

# Eating junk food while pregnant may make your child a junk food addict

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Here's another reason why a healthy diet during pregnancy is critical to the future health of your children: New research published in the March 2013 issue of *The FASEB Journal*, suggests that pregnant mothers who consume junk food actually cause changes in the development of the opioid signaling pathway in the brains of their unborn children. This change results in the babies being less sensitive to opioids, which are released upon consumption of foods that are high in fat and sugar. In turn, these children, born with a higher "tolerance" to junk food need to eat more of it to achieve a "feel good" response.

"The results of this research will ultimately allow us to better inform pregnant women about the lasting effect their diet has on the development of their child's lifelong good preferences and risk of [metabolic disease](#)," said Beverly Muhlhausler, Ph.D., a researcher involved in the work from the FOODplus Research Centre at the School of Agriculture Food and Wine at The University of Adelaide in Adelaide, Australia. "Hopefully, this will encourage mothers to make healthier diet choices which will lead to healthier children."

To make this discovery, Muhlhausler and colleagues studied the pups of two groups of rats, one of which had been fed a normal rat food and the other which had been fed a range of human "junk foods" during pregnancy and lactation. After weaning, the pups were given daily injections of an opioid [receptor blocker](#), which blocks opioid signaling. Blocking opioid signaling lowers the intake of fat and sugar by preventing the release of dopamine. Results showed that the [opioid](#)

[receptor](#) blocker was less effective at reducing fat and sugar intake in the pups of the [junk food](#) fed mothers, suggesting that the opioid signaling pathway in these offspring is less sensitive than for pups whose mothers are eating a standard rat feed.

"This study shows that addiction to junk food is true addiction." said Gerald Weissmann, M.D., Editor-in-Chief of *The FASEB Journal*. "Junk food engages the same body chemistry as opium, morphine or heroin. Sad to say, junk food during pregnancy turns the kids into junk food junkies."

**More information:** Jessica R. Gugusheff, Zhi Yi Ong, and Beverly S. Muhlhausler. A maternal "junk-food" diet reduces sensitivity to the opioid antagonist naloxone in offspring postweaning. *FASEB J* March 2013 27:1275-1284, [doi:10.1096/fj.12-217653](https://doi.org/10.1096/fj.12-217653)

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