

# Try salmon with all the trimmings on your festive menu

16 December 2014, by David Christie



The guilt of tucking into a calorific Christmas dinner may be lessened by adding fish to the menu, according to new research from the University of Stirling.

Stirling health and exercise scientists studied the body's capacity to cope with a bout of high-fat [binge eating](#) and found that [fish oil](#) provided some important protective qualities at the muscle level.

In the study, healthy young men swallowed a six-day, [high fat diet](#), consuming around 4000 calories each day – almost double the recommended intake for men. Half of the volunteers had a percentage of their [fat intake](#) replaced by salmon, mackerel and fish oils.

"The fish oil resulted in an increase of a protein which helps to break down fats within the muscle," said Postgraduate Research student Sophie Wardle, who led the study. "This suggests there may be some benefits to consuming more oily fish in place of other fats during periods of excess fat intake.

"Those who only had the high fat diet and no fish

oil gained weight mainly around their stomach whereas those taking the fish oils gained weight in different areas. This finding could be relevant for long term risk as fat accumulation in the central stomach area is strongly associated with obesity and diabetes."

Wardle gathered data from full body composition scans, blood samples and muscle biopsies before presenting the findings to the American Diabetes Association.

Insulin sensitivity – the term given to the body's ability to handle a sugar load – is greatly reduced in obesity and diabetes. Following the short period of high fat overeating, many people displayed reduced [insulin sensitivity](#), whereas others were more effective in their abilities to deal with the diets.

Wardle added: "The fact that many of us are flexible enough to deal with such a high fat load is quite impressive, but the findings do come with a health warning, especially at Christmas.

"Everyone enjoys eating more than usual at this time, but this diet over a longer period of time is not the way to go. We were starting to see complications at the muscle level which are early warning signs this kind of diet isn't good for you and you can't get away from the fact you will gain weight."

Provided by University of Stirling

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