

## HEART RATE, POWER AND ENERGY ZONES

	System Challenged	+/- LT	%HR Max	Perception	Training Type	Duration (time)	Recovery (time)	Benefit	Critical Power	RPE
<b>Zone 1</b>	Aerobic Base Recovery (Oxidative)	20 beats or more below LT (<80%LT)	55-70%	Easy and relaxed pace. Gentle breathing.	<b>Easy Distance</b>	30 min.- 3+ hours	None needed	Maintain O2 supply to working muscles. Enhanced Fat utilization	<.5 of CP1	1-2
<b>Zone 2</b>	Aerobic Endurance (Oxidative)	10-15 beats below LT (95%LT)	65-80%	Comfortable pace but slightly deeper breathing.	<b>Steady State</b>	30-60+ min	Between workouts = < 8 hours	Maintain O2 supply + economy. Health Enhancement Enhanced Fat utilization	CP 180	2-4
<b>Zone 3</b>	Aerobic & Muscular Endurance (oxidative / fast glycolysis)	+ or - 5 beats LT (100%LT)	85-92%	Breathing beginning to get more labored. Pace getting uncomfortable but doable for over an hour.	<b>Tempos &amp; Long intervals</b>	15-45 min.	Between intervals 1/8 <sup>th</sup> the time of repeat 36+ hours between WO.	Slight increased LT  Increase aerobic energy pathways	CP 60-90	4-6
<b>Zone 4</b>	Muscular Endurance (fast glycolysis)	5-10 beats above LT (105%LT)	92-98%	Forceful breathing. All out effort to sustain pace up to 1 hour.	<b>Threshold Intervals</b>  <b>Cruise or Fartlek</b>	5-10 min.  5-15 min.	¼ to ½ the time of repeat 36+ hours between WO.	Increased LT & sustainable power.	CP 60	5-7
<b>Zone 5</b>	Anaerobic Endurance Speed Power (Fast glycolysis / phosphagen)	15+ above LT (106%+)	100%%	High discomfort. All out pace from 1 minute up to 15 or 30 minutes.	<b>Repeats</b>	2-5 min.  30 sec. to 2 min.	1.5 the time of repeat  2-5 x repeat	Greater Fast Twitch recruitment & neuromuscular coordination. Strength & Power	CP 30 CP 12 CP 6 CP1 CP0.2	8-10

LT= Lactate Threshold, WO = workouts, CP = Critical Power (cyclists), RPE =Rating of Perceived Exertion (0-10)

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