

Questions and answers: What's causing the obesity epidemic?

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They're called excitotoxins.

These are Jekyll and Hyde amino acids.

On the one hand, they're absolutely necessary for human health.

On the other hand, they turn toxic/poisonous when more are eaten than needed.

What damage do they do?

They damage the brains of vulnerable people.

People who have had head injuries,

People whose brains are not yet mature,

A newborn child,

A child in the womb: a fetus.

How can excitotoxins get to the immature brains of newborns and fetuses?

Excitotoxins are eaten by pregnant women.

Pregnant women pass what they eat to their unborn offspring (fetuses) through the umbilical cord and the placenta.

Nursing mothers pass what they eat to their babies through mother's milk.

Exactly what damage do these excitotoxins do to the brains of fetuses and newborns that brings about obesity?

They obliterate (wipe out) the neurons (nerve cells) in that part of the arcuate nucleus of the hypothalamus that would have played a role in weight control, had they not been destroyed.

And although the empty space left in the brain when the neurons are destroyed is filled in with other cells, the neurons are not replaced.

What excitotoxins do this?

The one known best from research done in the 1970s is glutamic acid (a.k.a. glutamate).

Glutamate is essential for normal body function. There has always been glutamate in food. Why haven't more people always been obese?

Until 1957, the glutamate in food (and there is glutamate in essentially all food) was almost always part of something larger than itself. It was a part of protein. Scientists who wanted to examine glutamate had to break the protein apart before they could examine it. (They speak of glutamate being “bound up” in protein: tied to other amino acids in long chains. That’s still true.)

Glutamate bound in protein is not excitotoxic. Only glutamate outside of protein causes brain damage.

In 1957, the U.S. manufacturer of excitotoxic glutamate (for use in monosodium glutamate) revised its manufacturing process, and from that point on, virtually unlimited amounts of excitotoxic manufactured free glutamate (MfG) were produced. After 1957, there was sufficient MfG in ultra-processed food (at least in the U.S.) to provide the “excess” amounts of MfG needed to cause brain damage.

Then why didn't the “obesity epidemic” happen in 1957?

1957 was the year that the new and improved method for fabricating virtually unlimited amounts of the excitotoxic – brain damaging – MfG was put into production. But 1960 was the year that increased obesity began to be noticed. 1960-62 saw the first statistics kept on numbers of overweight people.