NUTRI-SPEC
METABOLIC BALANCE
THROUGH SPECIFIC NUTRITION
89 Swamp Road
Mifflintown, PA 17059
800-736-4320
717-436-8988
Fax: 717-436-8551
nutrispec@embarqmail.com
www.nutri-spec.net

THE NUTRI-SPEC LETTER

Volume 16 Number 6

From:
Guy R. Schenker, D.C.
June, 2005

Dear Doctor,

Small town newspaper headline:

HIGH SCHOOL SOPHOMORE IGNORES HER TRACK COACH:
SETS NEW SCHOOL RECORD IN THE 100 METER DASH

That could have been the headline in the paper of a near by town a few weeks ago. Next month I'll tell you the story of this charming young lady who, while listening to her well-meaning but misguided track coach, got nothing but painful stress fractures. She was supposedly through for the season. Then, on the advice of a crazy Chiropractor from Mifflintown she:

- refused to quit for the season
- refused to let the trainer put ice on her painful legs
- refused to follow the (high volume) training methods of her coach

Within two weeks she shattered her school record in the 100.

Yes, next month you will hear her full story along with other interesting and entertaining anecdotes illustrating the point that …

FROM ATHLETIC COACHES TO
PERSONAL TRAINERS TO GYM RATS
TO EXERCISE EQUIPMENT DISTRIBUTERS
YOU GET NOTHING BUT …

propaganda and mythology.

You are now likely the only person your patients know who can give the truth about how to get maximum gains from working out with minimum time and energy invested, and most importantly, with minimum catabolic damage.

But in case there are some lingering doubts --- in case you think there must be some truth in the exercise propaganda that has brainwashed you for as many as 40 years, read on. You are about to see some studies that will have you shaking your head in disgusted amazement of the absurdity of the common wisdom on exercise.

First, let us consider three studies that looked at the effects of exercise on the heart and vasculature in regard to either preventing or rehabilitating cardiovascular disease.

1. Strength/endurance training vs. endurance training in congestive heart failure. Delagardelle, et al. Med Sci Sports Exerc. Dec, 2002.

   This study showed that low intensity, long duration endurance training (40 minute workouts, three times per week) gave only small benefits in work capacity, peak torque, and muscular endurance. However, VO2 peak did not improve at all with conventional "aerobic" "cardio" workouts, and endurance training (gasp!) actually caused ventricular function to get <u>weaker</u> by three different objective criteria. Oh my! Don't let the word get out to the millions of people spending zillions on health club memberships so that they can tread on the mill to oblivion. The health club fraud would be over in a day.

   Meanwhile, the second part of this experiment took an identical population of exercisers and cut the endurance training in half, while adding strength training for the other half of the workouts. The results? Cutting the endurance training in half and substituting strength training resulted in an <u>increased</u> VO2 peak. These workouts also <u>strengthened</u> left ventricular function by all criteria, and gave greater improvement than the low intensity long duration exercises in work capacity, muscle strength, and muscle endurance.

   Think about it!

STRENGTH TRAINING STRENGTHENED THE HEART
WHILE "CARDIO" TRAINING
WEAKENED THE HEART!!

If that revelation doesn't shake the foundation of establishment exercise mythology, <u>nothing</u> will!

2. High intensity aerobic interval exercise is superior to moderate intensity exercise for increasing aerobic capacity in patients with coronary artery disease. Rugnmo, et al. Eur J Cardiovasc Prev Rehabil. June, 2004.

   This study showed that high intensity training (though not interval training as we define it) at 80-90% VO2 peak is nearly 2½ times as effective in improving cardiovascular function as medium intensity training at 50-60% of VO2 peak.

   This study did not look at what we call sprint interval training (Grizzly Bear intervals for conditioning or athletic purposes). The use of the word "interval" in the title of this study is within the context of the research meaning of the word, not as it relates to athletic training. In any case, this study showed that an increase in the intensity of workouts from 50-60% of VO2 peak to 80-90% of VO2 peak improved objective measures of cardiovascular function by 2½ times.

   Can you see why we must urge our patients to avoid wasting all their time and energy on plodding? Nothing more than a reasonably small increase in intensity will give …

   MORE THAN DOUBLE THE BENEFITS PER UNIT OF TIME AND ENERGY DEVOTED TO EXERCISE.

   Grizzly Bear Intervals are the ultimate!.

3. Interval vs. continuous exercise training after coronary bypass surgery: A comparison of training-induced acute reactions with respect to the effectiveness of the exercise methods. Meyer, et al. Clin Cardiol. Dec, 1990.

   In this study interval training, which involved both aerobic and anaerobic capacity, was shown to increase physical performance and cardiac function far better than continuous aerobic exercise.

Do you get it? These three studies showed that "cardio" "aerobic" training yielded very little benefit, and was certainly grossly inferior to interval training or even strength training as a means to improve myocardial function.

