

Vibration Exercise Slows Weight Gain

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A new study by Oregon State University researchers shows that whole body vibration slows the acquisition of fat, and may also positively impact bone density.

The publication can be found in the latest issue of the International Journal of Obesity.

Researcher Gianni Maddalozzo with OSU's Department of Nutrition and Exercise Science looked at the effects of whole body vibration on 7-month-old **rats** that were placed on vibration platforms at OSU's Bone Research Laboratory. Both groups were fed the same diet and kept in a sedentary environment. One group was put on the vibration platform for 30 minutes a day, five days a week for 12 weeks. The other group was not put on the platform.

"After 12 weeks, the whole-body vibration group weighed less, showed no changes in lean muscle mass, and had a lower overall percentage of body fat than the age-matched non-vibration group," Maddalozzo said. "Over the course of the study the vibrated rats were healthy, tolerated the vibration well and exhibited no obvious signs of distress following adaptation to vibration."

Maddalozzo said prevention is often the key to preventing obesity in society. More than 50 percent of adults in the United States do not get enough physical activity. Recent studies suggest that whole-body vibration has been proposed as a potential alternative, or adjuvant, to exercise. Whole-body vibration has been reported to increase energy metabolism through an increased oxygen uptake to values **comparable to moderate walking**.

"Vibration increases energy expenditure," Maddalozzo said. "It's equivalent to walking at moderate intensity."

While not a magic bullet solution to weight gain, Maddalozzo said that whole body vibration has promise as another tool that can be used to help keep weight off. And past studies at research institutions such as the Societa Stampa Sportiva in Rome and at Stony Brook University in New York have already shown that vibration platform regimes have a significant effect on bone formation and muscle strength. Building on that research, **Maddalozzo is involved in a human study with older adults who have had hip replacement surgery. He plans to publish his results in 2009.**

"Vibration training has been shown to improve strength and balance in **older women**," he said.

"Vibration training may give you the **same results as a moderate-intensity workout**."

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