

Antipsychotics can make you fat

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Psychosis medications can also lead to an increased appetite, shows new research. It could explain why some people react so dramatically to treatment.

Many patients initially suffer severe reactions to their prescribed antipsychotic medication. A new study takes a closer look to see what exactly is going on inside the brain to get to the bottom of why people react so dramatically.

The scientists behind the new research have discovered that medicines designed to treat psychosis also affect the area of the brain that influences our appetite.

The drugs block some of the receptors in the brain that register dopamine levels, which in turn affects our desire to eat.

The study is published in the scientific journal JAMA Psychiatry.

“I think it’s great work,” says Neuroscientist Professor Albert Gjedde from the University of Copenhagen, Denmark, who was not involved in the new study.

“It shows that there’s a connection between the reward from our dopamine system and our desire to eat,” says Gjedde.

Study participants played money games

The scientists behind the new study used an MR-scanner to monitor the brain activity of schizophrenic patients whilst they played money games.

During the game, the participants could win a gift card to the value of 150 USD.

Thirty-nine schizophrenic patients, who had never before been prescribed antipsychotics, took part in the study. Their weight and brain activity was monitored before they started taking their medication, and then again 6 weeks into their treatment.

All participants took the same type of medication, which works by suppressing dopamine receptors in the brain, thereby altering the participants’ dopamine levels, dampening their psychotic symptoms.

On average, participants had lost 2.3 kilograms, although some gained weight--up to 4 kilos. Some lost weight dramatically--up to 8 kilos.

“The schizophrenic patients whose dopamine system was disturbed the most were more likely to put on weight,” says lead-author Mette Ødegaard Nielsen, an associate professor in clinical psychiatry, at the University of Copenhagen, Denmark.

Medication carpet-bombs the brain

Nielsen and colleagues saw that it was not only the target area of the brain that was affected by antipsychotics. This is a common problem with medicines targeted at the brain.

“If we could develop drugs which only regulated dopamine receptors in the areas most affected by psychosis, then patients could perhaps avoid gaining weight,” says Nielsen.

“It’s always a problem with drugs that affect the brain. We would like to target a specific area of the brain, but we end up carpet bombing the entire brain--and then you get side effects,” says Nielsen.

Feeling knowledgeable gives a dopamine kick

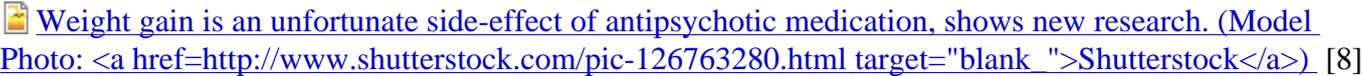
Gjedde believes that in addition to providing a new understanding of how antipsychotic drugs affect the brain’s reward system, the new study also provides new knowledge about the desire to overeat.

"The study is almost as much about the dopamine reward system and the urge to overeat, as it is about schizophrenia," he says.

The dopamine system, he says, is a survival mechanism that drives us to ensure our survival as a species. So we experience rewards from the system when we have sex, eat food, defend ourselves, or when we gain a better understanding of the world around us.

"I really hope that the researchers behind this study have been rewarded from their own dopamine systems! [As a researcher], when you get an article accepted in a journal like JAMA Psychiatry, you should get your own kick of dopamine," says Gjedde.

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February 22, 2016 - 06:25

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