

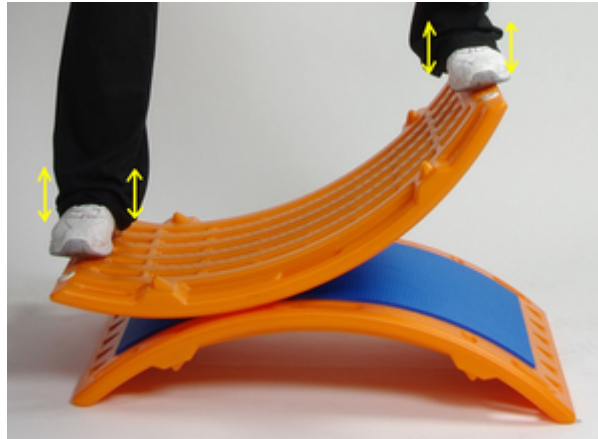
# Strength Training with the T-BOW® for skiing and snowboarding



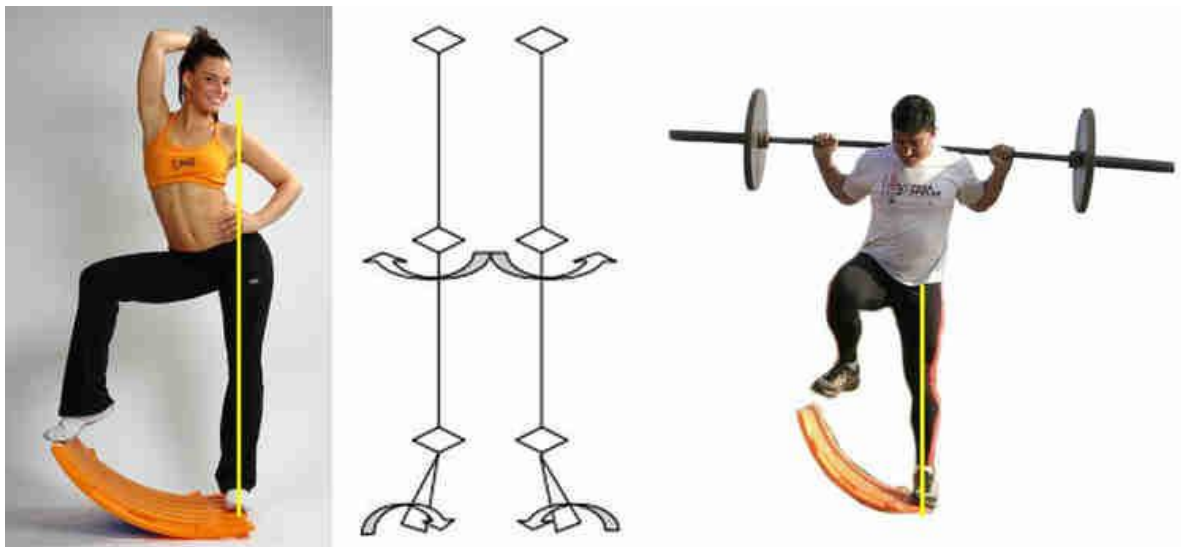
The T-BOW® provides options for training in its unstable and stable position, with support possibilities on its concave and convex surfaces, which, together with its ability to be combined with other sports equipment, allows an endless repertoire of differential exercises for coordinative, spatio-temporal and conditional optimization. More specifically, the T-BOW® provides extraordinarily effective exercises for the optimization of static and dynamic balance with variable positions of concavo-convex supports of the foot, and for strength and mobility of the trunk.

When training strength for winter sports, for example skiing or snowboarding, the T-BOW® provides the following benefits:

- Sway-balance situations forcing bilateral control of the support of each foot (motor control with both sides of the foot) thanks to having to lean on the narrow lateral edges of the T-BOW®, stimulating the segmental independence of each leg and its differential dynamic relaxation, facts that extraordinarily optimize the balance of each leg and its balance by combining both legs; unlike balancing on flat platforms where the control of the support of each foot is very unilateral (on the side of the foot towards which it balances).



- The balance on the T-BOW® allows to maintain the verticality of the leg, a fact that hyperstimulates the functional connection of the axis of the leg in interaction with the hip and trunk.



- The high level of reactivity of the T-BOW® optimizes very fine, fast and rapid postural adjustments (unlike softer and less reactive tools), both in its unstable position (for swinging or dynamic balances and static balances) and in the stable (for jumps and static and dynamic balances). From this high reactivity, the T-BOW® can be placed on surfaces with different levels of softness-elasticity to simulate the conditions of snow or mountainous terrain.
- Two arched surfaces, concave and convex, which allow great variability of independent and simultaneous supports for jumps, turns, balance-swings and rebalancing, both in stable situations (T-BOW® offering supports on a stable convex surface) and unstable (T-BOW® single and double, offering supports on unstable convex and concave surfaces).

