

Greater obesity in offspring of nursing mothers consuming a high-fat diet

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The future health of offspring is more negatively impacted when their mothers consume a high fat diet while nursing compared with high-fat diet consumption during pregnancy, according to animal research at Johns Hopkins University. These new research results are being presented at the 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.

The researchers used a method called "cross-fostering" to determine whether prenatal or postnatal exposure to maternal high fat diet has a greater influence on the development of obesity and diabetes in the [offspring](#). Rats were fed either a low fat or high fat diet during [pregnancy](#). After birth, pups born to mothers that consumed either diet were fostered over to different mother rats that ate the same or opposite diet during the nursing period.

The researchers found that rat pups nursed by mothers consuming a high fat diet gained more body weight and were obese when weaned a few weeks later, even if the pup's biological mother ate a low fat diet during pregnancy. In addition to being obese, pups nursed by foster mothers on a high fat diet displayed impaired glucose tolerance, an early indicator of diabetes.

According to lead author, Bo Sun, "These results suggest that high fat diet intake by nursing mothers may be more critical to the later development of obesity and [diabetes](#) in their offspring than high fat

feeding during pregnancy. Therefore, to help prevent [obesity](#) and metabolic problems in their offspring, it may be most important for mothers to avoid consuming too much fat in their diet while nursing."

Provided by Society for the Study of Ingestive Behavior

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