

The metabolic effects of antipsychotic drugs

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Research to be presented at the upcoming annual meeting of the Society for the Study of Ingestive Behavior (SSIB), the foremost society for research into all aspects of eating and drinking behavior, may explain why some antipsychotic drugs can promote overeating, weight gain, and insulin resistance.

Olanzapine, an atypical antipsychotic drug approved by the FDA for the treatment of schizophrenia and bipolar disorder, has been associated with body weight gain and impaired glucose homeostasis in humans and in experimental animals. As part of a Dutch research consortium, studies led by Simon Evers (University of Groningen, the Netherlands) sought to reveal underlying mechanisms for olanzapine's metabolic effects by studying healthy adult male volunteers. The research was motivated by observations of what co-author Anton Scheurink described as "a mysterious interaction between schizophrenia and diabetes."

Their results confirmed previous findings that olanzapine induces weight gain by increasing caloric intake, but also revealed that olanzapine reduces body temperature, which contributes to decreased energy expenditure. Indeed, reduced body temperature after olanzapine treatment may generate many of the known side effects of this antipsychotic drug. The authors' new findings also demonstrate that olanzapine alters peripheral [glucose metabolism](#), which may contribute to impaired [insulin sensitivity](#). According to lead author Simon Evers, "Our research group believes that reduced body temperature is the foremost direct and consistent effect of olanzapine in humans and in experimental animals. Reduced body temperature might explain several

of olanzapine's metabolic side effects, including increased food intake, reduced energy expenditure, sedation, [high blood sugar](#), body weight gain, and [insulin resistance](#)."

Provided by Society for the Study of Ingestive Behavior

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