

NUTRI-SPEC



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THE NUTRI-SPEC LETTER

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From:
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Dear Doctor,

It was in May 2004 that we began in these letters integrating exercise physiology with what you, as a NUTRI-SPEC practitioner, know about nutrition science. If you have been incorporating these scientific principles into your practice, then by now ...

YOU ARE A HERO ...

to dozens of patients who have become ex-plodders, or ex-flingers, or maximally achieving athletes. If you have not yet achieved hero status, then procrastinate no longer.

Helping your patients who have made a commitment to exercise tends to be far more gratifying than working with your typical nutrition patient, just because these exercising patients have already made a commitment to do something. They are not of the mind set that looks for magic pills to restore health. Every time you hear patients mention exercise, praise them for their good sense and ambition. Then go on to explain how the frustration experienced by so many who embark on exercise programs can be replaced by phenomenal success, if they employ systematically applied exercise and nutrition science.

All the while your patients are praising you for their having lost weight, or gained muscle, or increased speed or stamina, or for their new and exhilarating vitality, you will have objective indicators telling you that their benefits go far beyond the obvious. Slow pulses will come up and fast pulses will come down. Low blood pressures will come up and high blood pressures will come down. Chronically low body temperatures will rise. Low serum cholesterol will rise, while high

cholesterol and triglycerides will fall. The oxidation index will be maintained consistently near normal.

Less quantifiable but just as obvious benefits from combining exercise and nutrition are improved circulation, along with better nutrient assimilation and utilization. All aspects of health are enhanced. Hormonal output and balance is improved, the benefits of which are limitless, and include increased libido, increased bone density, a slowing of the aging process, the elimination of many emotional disorders, not to mention the elimination for your female patients of many menstrual and pre-menstrual disorders. Delivering so much to your patients requires so little from you. Simply offer your patients:

- The NUTRI-SPEC Fundamental Diet (modified as necessary for serious athletes)
- Grizzly Bear Intervals and Grunt and Growl Strength Training
- Metabolic balancing or The Diphasic Nutrition Plan
- Your MASTER BLASTER to push your patients out of an anabolic/catabolic rut.

This work is fun, profitable, and extremely gratifying. If you are doing anything else with your professional life ...

PLEASE ASK YOURSELF WHY.

In last month's Letter we summarized our case against some of the ridiculous myths that are commonly accepted by everyone --- most particularly your patients who are attempting to reap the rewards of a physical conditioning program. We debunked four misconceptions about exercise that have reached mythological proportions, and left the fifth and grandest myth of all for today:

Myth 5:

The best way to strengthen our cardiovascular systems and prevent heart attacks and strokes is with "aerobic" exercise such as running and cycling for long distances.

I think we have successfully refuted this nonsense over the past several months. Yet there is so much institutionalized propaganda on the benefits of what we call "plodding" that we must put forth an extraordinary effort to save our patients from plodding endlessly on the

treadmill to nowhere. The aerobic exercise myth is perfectly analogous to the “cholesterol causes cardiovascular disease” myth.

**A MULTI-BILLION DOLLAR INDUSTRY
DEPENDS UPON ITS PERPETUATION.**

Perhaps we can be in a better position to defend our patients from the damage of this myth if we understand its historical development. But before we get into that, let us take a moment and clear up a problem in terminology that has shown up in countless questions that have come from Doctors reading this Letter over the past several months.

Just what do the words “aerobic” and “anaerobic” mean? Most fundamentally, as you know, aerobic means with oxygen, and anaerobic means without oxygen. The words are adjectives. When used by biochemists and cellular biologists the terms refer to oxidative metabolism --- energy production through anaerobic glycolysis, or energy production through the aerobic Krebs cycle. In the last several decades, however, these same adjectives have been adopted by exercise physiologists (and subsequently exercise industry promoters) to mean exercise that is of such low intensity that it builds very little oxygen debt (“aerobic exercise”), or, exercise of sufficient intensity to exceed the body’s capacity for energy production using oxygen, building up an oxygen debt (“anaerobic exercise”).

Many of you have responded to our exercise discussion with questions on how anaerobic exercise (such as Grizzly Bear Intervals) can burn fat when anaerobic glycolysis uses sugar in the absence of oxygen. Such questions derive from the confusion in substituting the common lay use of the word “anaerobic” for the biochemical use of the word. Anaerobic glycolysis is not an energy producing system that operates in isolation. If you dig out your old copy of Guyton, or some other elementary physiology text and check out the nice flow chart, you will see that anaerobic glycolysis produces a net gain of 2 ATP, but also leads directly into the citric acid cycle. Anaerobic glycolysis and the Krebb’s cycle are really two phases of one process. Many of you have gotten the idea that they are an either/or proposition --- they are not; they always work in tandem.

It was back in the mid 1960’s when Dr. Kenneth Cooper of the United States Air Force coined the phrase “aerobic exercise.” The word aerobic in this context has absolutely nothing to do with aerobic vs anaerobic energy production. Cooper was simply referring to the amount of oxygen that an exercising person utilizes. The experiments he did with exercise, and the point system that he subsequently developed, were all associated with VO2 max, the maximum amount of oxygen a person is

capable of processing while exercising. Since Cooper just about single handedly began the exercise boom, the exercise industry adopted his terminology. So now, people refer to anaerobic vs aerobic exercise, terms that only remotely relate to anaerobic vs aerobic metabolism.

