

NUTRI-SPEC



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

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From:
Guy R. Schenker, D.C.
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Dear Doctor,

In last month's Letter, we confronted ...

THE ULTIMATE EXERCISE MYTH.

We established clearly that despite our wishful thinking, exercise is not going to lengthen our lives. But while it is clear that exercise will not help us live longer, it is quite evident that exercise will help us live better. To take full advantage of the potential for exercise to enrich the quality of life for us and our patients, we must emphasize the quality of exercise.

THERE IS A VERY FINE LINE BETWEEN EXERCISE THAT MAKES US STRONG AND EXERCISE THAT MAKES US DIE.

As I have told you countless times during these months of exercise discussion, high intensity, short duration exercise is the key to maximum gains and minimum catabolic damage from exercise.

To reinforce this exercise philosophy, I began last month to give you references from the scientific literature. I shared with you my favorite study --- the study showing that there are two entirely unrelated fatigue mechanisms, one mechanism for fatigue in high intensity exercise, and a completely different biochemical process for fatigue in response to low intensity, long duration exercise. The mechanism of fatigue in response to low intensity exercise involves a derangement of the calcium/magnesium exchange control. This is the same pathological

biochemical breakdown that accompanies thyroid failure, heart failure, and many chronic disease states.

The other favorite study I shared with you last month is the one showing the actual mechanism by which exercise decreases life span. It is all about ...

OXIDATIVE STRESS.

Exercise even slightly in excess of our adaptative capacity causes irreversible catabolic oxidative damage. In other words, the way most people have been convinced by the fitness industry to exercise gives minimal short-term benefits while accelerating the aging process. There are two ways to enjoy the benefits of exercise without suffering from premature death:

1. High intensity, short duration exercise using the Grizzly Bear Intervals and Grunt and Growl Strength Training that I have outlined for you in months past.
2. Take extra Oxy Power. We routinely recommend 3 Diphasic PM as part of the Diphasic Nutrition Plan for all of our patients to increase vital reserves. For those of us who exercise, 6 Oxy Power daily is the ideal way to maintain adaptative capacity in the face of the oxidative stress from exercise.

Read on for more references confirming the efficacy of high intensity, short duration exercise, as well as the futility and destruction inherent in low intensity, high volume workouts.

Another study I like was published in the April 2000 issue of Medicine and Science in Sports and Exercise. That study looked at what happens to people who try to do plodding exercises in combination with caloric restriction as part of a weight loss program. In other words, this study examined the fate of the countless thousands who are exercising and dieting “sensibly” in an effort to lose weight. Guess what happens when you get on the treadmill when suffering a caloric deficit? Your body takes your next meal and stores as much of it as it possibly can as fat. So, endless plodding on your treadmill not only makes you tired, hungry, and grouchy, it actually makes it much, much more difficult to lose body fat.

We know that Grizzly Bear Intervals along with Grunt and Growl Strength Training have precisely the opposite effect. While we respond to plodding exercise along with caloric restriction as an unrelenting stressor to which we must respond by shutting down metabolic

processes and conserving energy --- we respond to Grizzly Bear Intervals and Grunt and Growl Strength Training by firing up metabolic engines, burning over 45,000 calories at rest just while building our next additional pound of muscle.

WARN YOUR PATIENTS!

Never exercise when in a post-absorptive state. Above all --- we must never workout in the early morning before breakfast. The catabolic stress will destroy us.

LESS IS MORE.

Exercise, to a point, will help us look and feel our best. However, a slight bit more exercise than we need ravages our bodies. Even with Grunt and Growl Strength Training exactly as I have outlined it for you, three workouts per week are very often too much. (Watch your body temperature!) Here are some pertinent references showing that two strength training workouts weekly are superior to three or more. To prevent the catabolic stress of overtraining, two is certainly the maximum if we are also doing Grizzly Bear Intervals.

- Effect of reduced training frequency on muscular strength. International Journal of Sports Medicine, 1998.
- Comparison of two vs. three days per week of variable resistance training during 10 and 18 week programs. International Journal of Sports Medicine, 1989.
- Effect of training frequency and specificity on isometric lumbar extension strength. Spine, 1990.
- Effect of training frequency on cervical rotation strength. Medicine and Science in Sports and Exercise, 1991.
- Effect of reduced training frequency and de-training on lumbar extension strength. Spine, 1992.

And, in case there is any question about the essentiality of your exercise as full range of motion, check out this study.

- Non-specificity of limited range of motion lumbar extension strength training. Medicine and Science in Sports and Exercise, 1990.

This study showed that strength training exercises of less than full range of motion create greater strength in the exercised portion of the

motion, while the rest of the range of motion remains relatively weak. For both efficiency of function and injury prevention the ideal strength curve is a horizontal line. In other words, a muscle should be able to contract with exactly equal force over its entire range of motion. Incidence of injuries is directly proportional, to the degree a muscle's strength curve varies from horizontal. The best illustration of the correlation between injuries and non-horizontal strength curves is professional water skiers, who develop tremendous erector spinae strength over only a short range of motion and thus are subject to back injury both in and away from their sport.

