## Cyclist Training Bible by Joe Friel (1996)

An athlete should do the least amount of the most specific training that brings continual improvement. If you owned an expensive horse capable of winning the Kentucky Derby, would you run it hard every day? Heart rate training zones are best if based on lactate threshold (LT). LT = average heart rate of a 10m hard workout or 40k race. Zone $1=65-81 \%$ of LTHR; zone 2 = 82-88\%; zone $3=89-93 \%$; zone $4=94-100 \%$; zone $5=101 \%+$. Measure max \& average watts on a trainer with watt meter ( 0.2 mile all out). Max watts/body wt = power-weight ratio. A low average watts is a warning to improve lactate tolerance.

Clearly defined goals improve one's ability to achieve them. Goals must be written, positive, timely, measurable \& clear. Schedule top races, peak 1 week before, build for 8 weeks \& base for 12 weeks. Rest every $4^{\text {th }}$ week and after hard workouts (easy workouts, not inactivity). Allocate the annual hours into weekly schedule depending on training period. Strength training improves endurance 10-33\%. Masters can perform and compete with younger athletes, but typically lose $0.7 \%$ per decade in a 20 k ITT.

One hour of intense workout depletes the body of up to 30 g of protein (with out replacement, the body is forced to cannibalize protein from muscle). The insulin the pancreas releases (after a high-carb meal) stays in the blood for 2 hours preventing the body from utilizing stored fat. High-glycemic foods (bananas, bread, cereal, fruit juices, honey, raisins, rice...) are best eaten during and immediately after workouts. Low-glycemic foods (apple, beans, grapes, milk, peaches, peanuts, yogurt...) help avoid sugar cravings and lose body fat.

Vitamin C \& E heal the body. The 6 hours following a hard workout you are more vulnerable to sickness since your immune system is depressed. Within 30 minutes after a workout eat 20 g of protein with 80 g of carbs for better recovery. Learn to tell the difference between sore muscles and sore tendons and joints. Warm-ups, sports drinks, cool-downs, recovery drink, 10-min warm bath, 30-min recovery ride/swim, and rest all help recovery. See book for bike fit. Dehydration thickens the blood and causes the heart to work harder.

