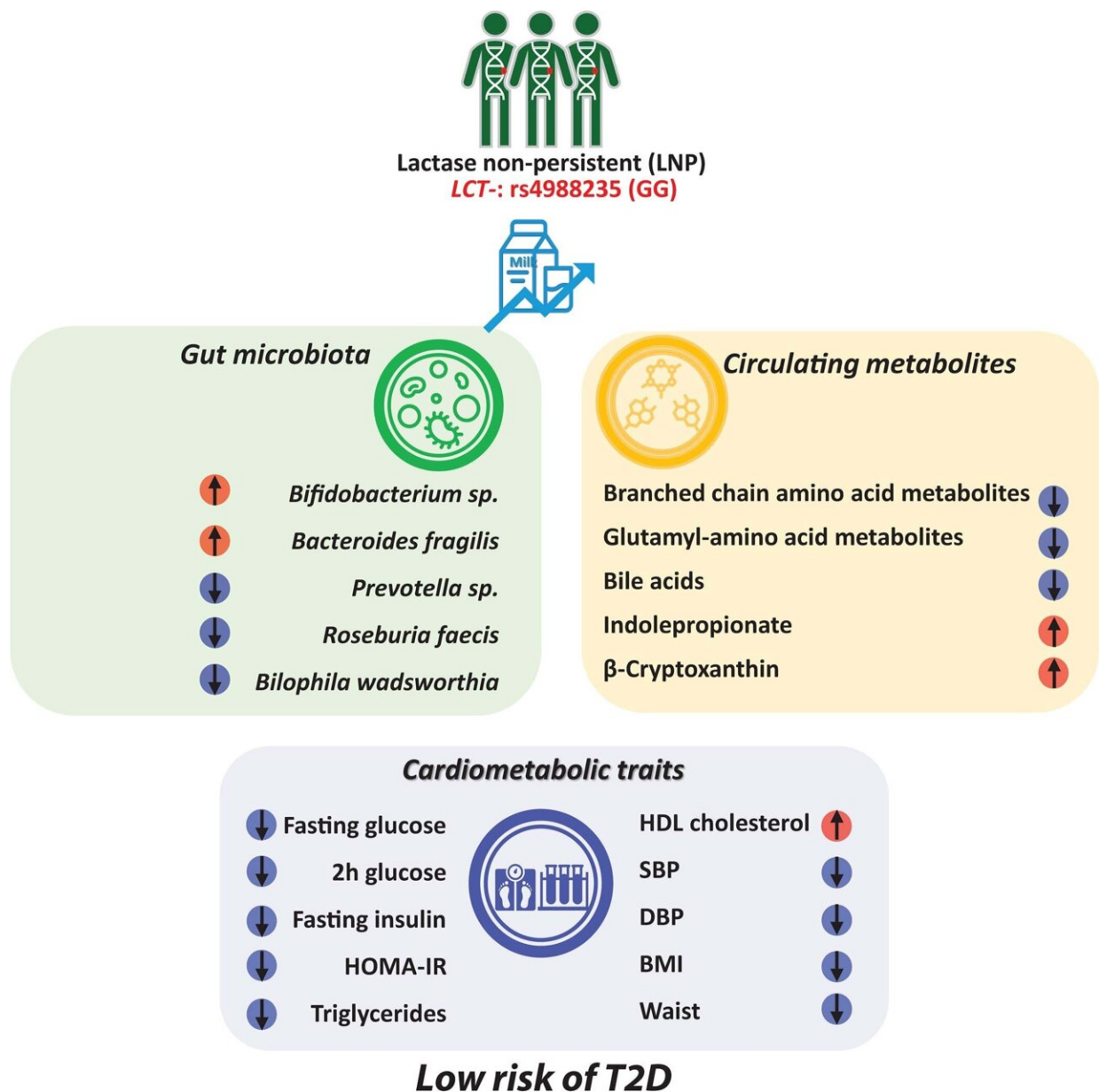


For people with certain gene variant, drinking milk may reduce risk of type 2 diabetes

January 23 2024, by Bob Yirka



A summary of key findings on the altered gut microbiota species, circulating metabolites, and metabolic traits associated with milk intake in lactase non-persistent individuals (LNP: LCT GG group). Credit: *Nature Metabolism* (2024). DOI: 10.1038/s42255-023-00961-1

A large team of medical researchers affiliated with multiple entities in the U.S. and China has found that the risk of developing type 2 diabetes is reduced for people with a certain gene variant.

In their project, [reported](#) in the journal *Nature Metabolism*, the group conducted a [genome-wide association study](#) (GWAS) looking for links between [milk consumption](#) and decreased risk of type 2 diabetes. Sheridan Littleton and Struan Grant, with Children's Hospital of Philadelphia, have published a [News & Views piece](#) in the same journal issue outlining this new effort.

Prior research into a connection between drinking cow's milk and a reduced risk of developing type 2 diabetes produced mixed results, with some efforts showing an association and others finding little to no association. In this new effort, the research team suspected that such different findings may have had something to do with the genetic profiles of the test subjects.

To determine if that might be the case, they conducted a GWAS involving [tissue samples](#) collected from approximately 12,000 Hispanic adults participating in the Hispanic Community Health Study/Study of Latinos. Their effort involved attempting to identify SNPs associated with milk consumption.

As part of their work, they used dietary intake estimates developed by the National Cancer Institute. They found an association between individuals with a genetic [variant](#) that encodes for the enzyme lactase, which the body uses to break down the sugars in milk.

Most people produce lactase as children, but many stop as they grow into adulthood, leading some to become lactose intolerant, which is also known as being lactase non-persistent (LNP). The difference has been traced to an LCT gene variant. In this new study, the researchers found that LNP individuals who also regularly consume milk have a 30% reduced risk of developing type 2 diabetes—no reduction in risk was seen in people who regularly consume milk but do not have the gene variant.

To reinforce their findings, the team repeated their effort with data from the UK Biobank and found similar results. The researchers suggest that their findings explain the varied results found in prior testing of an association between [milk](#) drinking and the risk of developing type 2 [diabetes](#).

More information: Kai Luo et al, Variant of the lactase LCT gene explains association between milk intake and incident type 2 diabetes, *Nature Metabolism* (2024). [DOI: 10.1038/s42255-023-00961-1](https://doi.org/10.1038/s42255-023-00961-1)

Sheridan H. Littleton et al, Metabolic links among milk, genes and gut, *Nature Metabolism* (2024). [DOI: 10.1038/s42255-023-00958-w](https://doi.org/10.1038/s42255-023-00958-w)

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