

About Selecting Courses For Your Performance Training

Selecting the right terrain for your training can improve your race performance.

This article addresses performance training considerations only. It does not pertain to casual and fun runs.

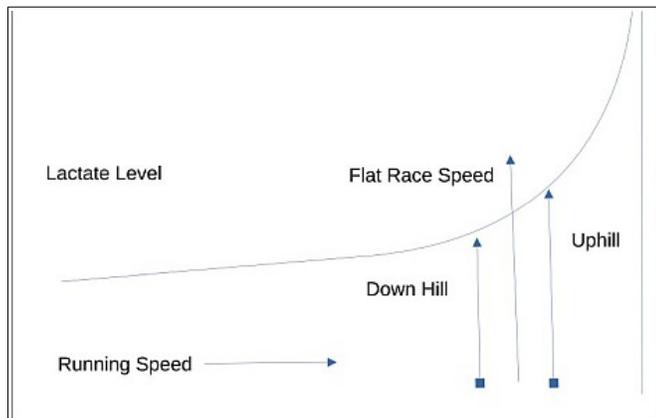
Racing is essentially an attempt to run the shortest amount of time between two points. This requires you to maintain a steady and ideal vVO_{2max} the whole distance. As in all sports, training must be sport specific; essentially this means your training long runs should be as close to the race course's terrain as practical. Generally, most courses consist of relatively long, straight sections. Thus, you should not waste your valuable training time running convoluted courses, e.g. courses with dozens of turns and short hills.

Racing performance requires both brain [in particular your hypothalamus] and vVO_{2max} training.

See "[About The Importance Of Your Central-Governor Training For Racing Performance](#)" [This is a URL link. If you are reading a printed copy, the URL is below], the "Key point in the article: It should be obvious that we need to train our central-governor to **let us** run races **evenly** at the necessary Approx% vVO_{2max} pace. The keyword here is "evenly". If you try to train on convoluted courses with numerous turns and/or hills, you can't maintain a smooth and even running speed, necessary to train your hypothalamus [Dr. Tim Noakes: Central-Governor] for your intended race course.

If your intended race has hills, it will be worthwhile to find a course near your customary running area that has similar terrain. Do some runs at slightly less than your vVO_{2max} pace.

A word about running hills. All runners question why do hills seem so hard to run up, but so easy to run down? It's not a subtle weight effect. Here is why: Assume a runner weighs 135lbs, and the hill is 2deg. The effective weight gain is calculated as $145 \times \tan(2\text{deg}) \approx 5\text{lbs}$. If the runner wears a 5lb weight-belt, he/she will scarcely notice the difference when running on flat terrain.



This depicts a typical lactate curve, which is related to the runner's vVO_{2max} . The curve shown is illustrative only. The perceived effort is related to the lactate level. Lactate is a bi-product constantly produced in the body during exercise. It increases when production exceeds the rate of lactate removal. The knee of the curve is close to your vVO_{2max} .

If the Flat Race Speed were much slower, the perceived effort for downhill and uphill speed differences would scarcely be noticed.

It's a bit off the subject; but, pertinent to this discussion. Any running using the run-walk routine totally confuses your central-governor. The exception is, using controlled run-walk routines for interval training. Run-walking can be a good substitute for track interval training, provided the run segment is at one's vVO_{2max} pace AND the recovery time is 30secs.

Bottom line: Your training long runs should be as close to the race course's terrain as practical. Run-walking and convoluted courses can be highly detrimental to your performance training.

Appendix, vVO_{2max} :

The VO_{2max} part of this factor is a measure of the **maximum** amount of oxygen your body can utilize during exercise. It's measured as Milliliters-of-oxygen / kg-of-body-weight / minute. [ml/kg/min]. Typical values for runners range from 65 ml/kg/min to about 85 ml/kg/min. It was initially thought [about 50 yrs ago] that this value could predict a runner's ability. However, it turned out to be rather inconsequential. So, based on good research a new, more accurate measurement was devised, vVO_{2max} . Note the small "v", it is the velocity [meters/sec] at VO_{2max} .

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