

Study shows soy protein alleviates symptoms of fatty liver disease

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University of Illinois researchers report this week that new research shows how soy protein could significantly reduce fat accumulation and triglycerides in the livers of obese patients by partially restoring the function of a key signaling pathway in the organ.

Hong Chen, an assistant professor of food science and [human nutrition](#) at the University of Illinois, presented her team's findings Sunday, April 22, at the annual meeting of the American Society for Biochemistry and Molecular Biology, held in conjunction with the [Experimental Biology](#) 2012 meeting in San Diego.

"Almost a third of American adults have fatty liver disease, many of them without symptoms," Chen explained. "Obesity is a key risk factor for this condition, which can lead to [liver failure](#)."

Fat is metabolized in the liver, and in those who are obese the transport of fat to adipose tissue can slow down to the point at which the liver becomes a dumping ground for excess fat, she said.

"When fat accumulates in an organ that's not supposed to store fat — like the liver, that organ's vital function can be dangerously compromised," she noted.

Eating soy protein, from such sources as tofu and yogurt, appears to alleviate some of the stress on fatty livers, Chen said. For her study, Chen compared fat accumulation in the livers of lean and obese rats,

which were assigned to either a diet containing casein, a milk-based protein, or a diet containing soy protein, for 17 weeks after weaning.

While diet had no effect on the liver profiles of lean animals, the obese rats that were fed soy showed a 20 percent reduction in triglycerides and overall fat accumulation in the liver, leading Chen to believe that soy protein could be used to alleviate the symptoms of [fatty liver disease](#).

Furthermore, the scientists discovered that [soy protein](#) isolate partially restored the Wnt/ β -catenin signaling pathway, a crucial player in fat metabolism. "In many obese persons, there's a sort of traffic problem, and when more fat can make its way out of the liver, there is less pressure on that organ," Chen said.

Provided by American Society for Biochemistry and Molecular Biology

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