And for those who can't let go of the myth that multiple sets are the way to build muscle:

- Single vs. multiple set dynamic and isometric lumbar extension strength. Spine Rehabilitation, 1993.
- Effect of frequency and volume of resistance on cervical extension strength. Archives of Physical Medicine and Rehabilitation, 1993.

Get it? Grunt and Growl Strength Training gives us maximum gains with minimum catabolic damage. One set of each exercise with all the intensity we can muster, two times weekly, will keep us looking and feeling young and strong. Maximum gains? Yes --- and remember, each pound of muscle gained requires 45,000 calories to build, then burns 50 calories every day, even on days we do not exercise. Adding two days of Grizzly Bear Intervals each week will give us the physique and the feeling of personal power we never thought could be ours.

**YES, BUT WHAT ABOUT "CARDIO"?
ISN'T THE MOST IMPORTANT BENEFIT
TO BE DERIVED FROM EXERCISE THE STRONGER
CARDIOVASCULAR SYSTEM THAT COMES FROM
"AEROBIC"/"CARDIO" EXERCISE?**

If you are still asking that question, then you simply have not been paying attention. Plodding at your target heart rate will make you tired, grouchy, hungry, and, is as likely to weaken your heart as strengthen it. In fact, low intensity, long duration "aerobic" "cardio" exercise will, when done to excess, do catabolic damage to the heart. Up to the point of over-training, plodding workouts are minimally beneficial (i.e., better than nothing), BUT WILL NEVER ACHIEVE EXERCISE GOALS. Going beyond the point of over-training (which almost everyone does) will do catabolic damage to the heart and oxidative damage to the arteries.

There are countless studies showing the damaging effect to the heart of low intensity, long duration “aerobic” “cardio” training. Why have you never heard of these studies?

WHO IS GOING TO PUBLICIZE THEM?

Certainly no one associated with either competitive sports or with the fitness industry will let the cat out of the bag.

Here are three studies off the top of a list that includes many dozens showing that even competitive endurance athletes on nothing more than a routine training regimen suffer heart damage from their workouts:

Cardiac drift during prolonged exercise with echocardiographic evidence of reduced diastolic function of the heart. Dawson, et al. Eur J Appl Physiol 2005 Mar 12.

Does four hours of cycling cause cardiac fatigue or cardiomyocyte damage? Damage! This study demonstrated damage to heart muscle cells as shown by reduced diastolic function of the heart. Diastolic filling had not fully re-covered after 24 hours of rest. Furthermore, the heart damage was greatest in the cyclists who were best conditioned, i.e., had the highest maximal oxygen uptake.

Altered cardiac function and minimal cardiac damage during prolonged exercise. Shave, et al. Med Sci Sports Exerc. 2004 Jul; 36 (7):1098-103.

This study measured markers of cardiac damage to highly trained triathletes in a half-triathlon. RESULTS: reduced left ventricular contractility, reduced diastolic filling, and elevated markers of inflammation and catabolic damage including creatine kinase, creatine kinase isoenzyme MB, and cardiac troponin.

Effect of Endurance exercise on autonomic control of heart rate. Carter et al. Sports Med 2003; 33(1):33-46.

Does the resting heart rate decrease in endurance athletes because the myocardium is stronger and the stroke volume increases? In other words, is the bradycardia a positive adaptation to the stress of training? No. This myth has existed for many decades. “Since he started running two years ago his resting heart rate has come down to 52! He is really in great shape!” Ha! Look at your BP-Pulse chart in your NUTRI-SPEC

QRG if you want to know what the slow pulse indicates: overstressed heart, dysaerobic, parasympathetic, or ketogenic. This study showed that prolonged endurance training results in a non-physiological change in autonomic control of the heart such that parasympathetic activity dominates and sympathetic control is reduced. The parasympathetic stress and sympathetic weakness results in a decreased heart rate at rest, and in response to sub-maximal exercise.

The well-conditioned heart, such as derives from Grunt and Growl Strength Training and Grizzly Bear Intervals, functions at rest with a pulse of 72. The pulse increases rapidly at the onset of exercise, then recovers very quickly at the end of exercise. The quick recovery is the key to cardiac strength; the resting pulse of 72 is the indicator of healthy myocardial physiology.

Next month we will wrap up our look at exercise physiology by citing some surprising studies. You will be 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. It is not even the most effective way to train for long distance athletic competition. Distance runners, cyclists and swimmers are better off not training at long distances? Preposterous, you say! As you have just read, science shows us that endurance training actually damages the heart. Science also demonstrates a truth that is far outside the comfort zone of running and swimming coaches --- the training methods they use are vastly inferior to the one truly effective way for endurance athletes to maximize performance (and the way for the rest of us to maximize cardiovascular health). --- And what way is that? I’ll bet you can guess.

Sincerely,

Guy Schenker, D.C.

P.S.: OXY POWER SPECIAL --- 2 **FREE** for every 10 you buy ---
Exercise for life, not to death.