

Introduction

The T-BOW® is a curved training and therapy tool. Supporting loads over 350 kg, it is 70x50x15 cm and weighs 3.2 kg. Both elastic and reactive, it is useable on both sides and has narrow flat edges on its concave surface (1).



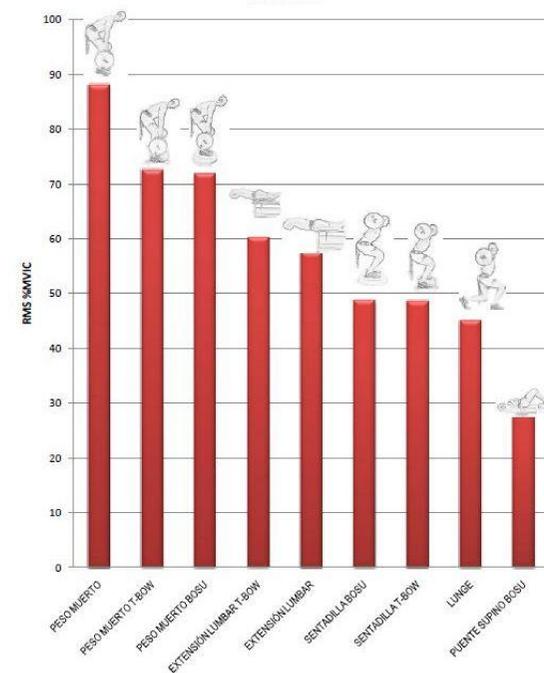
Method

Analysis of practical experiences and selective neuromuscular research comparing the T-BOW® with other unstable devices .



Results & Discussion

Deadlifts performed on the T-BOW® produced larger levels of strength and paraspinal muscle activity than those performed on a much softer tool like the Bosu (2). A lower-limb training program in healthy elderly women using the T-BOW® device showed significant improvements in static balance, dynamic balance and overall balance (2).



The spinal stretch reflex responses created by the narrow, ever changing angle of foot support while balancing on the T-BOW® show the specificity and outstanding interaction of all interoceptive and exteroceptive sensations for control and regulation of movement. The remarkable reactivity of the T-BOW® is very effective for improving balance where many indoor and outdoor sports are practiced.



Graph 1. Paraspinal Muscular Activity. Doctoral Thesis of Ivan Chulvi (2011)

The support on a flat surface demands less bilateral control and less rapid adjustment than on a curved, rounded and narrow-edged surface like the T-BOW®; where a faster change of lateral foot control is required. This increased bilateral control potentiates intra and inter-muscular static-dynamic relaxation with advanced levels of segmental independence; all of which are relevant to activities and sports practiced on uneven and varied-design surfaces.

Conclusions

Before designing any training with unstable devices, one should carefully analyze the following criteria (3):

- 1) The level of static-dynamic reactivity of the device and training surface.
 - 2) The conditions of support for each body part.
 - 3) The axis of instability and the range of imbalance.
 - 4) How slippery is the contact between the device and body.
- The T-BOW® provides numerous options for effective instability training, for coordination and conditioning optimization, in fitness and sports performance.



References

1. Bonacina S (2005). Das umgassende Training mit dem multifunktionellen Trainingsbogen. Fitness Tribune, 93: 112-113.
2. Chulvi I, Masià L (2014). Instability Training. Edic. Cardeñoso: Vigo.
3. Psalman V, Ribera D, Bonacina S, Chulvi I (2011). Application of Training with Instability Devices on Health and Sport Performance. Studia Sportiva; 5 (3): 379-385.