



Don't Put On The Brakes: Keys to Conquering the Downhill!

If your quadriceps muscles are sore from last week's run, it is probably from the downhill portion despite all the wicked hills we conquered! This is because downhill running requires our muscles namely our **quadriceps** and lower leg muscles, to contract "eccentrically" or lengthen as we move down the hill. This can actually cause microtearing within the muscle as eccentric loading uses more force than on uphill or flat terrain. This is more costly from an energy and recovery perspective possibly leading to injuries (IT Band syndrome, knee injuries, shin splints).

Also, runners increase their speed thanks to gravity's pull down the hill, encouraging a lot of runners to slam on the brakes, increasing heelstrike adding more stress to their muscles and joints! But not to be discouraged from the down as this extra loading in the long run actually strengthens and helps our muscles adapt to future downhills and eventually faster recovery.

Research has shown that downhill running can improve your pace. A 2006 study in the Journal of Strength and Conditioning Research demonstrated that when sprinters trained on both uphills and downhills they improved their speed and turnover more than just running uphill or flats (Active.com- 6 tips to improve your downhill runs). With confidence you can master the down using good technique and form.

The key is to stay relaxed, working with gravity, while remaining stable and in control. Running downhill can become your biggest asset race day!

Tips

- 1) Look ahead down the hill, about 10 paces; don't look down at your feet!
- 2) Run tall, as upright as possible with a slight lean (too much lean forward and you will go tumbling and too much lean back will slow you down, forcing you to heel strike = braking effect = increased impact, shin splints).
- 3) Run from the hips: think of alignment again—shoulders, hips/pelvis, feet underneath you, core engaged. This will create a stable base of support and minimize the impact on your lower limbs.
- 4) Keep arms out to side for balance, stability and control which is helpful with unpredictable terrain and change in direction.
- 5) Most importantly, FEET! Don't overstride- a very common mistake on the downhill which creates more impact = more heelstrike=fatigue= injury. *If you can see your feet, they are too far ahead of you!* This will throw you off balance pushing your center of gravity back, slowing you down. Try to shorten your stride, think light, quick steps (hot coals or dancing feet), this will encourage more of a forefoot/midfoot strike, lessening the impact up the leg.

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