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# How Do I Train for a Hilly Race Living Somewhere Flat Like Singapore?

By Andy DuBois

**T**raining on terrain as similar as possible to that of your upcoming race is always the preferred option, but when that's not possible you need to get a little more creative.

First of all, we need to understand how the loads on the body differ when going up and down a hill as opposed to running on flat terrain, and only then can we work out what to substitute in order to obtain a similar training effect.

Uphill means you have to do more work against gravity compared to running on the flat, so greater strength is required. When running downhill there is a greater load on the body as gravity has longer to act. Downhill also involves eccentric muscle contractions whereby the muscles are lengthening and working at the same time. These types of contractions do far more damage to the legs than when one is running uphill, and are effectively what makes your legs feel like they have been running on concrete late into a hilly race. Running downhill also requires much faster leg turnover compared to flat or uphill terrain.

## Hill Training

Any hill you can find is better than nothing. Even Singapore has some hills, they may be short, but there are some hills. You just need to run lots of repetitions to cover enough vertical to make it a worthwhile training session. The aim is to cover the same amount of vertical incline per 10km in your long run as the race you are training for. So, if your race has 4,000m of vertical in 100km, then your long run should have 400m of vertical per 10km. If by doing a lot of hill repetitions you can indeed cover that amount of vertical, then you just need

to find a way to deal with the mental challenge of many repetitions. Start by working hard up the hill and easy going back down; progress to running faster and faster back down while increasing the number of reps.

Even a 1min hill can have large training benefits — imagine doing 100 repetitions. That gives you an impressive cumulative total of 1h 40min of climbing, and if each repetition went up only 10m, that's still 1,000m of vertical covered. It might be monotonous, but your legs will thank you come race day.

## Stair Training

If you cannot get enough vertical through doing lots of repetitions of small hills then stairs are the next best option. Mixing hiking and running up to develop strength and power, then gradually increasing speed on the way down to improve eccentric strength, will have your legs in good condition to handle hills during a race. Starting with two 15min sets, and gradually building until you can do 60min non-stop, with a weighted pack, will have you in good shape to tackle the mountains.

## Strength Training

A program of lunges, squats, and step-ups can help with providing strength for the uphill as well as for dealing with the eccentric loads for descending downhill, and should be part of every runner's weekly routine, especially if you are training for a hilly race living somewhere flat. Focus on body weight to begin with, and then add more weight. I would place more emphasis on increasing the number of repeats rather than very heavy weights. For example, three sets of 10min of step-ups, with a 10kg pack, will provide you with a great workout.

## Speed Training

One of the limitations of both stair and strength training is that although they can load the legs eccentrically, they don't provide the neuromuscular stimulus necessary to condition the legs for the fast long strides that occur when you run downhill. For this you need to turn to speed training. Shorter and faster sessions not only force the legs to turnover more quickly, but the load on the legs — specifically the eccentric load — is also greater, which is great conditioning for the downhill. One speed session per week with repeats from 400m to 1mi, covering 4-8km in total, is highly beneficial.

## Treadmills

With treadmills you can simulate a hill of any length up to around 15%, so these are especially good for races with long climbs. You can mix up shorter harder sessions and long hiking sessions, but the problem with treadmills is that most of them have no option for imitating downhill. So you'll need to make sure you include either stair sessions or strength work to train your legs to cope with the eccentric loading.

Conclusively, while none of these options are as much fun as spending hours on mountainous trails in Europe or Hong Kong, they will help condition you so that you can handle those hills come race day. You'll need to be more mentally tough to manage with the dreary repetitions, but look on that as a positive as it will feel so much easier come the day of the event! **AT**

*Andy is an award-winning personal trainer and elite endurance athlete specializing in ultra running. You can find more useful info on his ultra-running coach website ([www.mile27.com.au](http://www.mile27.com.au)).*