

DNA test for couples? Start-up Orchid claims its over-the-counter kit can identify complex inherited disorders. Is it ready for prime time?

A new startup called [Orchid](#) is offering the chance for couples planning a pregnancy to learn their odds of passing on risks for common conditions like Alzheimer's, heart disease, type 1 and 2 diabetes, schizophrenia, and certain cancers to their future child.

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Couples take the test at home by spitting into a tube and mailing it in. The company sequences the genomes of each parent and uses data sets of people with and without these diseases to calculate their risks. The result is known as a [polygenic risk score](#).

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[Cardiologist Amit] Khera says there are lots of genetic variants that researchers just don't understand yet. His group has found variants that seem to protect against heart attacks but increase the risk of diabetes. In other words, there are genetic trade-offs.

Orchid's test could also lure parents into a false sense of security that their future children won't develop a particular disease. For instance, [Center for Psychiatric Genomics director Patrick Sullivan] says that while genetics play a role in schizophrenia, the disease is often not inherited.

"The highest risk factors we get from schizophrenia are generally de novo variants, meaning neither parent has them," he says. "This is a mutation that develops in the making of the child. It's a random event."

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