

Performance Point

Effective Posterior Chain Development

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The posterior chain musculature includes the hamstring, gluteus and low back muscle groups. The muscles of the posterior chain are known as the "athletic" muscle groups and are responsible for the majority of high speed athletic movements such as sprinting and jumping. These muscles typically have a high proportion of fast-twitch fibers making them the power generating centre of the athlete.

Due to an over abundance of quadriceps-dominated lifting, athletes tend to have an overdevelopment of anterior musculature which leads to problems in recruiting the muscles of the posterior chain. A common hip muscle imbalance is caused by overactive hip flexor muscles inhibiting the hip extensor musculature. This imbalance can lead to suboptimal athletic performance due to incorrect motor patterning (over-activation of the posterior chain to compensate for dominant hip flexors). This dysfunction can then predispose the athlete to lower back/hamstring injuries and impaired power production. As most athletes are anterior dominant, it is often beneficial to weight their program more heavily on posterior training in order to help correct the pre-existing musculature imbalance.

Proper training of the posterior chain can lead to a number of athletic benefits including:



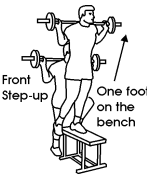
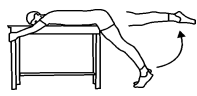

1. Increased running speed
2. Improved jumping ability
3. Decrease in hamstring, hip flexor, knee and low back injuries
4. Improved muscular balance around the hip and knee

Exercises that target and recruit posterior chain musculature:

1. Snatch Deadlifts on podium
2. Box Squats
3. Trap Bar Deadlift
4. Romanian Deadlifts
5. Seated and Standing Good Mornings
6. Reverse Hypers
7. Glute Ham Raises
8. Cable Pull Throughs

For more information on effective posterior chain development, please consult your Canadian Sport Centre Pacific Strength and Conditioning Coach.

Example Workout

Exercise	Diagram	Sets	Reps	Rest
Box Squat (1)		4	6	2 min
Romanian Deadlift (2)		4	6	2 min
High Box Step Up (3a*)		3	6 to 8	None
Reverse Hyper (3b*)		3	6 to 8	90 sec
Glute-Ham Raise (4)		3	8	60 sec

*3a-3b indicates a superset pairing with excises being completed back to back before rest is taken.

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