

PCB can increase risk of abdominal fat

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(Medical Xpress) -- There is a correlation between high levels of the environmental toxin PCB and the distribution of body fat to the abdomen. This is shown in a new study published today in the scientific journal *Obesity*. Abdominal fat is already known to increase the risk of diabetes and high blood pressure, among other conditions.

Fat inside the abdomen (visceral fat) is considerably more dangerous than fat near the surface of the body (subcutaneous fat). For instance, fat in the abdomen has previously been linked to the development of diabetes. Monica Lind, associate professor in environmental medicine at the Section for Occupational and Environmental Medicine, together with Lars Lind, professor of medicine, has analysed data from the so-called PIVUS study, which comprises more than 1,000 70-year-olds in Uppsala.

From the same material they have previously shown that [PCB](#) can predict the development of diabetes. In the present study, these researchers measured levels in the blood of 23 persistent organic environmental toxins in the more than 1,000 70-year-old women and men. In nearly 300 of them, with the aid of magnetic imaging, they also investigated the amount of fat in various parts of the abdomen. Previous studies have used only BMI as a measure of fatness. They found that having high levels of the highly chlorinated and very persistent compound PCB189 was related to a high proportion of fat in the [abdomen](#).

"These findings may indicate that PCB189, which was also related to

developing diabetes, may be of significance in how fat is stored in the body," says Monica Lind.

To understand the underlying mechanism, more research is needed in the form of controlled laboratory studies. According to Monica Lind, there are several possible causes. For example, it would be interesting to study whether there is a hormonal impact on fat metabolism, an inhibition of the breakdown of cortisol, or an inhibition of the creation of oestrogen.

More information: *Obesity* (2012) [doi:10.1038/oby.2012.123](https://doi.org/10.1038/oby.2012.123)

Provided by Uppsala University

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