

Protein maybe key to halting obesity related disease

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Australians are developing a form of liver disease seen in alcoholics – but which is being caused by obesity rather than an addiction to drink.

(Medical Xpress)—Australians are getting more obese and developing a disease called non-alcoholic fatty liver disease – a disease similar to that that results in cirrhosis in alcoholics and can be a precursor to diabetes.

Melbourne researchers have discovered a protein that may be key to the development of these diseases, providing a potential drug target that could act as a hand brake to the cascade of deadly diseases that can result from obesity.

Australians are developing a form of [liver disease](#) seen in alcoholics – but which is being caused by obesity rather than an addiction to drink. Non-alcoholic liver disease affects about 5.5 million Australians and one of the common risk factors for this condition is obesity. Nearly two thirds of obese adults and half of obese children are found to have fatty liver – which is a precursor to Type 2 diabetes.

Researchers at the Monash University School of Biomedical Sciences have discovered a novel protein that is released as a consequence of fatty liver and causes diabetes. The isolation of this new protein opens the way to developing drugs that can block the production of this protein potentially preventing the disease.

Professor Matthew Watt found more than three dozen proteins that are secreted by the liver when it becomes fatty. They found a further group of proteins that were secreted by the liver – one month after starting a [high fat diet](#) – which led to insulin resistance in skeletal muscle, a characteristic of early stage diabetes.

In data presented to a national scientific meeting recently – and currently being prepared for publication in an international journal – Professor Watt revealed that one of these proteins was particularly interesting in the cascade of physiological consequences of a [fatty diet](#).

"This proteins' role in the development of non-alcoholic [fatty liver disease](#) is completely new," Professor Watt said. The research group found that this protein is increased in livers that are developing fatty liver disease, and that it may have a role in developing the condition.

Working with researchers in the Netherlands, Professor Watt tested the blood of patients with fatty liver disease and they found that they had raised levels of the proteins and that the level of protein was related to the level of insulin resistance (as an indicator of pre-diabetes).

Professor Watt believes blocking the [protein](#) could be a key to preventing the deadly consequences of obesity.

"We may be able to block the development of fatty liver disease and apply a hand brake to the development of diabetes," Professor Watt said.

Provided by Monash University

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