A New Device for Training-Interventions

Klinikum re. d. Isar - Technische Universität München - Germany
M. Hartard¹, C. Kleinmond¹, C. Lammel¹, H. Schiessl², D. Jeschke¹

Department of Preventive and Rehabilitative Sports Medicine
²) STRATEC/NOVOTEC - Medizintechnik, Pforzheim-Germany

In this study, we investigated a new device for muscle training and recovery called Galileo 2000 (Novotec, Fig.5) which included exertion with superimposed vibratory stimulation (VS).

32 healthy men and women were divided (randomized) into four groups. The experimental groups (B,C,D) received 2 min VS (25-30 Hz) either at the end of the first (B) or of the second break (C) or at the end of each of the two recovery breaks (D). The control group (A) received no VS.

All subjects performed 3 series of 3-5 maximal (isometric) voluntary contractions (MCV, torque) in the elbows (flexion) and the knees (extension) using the SCHNELL multi-muscle-machine M3 (Fig.4). There was a rest of 15 minutes between each series.

The results (Fig.1-3) indicate that superimposed VS applied for short periods in recovery breaks allows to keep the MVC of flexion in the elbow and extension in the knee on a significantly higher level than without VS during the recovery breaks.