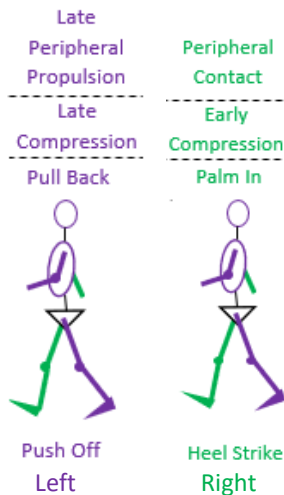
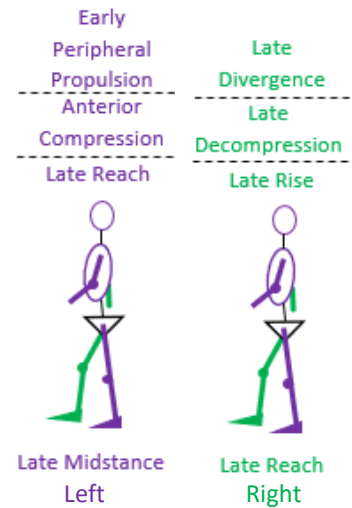


The Benefits of Lateral Fitness Equipment Such as the Skier's Edge and Aeroski 2.0 Ski Fitness Machines, On Hemi-Body Support and Hemi-Balance Stability

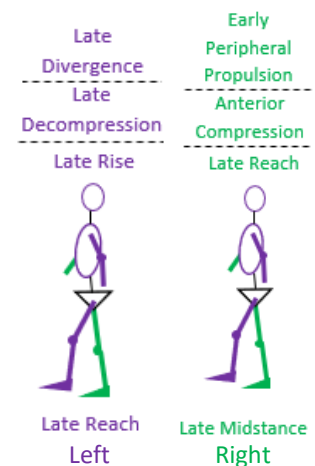
by Ron Hruska, MPA, PT

The human body has to be held up in four phases in its Forward Locomotor Movement; Left Midstance, Right Heel Strike/Left Push Off (Double Support Phase), Right Midstance, and Left Heel Strike/Right Push Off (Double Support Phase).

Left Centering of the human body occurs at Late Left Midstance, where the body is centered over the left foot and ankle, the right leg is in Late Reach or at the end of forward swing, and the left anterior hemi-chest is going through compression while the right hemi-chest is going through late decompression.

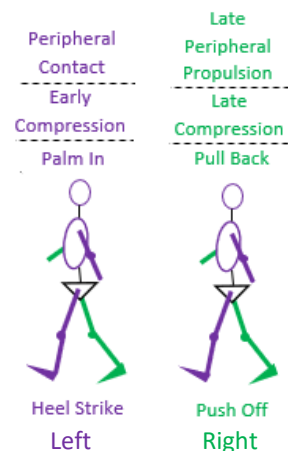


Centering of the body's midline occurs at Right Heel Strike/Left Push Off or at a "Double Support Phase" of one of the forward locomotor movement (FLM) cycles; as the hemi-chest on the side the floor that is coming up, is in Late Compression, while the hemi-chest on the other side, (right) is beginning Early Compression.



Right Centering of the human body occurs at Late Right Midstance, where the body is centered over the right foot and ankle, the left leg is in Late Reach or at the end of forward swing, and the right anterior hemi-chest is going through compression while the left hemi-chest is going through late decompression.

Centering of the human body occurs at Late Left Heel Strike/Right Push Off or at a “Double Support Phase” of one of the forward locomotor movement (FLM) cycles; as the hemi-chest on the side the floor that is coming up, is in Late Compression, while the hemi-chest on the other side, (left) is beginning Early Compression.



Humans have a tendency, more than not, to “lean” to the left or “list” to the right when centering on the left, to compensate for the strong neuromechanical mindedness of centering with their body mass over the right foot and ankle, in general. We also cortically (subconscious mind) want to keep our body mass over to the right when placing weight on our left foot and ankle, during left centering. If we cannot remain balanced when in a left centering state, we will more than likely lean over to the left and use our right foot and ankle that is in ‘late reach’ as weight or ballast to offset our left arm and upper body that is too far over to the outside of the left foot and ankle.



Leaning to Left Listing to the right

Humans move more efficiently, with more mechanical power and potential energy when the feet and ankles and the body move laterally in the same direction, with respect to the hips and floor or ground one is standing on. In other words, when we move into left centering, the body should center itself slightly over to the right as the hips are shifting slightly to the left. Therefore, the left foot and ankle and body are fundamentally moving to the right as the weight of the body is slightly falling down on the left, to the floor; which is fundamentally coming up, creating compressive forces in the left hip for stabilization, and secure balanced late reach of the right foot and ankle.

Equipment like the Skier's Edge and Aeroski 2.0 enhances bilateral non-compensatory lateralized centering during FLM and enhances functional symmetrical strength building when in a neutral state during double support phase of weight lifting or strength building. By keeping the entire surface on the footplates of these two pieces of equipment and by keeping the hip flexors off by standing with the body lined up with the legs when in the middle of the equipment, the body will move from side to side with optimal hip shifting (hamstring, glute and abdominal collaboration) and realignment of the body mass between the two feet and ankles when standing. This is an excellent resource for repositioning oneself prior to and after sagittal plane speed drills, and activity like running, or sprinting. It should also be considered as preparatory and subsequent function for weight lifting, squatting and benching.