

Applications of Training with Instability Devices to Health and Sport Performance

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Abstract

The aim of this work was to analyze the relevant characteristics of instability devices that will allow an effective selection of their training applicability to health and sport performance.

Based on practical training experiences with different instability devices and the support of research literature, it was carried out the comparison among three different unstable apparatus (the T-BOW®, the Bosu and the Freeman Plate), by using the following criteria: 1) the level of static-dynamic reactivity, 2) the conditions of each support on the device, 3) the axes causing movement instability and range of imbalance.

While training with Bosu can be applicable to softer surfaces, training with T-BOW® and Freeman plate can be more applicable to harder surfaces like many of the daily life and sports. The support on flat surfaces, as on the Bosu and Freeman Plate in their unstable positions, requires unilateral control of the foot and is applicable to activities practiced on flat surfaces. The support on the narrow edges of the T-BOW® (unstable position) requires bilateral control of the foot and is applicable to activities practiced on different-design surfaces. In their stable positions the three devices have rounded surfaces offering multiple support options, always conditioned by the level of reactivity of each device.

Extraordinarily selected coordination training on a certain unstable device can provide some general coordination support to optimize certain specific balance training; however, the use of unstable devices can be more appropriated, when well selected, for general-special conditioning training.

Mastering the movement education and training resources is the most relevant factor in order to optimize unlimited situations of static and dynamic balance in specific movement abilities that are developed in daily life and sports.