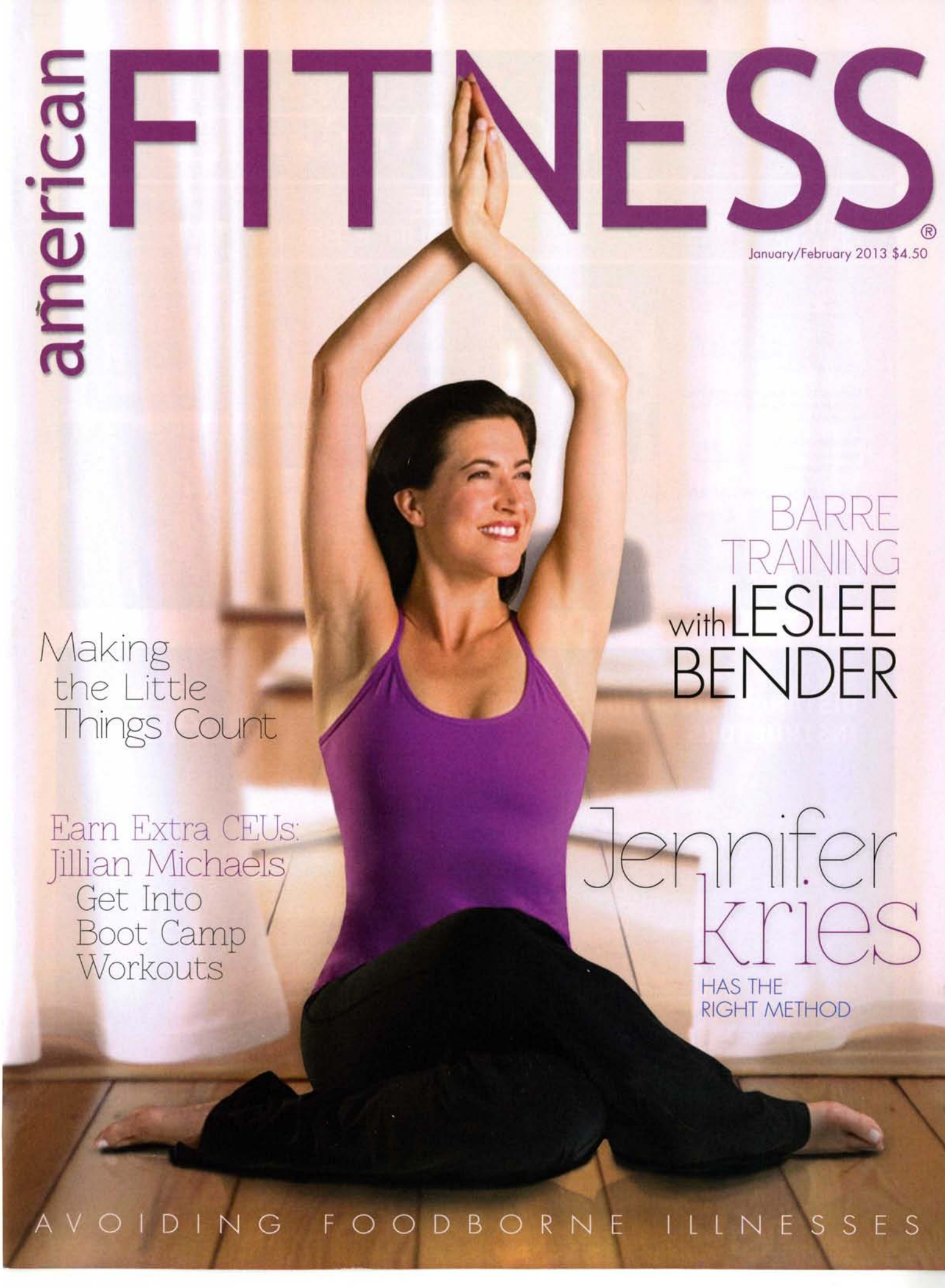
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AF Q&A

BY MATT BRZYCKI

Does listening to motivational music facilitate recovery after exercise?

It's known that listening to music before and during exercise has a positive impact on performance. But what about after exercise?

One study involved 20 men who were physical education students at the Wingate Institute in Netanya, Israel. The subjects ran for 6 minutes at a very high level of exertion on two occasions: once with motivational music (rhythmic with a fast tempo) during recovery and once without. During recovery, the subjects were told to "walk freely in the exercise laboratory."

Listening to music during recovery had no effect on heart rate but it was associated with a significantly greater increase in voluntary activity (as measured by an increased number of steps). In addition, when listening to music during recovery, there were significantly greater decreases in the concentration of lactate in the blood and the rating of perceived exertion.

The researchers concluded that listening to motivational music during recovery from intense exertion may enhance recovery.

Does the time that a muscle is "under load" influence its potential to increase in size?

Instead of counting repetitions, time under load (TUL)—or time under tension (TUT)—is sometimes used. It's felt that the amount of time that a muscle is loaded with a resistance is a critical factor in stimulating increases in size and strength.

Researchers at McMaster University in Canada assigned eight subjects to perform the leg extension unilaterally (one leg at a time) with 30% of their one-repetition maximum. The subjects did the same number of repetitions to muscular fatigue with each leg, but differed in the duration of the repetitions. One leg was exercised by raising the weight in 6 seconds and lowering it in 6 seconds; the other leg was exercised by raising the weight in 1 second and lowering it in 1 second. The subjects did three sets for each leg with 2 minutes of recovery between each set.

In the slow condition, the muscles were loaded for a total of 407 seconds whereas in the fast condition, the muscles were loaded for a total of 50 seconds. The researchers found that a greater TUL resulted in a greater rate of protein synthesis during the 24 to 30 hours post-exercise. Increased protein synthesis is a contributing factor in increasing muscular size.

Does eating bread contribute to weight gain?

Despite a strong body of evidence to the contrary, carbohydrates continue to be perceived as the "bad guys" in nutrition. In particular, bread is often viewed as a food that's connected to an increase in weight.

Researchers in Spain reviewed 38 studies that investigated the association between bread intake and different types of ponderal status including body weight, body fat, body mass index and waist circumference. The researchers found that whole-grain bread has no impact on weight gain and, in fact, may benefit ponderal status. Most studies showed that refined bread also provides beneficial effects but may be linked to an excessive amount of abdominal fat.

Worth noting is that the study was funded by the Spanish Association of Bread Producers and Retailers.

Bread—and other high-carbohydrate foods, for that matter—doesn't necessarily carry a greater potential for weight gain than other foods. The reason is that weight gain has nothing to do with the type of food that's consumed; weight gain results when caloric intake is greater than caloric output.

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