

Where there's type 1 diabetes, celiac disease may follow

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(HealthDay)—Parents of young children with type 1 diabetes need to be

on the lookout for symptoms of another autoimmune condition—celiac disease, new research suggests.

The study found these youngsters appear to face a nearly tripled risk of developing celiac [disease](#) autoantibodies, which eventually can lead to the disorder.

"Type 1 diabetes and celiac disease are closely related genetically," explained study author Dr. William Hagopian.

"People with one disease tend to get the other. People who have type 1 diabetes autoantibodies should get screened for celiac autoantibodies," Hagopian said. He directs the diabetes program at the Pacific Northwest Research Institute in Seattle.

Type 1 diabetes is an autoimmune disease that causes the body's immune system to mistakenly attack the insulin-producing cells in the pancreas, according to the American Diabetes Association. Insulin is a hormone that helps to usher the sugar from foods into the body's cells to be used as fuel. Because the autoimmune attack leaves people with type 1 diabetes without enough insulin, they must replace the lost insulin through injections or an insulin pump with a temporary tube inserted under the skin.

Celiac disease is an autoimmune disease that causes the immune system to attack the lining of the [small intestine](#) when gluten is consumed, according to the Celiac Disease Foundation. Gluten is a protein found in wheat. Symptoms of celiac disease include stomach pain and bloating, diarrhea, vomiting, constipation, weight loss, fatigue and delayed growth and puberty.

Dr. James Grendell is chief of the division of gastroenterology at NYU Winthrop Hospital in Mineola, N.Y. He explained why knowing ahead

of time that celiac may be developing can be helpful.

"Early diagnosis of celiac disease is important to initiate treatment with a gluten-free diet to prevent complications, particularly growth retardation in children," he said.

"Other significant complications include iron-deficiency anemia, osteoporosis and a form of skin rash. Less common, but potentially lethal, complications include lymphoma and carcinoma of the small intestine," Grendell added.

Treatment for the disease is avoiding eating or drinking anything containing gluten.

According to Hagopian, "Celiac is about three times more common in the general population than type 1 diabetes."

Previous research has pegged the co-occurrence of type 1 diabetes and celiac disease at around 5 percent to 8 percent, the study authors said.

To get a better idea of when these diseases start to occur together, as well as what might trigger them, the researchers looked at data from a prospective study of children with a high genetic risk of developing type 1 diabetes. The primary aim of the study was to find environmental causes of type 1 diabetes.

The research included almost 6,000 youngsters from six U.S. and European medical centers. The participants all had the necessary autoantibody testing. The median follow-up time was 66 months (5.5 years), the study said.

Autoantibodies linked to type 1 diabetes were found in 367 children, according to the report. Autoantibodies linked to celiac disease were

found in 808 youngsters. Autoantibodies associated with both conditions were found in 90 children.

Autoantibodies for type 1 diabetes typically appeared before those for celiac disease, the study authors noted.

That doesn't necessarily mean that type 1 diabetes caused the development of celiac autoantibodies, said Dr. Christine Ferrara, an adjunct assistant professor at the University of California, San Francisco. She co-authored an editorial that accompanied the study.

"The results of this paper demonstrate an association, but do not establish causation," Ferrara said.

The findings were published online Oct. 10 in the journal *Pediatrics*.

Hagopian said it's possible that type 1 diabetes may somehow trigger celiac disease. But it could also be an overlapping environmental factor that starts the disease process in both cases, he added.

Ferrara explained that "people need to recognize that regulation of the immune system underlies multiple disease processes."

Hagopian said it's important to note that the study only looked at children under 6.

Grendell agreed with Hagopian that a diagnosis of type 1 should signal the need to look for celiac disease.

"The take-home message for the public is that type 1 [diabetes mellitus](#) appears to be a risk factor for the development of [celiac disease](#) and, as already recommended, patients [usually children] diagnosed with type 1 [diabetes](#) mellitus should be screened for this highly treatable disease," he

said.

More information: William Hagopian, M.D., Ph.D., clinical professor, medicine, University of Washington, and director, diabetes program, Pacific Northwest Research Institute, Seattle; Christine Ferrara, M.D., adjunct assistant professor, University of California, San Francisco; James Grendell, M.D., chief, division of gastroenterology, NYU Winthrop Hospital, Mineola, N.Y. ; Oct. 10, 2017, *Pediatrics*, online

Learn more about celiac disease from the [Celiac Disease Foundation](#).

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