

Sugar causes Brain Damage in Type 1 Diabetes Diagnosis in Kids

Complication of High Glycemia in children called ketoacidosis can affect memory, thinking and brain development for six months, reports study

HIGH BLOOD SUGAR
↓
REDUCES PRODUCTION OF NITRIC OXIDE
↓
DECREASES RELAXATION ABILITY OF BLOOD VESSELS
↓
CAUSES VESSELS TO NARROW

SUGAR WEAKENS WHITE BLOOD CELLS' ABILITY TO DESTROY BACTERIA

Teaspoons of sugar	No. bacteria destroyed
0	14.0
6	10.0
12	5.5
18	2.0
24	1.0

Early Abuse of Hi Gly Sugar Leaves Scars on Blood Vessels

Cardiac + Stroke Disease Can Start in Youth from Sugar Abuse

Blood vessels
Blockage
Initial damage
Damage due to Excitotoxicity

Diabetic Foot Ulcer



By Laima Jonusiene, MD, for Medical Exposé' 3-15-2014

May 28, 2014 (Medical Exposé')-- A serious problem of [type 1 diabetes](#) called diabetic ketoacidosis (DKA) can cause temporary changes to the brain matter of children newly diagnosed with the disease, researchers say.

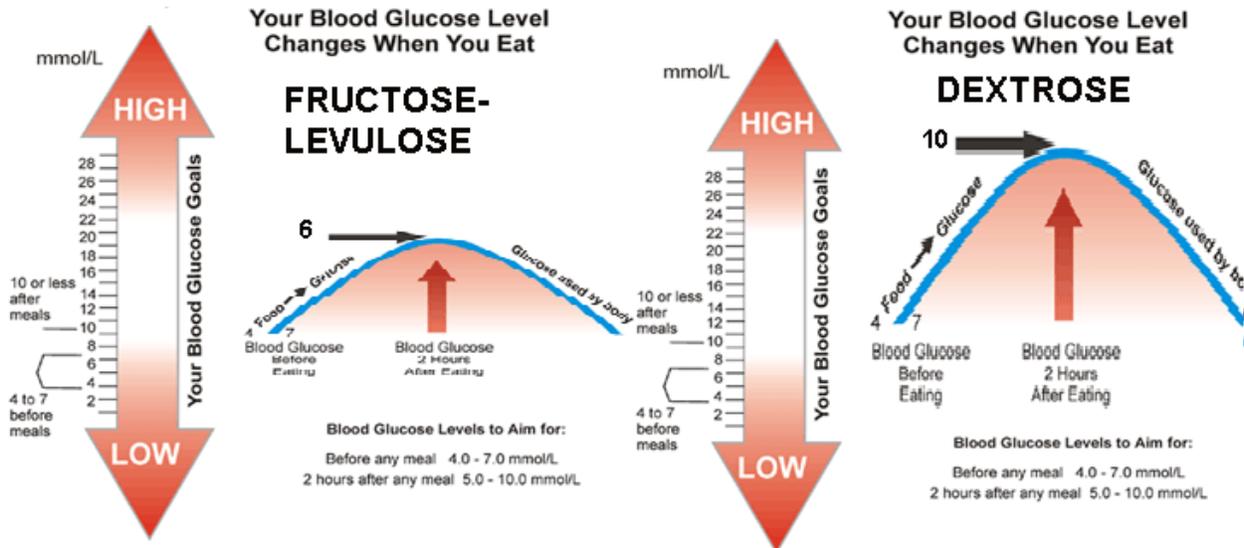
What's more, those changes may cause a decrease in memory and attention that persists for at least half a year following the diagnosis of type 1 diabetes, the new study reports.

"Children and adolescents diagnosed with type 1 diabetes with diabetic ketoacidosis have evidence of brain gray matter shrinkage and white matter swelling," said the study's lead author, Dr. Fergus Cameron, head of diabetes services at Royal Children's Hospital in Victoria, Australia. "While these changes resolve within the first week, there are associated residual cognitive changes -- memory and attention -- that are present six months after diagnosis."

Even if they're indirect, these differences "have the potential to affect higher-level learning tasks," he added.

