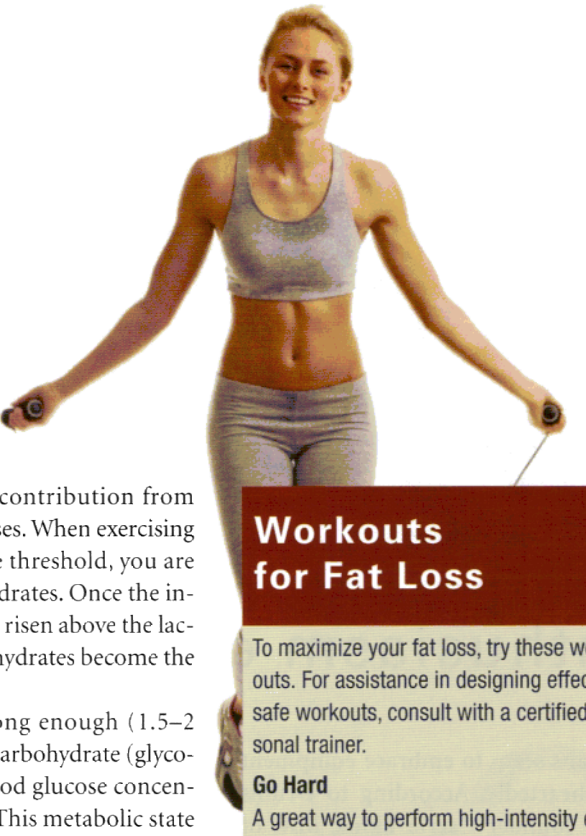
Burning Fat: Myths and Facts



A popular myth is that there is a specific range of heart rates in which you must exercise to burn fat. Even many cardio machines display a "fat-burning zone" on their panels, encouraging people to exercise in a specific heart rate range. Have you ever wondered if you really have to exercise in a specific heart rate zone to lose fat? And what happens if you venture out of that zone? Jason R. Karp, PhD, a nationally recognized speaker, writer and exercise physiologist who coaches recreational runners to Olympic hopefuls through his company, RunCoachJason.com, sheds light on this issue.

Fuel Use During Exercise

You use both fat and carbohydrates for energy during exercise, with these two fuels providing that energy on a sliding scale. During exercise at a very low intensity (e.g., walking), fat accounts for most of the energy expenditure. As exercise intensity increases up to the **lactate threshold** (the exercise intensity that marks the transition between exercise that is almost purely aerobic and exercise that includes a significant anaerobic contribution; also considered the highest sustainable aerobic intensity), the contribution from fat decreases while the contribution from carbohydrates increases. When exercising just below the lactate threshold, you are using *mostly* carbohydrates. Once the intensity of exercise has risen above the lactate threshold, carbohydrates become the *only* fuel source.

If you exercise long enough (1.5–2 hours), your muscle carbohydrate (glycogen) content and blood glucose concentration become low. This metabolic state presents a threat to the muscles' survival, since carbohydrates are muscles' preferred fuel. When carbohydrates are not available, the muscles are forced to rely on fat as fuel.

Since more fat is used at low exercise intensities, people often assume that low-intensity exercise is best for burning fat, an idea that has given birth to the "fat-burning zone." However, while only a small amount of fat is used when exercising just below the lactate threshold, the rate of caloric expenditure and the *total number of calories expended* are much greater than they are when exercising at a lower intensity, so the *total amount* of fat used is also greater.

The Bottom Line

For fat and weight loss, what matters most is the difference between the number of calories you *expend* and the number of calories you *consume*. Fat and weight loss is about burning lots of calories and cutting back on the number of calories consumed. For the purpose of losing weight, it matters little whether the calories burned during exercise come from fat or carbohydrates. ■

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Workouts for Fat Loss

To maximize your fat loss, try these workouts. For assistance in designing effective, safe workouts, consult with a certified personal trainer.

Go Hard

A great way to perform high-intensity exercise and decrease your body fat percentage is through interval training, which breaks up the work with periods of rest. Not only does interval training allow you to improve your fitness quickly; it is also more effective than continuous exercise for burning lots of calories during exercise and increasing your postworkout metabolic rate. Try one or two of these workouts each week:

- 5–6 x 3 minutes at 95%–100% maximum (max) heart rate (HR) with 2-minute active recovery periods
- 4 x 4 minutes at 95%–100% max HR with 3-minute active recovery periods
- 8–12 x 30 seconds fast with 1-minute active recovery periods

Each of these interval workouts should include a warm-up and a cool-down.

Go Very Long

Long runs or bike rides (≥ 1.5–2 hours at 65%–70% max HR) that stimulate mitochondrial synthesis and promote the depletion of glycogen threaten the muscles' survival, since carbohydrates are muscles' preferred fuel. In response to this threat, muscles "learn" how to use fat more effectively and over time become better fat-burning machines.