

CYCLING PERFORMANCE TIPS

PLANNING A PERSONAL TRAINING PROGRAM

by Richard Raftery, M.D.

There are as many cycling training programs as there are trainers, but certain basic "rules of thumb" can be used to help you develop your own personal program for that upcoming event - usually a century or longer - but this program works for shorter distances as well.

- Before beginning a regimented training program, develop a base of at least 500 miles of easy rides. (If you have a good winter or off season training program, you can pare down this recommendation.)
- Once you have your training base, calculate your average weekly mileage, and then plan to increase it by no more than 10 - 12% per week. This includes both total weekly mileage as well as the distance of your long ride. (This 10 to 12% figure was developed from marathon training to minimize musculoskeletal injuries. Bicycling is easier on the joints and muscles, implying that this figure might be pushed.)
- It's important to **ride at least 5 days a week**, and take at least one day off. Depending on your level of training (or evidence of overtraining) the seventh day is an additional intermediate mileage day or an additional rest day. For example:
 - one high mileage day equal to the event distance
 - one long slow recovery day
 - 3 intermediate mileage days
 - 1 or 2 rest days (off the bike or short recovery rides)
- Plan a short mileage day or rest day to follow the high mileage day. It should be at least 1/4 of the length of your long ride and ridden at a leisurely pace to help loosen up your muscles after the long ride of the week.
- The three intermediate mileage days should be midway between the short ride and the long ride of the week in mileage and should be ridden at a good training pace (85 to 90% of maximum heart rate). One or two of these may be interval training rides.
- The longest mileage day is keyed to the length of your event or ride and ridden at the pace you hope to maintain for the event. Many coaches suggest you work up to the length (or even 125% of the length) of the event while others are comfortable if you can ride 75% of the event distance comfortably. This is usually a Saturday ride (with Sunday as a backup for bad weather or other unexpected circumstance that might derail your training program).
- There should be an additional long mileage, recovery day during the training week.
- The final high mileage day of your training program (the week before the event) should be at least 75% of the length of the planned event.
- You can estimate the length of your training program by using your "average" long ride from your 500 mile base training period, increasing it by 10% a week, and repeating this until you arrive at a figure that is 75% (3/4) of the length of the event for which you are training.
- If you are training for a single day event or ride, your longest ride should be 10 to 14 days before the event. Then cut back on your rides the 3 days immediately before the event - short, low intensity rides (spinning) to keep your muscles from tightening up. This recommendation is not as important for multiday endurance type rides, but common sense suggests that taking a few days off (short spinning rides only) immediately before the event will facilitate maximum muscle recovery and glycogen repletion.
- Be flexible and adjust your program to your lifestyle. A rigid program is destined to fail.

- As far as pace of your rides:
 - the long ride should match your own planned century speed
 - the short "recovery" ride should be a leisurely pace at no more than 50-60% of your maximum heart rate
 - two of the intermediate rides should be at the planned century pace
 - one of the intermediate rides, preferably prior to your day off the bike, should be at a brisk pace 2 - 3 mph faster than your planned century speed.

MORE ABOUT YOUR LONG RIDE

Are Long Training Rides Necessary? Early in the spring when you're building endurance, longer rides have a role to be played in a training program. But during the competitive season conventional wisdom says not to ride significantly farther than your longest event.

So if you do 40K time trials and road races up to, say, 50 miles, your longest training rides don't need to be longer than 40-60 miles. Early-season long rides build aerobic conditioning. But once the season is underway, distance may detract from the power and speed you need to do well in your goal events.

That said, there's an important psychological factor at work here, too. Centuries and tours can fit into a recreational race schedule. After all, we're into cycling to have fun, and variety keeps it that way. Just be sure to recover well and don't ride over-distance too often or too close to competition. And remember - long rides won't make you faster!

A READER'S APPROACH

The following email from a reader is a great example of how it can all come together. A specific example sometimes shows you the way through the morass of "bullet points".

Q. I've gone over your web site articles for training and I have a question. From reading, Max VO2 occurs at 90% max heartrate. On intense training days, how long should you keep pedaling at MaxVO2?

I

have a limited training time schedule and I want to maximize intensity for my 2 intense sessions, but I am unsure how long I should pedal at MaxVO2 rate. I am using an interval based approach for my intense days to control heartrate. On other 2-3 days of training, I just keep heart rate in the target range based if I am doing a long ride or recovery ride, or some days I just cross train instead.