Each year, approximately 30,000 U.S. adults and children are diagnosed with type 1 diabetes, according to JDRF (formerly the Juvenile Diabetes Research Foundation). And the incidence of type 1 diabetes has increased dramatically in recent years.

Type 1 diabetes occurs when the immune system mistakenly destroys the insulin-producing cells in the body. This leaves the person with type 1 diabetes with little or no insulin, a hormone needed to convert food into fuel for the body's cells.



As time passes without treatment, the body begins to burn fat for fuel. Byproducts of this process are acids called ketones, according to the American Diabetes Association. High levels of ketones can poison the body and cause diabetic ketoacidosis.

Cameron said between 20 and 30 percent of people newly diagnosed with type 1 have diabetic ketoacidosis. The condition can also develop later in type 1, when problems with diabetes management arise.

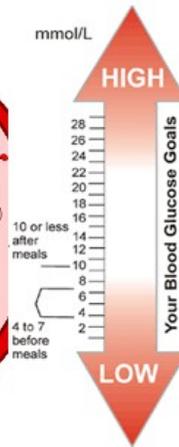
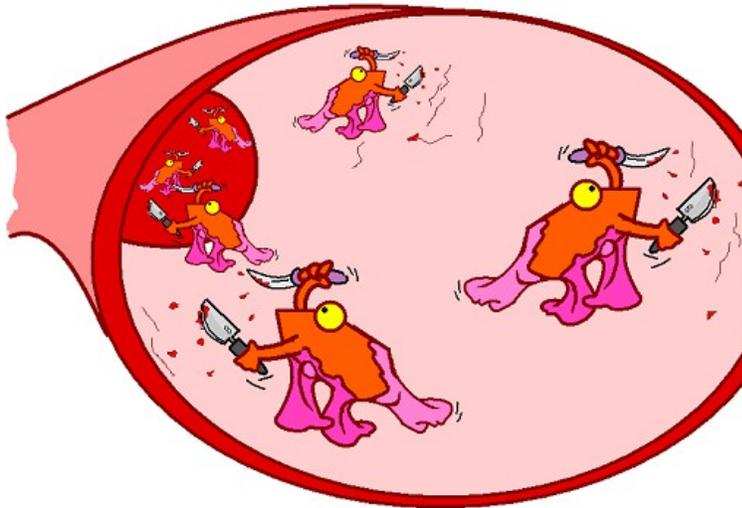
The present study, released online May 22 in *Diabetes Care*, included 36 children and teens with diabetic ketoacidosis and 59 without it. All were newly diagnosed with type 1 diabetes and between 6 and 18 years old.

All had MRIs done of their brains at two days, five days, 28 days and six months after diagnosis. They also took tests of memory and attention at comparable time points.

The researchers found diminished gray matter volume in the children with diabetic ketoacidosis as well as swelling in the white matter. These brain changes resolved quickly.

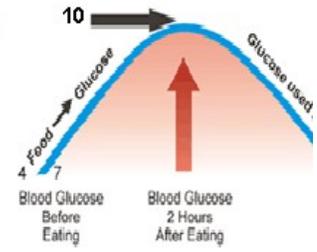
But children who'd experienced these brain changes had more delayed memory recall and poorer sustained and divided attention scores for at least six months after the diabetic ketoacidosis, the study found.

"Changes in memory and attention are subtle, and may or may not be noticed by a parent or teacher on a daily basis," said Cameron. "However, any decrement in attention or memory in children is a concern as children are acquiring new knowledge and learning new skills all the time."



Your Blood Glucose Level Changes When You Eat

DEXTROSE



Blood Glucose Levels to Aim for:
 Before any meal 4.0 - 7.0 mmol/L
 2 hours after any meal 5.0 - 10.0 mmol/L

Hyper Glycemic Sugar Weakens the Immune System, Attacks the Nerves and Destroys the insides of the Arteries, Veins, and Capillaries

LIKE SUGAR?

SO DOES...

