

Fatty food can weaken the immune system

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Fresh evidence that fatty food is bad for our health has come to light: mice fed a lard-based diet over a long period got worse at fighting bacteria in the blood, reveals a thesis from the Sahlgrenska Academy at the University of Gothenburg.

The [mice](#) fed the lard-based diet derived 60 per cent of their total calories from fat. They were compared with mice fed a low-fat diet, where no more than ten per cent of their calories came from fat. As expected, the mice on the high-fat diet got fatter. A more surprising result was that their [immune system](#) was less active. The white blood cells got worse at dealing with bacteria in the blood, which could have contributed to many dying of sepsis.

"[Obesity](#) is usually associated with [inflammation](#) that does not result from an infection, which simply means that the immune defences are activated unnecessarily," says doctoral student Louise Strandberg who wrote the thesis. "Ironically, the mice on the high-fat diet seem to have a less active immune system when they really need it."

Fat people are also at a greater risk of acquiring infection, for example in connection with an operation. In mice, the thesis shows that it is fatty food rather than obesity in itself which affects the ability to fight off sepsis caused by bacteria.

Strandberg has also investigated different variants of three genes that are important for the immune system and noted that several of the gene variants that strengthen immunity also result in less obesity.

"So there are all kinds of links between the immune system on the one hand and obesity and [diet](#) on the other," says Strandberg.

Source: University of Gothenburg ([news](#) : [web](#))

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