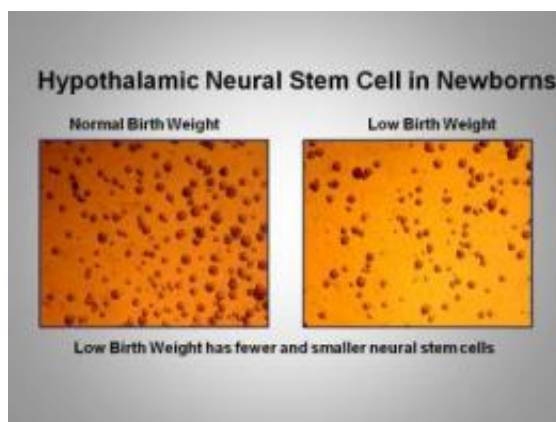


# Study provides explanation for connection between low birth weight and obesity later in life

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LA BioMed study finds nutritionally deprived newborns are “programmed” to eat more because they develop less neurons in the region of the brain that controls food intake. Credit: LA BioMed

Providing further understanding of the link between low birth weights and obesity later in life, researchers found nutritionally deprived newborns are "programmed" to eat more because they develop less neurons in the region of the brain that controls food intake, according to an article published today in the journal, *Brain Research*.

The study by a team of researchers at Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center (LA BioMed) suggests that overeating is programmed at the level of stem cells before birth when the

mother has poor or inadequate nutrition.

Using an [animal model](#), the researchers found less division and differentiation of the neural stem cells of a newborn with [low birth weight](#) as compared to normal birth weight. Previous studies have found a small size at birth followed by accelerated "catch-up" growth is associated with an increased risk of adult [obesity](#), cardiovascular disease, [type 2 diabetes](#), hypertension and osteoporosis.

"This study demonstrates the importance of maternal nutrition and health in reducing obesity," said Dr. Mina Desai, an LA BioMed principal investigator and corresponding author of the new study. "Obesity and its related diseases are the leading cause of death in our society, yet we have few effective strategies for prevention or treatment. These studies suggest maternal nutrition could play a critical role in preventing obesity and related disease."

In addition to obesity, the findings of altered brain (neural [stem cells](#)) development suggest that fetal growth restriction may be associated with cognitive and/or behavioral alterations. Importantly, the study offers potential opportunities for prevention and treatment for obesity and other related disorders. In addition to Dr. Desai, LA BioMed investigators Tie Li and Michael G. Ross participated in the study.

More than 60% of American adults are overweight and more than 1 in 5 are obese. Obesity is a serious health concern for children and adolescents, as well. About 17 percent of children and adolescents ages 2-19 years are obese.

Provided by UCLA Medical Center

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