

Genetic data help ID risk of future impaired fasting glucose

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(HealthDay)—The addition of genetic risk variant data to conventional

childhood risk factors improves risk assessment of impaired fasting glucose (IFG) and type 2 diabetes in adulthood, according to a study published online June 13 in *Diabetes Care*.

Niina Pitkänen, Ph.D., from the University of Turku in Finland, and colleagues analyzed an association of a weighted genetic risk score (wGRS) based on 73 risk variants with IFG and type 2 diabetes in 2,298 participants of the Cardiovascular Risk in Young Finns Study. Participants were followed from childhood to adulthood for 24 to 31 years.

Overall, 21.8 and 3.4 percent of participants had IFG or type 2 diabetes in adulthood, respectively. The researchers found that wGRS correlated with increased risk of IFG and type 2 diabetes after adjustment for multiple confounding variables (odds ratios, 1.64 and 2.22, respectively, per unit increase in the wGRS). Model discrimination and reclassification properties were improved with incorporation of wGRS into pediatric risk models. For IFG, combined IFG and type 2 diabetes outcome, and type 2 diabetes, the area under the receiver operating curve improved ($P = 0.015, 0.007, 0.158$, respectively). For all outcomes, the net reclassification improvement and integrated discrimination improvement were significant.

"A multifactorial approach combining genetic and clinical risk factors may be useful in identifying children at high [risk](#) for adult IFG and type 2 diabetes," the authors write.

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