

Forthcoming study explores use of intermittent fasting in diabetes as cardiovascular disease

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Intermittent fasting is all the rage, but scientific evidence showing how such regimes affect human health is not always clear cut. Now a scientific review in the *British Journal of Diabetes and Vascular Disease* suggests that fasting diets may help those with diabetes and cardiovascular disease, alongside established weight loss claims.

Intermittent fasting –fasting on a given number of consecutive or alternate days – has recently been hailed as a path to weight loss and improved [cardiovascular risk](#). A team led by James Brown from Aston University has evaluated the various approaches to intermittent fasting in the scientific literature. They searched specifically for advantages and limitations in treating obesity and type 2 diabetes using fasting diets.

The basic format of intermittent fasting is to alternate days eating 'normally' with days when [calorie consumption](#) is restricted. This can either be done on alternative days, or where two days each week are classed as 'fasting days'. These types of intermittent fasting have been shown in trials to be as effective as or more effective than [counting calories](#) every day to lose weight. Evidence from clinical trials shows that fasting can limit [inflammation](#), improve levels of sugars and fats in circulation, and reduce blood pressure. Our fasting bodies change how they select which fuel to burn, improving metabolism and reducing oxidative stress.

For people with obesity, only one drug ([orlistat](#)) is currently available in the UK, and gastric surgery is a relatively rare and expensive alternative. [Dietary changes](#) remain the most common intervention used for obese people. Fasting is known to help, but former treatments were based on intermittent starving. Today's intermittent fasting regimes are easier to stick to, and are proven to help remove excess pounds melt away.

Scientists have known since the 1940s that intermittent fasting helps us lose weight, and can cut the incidence of diabetes in [lab animals](#). Recent studies have also confirmed that restricting calorie intake could possibly reverse type 2 diabetes in some people. Researchers measured improved pancreatic function and fewer of the fatty deposits associated with insulin resistance were present in fasting subjects.

A healthy heart

In animal models, scientists have shown that intermittent fasting has some cardiovascular benefits that appear similar to exercising, such as improving blood pressure and heart rate, and lowering cholesterol. Fasting also appears to aid those with ischemic heart disease. Fasting may even protect the heart by raising levels of adiponectin, a protein that has several important roles in carbohydrate and lipid metabolism and vascular biology.

"Intermittent fasting might achieve much of the benefit seen with bariatric surgery, but without the costs, restriction on numbers and risks associated with surgery," according to lead author, James Brown.

"Whether intermittent fasting can be used as a tool to prevent diabetes in those individuals at high risk or to prevent progression in those recently diagnosed with [type 2 diabetes](#) remains a tantalising notion and we are currently in preparation for clinical trials to assess the effectiveness of this form of lifestyle intervention in various patient groups."

Intermittent fasting is an increasingly popular diet plan that hit the headlines in the run up to Christmas 2012 after the release of a book on the subject. Proponents claim that in addition to weight loss, the diet can lead to longer life, and protection against disease, particularly conditions such as dementia and Alzheimer's disease.

More information: "Intermittent fasting: a dietary intervention for prevention of diabetes and cardiovascular disease?" by James E. Brown, Michael Mosley and Sarah Aldred, published April 2013 in the *British Journal of Diabetes and Vascular Disease*.

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