



# Abrupt decline in exercise shows up in body fat gain

What do most of us have in common with the recent Olympic competitors? Maybe we didn't hit our personal peak performance during the summer, but we likely found more time to be active and physically fit.

Also, like the Olympians, the transition from summer into autumn school days and the holiday season is likely to result in new demands on our time that decrease opportunities for physical activity.

Clearly, it takes time and effort to get into shape. But the process and consequences of getting out of shape are not so apparent.

**Question:** How long does it take to get out of shape?

**Answer:** The process that occurs when a person stops exercising has been called "detraining."

When physical activity is abruptly reduced, the ability to exercise goes into significant decline within one or two weeks.

Within three weeks the ability of the heart to pump blood to

working muscles can decline by 8 to 10 percent, along with a drop in the amount of oxygen the muscles are able to use. These changes continue to occur as detraining continues.

**Q:** How does detraining affect body fat?

**A:** Significant increases in body fat have been measured in detrained athletes in fewer than eight weeks.

The effects of detraining were clearly shown by researchers from the University of Bordeaux in France. They showed that even highly trained competitive rowers add pounds of fat in less than a year of detraining -- even with cutting their caloric intake.

During training, the average rower ate more than 5,500 calories per day yet maintained a stable body weight with about 12 percent body fat. When half the rowers stopped their average four-hour-per-day training, their body fat level increased to 20 percent in just one year. This fat gain occurred despite the men cutting their calorie intake al-

most in half.

The average weight gain was only about 4 1/2 pounds, but their fat gain was 9 pounds, indicating a significant loss of muscle. In addition to the change in body composition, blood levels of LDL (bad) cholesterol went up, and blood values of HDL (good) cholesterol went down quite dramatically.

**Q:** Is this French study unusual?

**A:** No. Other studies have reported similar results. It seems that the negative effects of detraining are most pronounced when an abrupt decline in either aerobic (endurance) training or strength training occurs. Also, both animal and human studies report pronounced increases in body fat within two or three months of stopping training.

But before deep depression sets in, there is a silver lining to this cloud. Research also shows that reduced training, rather than stopping altogether, generally does not cause fat gain and helps to maintain lower body-fat levels.

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