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NEW FINDINGS ON WEIGHT GAIN, CONCURRENT TRAINING AND MUSCLE CRAMPS.

WHAT CAN PREVENT MUSCLE CRAMPS ASSOCIATED WITH EXERCISE?

Exercise-induced muscle cramps are those that occur during or immediately after exercise. As is typical of all cramps, they are painful, spasmodic and involuntary contractions, and they can range in severity from mild to extreme. Some individuals are more susceptible to exercise-induced muscle cramps than others. Interestingly, males are more prone to these cramps than females.

The two most popular theories as to the cause of these cramps have been dehydration and an electrolyte imbalance. But the strongest scientific evidence shows a link between them and the way in which the body responds to neuromuscular fatigue. This may explain why the best way to treat exercise-induced muscle cramps is with stretching. (Oddly enough, voluntary hyperventilation has also been shown to be effective.) For preventing these cramps, a small study showed that Kinesio Taping is an effective means. Interestingly, little or no evidence supports any other strategies for cramp prevention or relief, including massage, use of compression garments, or ingestion of salt tablets, magnesium or pickle juice.

REFERENCE: Nelson, N.L., & Churilla, J.R. 2016. A narrative review of exercise-associated muscle cramps: Factors that contribute to neuromuscular fatigue and management implications. *Muscle & Nerve*, 54 (2), 177-85.

IS THERE AN ASSOCIATION BETWEEN EATING POTATOES AND GAINING WEIGHT?

For years, potatoes have been one of the carbohydrates that have been fingered as suspects in the obesity epidemic. Recently, researchers conducted a systematic review of the relevant literature and found five studies that examined the relationship between potatoes and the risk of overweight/obesity in healthy adults. Two studies showed no relationship and, in two others, the connection was trivial. In one of those studies, increasing potato intake by 1 serving per day resulted in a gain of only about 1.28 pounds in 4 years. (The fifth study focused on french fries.) Potatoes that were boiled, baked or mashed were associated with the least weight

gain, while french fries were associated with the most.

In short, potatoes *can* be part of a balanced diet. That's encouraging, since they are a good source of fiber, vitamin C, potassium, phosphorus and magnesium.

REFERENCE: Borch, D., et al. 2016. Potatoes and risk of obesity, type 2 diabetes and cardiovascular disease in apparently healthy adults: A systematic review of clinical intervention and observational studies. *The American Journal of Clinical Nutrition*, 104 (2), 489-98.

DOES CONCURRENT TRAINING LIMIT INCREASES IN MUSCLE SIZE?

Many fitness enthusiasts engage in both strength training and aerobic training, separating these activities by minutes, hours or days. This is referred to as *concurrent training*. Individuals whose main focus is to increase muscular size often avoid aerobic training, believing that it will interfere with gains in muscle mass. But research actually shows otherwise.

In fact, there's growing evidence that concurrent training may *assist* with increasing muscle mass, provided that the volume and frequency of training aren't excessive and that recovery is adequate. One study that examined a 21-week training period found that concurrent training (with aerobic and strength training each twice per week on different days) produced nearly twice the increase in quadriceps size as compared with strength training alone. Also of interest: Low-impact activities such as cycling seem to be more favorable choices for aerobic training when an increase in muscle size is the primary goal. **AF**

REFERENCE: Murach, K.A., & Bagley, J.R. 2016. Skeletal muscle hypertrophy with concurrent exercise training: Contrary evidence for an interference effect. *Sports Medicine*, 46 (8), 1029-39.



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Have a question for our experts? Send it to AmericanFitness@nasm.org.