

[IMAGE]

## Sugar on the Brain

By Editorial Staff

Excess weight can be a health issue for various reasons, including an increased risk of type 2 diabetes, certain cancers and cardiovascular disease. But weight loss for the brain? Let's talk about how obesity – specifically obesity caused by a *high-sugar diet* – increases the risk of neurodegeneration – and the mechanism by which it happens.

While it's well-established that a high-sugar diet can lead to insulin resistance in the body, research suggests the same thing can happen in the brain. Researchers used a fruit-fly model (to which humans are similar in many respects) and discovered that a high-sugar diet reduced levels of a specific protein in the brain's glial cells, indicating insulin resistance. Glial cells also had a reduced ability to remove "neuronal debris," increasing the risk of neurodegeneration.

According to the researchers, whose findings appear in *PLoS Biology*, the glial dysfunction observed in response to a high-sugar diet "resembles that caused by aging": "A hallmark of neurodegenerative disorders is the failure to clear neuronal debris and cytotoxic proteins, triggering a cascade of devastating effects that include inflammation, cell death, and impaired regeneration."

The takeaway? Too much sugar isn't just bad for your body; it's bad for your brain, too. Your doctor can tell you more about the dangers of sugar (particularly added sugar; not the kind you get naturally from whole fruit, for example) and how you can modify your diet if necessary.

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