

Can Galileo Training decrease Creatine Kinase levels in Duchenne patients ?

The answer is: YES

This study shows the effect of Galileo Training on Creatine Kinase (CK) levels in Duchenne Patients (5-20Hz, 2*1 to 2*2 min., 3/week, 12 weeks). Over a period of 3 months the CK levels dropped essentially by 98% and increases again after the end of the training period. CK is believed to indicate the amount of muscle fiber damage due to training and therefore should be kept low in Duchenne patients.



Mah JK, Wong J, Chiu A, Ramage B, Khan A: Whole Body Vibration Training Lowers Serum Creatine Kinase Levels in Boys with Duchenne Muscular Dystrophy; JCCR, 4(2):1000334, 2014; GID: 4470

This study investigated the effects of 3 months of Galileo Training on Creatine Kinase (CK) levels in Duchenne (DMD) patients.

The kids trained with increasing intensity (5-20Hz, 2*1-2*2 minutes, 3 times per week) over a period of 3 months.

The study showed a massive decrease in CK levels with increasing duration of the therapy by up to 98%. However, it has to be noted that the study only included two patients. Nevertheless it is very interesting that the CK levels in both decreased with increasing duration and intensity of the training (15-20Hz, 2*2 minutes) which both could potentially be the reason for the effect.

The results are in line with other studies that showed a significant reduction of CK levels using a Galileo cool-down protocol (13Hz) after very intense resistance training ([#GRFS5](#)) as well as after intense endurance training ([#GRFS46](#)) and much lower CK levels compared to resistance training ([#GRFS90](#)).

Low CK levels are of importance for Duchenne patients sine CK is believed to indicate the amount of damage on the muscle fiber level which is cause by training or any usage of the muscle – low CK levels therefore indicate low damages of the system.



JCCR, 2014; 4(2): 1000334

Whole Body Vibration Training Lowers Serum Creatine Kinase Levels in Boys with Duchenne Muscular Dystrophy

Abstract:

We aimed to describe the effects of whole body vibration training on serum creatine kinase and motor function in two brothers with Duchenne muscular dystrophy using standardized measurements.

Whole body vibration was delivered using a side-alternating vibration platform at a starting frequency of 7.5 Hz, increasing up to 20 Hz for 5 minutes three times weekly for three months.

The baseline serum creatine kinase of the 7 and 10 years old boys was 33,105 U/L and 14,984 U/L.

After vibration training, their levels dropped significantly, reaching a nadir of 7,383 U/L and 536 U/L respectively during treatment.

There was a modest increase in their 6-minute walk distance but their overall North Star Ambulatory Assessment scores were unchanged.

Whole body vibration appeared to be safe and well-tolerated.

The reduction in serum creatine kinase as observed in these two boys suggests a potential benefit of brief high frequency vibration on muscle function.

GID: 4470; Last update: 10.07.2017