

## Speed of Movement for Muscle Growth

Summary: It really does not matter what speed you train when doing resistance training when it comes to muscle growth, although it does matter when it comes to safety. To lift safely I recommend that most lifters, especially novice ones, spend 1-2 seconds in the concentric phase (up) and 2-3 seconds in the eccentric (down) and not let momentum drive the motion. At any point in the lifting motion you should be able to stop the lift safely. Experienced lifters may see hypertrophic benefits from eccentric times of up to 4 seconds, but the excessive damage from slow loaded lengthening should be used sparingly. I would also pay attention to how fast you can move a weight when you're about 3-4 reps away from failure and aim to mimic that movement speed through the full rep range of motion. That being said research does not point to slow or fast movement speeds to be better than the other when it comes to muscle growth. An experienced lifter may benefit incorporating both speeds in their training, but be cautious using momentum driven motion.



# Speed of Movement for muscle growth with resistance training

I recommend that most lifters spend 1-2 seconds in the concentric phase and 1-3 seconds in the eccentric. Experienced lifters may see hypertrophic benefits from eccentric times of up to 4 seconds, but the excessive damage from loaded lengthening should be used sparingly. Pay attention to how fast you can move a weight when you're about 3-4 reps away from failure and aim to mimic that movement speed through the full rep range of motion. As mentioned previously, when I discussed eccentric and concentric and muscle growth, both motions are important. Do not just go through the motions when lowering the weight (lengthening) really think about engaging the muscle versus just concentrating on the shortening (concentric) motion, which most people concentrate on since it is harder motion to do and it gives more of a pump. I literally see people almost dropping the weight during the eccentric motion and not caring. I call this type of lifting momentum driven motion. This is wasted motion, which can cause an injury since a lot of tension is placed on tendons. Leave those motions for strength and power athletes, which will find benefit in that type of training since they are looking for strength, power, speed, and improved performance. For the rest of us performing momentum driven motions decrease the work a muscle does thereby decreasing the effectiveness of the exercise. What is worse, it is dangerous to the joints and spinal cord, since it overloads these areas, causing unnecessary wear and tear.

DETAILS: What does the research say. According to a review by Will et al. research has extensively investigated the effects of different intensities, volumes, and rest intervals on muscle growth, many of the present hypertrophy guidelines do not account for different movement tempos, likely only applying to volitional movement tempos. Changing the movement tempo during the eccentric and concentric phases can influence acute exercise variables, which form the basis for chronic adaptive changes to resistance training ([review](#)). **They go on to say to further elaborate on the already unclear anecdotal evidence of different movement tempos on muscle hypertrophy and strength development, one must acknowledge that the related scientific research does not provide equivocal evidence.** It would be wise to do both (slow and fast) to a degree in advanced lifters. M&S says it nicely “the best conclusions that can be drawn based on available evidence point to incorporating slower and faster repetitions into your routine to prevent adaptations to either style of training”.