



## Vibration Platforms May 'Shake Up' Warm-Ups for Softball Players

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### *Whole-Body Vibration Leads to Increased Bat Speed*

NewsWire — How can softball players increase their bat speed without taking a swing? Thirty seconds of whole-body vibration (WBV) on a special vibration platform has the same effect on bat speed as the standard "dry swings" warm-up, reports a study in [The Journal of Strength and Conditioning Research](#), official research journal of the [National Strength and Conditioning Association](#). The journal is published by [Lippincott Williams & Wilkins](#), a part of [Wolters Kluwer Health](#), a leading provider of information and business intelligence for students, professionals, and institutions in medicine, nursing, allied health, and pharmacy.

"The results indicate that bat speed was not different after warm-up using WBV alone, dry swings, or WBV with dry swings," according to the study by Nicole C. Dabbs and colleagues of California State University, Fullerton.

### Whole-Body Vibration Affects Bat Speed

In the study, two groups of trained female softball players — 11 collegiate and 11 recreational athletes—performed three different warm-ups in random order. For the WBV warm-up, the women stood on a special vibration platform in their normal batting stance for 30 seconds.

Whole-body vibration is a relatively new technique that seeks to produce neuromuscular activation by transmitting vibrations through the body. Previous studies have suggested that WBV can enhance lower-extremity muscle torque and flexibility, among other measures of athletic performance.

The athletes also performed standard dry swings, in which they performed five maximal bat swings; and WBV plus dry swings, that is, 30 seconds of WBV followed by five maximal bat swings. After each warm-up, a special testing apparatus was used to measure bat speed. Reflecting the speed of the bat head through the hitting zone, bat speed

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### Description

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is a key component of batting performance.

The results showed no significant difference in average bat speed after the three warm-up conditions: about 42 mph after WBV, 40 mph after dry swings, and 38 mph after WBV plus dry swings. Thus WBV achieved the same bat speed as dry swings—without the athlete taking a single swing.

Although it may seem like batting performance has more to do with the arms than the legs, most of the force in the batting swing is generated from the legs and then transferred to the upper body. "Therefore, WBV, which primarily activates lower limb muscles, should transfer to upper body and trunk and possibly enhance bat speed," Dabbs and co-authors write.

Their study supports this hypothesis. "These results indicate that WBV warm-ups may be used in place of dry swings to achieve similar bat speeds," the researchers write. They believe the WBV may be especially useful for warm-ups in situations where it's desirable to conserve the athlete's energy—between games of a doubleheader, for example.

Whole-body vibration is still a "fairly new phenomenon," Dabbs and colleagues add, calling for more research to clarify its effects on athletic performance. In particular, studies are needed to see how WBV variables such as vibration amplitude, frequency, and duration affect performance measures such as sprinting, vertical jump height, acceleration, agility, power, and strength.

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