

## **OPTIMIZING LEG STRENGTH TRAINING WITH T-BOW® IN GROUP FITNESS**

**Bonacina S, Chulvi-Medrano I, Farre-Sanchez I, Kneale D, Lasso M, Nocerino S, Pelegrin-Fernandez L, Peruyera A, Renner M, Reverter J, Serena D, Ribera-Nebot D**

Zurich, Lleida, Valencia and Bergamo Universities, Departments of Movement Sciences

### **Abstract**

Currently, strength training using free weights and elastic bands is quite widespread in group fitness classes, with a tendency to develop programs based almost exclusively on endurance strength training, especially of the leg muscles. Based on the experiences in group training with T-BOW® initiated by Sandra Bonacina at Zurich University since 2005 and in order to enrich leg strength training in group fitness classes by improving health, fitness and performance, the following main proposals are made:

**(a)** combine exercises on the ground with exercises on the T-BOW®, taking advantage of two of its differential characteristics,

(1) its high reactivity and unique axis of imbalance that stimulates very fast and precise postural adjustments accessible to many people, and

(2) its rich possibilities of neuromuscular implications of legs with swings and static balances and with steps and jumps by placing the feet on its concavity and its convexity and on its narrow lateral edges).

**(b)** prioritize conditioning and balance-coordination for designing leg strength training by

(b.1) healthy combinations of submaximal strength, rapid-explosive strength and endurance strength using free weights, medicine balls and elastic bands, selectively, with biomechanical analysis of muscular implications of legs depending on the positions-movements of the trunk and feet-legs and placement-movement of the loads, and,

(b.2) enriching the balance and coordination exercising on the flat ground and on the convexity and concavity of T-BOW® in stable and unstable conditions.

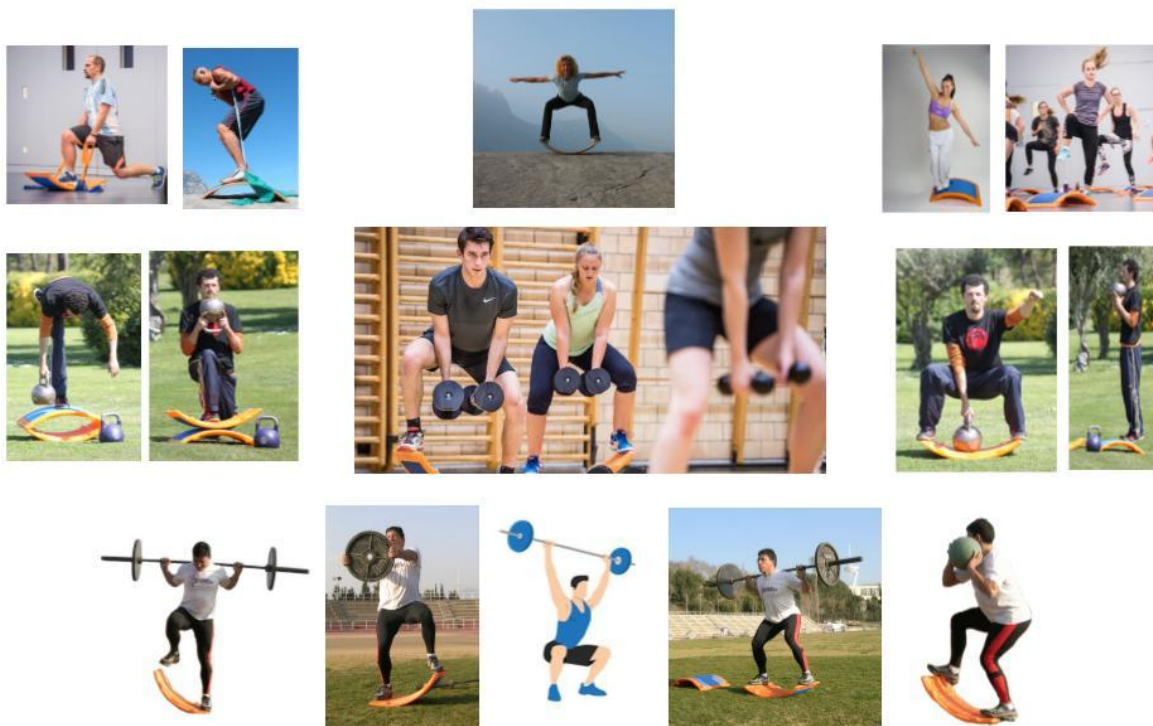
**c)** take exhaustive care of execution and breathing techniques, and add appropriate tendinous-articular unloading, joint mobility and muscular elasticity d) design class structures with 1-2-3 blocks of strength and combining priorities of submaximal, rapid-explosive and endurance strength.

**e)** personalize the leg strength training for each type of group class (big group fitness, small group fitness, circuit training in group fitness,...), based on coordination-balance, spatial-temporal perceptions and conditioning levels of participants, and enrich the programs with socio-affectiveness, emotive and creativity variations.

**Key words:** leg strength, T-BOW®, group fitness, training optimization

### OPTIMIZING LEG STRENGTH TRAINING WITH T-BOW® IN GROUP FITNESS

Big group fitness · Small group fitness · Circuit training in group fitness.



Conference at University South Bohemia · October 7th, 2022

*Disportare 2022 International Scientific Conference · University of South Bohemia  
70th anniversary of the Department of Education and Sport Studies  
October 6-7, 2022 · České Budějovice*