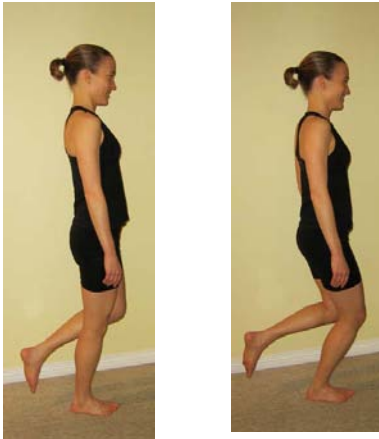


Drop Squat

For quadriceps strengthening and balance/activation



Why?

When running, the foot is only on the ground for a split second so quadriceps strength is not useful unless activation speed and balance is maximized. Quadriceps endurance and speed of firing is essential for shock absorption, injury prevention and knee stability.

How?

- Brace* your core
- Stand on one leg
- Assume a short foot** position
- First be able to balance (with very little movement) for 30 seconds before progressing to the next step
- Drop standing leg slowly at first by bending the knee (then quickly with practice) to a 1/4 squat position.
- Slowly re-straighten the leg / knee just short of a locked position.

Explanation:

The key to this exercise is speed (not the depth).

Sets:	2
Reps:	20
Frequency:	After or between runs

Dynamic Alternatives***:

Bounding and strides

*Brace (your core muscles):

Recent research shows that the common advice to pull in your belly button limits the full bracing capacity of your core muscles. Although pulling your belly button in activates a very important core muscle, it does so at the expense of several other key core muscles. This is why power lifters keep their stomachs out so their spines do not buckle during maximum lifts. Preferably, try to “bear down” as if you are going to be punched in the stomach for full core activation. For more research, please see Dr. Stuart McGill’s work at: <http://www.ahs.uwaterloo.ca/kin/people/StuMcGill.html>.

**Short foot:

Scrunch the arch of your foot into a shortened or high-arch position. Keep your toes flat and relaxed to help isolate the muscles within the arch of your foot (plantar fascia).

***Dynamic Alternatives:

- **Bounding:** Leaping as high and as far forward as possible by driving the knee up and pushing off. It should feel as though you are trying to stay in the air as long as possible. Start with 10 steps, 2-3 sets and progress to 20 steps. An advanced version would be bounding up an incline/hill. For a video demonstration go to: <http://www.youtube.com/watch?v=mnhMpLONbtY&feature=related>
- **Strides:** Slightly exaggerated stride length when running fast. Slowly accelerate and decelerate over 60 -100 metres, 4-8 times.