

Neurobiological mechanism behind anorexia/self starvation found in mouse

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Researchers at Karolinska Institutet have found inborn traits in mice, which might explain why some individuals are more prone to develop anorexia/self starvation than others. A study showing that genetic defects in the cells power plant, the mitochondria, might cause the neurons in the feeding center of the brain to die, when they are exposed to starvation, is published today in the scientific journal *PNAS*.

A study from Karolinska Institutet, performed in mice, shows that anorexia/self starvation could be associated with genetic defects causing malfunction of the cells power plants, the mitochondria. The study shows that this mitochondrial defect might make the neurons in the feeding center of the brain extra sensitive to oxidative stress, a biochemical reaction caused by [free radicals](#). The researchers observed that these [nerve cells](#) are shut down and might even die.

Eating disorders like [Anorexia Nervosa](#) are serious diseases and little is known about what is causing them. Extensive research has shown that affected individuals seem to have an inborn sensitivity to external stimuli that can trigger the disease, like the current beauty ideal. The cause(s) for this inborn sensitivity has, however, not been discovered yet. The researches at Karolinska Institutet may now have found one of the causes.

"We will now investigate if our results are applicable also in anorectic conditions in humans," says Jeanette Johansen at the Center for Molecular Medicine, Department of [Molecular Medicine](#) and Surgery,

Karolinska Institutet and one of the researchers behind the study.

Provided by Karolinska Institutet

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