bodyweight squats and crunches, and fewer reps with a heavier weight. It’s also clear that your muscles have a preference.

In the study, participants performed a routine with light weights and high reps or a routine with heavier weights that limited them to fewer reps. Both routines were similar in that all sets were performed to the fatigue point of “Muscle Success.” The training lasted six weeks.

The light-weight group performed about three-times as many reps...and gained less strength and muscle! In fact, the heavier-weight group gained about three-times the amount of strength.

Electromyography tests showed the heavier-weight, low-rep routine stimulated progressively more muscle fiber usage throughout the study. This was not the case for the low-weight group. This result is important for a few reasons. It means heavier weight is needed to perpetually challenge muscles. It also explains why the heavier-weight group gained more strength and muscle (more fibers trained means more fibers were improved).

In terms of why this result is important for you, it shows that a challenging resistance is necessary to maximize results and to perpetually obtain better results. While bodyweight exercises and exercises using light weights certainly have value, they are not able to provide the same continuously-challenging resistance levels that is possible with effective strength training machines.

Success has many levels, and to achieve the highest level of “success” with strength training, very challenging resistance is needed.

When you start the leg press next time and you notice the resistance feels “heavy,” embrace it. This means you have the opportunity to develop more muscle and strength.

Reference

Jenkins, N.D., Miramonti, A.A., Hill, E.C., Smith, C.M., Cochrane-Snyman, K.C., Housh, T.J., & Cramer, J.T. (2017). Greater neural adaptations following high- vs. low-load resistance training. *Frontiers in Physiology*, 8, 331.