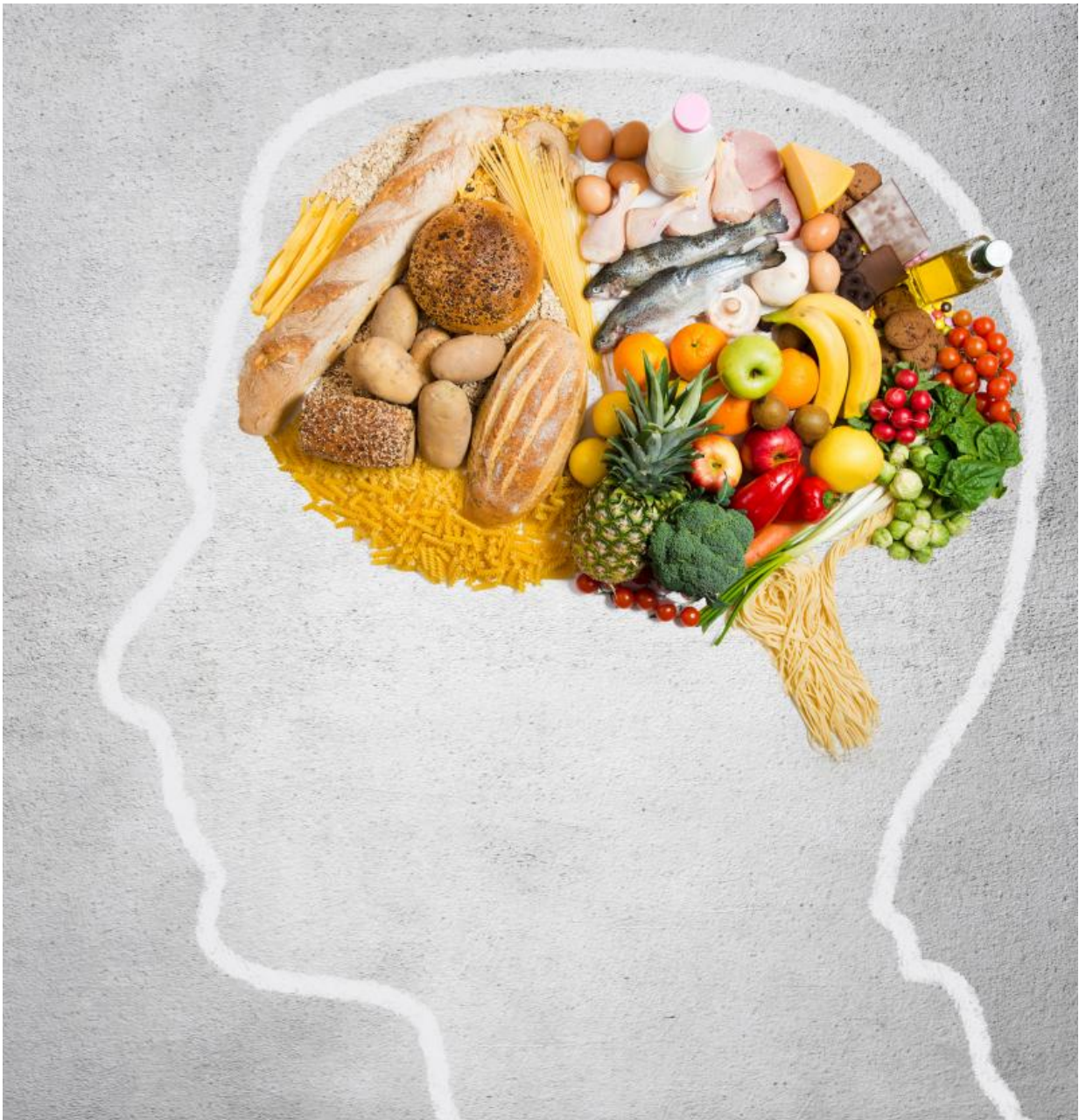


# Poor diet can cause Alzheimer's or Parkinson's in rats

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For several years, a researcher fed rodents in his laboratory a high caloric diet with glucose concentrations, which resulted in diabetes. By scientifically assessing what occurred in rats, Samuel Treviño Mora from the Meritorious University of Puebla (BUAP) in Mexico observed that "Diabetes and poor diet is a risk factor for developing Alzheimer's or Parkinson's."

The scientist at the faculty of chemistry (FCQ) reproduces human consumption in biological models with different genetic conditions. He feeds the animals with a [high calorie diet](#), then analyzes the resulting metabolic disorder, triglycerides, insulin resistance, obesity and overweight development triggered in type II diabetes.

By measuring the effects on the brain, the analysis determined the existence of inflammation and neurodegeneration in the hippocampus and cerebral cortex, important areas for the proper functioning of short and [long term memory](#). "With a diet based on high carbohydrates neurodegenerative conditions arise associated with Alzheimer's and Parkinson's diseases," says Trevino Mora.

"The diet of Mexicans is based on high caloric content, junk food and poor implementation of foods that we (mistakenly) think are healthy, like large quantities of cereals, drinks with high portions of sucrose or light foods containing fructose as a sweetener."

A child growing up overweight or obese may begin to develop [diabetes](#) in adolescence, and if this metabolic disease is not regulated, it is likely to result in brain damage. The same happens with adults. A [poor diet](#)

maintained at age 30 could result in these same features and reduce labor productivity in a very short time.

"We are talking about an progression from childhood that causes premature aging of the brain, similar to brain conditions observed in patients from 70 to 80 years of age, and occurring currently in people between 50 and 60," says Trevino Mora.

He adds that since childhood obesity could have a direct association with poor learning and consolidation of information, as well as problems retaining knowledge, and in the long-term, Alzheimer's.

Carbohydrate-based diets alter the conditions of brain regulation in people such as consumption (orexigenis) and lack of appetite (anorexigenis). When there is no energy balance, the body begins to lose these regulatory features and generate pathologies like Alzheimer's.

Samuel Treviño Mora is also developing a cellular device that measures the levels of glucose without a blood sample. He is developing sensors that record the voltage created by the flow of glucose on the skin, which are incorporated in a ring-shaped device.

"The idea is to create a phone application so that the patient has a constant measurement of their [blood glucose levels](#) without pricking their fingers," says the specialist.

Provided by Investigación y Desarrollo

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