## **Tempo**

The significance of **Tempo** as a training variable is a somewhat hotly debated topic amongst the weightlifting community. Should you lift weights quickly or should you lift weights slowly? Most of the studies on the topic are mixed at best, and most often the results show that the variations on tempo across different movements yield similar results when it comes to muscle *Hypertrophy* (muscle size), and in fact has diminishing returns after a certain threshold.

"Results indicate that hypertrophic outcomes are similar when training with repetition durations ranging from 0.5 to 8 s."

"From a practical standpoint it would seem that a fairly wide range of repetition durations can be employed if the primary goal is to maximize muscle growth. Findings suggest that training at volitionally very slow durations (>10s per repetition) is inferior from a hypertrophy standpoint, although a lack of controlled studies on the topic makes it difficult to draw definitive conclusions."

Schoenfeld BJ, Ogborn DI, Krieger JW. Effect of repetition duration during resistance training on muscle hypertrophy: a systematic review and meta-analysis. Sports Med. 2015 Apr;45(4):577-85. doi: 10.1007/s40279-015-0304-0. PMID: 25601394.

So if tempo isn't that important to building muscle, why am I even talking about it? Well, because *muscle size* is not the end-all, be-all goal of this program. Tempo training still holds quite a bit of value and there are certain advantages to working with specific lifting tempo's outside of a purely muscle building standpoint. These advantages carry over to things like **overall safety and injury prevention**, **improvements in technique**, and **building a sense of discipline during your lifts** (learning when or when not to terminate a lift.) As well as building strength in both muscle and connective tissue (Tendons, ligaments, and fascia).

"Eccentric training improves muscle strength, power, and stretch-shortening cycle function compared to traditional resistance training, with unique effects on muscle-tendon unit adaptations."

Jamie Douglas et al. "Chronic Adaptations to Eccentric Training: A Systematic Review." *Sports Medicine*, 47 (2017): 917-941.<https://doi.org/10.1007/s40279-016-0628-4>.

It is also a very easy variable that we can tweak throughout our program to increase the intensity of our workouts, which if you remember, is what Progressive overload is all about.

So let's go over the basics of what Tempo is, and how you will be able to "read it" and follow it in the context of the program. **Tempo** is simply the speed at which you perform the **certain phases** of an exercise. **Every exercise** can be broken down into these **4 separate phases**.

1. **Eccentric Phase**- Muscle Lengthening Phase. When a muscle stretches.
2. **Bottom Position**- The bottom position of the movement.
3. **Concentric Phase**- Muscle Shortening Phase. When a muscle contracts.
4. **Top position**- The top position of the movement.

Now, when you read tempo in the context of the program **it will always follow that specific order** (Eccentric, bottom, concentric, top) with a corresponding number of seconds in each position, representing the time you should be spending in each one of those phases. It will look something like this.

**Example 1: Goblet Squat**

3x10-12x25lbs

**@ 2, 2, 1, 0**

**How to Follow this tempo:**

1. Descend for 2 seconds.
2. Hold the bottom Position for 2 seconds.
3. Ascend for 1 second.
4. Go straight into the next rep with no pause.

When there is an "**0**" notation, the goal (depending on which phase it is in) is to either move the weight explosively and with force, or that there is no pause in either the top or bottom position. It's important to realize the difference between X and 1. 1 second is quick, but still controlled and would resemble a majority of what you see done in the gym. 1-2 seconds is the "standard" tempo performed for the majority of reps, you can consider it "working speed" Not fast, but not intentionally slow either.

Now the tricky part is this, while every exercise follows these 4 phases, not every exercise **STARTS** in the same phase. You can think of exercises as belonging to two separate camps. *Those that start with the concentric action* (Muscle Shortening), and *those that start with the eccentric action* (muscle lengthening.

So if we look at **example 2**, the Lat Pulldown, you can see that this movement starts with the **concentric phase** of action (pulling the bar/handle toward your body). So the first number you should be looking at will be the third phase.

**Example 2: Lat Pulldown**

3x10-12x50lbs

**@ 2, 2, 1, 0**

**How to follow this Tempo:**

1. Pull the bar down for 1 seconds.
2. Hold that position for 1 seconds.
3. Control the weight back up for 2 second.
4. Go immediately into your next rep.

Now, I know this can be a little bit confusing, and I don't expect you to be a master at this right out of the gate. It's part of the reason I saved this concept for the end. In fact, 99.999% of the time, your Tempo should look like this, **[@ 2, 2, 1, 0]**, a slower, controlled eccentric phase, with a short pause at the bottom, followed by a strong and powerful concentric phase, and little to no rest between reps.

The real reason I am taking the time to lay this information out is to bring your awareness to the speed at which you move weights. I would say that a large majority of people that are new to lifting are moving through their sets/reps far too quickly. Something you have to understand, is that your muscles need to be placed under tension for a certain amount of time for physiological adaptations to take place. *Very broadly and generally speaking*, that majority of your working sets should take about 40 seconds to complete in their entirety. When you slow your reps down, your muscles are tasked to control and stabilize the load you are working with. This can sometimes feel uncomfortable, and most of the time people are speeding through their reps as fast as they can just so they can be done with their set. **You have to learn to be comfortable being uncomfortable.** The biggest takeaway from this section is that *you have to control the weight you are working with*, with the emphasis being placed on the eccentric portion of the exercise.