

Study finds mechanisms of early insulin treatment for diabetes may produce better outcomes

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A pilot study of 23 adults with newly diagnosed type 2 diabetes found early insulin therapy to be as effective as 15 months of oral therapy and may improve the body's ability to produce insulin.

The current standard of care calls for initial treatment with oral therapies that suppress glucose production by the liver. In contrast, [insulin](#) is a hormone produced by the pancreas that allows the body to use glucose and prevents [blood sugar levels](#) from getting too high. If used early it can provide effective treatment with fewer metabolic side effects.

Researchers from Ohio University and Western University of Health Sciences College of Osteopathic Medicine will present their updated findings at OMED 15 October 17 in Orlando. The [pilot study](#) was conducted after successful cases series that were completed at The Ohio University Diabetes Institute.

In the [randomized controlled trial](#), the insulin-treated group's A1C levels decreased from 10.1 percent to 6.7 percent after 15 months. The group receiving intensive oral therapy saw its A1C level drop from 9.9 percent to 6.8 percent at 15 months. The [insulin treatment](#) was well tolerated with no severe hypoglycemia. While the intensive oral therapy group gained weight, insulin-treated subjects lost an average of five pounds.

"While the improvement in glucose was relatively comparable between

the two groups, our findings support the idea that the body can improve its natural insulin secreting ability when early insulin is given," said lead researcher Jay Shubrook, DO. "This may be because early insulin therapy protects beta cells in the pancreas that respond to glucose and produce insulin."

Based on additional research published in the journal *Cell Metabolism* in 2014, the mechanism appears to be re-differentiation of beta cells, Shubrook said.

Shubrook noted limitations to the study, including its size and the number of participants considered severely obese, with a [body mass index](#) (BMI) of 40 or greater. Despite the limitations, the study provides new clues to improving outcomes for patients newly diagnosed with type 2 diabetes.

Provided by American Osteopathic Association

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