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### Impacts of previously established loci associated with obesity-related traits on type 2 diabetes

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To date, genetic predispositions to type 2 diabetes (T2D) underlying obesogenic environments have demonstrated genetic heterogeneity across global populations. To extend understanding of the overall genetic architecture, we recapitulated previous obesity-related susceptibility loci on T2D risk in two ethnic-different consortiums (the DIAGRAM and the AGENT2D). A total of 64 SNPs in or near 41 genes were observed with pleiotropic associations on T2D (9 trans-ethnic, 22 European-specific and 10 Asian-specific). In a conditional analysis, 14 genes were found to be associated with T2D risk in obesity-independent manner. In conclusion, our findings might expand understanding of multiple genetic effects in metabolic and endocrine regulation.

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