

Diabetes medication can reduce food intake

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Many studies have focused on how much we eat when we are hungry, but sometimes we eat just to feel better. A new dissertation at Sahlgrenska Academy shows that medication used for type-2 diabetes which mimics the gut-brain hormone glucagon-like peptide-1, can affect the brain's reward system and reduce the intake of food.

Obesity and overweight have become a major global problem and can increase the risk of developing cardiovascular diseases and type-2 diabetes, among other problems.

Some high-calorie food can affect the [brain](#) in the same way as [addictive substances](#) like drugs and alcohol. When we eat, a feeling of well-being is created through the release of dopamine in the brain's [reward center](#). Overconsumption is considered to be due in part to an imbalance in this system and there is great need for effective new medicines to combat overweight.

Decrease in appetite

Recently, type-2 diabetes has begun to be treated with medications that resemble the body's own hormone GLP-1, such as Byetta and Victoza. The hormone GLP-1 is produced naturally, both in the intestines and in the brain. After every meal, the levels of GLP-1 in the blood increase, which lead to an increase in insulin production and a decrease in appetite.

Reduce alcohol intake

A new study on rats at Sahlgrenska Academy at the University of Gothenburg shows that hormone-like medication used for type-2 diabetes can affect the brain's reward system and reduce the need for [food intake](#).

A follow-up study showed that this substance can also reduce [alcohol intake](#).

"Later, we discovered that the same medication can stimulate production of interleukin 6 and interleukin 1, two important hormones that play a major role in our immune system, in the areas of the brain that control appetite. The results are increasing our understanding of how these medications can affect the brain," says Rozita Anderberg, Researcher at Sahlgrenska Academy.

Potential new treatment

Medications resembling GLP-1 have become a potential new treatment for obesity and these findings can be of major clinical significance.

"Our data can make an important contribution to the understanding of these mechanisms," says Rozita Anderberg, Researcher at Sahlgrenska Academy.

Provided by University of Gothenburg

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