Poor diet associated with increased diabetes risk across all gradients of genetic risk

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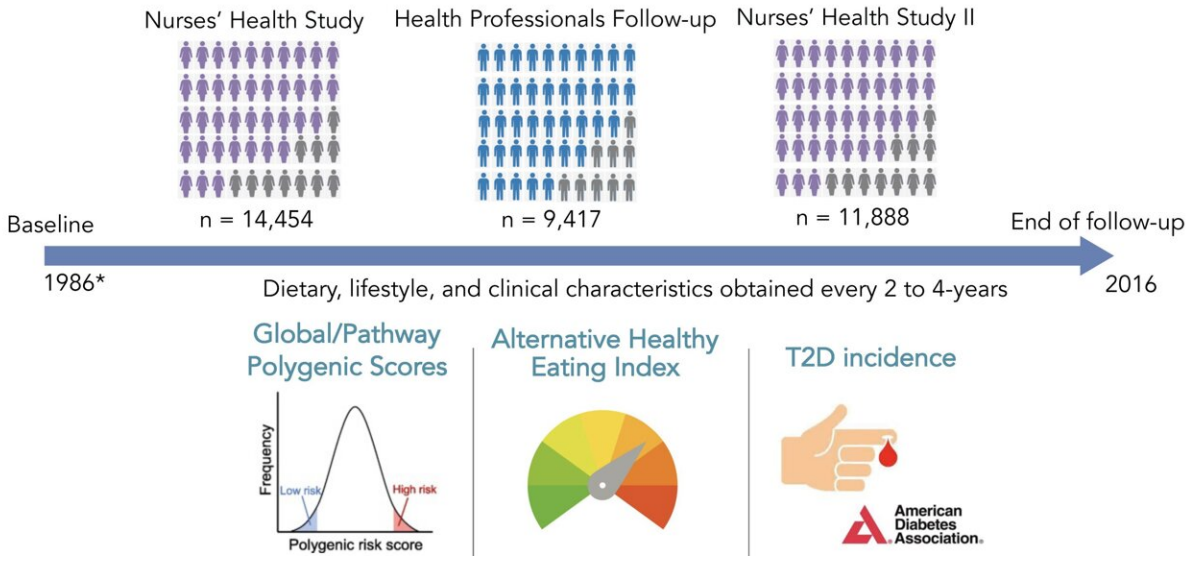

Interplay between genetics and diet on the development of type 2 diabetes. Credit: Jordi Merino, Merino J. et al., 2022, *PLOS Medicine*, CC-BY 4.0 (creativecommons.org/licenses/by/4.0/)

Genetic risk factors and diet quality are independently associated with type 2 diabetes; a healthy diet is linked to lower diabetes risk across all levels of genetic risk. That's the conclusion of a study of more than 35,000 US adults publishing April 26th in *PLOS Medicine* by Jordi Merino of Massachusetts General Hospital, US, and colleagues.

Both genetic and lifestyle factors are known to contribute to individual susceptibility to type 2 diabetes. Previous studies have shown that adherence to a healthy lifestyle is associated with reduced risk of type 2 diabetes across genetic profiles, but whether genetic profiles, in part, interact with lifestyle factors was unclear. In the new study, researchers analyzed data from three extensive cohort studies, including 35,759 U.S. health professionals followed for 902,386 person-years of follow-up.

The team found that, irrespective of genetic risk, a low diet quality, as compared to high diet quality, was associated with a 30% increased risk of type 2 diabetes ($P_{interaction}$=0.69). The relative risk of type 2 diabetes was 1.29 (95% CI 1.25-1.32, P