Yes,

KENNETH COOPER WAS THE MAN.

To him we owe thanks for our national obsession with fitness (or, our national guilt over our lack of fitness). Regrettably, however, our number one exercise myth --- that of improving health in general, and preventing cardiovascular disease in particular with low intensity, long duration exercise --- comes from Cooper as well.

It all started with Cooper's Poopers, the group of Air Force personnel who had cardiovascular disease, and who became Cooper's first experimental group. Cooper's hypothesis was that exercise that placed a demand on the cardiovascular pulmonary systems would strengthen them, thus preventing the development of cardiovascular disease, and perhaps reversing to some extent existing CVD. [It is difficult for us to look back after 40 years of the running and fitness boom, and imagine that in the 1960's Cooper's thoughts on the connection between exercise and cardiovascular disease were completely untested.] Cooper did even better than establish the connection between exercise and the prevention of cardiovascular disease. He made an attempt to quantify the connection between what he called "aerobic exercise" and cardiovascular pulmonary function.

Cooper's Poopers were fabulously successful --- far beyond even the wildest imaginings of Dr. Cooper. As they walked or ran, mile after mile after mile, day after day after day for a year or two, being monitored every step of the way in Cooper's lab, it was seen that the benefits in blood pressure, circulation, and increased VO₂ max that his subjects experienced were directly proportional to the amount of oxygen consumed during the workout. So, Cooper went the next step and quantified just how much oxygen is consumed while running at various paces. Thus was born the famous Cooper point system. Each point represented nothing more than a certain unit of oxygen volume (I forget the exact quantity) consumed while running at a specified pace. So, to illustrate, running a mile in 8 minutes was worth five points, running a mile in 7 minutes was worth 6 points, and running a mile in 6 minutes was worth seven points. After expanding his chart to running various numbers of miles at different paces, and then creating a chart for swimming and bicycling as well, Cooper went public with his findings with his classic book entitled, Aerobics.

The public went nuts. Cooper, it seemed, had found the prevention and the cure for cardiovascular disease. In short order he came out with The New Aerobics, and then Aerobics for Women. High school tracks that previously sat idle 99% of the time, were populated day and night by joggers. In neighborhoods all across America you could find men and women plodding around the block at any hour of the day or night. People by the zillions were counting up their aerobic points every week.

How many points? Here is where, in retrospect, I think I can say Cooper somewhat misinterpreted his experimental data. Cooper had found that at about 30 points per week, some seemingly magical changes occurred in a test subject's physiology. At that 30 point mark there was somewhat of a quantum leap in progress in a person's conditioning. In other words, if you accumulated aerobic points up to something less than 30 you benefited from your running or swimming, but if you pushed your point total up above 30, your progress in increasing your VO2 max and in your ability to run longer distances at higher speeds, broke far above its linear trend line that existed prior to the 30 point mark. Cooper named this phenomenal rate of progress that his experimental subjects experienced when the 30 point criteria was achieved, "The Training Effect." He therefore prescribed 30 or more points for everyone serious about health and fitness as a minimum to achieve the training effect and thus all fitness goals.

My personal thought is that what Cooper identified would more properly have been called "The Athletic Training Effect." Thirty points is the level at which you will achieve not fitness benefits, but athletic specialization benefits. In other words, beyond 30 points of running you are engaged in athletic training to become a competitive runner, rather than merely running for fitness. To put this idea in the terms of our discussion these last few months --- I am saying that at 30 points you begin to risk over-training. At 30 points you are getting fatigue from your workouts out of proportion to the health benefits you are receiving. At 30 points, there is a major catabolic stress on your body from which it may be difficult to bounce back.

Cooper created millions of plodders. Thousands upon thousands of people invested probably millions and millions of hours in plodding exercise routines that eventually made them nothing more than tired, hungry, and grouchy. Yes, they benefited; even plodding for exercise is probably better than no exercise at all (although sometimes I'm not so sure). People who put out less than 30 points worth of effort lost a little weight, probably felt somewhat better, and may have improved CVD functioning a bit. Those who put out more than 30 points worth of effort lost a little more weight, improved CVD function a little bit more, but felt

somewhat rotten much of the time. Neither the below 30 nor the above 30 group experienced the tremendous metabolic benefits that could accrue from that much commitment to exercise, but with less volume and more intensity.

In contrast to Cooper's aerobic exercise recommendations, Grizzly Bear Intervals will give you more weight loss by far, more cardiovascular benefits, and will do so in a fraction of the time invested in exercise. Moreover, The Grizzly Bear Intervals will give you tremendous metabolic effects, and leave you feeling like you could conquer the world, rather than like a rat that has been run on a treadmill for endless hours.

Next month we will shatter the remainder of the aerobic exercise myth, fully exposing all its fallacies, including:

- Calories burned while exercising
- Fat burned while exercising
- Heart safety while exercising
- And, the most contrived and absurd mythology of all --- exercising at a target heart rate.

Meanwhile, you've got three things to achieve beginning today:

1. Turn your exercising patients into successful exercising patients
2. Use your MASTER BLASTER to restore selective membrane permeability and clear the tissue pH imbalances that are preventing your patients (whether exercisers, or non-exercisers) from discovering the health they are counting on you to help them find.

1 + 2 = 3. Have fun, make a buck, and enjoy the extreme gratification from being a HERO to your patients.

Sincerely,

Guy R. Schenker D.C.