

Last month's article provided information regarding injury prevention ideas, core strength through Pilates, and example exercises performed at the Training To Be Balanced (T2BB) facility. T2BB is in its last week of Ski Performance where we are finishing up a power endurance week which involved loading the body (weights), agility ladder and training in ski/snow/tele-boots.

I received many responses last month regarding types of training for Winter conditioning. Due to the large request for more exercises, this month's article will provide one more concept that can aid in whatever winter conditioning and two more example exercises.

If you do anything that is a change from previous years of winter sport activities, I offer this to you...stretch! At T2BB, we tell our ski performance participants that if they perform movement prep at the top of the Gondola or the Tram prior to down hilling and there is proof (caught on video), T2BB will buy them dinner.

The notion here is to get what is referred at T2BB as movement prep which replaces the words "warm-up". Movement prep does just that, prepares the body for movement, activation or "turning on" the nerves and muscles of the body. This activation is a strategy that enhances the excitability of the neuromuscular and muscle sequencing. Sequencing is synonymous with synergy in that muscles and nerves work in a kinetic chain to produce the maximal amount of force or movement pattern. Proper activation increases range of motion and prepares the body to handle acceleration and deceleration forces.

Almost any type of mild movement that is active works at a movement prep. Suggestions would include choosing movement patterns that move many body parts at once or movements that stabilize one area of the body while others move. Pick movements that can be done anywhere and at anytime (hence, at the top of skiing hill). Anything that involves rotation and glute/hamstring activation of the entire body. This does not need to last all day, just a few minutes.

A review of studies regarding stretching was conducted by Scott Riewald, a Sport Science Administrator for USA Tennis High Performance in Key Biscane, FL. "Studies that have looked at stretching combined with a warm-up have shown that this is another effective way of improving flexibility. A number of studies from the 1950s and 1960s have shown improved athletic performance and flexibility after conducting a dynamic warm-up, [movement prep] in which the stretches that were done were related to the activity to be undertaken."

Another concept to winter sport activity is what T2BB calls "après stretch". Scott Riewald states, "Twenty-seven studies conducted since 1962 have shown that stretching effectively increases muscle flexibility and joint range of motion (ROM). Improved flexibility (with a subsequent increase in joint ROM) can be seen in essentially any muscle group that is stretched. A passive stretch held for 15–30 seconds is all that is needed to improve flexibility, and a single bout of stretching can increase flexibility for up to 90 minutes. Even more, a player who engages in a consistent flexibility-training program can experience improvements in flexibility that last for several weeks. To improve ROM and flexibility, stretching can be performed either before or after a practice or competition."

As requested by readers, add the following exercises to your own program.

**Lateral Jump to Sprint:** **Starting Position:** Standing in an "athletic" stance with feet outside of hip and knees slightly bent. Set up a object six to 18 inches high next to you and 10 yards away or what ever space is allowed (or you can use a rope/tape). **Movement:** Quickly jump side to side over object. If jumping is too hard, step over quickly (bounding) with one foot followed by the other foot for eight total repetitions. Upon final landing, explode forward into a sprint for 10 yards or what ever you space is allowed. Quickly decelerate at the end of 10 yards. Turn around and repeat. **Considerations:** Anticipate next jump with torso leaning in that direction. Move into full sprint with piston-like leg and arm action. **You Should Feel:** Calves, legs muscles.

**Side steps hurdles:** **Starting Position:** Line up 3 ropes (or other objects) side-by-side about shoulder width apart. Standing in an "athletic" stance straddling first rope. **Movement:** Quickly side step over lines with high knees (feet). Once straddling third rope, quickly change directions. Continue side stepping back and forth x 12 seconds at the highest level of speed and form. Rest for 10 seconds and repeat two more times. **Considerations:** Never cross feet. Arms move opposite of legs

The form and speed should be the same in the third set as performed in the first. **You Should Feel:** Everywhere, total body exercise.

Enjoy next week's holiday and be safe on the any and all mountains you ride down!