

Mike Nichols MD

Health Management

Nam et ipsa scientia potestas est.

Knowledge is power. - Francis Bacon

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Heart Rate Based Training

Warning: Be sure your heart is ready for serious training!

As some of you know I've had the good fortune to train some very fine athletes; national and international class across several different sports. You will also know that my doctor's heart is given to those who are ill; sick with diabetes, coronary artery disease and the like.

For those who were at Tempus Clinic you will remember the fuss we made of getting your heart rate data downloaded and studied. As I've lately been working directly as a trainer with patients and not just my jocks I've realized afresh how much information I derive from heart rate based training as a guide to healthy training. I 'knew it' but had not lately so directly, so intimately, seen how important the information can be.

Let me initiate you into the Polar Priesthood! Of course the monitor need not be Polar; any will do, however you should have a way to download and examine each workout.

When examining your heart rate profile download look for these basics:

- How tightly does the heart rate profile map onto the actual work done?
- Is there an overshoot at cessation of exercise; does the heart rate come down immediately or seconds later?

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- Is there a shoulder just off peak where the heart rate 'hangs' for some period of time? Peaked at 170 and then stuck at 145 for 15 seconds for example.
- How long is the tail of elevated heart rate after you have completed your workout? For example you started with a resting heart rate of 60, had a good shark tooth workout with ascending mean heart rate throughout the workout and then your heart rate stayed at 110 for 12 minutes after the workout.

To understand what each of these means let me tell you that a rested well trained heart in a healthy young athlete has no overshoot, shoulders, or tails and his heart rate maps very tightly onto his actual work load.

Each of these very visible shapes to the heart rate profile as a graph has specific information about your heart, your sympathetic/parasympathetic tone, your underlying metabolism, how well you slept the night before the workout and how well and what you have been eating and maybe of more immediate concern this kind of information can point directly at various kinds of heart disease. Notice that last part; important clues to heart disease can be found here as well.

To unpack each issue revealed in your heart rate profile would take a book. Short of that begin to familiarize yourself more with your heart rate response to exercise. Know that this is one of the more important feedback loops to help you track your health and your training.

If there is sufficient interest I will hold a "Master's Class", there would be a fee for this, where through illustration and dialogue I can paint an indelible picture of the information to guide your health to be gleaned from this simple tool.

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FAT...out damned fat!

OK, I can't resist, there bobs another hook I should ignore. The American Journal of Clinical Nutrition recently had an article, a meta-analysis, of many large prospective epidemiological trials to see what effect saturated fats have on the incidence of cardiovascular disease. Now, before I go on, keep in mind that since the '70's we have been inundated with government mandated labeling laws, shifts in consumer product composition and marketing all aimed at getting the American public to eat not only less fat but specifically less saturated fat. Millions if not billions of public health dollars have been spent to this end. Our entire population has been wheedled, cajoled and threatened with death all to the end of decreasing saturated fat in our diet. In response the public has eaten other, far worse things, to replace the deleted saturated fat. (Vol. 91, No. 3, 535-546, March 2010)

And the winner is... saturated fat has no significant relationship to cardiovascular disease. Well that is not quite true; it might be partially protective against stroke. This kind of unintended consequence of empowering the brilliant to regulate the lives of us mere cattle makes me furious. Cutting out saturated fat from the American diet has cost many, many lives and is one of the principle culprits in the obesity epidemic. By the way there never was credible evidence of harm from saturated fat.

Smile and God Speed,

Dr. Mike

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