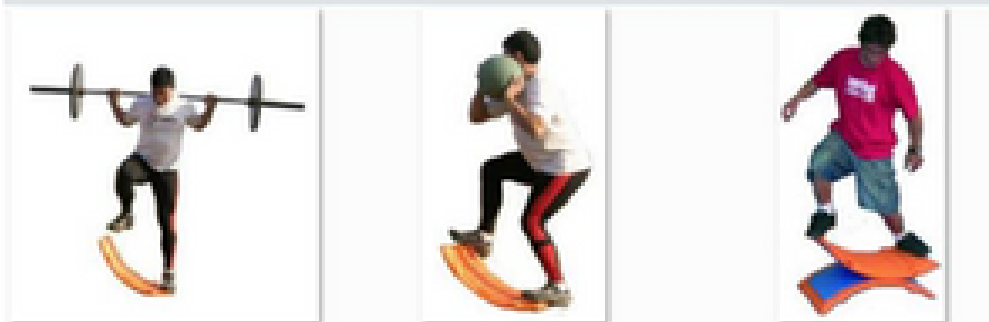
Strength training in preferential conditions of speed, submaximal-maximal strength, fast strength (more-less speed and more-less elastic-reactive) or resistance strength, can be oriented with the T-BOW® towards specific strength levels. in more directed and special situations for sports such as skiing and snowboarding.

A relevant detail will be to carefully select the surface on which we train with the T-BOW® in such a way that it distorts the specific haptic sensitivity of skiing and snowboarding as little as possible.

Although the design of strength exercises by levels of approach in specificity offers many alternatives, we have experienced that sequences of three exercises are effective for many individuals.

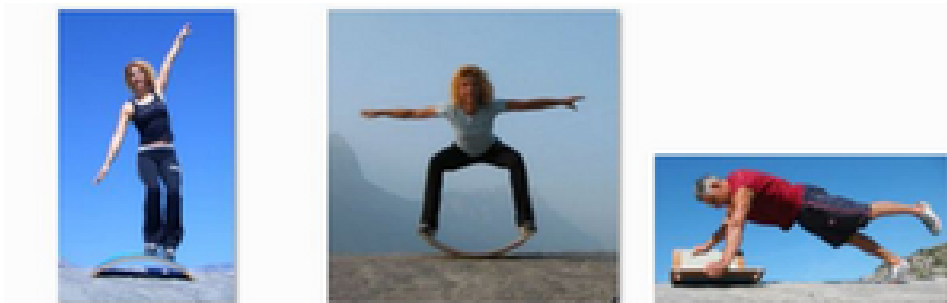
Two examples applied to conditional training for skiing are shown.

### Fast Strength orientation:



1. 4-6 wide swings with a loaded bar on the shoulders.
2. 8-10 aiming ballistic throws starting with weight on one foot and ending with single foot balance.
3. Contrast with varied supports on lateral edges and concavity through creative swings in multidirectional and very reactive.

### Endurance-Strength orientation:



1. Successive jumps on a very reactive curved elastic plane, until the speed drops.
2. Short and fast balance in a half squat position, in support of bilateral control, until the speed drops.
3. Compensatory global exercise through a postural balance of reactive rocking in hand support.

**A) Orientación hacia la fuerza rápida:**



**A1:** 4-6 balanceos amplios con barra cargada en los hombros.



**A2:** 8-10 lanzamientos balísticos desde balanceo finalizando en equilibrio unipodal.



**A3:** contraste coordinativo con variabilidad de apoyos y giros en balanceo multidireccional.

**B) Orientación hacia la fuerza resistencia:**



**B1:** saltos sucesivos sobre plano inclinado elástico hasta que baje la velocidad.



**B2:** balanceo corto y rápido en posición de medio squat hasta que baje la velocidad.



**B3:** compensatorio mediante un equilibrio postural en balanceo de manos.

Only a few training ideas have been shown and both the load, the specific orientation of the load, the execution conditions of each exercise, as well as the planning of the loads, must be personalized for each athlete !!

Likewise, it is very important to have optimal levels of adjuvant strength and basic general strength, especially in squat exercises, to be able to safely and effectively apply the most targeted and special strength exercise proposals for skiing and snowboarding.

## Tips for Coaches:

\* For individuals who ski and/or snowboard at a more recreational level, albeit regularly: a) give priority attention to maintaining optimal adjuvant and general strength levels, especially in squat exercises, b) design strength exercises about the T-BOW® with 2-3 levels of specificity and types of strength balanced between those more oriented towards submaximal strength, rapid strength and endurance strength, c) plan 1-2 weekly strength sessions, combining general and directed levels depending on the challenges and motivations, d) in the most specific orientations, place under the T-BOW® the more-less soft and more-less reactive materials that simulate the haptic sensitivity of the snow conditions in which you are going to practice.

\* For ski and/or snowboard athletes: a) if they are young in their beginner-improvement stages, design a strength program with all levels (general, directed, special and competitive) and prioritize general and directed levels with loads undulating for most of the season, reserving the special and competitive levels for brief periods with some competition considered very important, b) if they are athletes in their peak stage of performance, design a strength program with all levels (general, directed, special and competitive) and adapts its application according to the importance of each competition throughout the season, c) if they are athletes in their last years of sports life, plan the special and competitive levels for the entire season according to the importance competitively, d) in the most specific orientations, place under the T-BOW® the more-less soft and more-less reactive materials that simulate haptic sensitivity of the snow conditions in which it is expected to compete.

In the following videos you can find some examples of exercises that, obviously, will have to be personalized.

<https://www.youtube.com/watch?v=sWGCJ7lcJR8>

<https://www.youtube.com/watch?v=ua3PgqetCUo>

<https://www.youtube.com/watch?v=TtdGSIsHGlg&list=PLCC17321F245A1D80>

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## Referencia:

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