

Genetic tests may not change people's unhealthy ways

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(HealthDay)—Genetic tests that predict people's risk for disease are

becoming more common, but a new analysis suggests that having that information doesn't mean people act on it.

British researchers reviewed the results of 18 studies that looked at whether communicating DNA test results for conditions such as cancer and heart disease led people to make healthy changes.

They found no evidence that people adopted healthier behaviors, such as quitting smoking or eating more healthfully, after receiving their DNA results.

Individuals were neither motivated to make healthy changes nor discouraged from doing so, the review authors noted.

Theresa Marteau, director of the Behaviour and Health Research Unit at the University of Cambridge, led the investigation. She said the reviewed studies did not address why test results failed to promote risk-reducing behaviors.

The most likely reason is that "risk perceptions have at best only a small influence on behavior," she said.

The analysis was published March 15 in the *BMJ*.

Isaac Lipkus, a professor at the Duke University School of Nursing in Durham, N.C., who studies risk communication, said the medical literature shows "weak, if any, effects of providing [genetic information](#) on behavior change."

But Mary Freivogel, a cancer genetic counselor in Denver, wondered how DNA results in the Cambridge analysis were delivered to patients.

For those who did not receive genetic counseling, it's like "giving

someone an unassembled tool with hundreds of pieces without any instructions," said Freivogel, president-elect of the National Society of Genetic Counselors.

Today, advances in genomic sequencing—the ability to map an individual's DNA code and detect gene variations that signal trouble—make it possible, at least in theory, for people to identify their genetic disease risks.

Spending on genetic and molecular testing in the United States is projected to reach between \$15 billion and \$25 billion by 2021, up from \$5 million in 2010, according to a 2012 UnitedHealth Group report.

For more than a decade, several companies in Europe and Canada have sold genetic tests for a range of common, complex disorders directly to consumers, the study authors said. In the United States, the genetics testing company 23andMe, Inc., resumed sales of its [genetic testing](#) service in 2015, they added.

However, Andy Kill, a spokesman for 23andMe, said the Mountain View, Calif.-based company does not provide information on the conditions mentioned in the study.

"In the U.S., we report on carrier status, traits and ancestry, not disease risk," he said.

From more than 10,000 study abstracts, the authors pulled 18 studies for review. Included were studies on genetic risks for several conditions that may be altered with lifestyle changes, such as smoking cessation, dietary changes or physical activity.

The Cambridge team excluded studies dealing with genetic conditions, such as Huntington's disease, with no known intervention for reducing

risk.

Overall, there was little to suggest that giving people information about their genetic risks empowers them to change their ways, particularly to eat more healthily or quit smoking, Marteau said.

At the same time, there were no adverse effects, such as depression and anxiety, from receiving their [genetic](#) information, the researchers added.

The authors suggested caution in interpreting the results, citing several limitations, including the poor quality of many of the included studies.

DNA testing, however, may still help clinicians identify and treat people at risk, the authors noted.

"For the general public, our message is *caveat emptor*—buyer beware," Marteau said.

"Genetic tests may identify risks for which medical intervention could reduce the risk, but this would be something that an individual would be wise to discuss with their primary care physician," she added.

More information: The National Society of Genetic Counselors has more on [your genetic health](#).

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