

endurance cycling

by Brad Spark

As the sport of cycling - both road bikes and mountain bikes - continues to grow, more people are taking up the challenge of testing themselves against the clock and other riders. Over the past six years, major cycling events have seen a rise in competitors of up to 1,000%, with most events now having a cap on the number of entries.

Riders can now experience a wider variety of events, from charity road races such as the RTA Big Bike Ride and the City to Gong, to off-road endurance races such as the Crocodile Trophy and the SCOTT24hr. Most events can be attacked either as an individual or as a team.

Endurance racing requires good leg strength, combined with great cardiovascular strength and stamina.

Road racing is largely about heart and lung strength. You also need plenty of mental strength to push yourself through the pain barrier and dig deep when the surges are on.

Mountain bike racing requires the additional element of technical off-road skills, which can take some time to master. Coaching clinics for off-road riding are available, but there is no substitute for just getting out there and riding and enjoying a variety of terrains. This helps develop the required upper body strength and allows you to gain that confident riding edge.

Although road racing and cross-country mountain biking are vastly different sports, both disciplines use similar training elements. To take your cycling strength to a new level and to get more out of your cycling, here are some basic training principles to help you along.

How to Train

For your first block of training (your 'base'), your main focus needs to be on:

1. Cadence - number of revolutions per minute
2. Heart rate zone - the rate or intensity of the heart rate in accordance with the cadence the level at which your heart is working

You should try to maintain an ideal training cadence of 90, while keeping your heart rate within the aerobic training zone of 60-70% (where energy is derived from oxygen, carbohydrates and fat stores), an increased intensity will enter the anaerobic threshold (where energy is taken from the limited but ready to use energy forms such as glucose and glycogen stores). For base training, the emphasis is to ride for time, not distance, so stay in the saddle and gear accordingly. Don't attack the hills, but rather keep your heart rate in the aerobic

training zone. An increase of intensity will result in a build up of lactic acid which will leave your legs feeling heavy and fatigued (anaerobic zone) and unable to go for the desired time. Aim for a ride of 2-3 hours or work towards this by following the suggested training program.

The aim of the next training block is to break out of your comfort zone and really push your body to increase your strength and improve your resilience to lactic acid burn. This part of the program is all about intensity and must be accompanied by extra rest and recovery. It comprises shorter workouts of one hour, with increased intensity intervals and recovery periods (Fartlek training) over varying terrain. Maintain a cadence of around 90 and use your bike's gears to push your heart rate up to 80% (anaerobic training zone).

The body is not capable of sustaining long periods in the anaerobic zone as the lactic acid (a bi-product of burning glycogen) build-up becomes too great and the muscles cannot withstand such intensity, however small periods of this intensity combined with rest periods will increase the body's ability to withstand greater intensity for longer periods. This same style of training can be done on an incline, using the slope of the hill to increase resistance and the down hill for recovery. The steeper the hill, the greater the intensity.

Strength training in the gym is recommended for a program that starts in the 'off-season', when the racing has finished until next season. This way you can gain the desired strength and add the endurance towards the start of the racing season. In a strength program exercises such as free-standing squats and dead lifts along with individual leg strength exercises such as single leg squats, single leg 45 degree leg press and single leg dead lifts will enhance your general riding strength. Independent leg exercises are important, we all have a stronger or favoured side and these exercises help balance these progressive imbalances. However, this would not be recommended if you're just starting out. Instead, stick to riding your bike, using your gears and a lower cadence to strengthen your muscles through the intensity phase of your program.

The most likely thing to prevent you from racing is an overuse injury. Recovery stretching will greatly assist you in your quest for greater muscle and joint resilience. Muscle groups that require most attention are your quadriceps and ITB (Iliotibial Band), hip flexors, hamstrings, glutes and calf muscles.



Other Training Considerations

Apart from the physical aspect of training, other components that need to be considered are nutrition, hydration and recovery. These are all equally vital to a great all-round training program. Carbohydrate loading will be your main form of fuel for competing. Electrolytes and fluids must be replenished to maintain hydration. A good stretch routine, a sports massage and recovery ice baths for enhanced recovery and prevention of overuse injuries are also desirable.

Racing

Start out by riding your own race. Pace yourself with cadence and heart rate monitoring. Settle into a rhythm, then start to push yourself. Don't always sit in the saddle like you do when you train. Get out of the saddle from time to time to stretch your legs. Keep yourself with the pack, or with riders of similar (or slightly better!) strength. Keep your technique smooth and slick. Keep your food and fluids up. Push yourself. Racing is your greatest effort. Your training has been for you to take yourself and your bike to a new level.

Equipment

Cadence/time computer and HR monitor
Spare tyre tubes
Eye wear (clear/UV protection)
Hydration setup, bottles, camel pack
Approved safety helmet and gloves

Related websites

www.cyclingnews.com
www.roadcycling.com
www.firkin.net

4 week program

Week 1

2 x 2-3 hour light rides – focus on time on bike rather than pushing for distance. Heart rate at 60-70% (base training)

Week 2

1x 2-3 hour ride (base training)
1x 4-6 hour ride with bouts of intensity (Fartlek) to raise HR to 80%

Week 3

1x 2-3 hour ride again with increased intensity if you feel up to it, main aim is for time on bike
2x 1 hour rides (hills) 20min warm up, 20min interval 30seconds on (80-90%) 30seconds off (60-70%). Your off time may need to be increased. Stay in saddle and maintain a cadence of 90.

Week 4

3x 1 hour rides, 20min warm up, 20 intensity, 20 cool down.
1. hills, cadence of 60, out of saddle, 45 sec on and 45 sec off
2. speed on flat with cadence of 80, 1 min on 1 min off
3. gradual hill, cadence of 90, 1 min on 1 min off (seated)

Brad Spark

Active Lifestyles and all-round nice guy!
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