

Training Matters - Hills

There you taking part in a race, cracking on with good pace, picking off some of your rivals. You come to a bit of a rise in the route. Your breathing becomes laboured, your legs heavy, quads start to tighten and your pace drops. Your rivals go past one after the other. The rest of your race is uncomfortable, bang goes a good time and placing.

What's happened?

Sounds like you could do with some hill training to get your body ready for future slopes. So, Bill's Hills was right. If you are going to race in events with rolling or hilly courses, hill training is important. Hill training is like interval training on steroids! Gravity is an additional training aid.



“The Beast!”: the infamous climb up towards the Poet’s Stone above the village of steep; too steep for general hill training.

Advantages doing hill training: it is one of the best ways to build running strength. Like interval training, hill training forces muscles and the lungs to work harder. Running stride should become more efficient. Almost all your muscles will be worked, especially the quadriceps. Heart rate increases running uphill and becomes stronger. Your lungs will become more efficient. Legs and arms will need to work better together with more of a pumping of the arms all improving running technique.

All the above will increase your endurance and lengthen your running time until exhaustion. Hill training is also hard, leading to you becoming a tougher more resilient runner.

Hill training pointers and suggestions: for any treadmill running you want to turn into a kind of hill training, set the degree incline between 10 to 12 degrees. Hill training is hard and it would be advised not to do more than one session a week. After a hard hill training session have a rest or easy day.

If you are new to hill session or have not done any for some time start off easy and work the effort and hill distance up when your body is used to running uphill. Ensure to warm up on flat and easy ground before any hard hill training. Eight to ten minutes should be enough with a couple of minutes more if very cold.

Cold uphill running can risk muscle tears or other injuries. Also have a warm down run and stretch down after your hill session. The hard, anaerobic effort will build up lactic acid and the warm down will help disperse the lactic along with loosening off the muscles. After a hard hill session or race you will often feel a stiffness at the top of your quads.

That familiar trouble getting down the stairs! It will go after a few days and your legs will become stronger; the stiffness should be lessened with a warm down and stretch. At the hill bottom try to gauge your pace.

You are after a hard but even pace. If you go too fast to start, there is a risk of exhaustion and stopping before the end of your hill climb section.

Hill running form: as the slope steepness increases your knees should come up further. Help them along with a good pump of the opposite arm. The arm will go further in front of your body but don't let the hand go up too high. Arms should go straight ahead and not cross over the body. Try to keep the back straight and don't hunch your shoulders.

Your lungs will need more air due to the effort. Keep your head up scanning the ground ahead for any obstructions. Allowing a good intake of air through the mouth and nose, down the throat to non-obstructed lungs. Foot strike will be more on the forefoot. The Achilles tendon will be more used. It may be worth including Achilles strengthening exercises with you stretching (such as using a step or stair edges) especially for older runners.

Running strides will be shorter and the cadence quicker. Try to not let the body stiffen up; keep relaxed as far as possible with the hard effort.

Suggestions for hill training sessions: Informal: pick a training route with hills – such as my route in the last (November 2024) newsletter - work the hills and recover going downhill or along the flat.

There is also merit with working hard over the top of the hill and down the other side. If you can do this at the hill top, beyond and going downhill are great places to pass runners in races where the other runners slow down due to tiring up the top of the hill.

More formal hill sessions: pick an even sloped hill with a good surface.

Distance sessions: chose a hill with a certain uphill distance, such as 50 meters, run hard uphill to the top and recover downhill. Do this for eight to ten times. As you improve chose longer hills.

Timed hills: very similar to distance but run for a time such as three minutes and again recover down. Do 8-10 times as for the distance sessions. Again increase the effort times as you improve.

Short hill sprints: do hard hill efforts for a shorter time and recover at the top, walk back to the hill bottom.

Hill ladders: Pick a longer hill and run up hill in stages for a set time. Either stop and recover or recover down and increase the second uphill section. Vary the “ladder” sections to suit the training session.

Long hills: grind up the whole long hill and recover at the top (unless continuing up and over the top). Remember try for even pace or you won't make it to the top!

Going downhill: it's also a good idea to train on the downhills as well. All good to pass runners not used to the downhills! Pick even hills with few tripping hazards. Relax going downhill and “work” with the slope. Legs act as your brakes but too much leg “breaking” and your legs will quickly become fatigued. Keep the head scanning the ground ahead for the best running route with chest out, core tight, natural neck and shoulder positions to keep the airways and lungs all nice and clear for maximum air intake.

Arms and elbows should be used for balance with arm adjustments to keep your body stable. For steeper hills running in a zig-zag style to and fro across the slope will provide the breaking. Strides will be come shorter with steeper slopes. Near the bottom of the slope, especially the steeper hills strides can become longer as the slope runs into flatter surfaces.

For hill lovers races available are many trail races around the area especially over the South Down and North Downs, Dorking being a base for many. Hill races are the Butser run, Gibbet Hill run from Haslemere (being reinstated this year after a break for a few years), Box Hill race (very tough) and a fell run series based in Ventor Isle of Wight.

For “real” fell races you will need to go North to mountain regions. Many will have letter classifications:

Climb classifications: A = not less than 50m of climb per k;
 B = 25m of climb/k
 C = 20m of climb/k.

Distance classifications: L = long 20kms or more
 M = medium 10 to 20k
 S = short 10k or less.

Butser run is an AS race.



Climb up Butser Hill: mostly an even climb, suitable for “hill ladders” or a long hill climb.