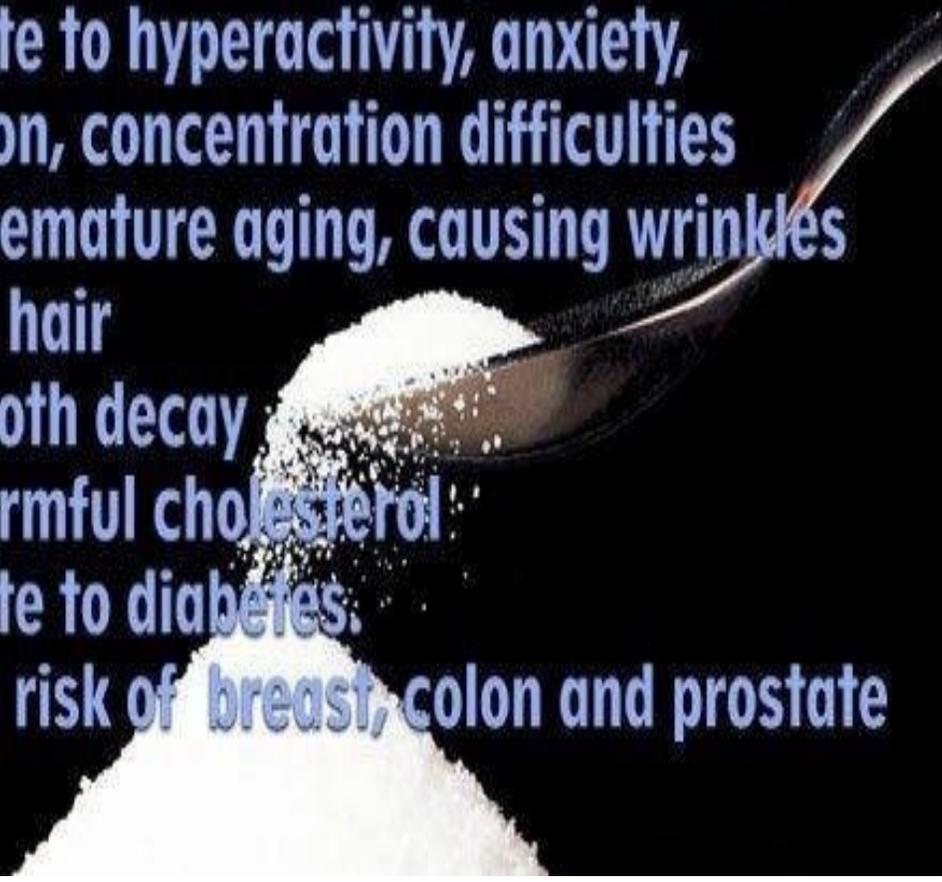
CANCER INFLAMMATION DIABETES

YEAST ARTHRITIS

INSOMNIA

AND MOST OTHER DISEASES!

The Harmful Effects of Sugar

- Suppress the immune system
 - Contribute to weight gain and obesity
 - Increase the risk of fatty liver disease
 - Cause headaches, including migraines
 - Contribute to hyperactivity, anxiety, depression, concentration difficulties
 - Cause premature aging, causing wrinkles and grey hair
 - Cause tooth decay
 - Raise harmful cholesterol
 - Contribute to diabetes.
 - Increase risk of breast, colon and prostate
- 
- A close-up photograph of a silver spoon tilted to the right, pouring a stream of white sugar granules onto a larger pile of sugar below it. The background is black, making the white sugar stand out. The spoon is positioned in the lower right quadrant of the image, and the sugar granules are falling from it, creating a small mound at the bottom center.

UCSF Scientists Declare WAR on Sugar in Food

[Erin Allday, Chronicle Staff Writer](#)

02/01/12



Like alcohol and tobacco, sugar is a toxic, addictive substance that should be highly regulated with taxes, laws on where and to whom it can be advertised, and even age-restricted sales, says a team of UCSF scientists. *(University of California San Francisco)*

In a paper published in *Nature* on Wednesday, they argue that increased global consumption of sugar is primarily responsible for a whole range of chronic diseases that are reaching epidemic levels around the world. The health care expense of sugar caused diseases is massive.

Sugar is so heavily entrenched in the food culture in the United States and other countries that getting people to kick the habit will require much more than simple [education](#) and awareness

THE FIVE UNHEALTHY WHITES

Avoid excess use
Use sparingly not Daily



WHITE RICE



WHITE FLOUR



WHITE SUGAR



White Pork



White Potato