Here is another study showing the benefits of sprint interval training on the cardiovascular system of normal, healthy individuals (rather than those with CVD) looking for the fitness benefits of exercise.

4. Blood volume expansion and cardio respiratory function: Effects of training modality. Warburton, et al. Med Sci Sports Exerc. June, 2004.

   This study showed that interval training is at least as effective as continuous training as measured by:

   - increased VO2 max
   - increased left ventricular strength
   - increased blood volume

Let us shift our attention now from merely maintaining the health of the cardiovascular system to striving for optimal performance. Here are some studies that look specifically at the advantage to those in serious recreational training or even competitive athletic training from doing interval training rather than long slow distance.

5. Training-over-training: Influence of a defined increase in training volume vs. training intensity on performance, catecholamines, and some metabolic parameters in experienced middle-and long-distance runners.

   In this study trained runners were divided into two groups. One group increased the running volume of its workouts and the other increased the intensity with sprint interval workouts. What were the results? On follow-up testing the group that increased the volume of its workouts, showed a <u>decrease</u> in speed, a <u>decrease</u> in endurance, a <u>decrease</u> in heart rate, <u>decreased</u> energy metabolism efficiency, and <u>increased</u> plasma catecholamine stress hormones.

   So much for all the coaches that are exhorting their athletes to give themselves an increased competitive advantage by increasing workout volume. Think of it: in well-trained athletes,

INCREASING THE VOLUME OF WORKOUTS
CAUSED A DECREASE IN PERFORMANCE

   by every cardiovascular, pulmonary, and biochemical measure. Meanwhile, the group that decreased the volume of its workouts but increased the intensity by using sprint interval training increased performance tremendously, even though these were already well trained runners who were presumably near their competitive peak. They <u>increased</u> their speed, they <u>increased</u> their endurance, their heart rate and energy metabolism were <u>not</u> adversely affected as were those who increased the volume of the workouts, and the catecholamine stress hormone level was actually <u>decreased</u> in these

athletes as their performance increased.

Imagine if competitive runners, swimmers and cyclists trained according to scientific principles rather than the hand-me-down mythology administered by their coaches.

Now, here is a study that looked at sprint interval training on untrained men rather than competitive athletes:

6. Muscle performance and enzymatic adaptations to sprint interval training. MacDougall et al. J Appl Physiol. June, 1998

   This study evaluated the effects of sprint interval training on healthy untrained men over a period of seven weeks. Training consisted of 30 second maximum efforts interspersed by 2-4 minutes of recovery, performed three times weekly. The training program resulted in dramatic increases in peak power output, in total work over 30 seconds, in VO2 max, and in maximal enzyme activity of hexokinase, phosphofructokinase, citrate synthase, succinate dehydrogenase, and malate dehydrogenase. In summary, intense sprint interval training resulted in an increase in both glycolytic and oxidative enzyme activity, maximum short-term power output, and VO2 max. No low intensity, long duration exercise regimen can begin to match Grizzly Bear Intervals.

Surprising studies? Are you shocked to learn that "aerobic" "cardio" long duration exercise is not only bad for your health, it is not even the best way to build cardiovascular endurance? Yes, it is true, endurance training is not even the most effective way to train for long-distance athletic competition. Is it preposterous to conclude that distance runners, cyclists, and swimmers are better off not training at long distances? Read this one final study.

7. Six sessions of sprint interval training increases muscle oxidative potential and cycle endurance capacity in humans. Burgomaster, et al. J Appl Physiol. Feb, 2005

   In this study recreationally active subjects were put through only six sprint interval training sessions over a period of 2 weeks. There were one to two days of rest between sessions. Each session consisted of 4-7 all out 30 second sprints with 4 minute recovery between. The results were amazing. Citrate Synthase activity increased by 38%; resting muscle glycogen content increased by 26%; and, most strikingly, cycle endurance capacity increased by 100% in just 2 weeks of training.

Think about that. No "aerobic" exercise regimen has even come close to duplicating this phenomenal success. With only 15 minutes of actual exercise time over a period of 2 weeks, muscle oxidative potential increased dramatically and

ENDURANCE CAPACITY WAS ACTUALLY DOUBLED.

Now, think about this; the "recreationally active" subjects of this experiment were perfectly analogous to the dozens of patients you have, who are working out to stay in shape. Yes, your patients could be following your advice to exercise according to scientific principles rather than propaganda and mythology. Your patients could be doubling their aerobic capacity with just 15 minutes of high intensity output over the next two weeks. One to three Grizzly Bear Interval workouts per week plus one to three Grunt and Growl Strength Training workouts per week (three to five weekly workouts), is the one and only guaranteed way for your patients to look and feel their best for a long, healthy life.

Sincerely,

Guy Schenker, D.C.

P.S.: SPECIAL this month --- To help all your victims of high volume, low intensity exercise --- GLUTAMINE and/or OXY POWER, 2 **FREE** with every 10 you buy.