

## **Dr. Al Sears on the Long Steady Distance Training Effect on the Heart.**

### **For a Strong Heart, Heed this Lesson from Marathons**

If you're looking for a New Year's resolution, don't let your good intentions put you at greater health risks. My suggestion: Nix long-duration exercise from your plan.

Finally, there's a body of clinical evidence to support what I've been telling my patients for two decades. Long-distance workouts - especially marathons - traumatize your heart and mimic the effects of heart disease.

Back when I was in medical school, I saw this first hand. At the time, I was working at an emergency aid station for marathon races. During one race, I saw 2 runners fall to their knees, their lips turning blue, suffering from irregular heartbeats and fearing a heart attack.

Unfortunately, the damage is continuing.

In 2006 alone, at least 6 runners lost their lives in marathons in the US. In March, two police officers, one 53, the other 60, died of heart attacks at the Los Angeles Marathon. Three runners in their early 40s all had fatal heart attacks during marathons in Chicago, San Francisco and the Twin Cities. And on October 29th, at the Marine Corps Marathon, a 56-year old man collapsed at the 17th mile marker, never to recover.<sup>1</sup>

### **Science Finally "Discovers" the Risks of Marathon Running**

Results from Boston area hospitals reveal the risks and damaging effects experienced by dozens of marathon runners they've studied over the last ten years.

#### **Increased Risks for Marathon Runners<sup>2</sup>**

Heart Attack

Sudden Cardiac Death

Hardening of Arteries

Stress Fractures

Lower Back Pain

Blood in Urine

Repetitive-Stress Injuries

Permanent Bone Damage

Dr. Arthur Siegel, the director of internal medicine at McLean Hospital in Massachusetts and an assistant professor of medicine at Harvard University has authored more than two dozen studies on runners of the Boston marathon.

In October of 2001, Dr. Siegel published two studies in the *American Journal of Cardiology*.<sup>3</sup> Between 1996 and 2001, he drew three blood samples from 80 middle-aged male runners. They drew the first sample just before the marathon. The second immediately following, and then a third a day after the marathon.

The results: Twenty-four hours after the race, the men - none of whom had any history of heart disease - exhibited early-stage signs of cardiac damage similar to the symptoms that appear during a heart attack.

In a more recent study - published in November's issue of *Circulation*<sup>4</sup> - Dr. Siegel and his colleagues from Massachusetts General Hospital tested 60 runners before and after the 2004 and 2005 Boston Marathon. Each runner had a cardiogram to look for abnormalities in heart rhythm.

They also checked for evidence of cardiac problems in their blood. They used troponin, a protein found in cardiac muscle cells, as a marker of cardiac damage. If the heart is traumatized, troponin shows up in the blood. Its presence is also used to determine whether heart damage was sustained during a heart attack.

The runners (41 men and 19 women) had normal cardiac function before the marathon, with no signs of troponin in their blood. Twenty minutes after finishing, 60 percent of the group had elevated troponin levels, and 40 percent had levels high enough to indicate the

destruction of heart muscle cells. In addition, most had noticeable changes in their heart rhythms.

Dr. Siegel said, "Their hearts appeared to have been stunned."<sup>2</sup> Bingo! During long-duration exercise, your heart is under constant stress with no time to recover. If it goes on for long enough, your heart is traumatized and your body reacts by triggering a wave of inflammation.

Inflammation can be a good thing. It's a natural response to initiate repairs. But if you do this recurrently and purposely as exercise, you induce chronic inflammation of your heart and blood vessels - putting you on the fast track to heart disease. In fact, in ***The Doctor's Heart Cure***, I showed that inflammation, NOT cholesterol, is actually the leading mechanism of heart disease.

Dr. Siegel concluded that running a marathon causes injury to the skeletal muscles, which in his own words, "sets off a cascade of inflammation in the body."<sup>1</sup>

In a related study, researchers at the University of Duisburg-Essen in Germany were surprised when men who had completed at least five marathons each were given an advanced type of heart screening called a spiral CT scan. This unique exam measures the amount of calcium plaque buildup in the arteries.

About 35 percent of the marathon runners had significant buildup in their arteries - indicating they were at higher risk for a heart attack. Only 22 percent of non-marathon runners in a control group had the same amount of blockage.<sup>2</sup>

### **Sidestep this Trap and Exercise Naturally**

Many have thought that running a marathon is helpful because it gives your heart endurance training. The idea being that extra endurance will keep your heart going far into old age.

Yet your heart was designed by nature to beat for a lifetime. It doesn't need help with endurance. What it needs is a reserve of extra power to help it during times of stress. That's when heart attacks happen.

And, **you can build up your heart's reserve capacity** in as little as 10 minutes a day. By focusing on periods of gradually increasing exertion followed by focused recovery - the basis of my PACE program

- you mimic natural demands and recondition your heart's reserve power.

I also encourage you to use PACE to build boost your lung volume and burn off pounds of unwanted fat.

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- 1 Reynolds G. Is marathoning too much of a good thing? New York Times, Dec 7, 2006
  - 2 Willdorf N. Run for Your Life? The Boston Phoenix, Apr 11 - 18, 2002
  - 3 Siegel A., et al. Effect of marathon running on inflammatory and hemostatic markers. *Amer Jour Card.* Volume 88, Number 8, 15 October 2001
  - 4 Thompson P., et al. Marathoner's Heart? *Circulation.* Nov 28, 2006, Vol. 114, Issue 22
  - 5 Sears A. The Doctor's Heart Cure. 2004. Dragon Door Publications, Inc.

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## Lose the Belly Fat Fast!

Need to lose a few extra pounds this year? How about some extra motivation?

To start the New Year right, I'm kicking off my Dr. Sears' Fat Loss Challenge...There will be prizes for everyone.

And, if you lose the most fat, I'll pay you \$5,000 in cash!

I temporarily lost sight of the most important thing that usually keeps me grounded and focused: My own fitness. I just measured my body composition and had a bit of a shock. I have 30% body fat.

Here are my current body composition numbers:

**Date:** 1.12.2007

**Weight:** 191

**Body Fat %:** 30%

**Lbs. of Fat:** 57 lbs

**Lean Body Mass:** 134

I'll keep you posted regarding my personal results:

During the first three months of the New Year, I'm going to lose half of my body fat. I plan on leaning down to 14% body fat. This is your invitation to join me...Consider me your "Fat-loss Buddy".