

## **Brain damage: key to the obesity epidemic**

In 1969, Dr. John Olney demonstrated that glutamic acid fed in quantity to immature animals causes lesions in the arcuate nucleus of the hypothalamus, resulting in gross obesity as the animals mature. Although lost cells were replaced, they were not replaced with neurons. The neurons that might have regulated food intake were gone.

That research raises a question: Might excitotoxic glutamate fed to immature humans also result in uncontrollable obesity? Obesity that is:

- produced in a fetus by something a pregnant woman “feeds” to her fetus before birth,
- not caused by lack of will power, laziness, or genetic deficiency,
- something a person has no control over.

**Olney’ subjects were infant animals. Newborn humans and fetuses would be comparable.** Both have immature brains that are vulnerable to damage caused by excitotoxic glutamate.

**Olney fed exceedingly large amount of glutamate to those animals. Since 1957, exceedingly large amounts of free glutamate have been available, accessible and consumed by humans.**

In 1957, the method for producing glutamate was changed to facilitate virtually unlimited production of free glutamate and MSG. And ultra-processed foods, which contain flavor-enhancing free glutamate in ingredients such as autolyzed yeast extract, sodium caseinate, maltodextrin, glutamic acid, and hydrolyzed proteins as well as MSG, became readily available, accessible, and increasingly more popular.

**The glutamate delivered to Olney’s neonatal animals was delivered in food fed to them. The glutamate delivered to humans with vulnerable brains is delivered by their pregnant mothers.**

Newborn humans can only receive glutamate in mothers’ milk or infant formula. But fetuses are “fed” through the umbilical cord and through the placenta. And if a pregnant woman ingested large quantities of free glutamate, as she might if her diet included processed and ultra-processed food, the excitotoxic free glutamate would cause damage to the brain of her fetus just as it caused damage to the brains of Olney’s animals.

**Consider this: There was no obesity epidemic prior to 1957. The obesity epidemic was established after virtually unlimited amounts of excitotoxic glutamate became readily available, accessible, and consumed in processed and ultra-processed food.**