

'Junk food' moms have 'junk food' babies

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A new research report published online in *The FASEB Journal* suggests that pregnant mothers who eat high sugar and high fat diets have babies who are likely to become junk food junkies themselves. According to the report, which used rats, this happens because the high fat and high sugar diet leads to changes in the fetal brain's reward pathway, altering food preferences. Not only does this offer insight into the ever-increasing rate of human obesity, but it may also explain why some people easily resist fatty and sugary foods, while others seem hopelessly addicted.

"These results will help us to better help women about diet during pregnancy and breastfeeding for giving their infants the best start in life," said Beverly Muhlhausler, Ph.D., co-author of the study from the FOODplus Research Centre in the School of Agriculture Food and Wine at the University of Adelaide in Adelaide, Australia.

To make this discovery, Muhlhausler and colleagues studied two groups of rats, which during pregnancy and lactation, were either fed standard "rat chow" or a [junk food](#) diet made up of a selection of common human foods high in fat and high in sugar. After the baby mice were weaned, the pups from both groups were allowed to select their own diets from either the same range of junk food or the standard rat chow. Brains from some of the pups also were collected at different times after birth and measured for the levels of the "feel good" chemicals (dopamine and [opioids](#)) and the receptors that these chemicals act upon. The scientists found that the group of rats whose mothers had eaten the junk [food diet](#) had higher levels of the receptor for opioids after they were weaned.

This group also chose to eat more of the [fatty foods](#) as compared to the pups whose mothers ate the standard rat chow. This suggests that infants whose mothers eat excessive amounts of high-fat, high-sugar junk foods when pregnant or breastfeeding are likely to have a greater preference for these foods later in life.

"How ironic that your mother nags you to eat your fruits and vegetables, but it could have been her actions that helped you to prefer junk food!" said Gerald Weissmann, M.D., Editor-in-Chief of The [FASEB Journal](#). "Perhaps in the future, studies like these will convince pregnant moms to go heavier on the green vegetables and a little lighter on the ice cream and Twinkies."

More information: Z. Y. Ong and B. S. Muhlhausler. Maternal "junk-food" feeding of rat dams alters food choices and development of the mesolimbic reward pathway in the offspring. FASEB J; [doi:10.1096/fj.10-178392](https://doi.org/10.1096/fj.10-178392)

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