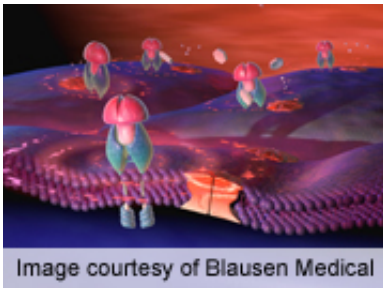


# Progression of dysglycemia in youth similar to adults

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(HealthDay)—For obese adolescents, glucose sensitivity deteriorates progressively across the spectrum of glucose tolerance, according to a study published online June 19 in *Diabetes*.

Sara F. Michaliszyn, Ph.D., from the University of Pittsburgh Medical Center, and colleagues describe oral glucose tolerance test (OGTT)-modeled  $\beta$ -cell function and incretin effect in 255 obese adolescents (173 with normal glucose tolerance, 48 with impaired glucose tolerance, and 34 with type 2 diabetes). An established mathematical model yielding  $\beta$ -cell glucose sensitivity, rate sensitivity, and [insulin sensitivity](#) was used to derive  $\beta$ -cell function parameters. The ratio of the OGTT  $\beta$ -cell glucose sensitivity to the two-hour hyperglycemic clamp  $\beta$ -cell glucose sensitivity was calculated as the incretin effect.

The researchers found that  $\beta$ -cell glucose sensitivity was 30 and 65 percent lower in youth with impaired glucose tolerance and type 2 diabetes, respectively, compared with normal glucose tolerance. In type 2 diabetes, rate sensitivity was 40 percent lower. Incretin effect was 32 and 38 percent lower for youth with impaired glucose tolerance and type 2 [diabetes](#), respectively, compared with normal glucose tolerance, when faced with similar changes in glucagon-like peptide-1 (GLP-1) and glucose-dependent insulinotropic polypeptide (GIP) in response to oral glucose.

"We conclude that glucose sensitivity deteriorates progressively in obese youth across the spectrum of [glucose tolerance](#) in association with impairment in incretin effect without reduction in GLP-1 or GIP, similar to that seen in adult dysglycemia," the authors write.

**More information:** [Abstract](#)  
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