



VELOCITY BASED TRAINING

STARTER GUIDE

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Velocity Based Training Overview

What is Velocity Based Training

Velocity Based Training (VBT) is a modern, data-driven approach to strength training that focuses on measuring the speed of your lifts, rather than solely relying on traditional metrics like weight or reps. By tracking barbell velocity, athletes and coaches can gain real-time insights into performance, helping them to optimize their training programs for better results.



Why use VBT?

Traditional training programs often rely on percentage-based systems, which assume a static relationship between strength and intensity. However, daily fluctuations in performance can make these systems less effective. VBT allows you to adjust training intensity based on how fast you're moving the bar, providing a more dynamic and individualized approach to training.

Benefits of VBT

Track Progress

Track progress through bar velocity. It can be difficult to see real progress with typical sets and reps without max intent.

Compare your bar speeds from week to week to see small improvements each training session. This also creates more opportunities to see improvement, motivating athletes for every rep, set, and training session.

Increase Intensity

Increase intensity by giving an athlete instant feedback on performance. When each bar speed is measured, an athlete instantly wants to achieve higher velocities, and hit new PRs.

Tip: For athletes working in pairs, use the resting athlete to call out each velocity, motivating the lifting athlete.

Monitor Fatigue

Monitor fatigue by comparing data real-time to your performance in the past. Your bar velocity day to day will change due to your recovery.

Notice your bar speeds at a certain weight are significantly lower than usual? It may be good to reduce intensity.

Notice your bar speeds are higher than usual? This is a good day to push your limits.

Tailor Training

Tailor training by moving at a bar speed that matches the goal. The speed of your training has a large effect on the adaptation.

Want to improve absolute strength? Work at lower velocities. Want to improve explosive power? Work at moderately high velocities.

Reduce Risk of Injury

Reduce risk of injury by using data to make informed training decisions. Let VBT tell you at 50% of 1RM that you are more fatigued than usual, as opposed to at 95% of 1RM.

Prevent "ego lifting" and see your athletes care less about the weight on the bar, and more about how fast the bar is moving.

How to use VBT

Using VBT specific to your goals

Speed and Power

By measuring velocity, athletes inherently want to perform better. It has been proven in research that instant feedback on performance increases intensity. When the athlete is shown the speed on each rep, they can create internal competition to beat their previous best.

When training for speed and power, where intensity is paramount, VBT keeps the athlete training at their true peak potential.

Strength

In typical strength training, an athlete makes progress by lifting more weight for a 1RM, or more reps at a high percentage of 1RM. This doesn't give much opportunity for positive feedback, and forces the athlete to use very heavy weight to test.

By using VBT, an athlete can track progress not only by weight and reps, but now with velocity. This creates many opportunities to set PRs, as athletes can track even small improvements of 0.01m/s at any weight.

Daily Fatigue

Fatigue and performance fluctuates daily. Athletes often have a difficult time quantifying how fatigued or rested they are. Using their previous VBT data, and real-time results, they can begin to assess their readiness to train on a given day.

By using their previous velocity PRs at each weight for an exercise, an athlete can compare their current performance to their peak.

For example, if an athlete is moving 225lb on a squat much slower than usual, it may be a good idea to reduce intensity, as this may indicate fatigue. On the other hand, if they are consistently nearing their PR, or achieving higher velocities than before, they may be well rested and can push themselves.

How to measure velocity

To measure bar velocity, use a tethered VBT device like OVR Velocity, which will measure the speed of every rep. Setup the device on the ground, attach the magnets to a metal surface or plate, and fasten the strap to the bar. The device will now measure:

- Average Velocity (m/s)
- Peak Velocity (m/s)
- Average Power (W)
- Peak Power (W)
- Range of Motion (in)
- Time to Peak Velocity (s)
- Height of Peak Velocity (%)



Storing VBT data

By connecting the device to a mobile app, like OVR Connect, you can save all your data in one place. You can now quickly see your velocity PR at each weight, for each exercise.

