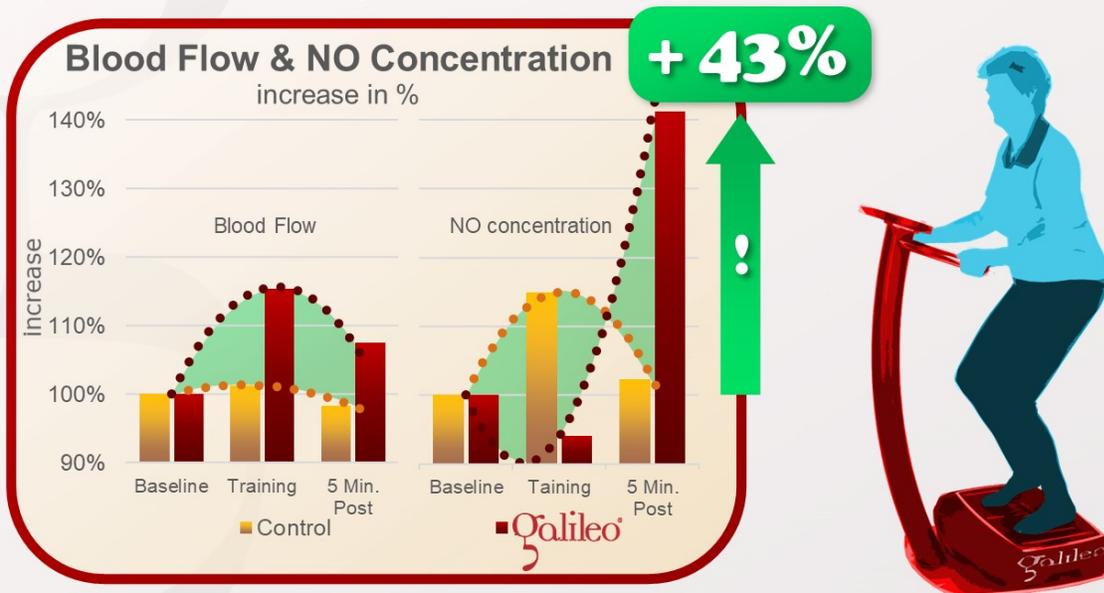


The answer is: YES

This study reported the effects of Galileo Training at high frequencies on blood flow and NO concentration in 58-83 year old individuals (26Hz, pos. 2, 30°-40° squat, 10x30s, 60s rest). The control group performed identical exercises without vibration. The Galileo groups showed significant improvements of blood flow during the training (+15%) and significant increase of NO concentration 5 minutes after the exercise (+43%).



Johnson, Paula K.: The Effect of Whole Body Vibration on Skin Blood Flow and Nitric Oxide Production; All Theses and Dissertations. Paper 4120., 2013, Masters Thesis; GID: 3737

One of the fundamental effects of Galileo Training at high frequencies: With increasing frequency the muscle contraction also increases ([#GRFS3](#)).

Above a certain contraction the Muscle blocks its own vessels. This situation is ideal to maximal exhaust the muscle in a minimum of time. As a result the local NO concentration inside the muscle increases massively (here within 30 seconds).

At the same time there is no cardiovascular reaction (blood flow stays constant). When the muscle relaxes after the training the blood flow increases significantly ([#GRFS24](#)) because the high local NO concentration relaxed the vessel surrounding muscles and therefore increased the vessel cross-section and blood flow which then decreased the NO concentration.

As a result not only muscle power ([#GRFS35](#), [#GRFS26](#), [#GRFS19](#), [#GRFS10](#)) but also endurance ([#GRFS12](#), [#GRFS11](#)) is increased. Most effective for this kind of training are high frequencies (>26Hz, [#GRFS3](#)) and depending on the physical abilities extra loads and deep squatting ([#GRFS4](#)) to maximal exhaust the muscle within 60 seconds.

This works for all age groups and fitness Levels.



All Thesis and Dissertations. Paper 4120., 2013;

The Effect of Whole Body Vibration on Skin Blood Flow and Nitric Oxide Production

Johnson, Paula K.

Department of Exercise Sciences Brigham Young University

Abstract

Background: Vascular dysfunction due to hyperglycemia in individuals with diabetes is a factor contributing to distal symmetric polyneuropathy (DSP). Reactive oxygen species (ROS) reduce the bioavailability of nitric oxide (NO), a powerful vasodilator, resulting in reduced circulation and nerve ischemia. Increases in blood NO concentrations and circulation have been attributed to whole body vibration (WBV). The purpose of this study was to determine the effects of low frequency, low amplitude WBV on whole blood NO concentration and skin blood flow (SBF) in individuals with symptoms of DSP.

Research Design and Methods: Ten subjects with diabetes and impaired sensory perception in the lower limbs participated in this cross-over study. Each submitted to two treatment conditions, WBV and sham, with a one-week washout period between. Blood draws for NO analysis and Doppler laser image scans of SBF were performed before, immediately after and following a 5-minute recovery of each the treatments.

Results: Low frequency, low amplitude WBV vibration significantly increased skin blood flow compared to the sham condition ($F_{2,18}=5.82$, $p=0.0115$). Whole blood nitric oxide concentrations did not differ between the WBV and sham condition immediately or 5 minutes post-treatment ($F_{2,18}=1.88$, $p=0.1813$)

Conclusions: These findings demonstrate that subjects with diabetes respond to whole body vibration with increased skin blood flow compared to sham condition. The implication is that WBV is a potential non-pharmacological therapy for neurovascular complications of diabetes.