Drinking Water – Is It The Secret To Fat Loss?

by Matt O'Neill, BSpSc, MSc(Nut&Diet) (Author & Fitnesss Professional)

Will an extra litre or two of water each day speed your metabolism and get you in shape faster? Dietitian and weight loss expert, Matt O'Neill checks the research.

Drinking enough water is vital to keep your body hydrated. But what effect does water intake have on metabolic rate, which in turn can enhance fat burning? Two recent scientific studies have attempted to answer this question with very different results.

In 2003, German researchers tested the idea that drinking cold water would stimulate sympathetic nervous activity and boost thermogenesis. They thought that the energy cost of heating cold water to body temperature would show up as an increase in metabolic rate (1).

The results were impressive, with a 30% increase in the metabolic rate of study subjects in the hour after drinking 500 mL of water at 22 degrees Celsius. This increase was equivalent of around 100 kJ.

The Germans concluded that drinking 2 litres of water a day could increase energy expenditure by 400 kJ. This is more energy than in an apple and less than in a low-fat breakfast bar. It doesn't sound like much, but over a year you could burn an extra 146,000 kJ or the equivalent of roughly 4.5 kg body fat, just by knocking back an extra 2 litres of water a day.

Based on this study, water was looking like a wonder treatment for obesity. However, three years later in 2006 a Swedish research team repeated the study, finding only a 4.5% increase in metabolic rate after drinking 500 mL of water at 3 degrees Celsius (2).

This would only represent 675 g of extra body fat burnt off over a year. Even though the liquid was colder, they still didn't see a water-induced thermogenic boost. And they were keen to point out that almost a dozen previous studies had found little or no change in metabolic rate after drinking water.

The Swedes suggested that most of the energy cost of heating the water to body temperature was more likely to come from a reduction in body heat loss rather than any boost in metabolism. They concluded, "Cooling the water before drinking only stimulated a small thermogenic response, well below the theoretical energy cost of warming the water to body temperature. These results cast doubt on water as a thermogenic agent for the management of obesity."

So, on balance the evidence says you shouldn't get too excited about the metabolic boosting properties of cold water. This is not to say that water isn't the secret to fat loss for some people. A big drink of water may help stave off a hunger craving and reduce the calories you consume.

References:

(1) *Water-induced thermogenesis reconsidered* – the effects of osmolality and water temperature on energy expenditure after drinking. Brown, C. etal, Journal of Clinical Endocrinology & Metabolism. 2003 Dec;88(12):6015-9.

(2) *Water-induced thermogenesis.* Boschmann, M. etal, Journal of Clinical Endocrinology & Metabolism. 2006 Sep;91(9):3598-602.