

# Milk: Two glasses a day tones muscles, keeps the fat away in women, study shows

26 May 2010

Women who drink two large glasses of milk a day after their weight-lifting routine gained more muscle and lost more fat compared to women who drank sugar-based energy drinks, a McMaster study has found.

The study appears in the June issue of *Medicine and Science in Sport and Exercise*.

"Resistance training is not a typical choice of exercise for [women](#)," says Stu Phillips, professor in the Department of Kinesiology at McMaster University. "But the health benefits of resistance training are enormous: It boosts strength, bone, muscular and metabolic health in a way that other types of exercise cannot."

A previous study conducted by Phillips' lab showed that [milk](#) increased muscle mass and fat loss in men. This new study, says Phillips was more challenging because women not only steer clear of resistance training they also tend to steer away from dairy products based on the incorrect belief that dairy foods are fattening.

"We expected the gains in [muscle mass](#) to be greater, but the size of the fat loss surprised us," says Phillips. "We're still not sure what causes this but we're investigating that now. It could be the combination of calcium, high-quality protein, and vitamin D may be the key, and, conveniently, all of these nutrients are in milk."

Over a 12-week period, the study monitored young women who did not use resistance-training exercise. Every day, two hours before exercising, the women were required not to eat or drink anything except water. Immediately after their exercise routine, one group consumed 500ml of fat free white milk; the other group consumed a similar-looking but sugar-based energy drink. The same drinks were consumed by each group one hour after exercising.

The training consisted of three types of exercise: pushing (e.g. bench press, chest fly), pulling (e.g. seated lateral pull down, abdominal exercises without weights), and leg exercises (e.g. leg press, seated two-leg hamstring curl). Training was monitored daily one on one by personal trainers to ensure proper technique.

"The women who drank milk gained barely any weight because what they gained in lean muscle they balanced out with a loss in [fat](#)" said Phillips. "Our data show that simple things like regular weightlifting [exercise](#) and milk consumption work to substantially improve women's body composition and health." Phillips' lab is now following this study up with a large clinical weight loss trial in women.

Provided by McMaster University

APA citation: Milk: Two glasses a day tones muscles, keeps the fat away in women, study shows (2010, May 26) retrieved 31 July 2022 from <https://medicalxpress.com/news/2010-05-glasses-day-tones-muscles-fat.html>

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