

**Explanation of Zones**

<b>Zone</b>	<b>Swim Pace</b>	<b>% LT Bike</b>	<b>% LT Run</b>	<b>Description of Exertion</b>
<b>1</b>	Form work	Up to 80%	Up to 84%	Very easy breathing. Easy pace. Barely any effort expenditure. Should easily be able to carry on a full conversation without having to concentrate on effort.
<b>2</b>	TT pace plus 10 sec. per 100	81-88%	85-91%	More perceived breathing. Increased pace. Should still be able to carry on a conversation but slightly more concentration on effort being made.
<b>3</b>	TT pace plus 5 sec. per 100	89-93%	92-95%	Rhythmic breathing. Moderate pace. Full conversation is more difficult, but not fully broken. Concentration on effort becomes noticeable.
<b>4</b>	TT pace	94-99%	96-99%	Harder breathing. Faster pace and approaching discomfort. Only broken communication is possible, but full sentence structure can occur with periods of breathing between sentences.
<b>5a</b>	TT pace minus 2 sec. per 100	100-102%	100-102%	Breathing is deep, seemingly barely able to get enough oxygen. Focus mainly on effort and communication only in short sentence fragments/words. Undesirable overall to communicate.
<b>5b</b>	TT pace minus 5 sec. per 100	103-105%	103-106%	Labored breathing. Pace is sustainable from 15 to 25 minutes. Very uncomfortable but manageable. Communication pretty much ceases to exist. One word barking at best.
<b>5c</b>	Sprint	106% +	107% +	Maximal exertion. All out sprinting. Severe discomfort. Ability to sustain for around one minute. No ability to communicate.

**Notes:**

- 1) If you are progressing through a training program without the use of a heart rate monitor, pay close attention to the Description of Exertion in order to maintain the correct zone.
- 2) If you are progressing through a training program using a heart rate monitor, you will first have to establish your LT threshold before using % of LT as it varies per individual based on a wide array of factors. This is a more accurate means of training. If your goal is to finish a race, the use of scientific means to this magnitude isn't necessary. Also, if you are very well trained, you may know your body well enough to follow the Description of Exertion means over the more scientific % of LT mode.
- 3) If you are using a heart rate monitor and happen to find that it doesn't correlate with the Description of Exertion, it can be attributed to a few factors: First, you may be overtrained. If you are overtrained, your heart rate may be reading higher than it should for the corresponding Description of Exertion. This will also happen if you are dehydrated. Another reason is that you need to re-calibrate your LT threshold. This needs to happen periodically as you progress through your fitness and training. This is what you are aiming for.
- 4) The "TT" referenced in the Swim Pace column is based on a benchmark swim pace. This pace is set by determining the average pace per three hundred yards or meters with 30 second rest between sets. Make sure you are well warmed up prior to testing for your benchmark pace.
- 5) The "LT" for both cycling and running can be established by one of several methods. Most athletes will need to do a "field test" on the bike or run using a heart rate monitor that has an average heart rate function associated with it. This function is a necessity in determining your LT benchmark.