Heart Rate Zones and Maximum Heart Rate

For setting your heart rate training zones, a simple system is best. The five zones identified in the following table will provide an effective platform for structured training.

Heart Rate Training Zones*

Zone number	Zone label	% of MHR
Zone 1	Active recovery	<75%
Zone 2	Aerobic	75-80%
Zone 3	Lactate threshold	80-85%
Zone 4	Subanaerobic threshold	85-90%
Zone 5	Anaerobic	>90%

*These are general guidelines and not absolutes.

These zones provide a good estimate for performing specific workouts; however, you should note that as you build fitness and mature in cycling, you may be able to do more work at similar or lower heart rates. For example, early in the season, you may only be able to perform 20-minute lactate threshold workouts at 80 percent of Maximum Heart Rate (MHR). When you are at your highest racing fitness, you may be able to do the same workout at closer to 83 percent of MHR while feeling as if you are training 80 percent of MHR.

To find your training zones, perform a maximum heart rate test. You will need a heart rate monitor and a bicycle computer that displays cadence. The best conditions for performing the test are on a flat road or road with a slight rise with steady wind and with limited traffic, traffic lights, or stop signs. A closed park road with few pedestrians is ideal. This test can also be performed on a stationary trainer (if the trainer provides even resistance throughout the duration of testing).

Before performing any maximum efforts, you need to be in good physical health as confirmed by a medical professional.

Test for Finding Maximum Heart Rate

Warm-Up: 20 Minutes

Ride steady and easy in the warm-up at an estimated 75 percent of MHR.

Near the end of the warm-up, perform one 5-minute effort (1 x 5 min) at 95 percent of what you estimate to be your time trial heart rate. Perform active recovery—rolling at cadences between 70-85 rpm at <75 % of MHR—for 5 minutes.

Next, perform three 1-minute (3 x 1 min) high-cadence (>100 rpm) efforts in the easiest gear. Perform 1 minute of active recovery between the 1-minute intervals.

After the three 1-minute efforts are complete, perform active recovery for 4 minutes.

Actual Test: Variable Time Length

Mark the interval. Starting at 80 rpm, increase the cadence by 2 or 3 rpm or increase your gearing by one gear every 2 minutes.

When you cannot hold your cadence for the 2 minutes, perform an all-out sprint for 30 seconds. Look at your heart rate monitor at this point; the value should be a good estimate of your maximum heart rate.

Compare the test value to the MHR values you see when racing in order to find the most accurate estimate.