This is sample intense session:

- Pedal at 65% for 10 minutes warmup
- Pedal at 90% for x? minutes
- Recover back to 65%-75%
- Pedal at 90% for x? minutes
- Recover back to 65%-75%
- Pedal at 90% for x? minutes

And so forth until interval is completed. Typically, I like to ride for about 60 minutes for an intense session doing 4-8 intense intervals, maybe 60 is too long? Recovery rides are usually 60 minutes, and long ride (current) is 2 hours. On all my rides I like to keep my cadence at 90-95 RPMs.

Currently, I am in decent shape (resting HR 56), but I am trying to increase overall fitness. Not trying to become elite cyclist, but want to maximize effort. I've also noticed that as I do intervals, my recovery heartrate seems to increase over time. For example, if I am on the first interval and

then go to recovery for 5 minutes, the HR may dip back to 130ish, then on the 4th interval the same amount of recovery time the HR may only go back 140ish. I am not sure if this is normal or I need to pedal longer a recovery rate because I am getting fatigued. There's probably no right or wrong answer here, but any advice would be appreciated. - JR

A. I would say you are doing everything just right. You can fill in the "x" with any length interval you'd like. Depends on the event you are training for and personal goals. Getting better will happen as you put in the time - and if you increase your training (not frequency of each type of ride, but length of each). But don't forget to take off a day or two each week - that often takes more discipline than riding every day.

And yes, it is normal for subsequent HR recoveries to be less. the important HR is the next morning when you get up (to assure you are recovering and not approaching overtraining).

TRACKING TRAINING - MILES VERSUS HOURS

Although the number of miles ridden (per week) is the most common approach to measuring training, there are those who believe that mileage doesn't count as much as time. For example, compare riding alone at 15 miles per hour versus in a group at 20. Were both equal workouts with an hour of saddle time? Or was the 20 miles a better workout? There is no answer to this question, so you get to pick your own preference.

USING A TRAINING LOG

Keeping track of your training - and using the information to improve - is an important part of any training program. How do you use the information?? I'll reprint the comments of Fred Matheny (from www.roadbikerider.com - an excellent on line resource). I'll emphasize what resonates with me **in bold**.

From RBR's 12/21/06 Newsletter: Motivation & Inspiration: Best of Coach Fred. " How Do You Analyze a Training Diary?"

- Question: You've mentioned that you've kept a training log for almost 33 years. I'm curious -- what are your training totals for 2006, and how do you analyze your entries to help you plan for next year? -- Mark N.

Coach Fred Matheny Replies: Good question, Mark. Not many riders keep detailed training logs, which is a shame, and even fewer know what to do with a year's worth of information. Analyzing a training log is crucial to learning from your mistakes, understanding your successes and getting better each year. I'd like to see you and all RBR roadies start a cycling diary for 2007.

This task is easier now that computer-based diaries can be used instead of paper-and-pencil logs. (For an example, see <http://www.cyclistats.com>) With electronic diaries you can pull out average miles, average heart rate, number of hours at or above lactate threshold and much other potentially useful data.

But having said that, I admit to still using an old-school paper diary. I've gotten comfortable with this type during three decades, although I still find that turning all the data into actual improvement is more art than science.

You asked about my numbers. With two weeks to go in 2006 I've done 527 hours on the bike, 227 hours of other aerobic exercise (mainly hiking and snowshoeing) and about 50

hours of weight training. That adds up to around 800 hours of exercise. My totals have been pretty consistent in the last 17 years, averaging 650-800 hours annually.

But lump-sum hours aren't as meaningful as the hours spent near or above lactate threshold. In other words, quality is more important than quantity. And in this area my ability to analyze my training falls short. It's difficult to pull that information from a handwritten log. I rarely wear a heart monitor, and although I do have a power meter on a bike, I'm not always riding that one when I go hard. So quite a few power profiles of hard rides aren't recorded.

Periodically through the year, I read back over my diary to make a subjective analysis. I check the number of interval sessions I've done and their spacing. I look for rides that were hard even though no formal intervals were scheduled. Examples are spirited group rides, races and courses with lots of climbing. I also check my body weight, looking for fluctuations that could indicate dehydration or overtraining.

But more important to me than intensity or hours is a subjective rating of my well-being. I find my mental state to be the best indicator that I'm on the right track or doing too much. Do I feel vigorous or flat? Am I eager to ride or am I going through the motions? Do rides feel so good that I extend them longer than I'd planned, or do I plod through a lackluster hour and head home?

Hard training doesn't, by itself, lead to improvement. Rest and recovery are the essential catalysts. If I don't rest enough, everything goes downhill. So for me, charting my mood against the objective numbers produced by my training is the most useful aspect of diary analysis."