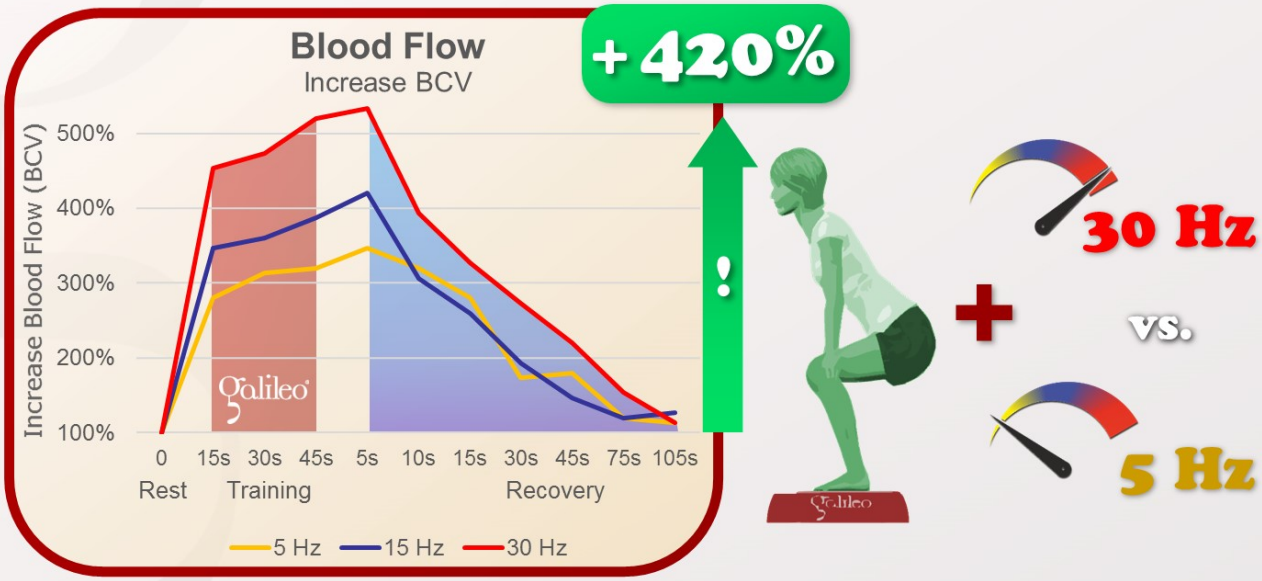
Is the increase in blood flow highest during active Galileo Training ?

The answer is: NO

This study reports for Galileo Training the influence of frequency and amplitude on blood flow, and the short-term changes over time before, during and after Galileo Training (1 min., 5-30Hz, position 2.5 and 4.5, static squatting). The results show that with increasing frequency and amplitude Galileo Training can increase blood-flow by up to 420% und that it increases by an additional 50% directly after the active training.



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StimDesigns LLC 32683 Coast Ridge Rd. Carmel, CA 93923 (831) 222-0330

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Whole-body vibration dosage alters leg blood flow.

Lythgo N1, Eser P, de Groot P, Galea M.

Abstract

OBJECTIVE:
The effect of whole-body vibration dosage on leg blood flow was investigated.

PATIENTS:
Nine healthy young adult males completed a set of 14 random vibration and non-vibration exercise bouts whilst squatting on a Galileo 900 plate.

METHODS:
Six vibration frequencies ranging from 5 to 30 Hz (5 Hz increments) were used in combination with a 2.5 mm and 4.5 mm amplitude to produce twelve 1-min vibration bouts. Subjects also completed two 1-min bouts where no vibration was applied. Systolic and diastolic diameters of the common femoral artery and blood cell velocity were measured by an echo Doppler ultrasound in a standing or rest condition prior to the bouts and during and after each bout. Repeated measures MANOVAs were used in the statistical analysis.

RESULTS:
Compared with the standing condition, the exercise bouts produced a four-fold increase in mean blood cell velocity ($P<0.001$) and a two-fold increase in peak blood cell velocity ($P<0.001$). Compared to the non-vibration bouts, frequencies of 10-30 Hz increased mean blood cell velocity by approximately 33% ($P<0.01$) whereas 20-30 Hz increased peak blood cell velocity by approximately 27% ($P<0.01$). Amplitude was additive to frequency but only achieved significance at 30 Hz ($P<0.05$). Compared with the standing condition, squatting alone produced significant increases in mean and peak blood cell velocity ($P<0.001$).

CONCLUSION:
The results show leg blood flow increased during the squat or non-vibration bouts and systematically increased with frequency in the vibration bouts.

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