Psoriasis drug may help preserve pancreas cells in type 1 diabetes

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Used early after diagnosis, drug appears to have long-lasting effects, study reports.

(HealthDay)—Taking two 12-week courses of alefacept—a drug already approved to treat the skin condition psoriasis—may help people with newly diagnosed type 1 diabetes preserve some function in the beta cells in the pancreas, a new study suggests.

People taking the drug needed about 25 percent less insulin, and they had about half the rate of major low blood sugar episodes (hypoglycemia) compared to those who took a placebo, the study revealed.

"This is the first time that documented rates of hypoglycemia—using standardized home glucometers in all patients—have shown a reduction

in major hypoglycemia events following an immune intervention in new-onset [type 1 diabetes] patients," lead researcher Dr. Mario Ehlers, of the Immune Tolerance Network, said in a network news release.

"This is important because frequent hypoglycemia is a common and serious complication in this disease," Ehlers added.

Type 1 diabetes is an autoimmune disease that causes the body's immune system to mistakenly attack the insulin-producing beta cells in the pancreas. Specifically, certain T-cells in the immune system lead the attack. When enough beta cells have been destroyed, a person can no longer produce enough insulin. Insulin is necessary to help the sugars in foods get into the body's cells to be used as fuel.

When used early after diagnosis, alefacept may interfere with the action of the destructive T-cells. And the drug appears to do this without affecting another type of T-cell that is protective, the researchers noted.

The current clinical trial—the second of three required for approval—included 49 people between the ages of 12 and 35 who were newly diagnosed with type 1 diabetes. Patients were randomly selected to receive the drug or a placebo. Thirty-three people were given the drug for two 12-week courses, with a 12-week gap in between the courses.

Over two years of follow-up, the group that received the drug had a lower decline in a marker of beta cell function known as C-peptide. Moreover, nine out of 30 patients evaluated for C-peptide function showed no decline in C-peptide production, compared to just one of 12 people evaluated in the placebo group. Preservation of C-peptide lasted as long as 15 months after treatment stopped, Ehlers noted.

"Achieving long-term benefit following a short course of therapy is a challenging goal," Dr. Gerald Nepom, director of the Immune Tolerance

Network, said in the news release.

"Detailed analysis of the T-cell types present in the blood of those who responded to the treatment will help us identify the best way to improve this type of immune therapy for patients with type 1 diabetes and potentially other autoimmune diseases," he added.

The study results were published July 20 in the *Journal of Clinical Investigation*.

More information: Learn more about type 1 diabetes from the Diabetes Research Institute Foundation.