

# Study explores impact of workplace genetic testing on employee health behaviors

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Genetic testing is not yet a standard component of workplace wellness programs, but what if it were? Researchers at The Jackson Laboratory and the University of Michigan aim to answer this question, and to

consider the ethical and social implications associated with such offerings.

The work, [published](#) in the August issue of *Genetics in Medicine*, provides real-world employee perspectives, following employer-sponsored genetic testing, as well as valuable insights into how employers make informed decisions about integrating genetic testing into their wellness programs.

## **The future of personal health**

"Genetic testing may very well be the way of the future when it comes to [personal health](#)," said Kunal Sanghavi, MBBS, M.S., CGC, Associate Director of Genetic Counseling at The Jackson Laboratory for Genomic Medicine and one of the leaders of this study.

"These findings are highly relevant to the research we are doing at JAX, studying [genetic markers](#) and applying them to personalized medicine that could provide targeted care to the patients who need it the most."

The survey-based study recruited participants from a large [health care](#) system employing approximately 30,000 individuals, who had been offered workplace genetic testing (wGT) as part of their wellness benefits.

The wGT program, established in fall 2018, used a third-party testing service which included genes associated with increased risk for cancer and heart disease. Genes driving medication response (pharmacogenes) were also included—this type of testing can reveal an individual's metabolic response to certain medications as well as susceptibility to side effects.

Of the 776 web survey respondents, 418 elected to have genetic testing

and received results. The web survey collected information about their use of health services and their health behaviors after receiving their test results.

Some 12% of the 418 employees who opted into testing reported that they received results indicating an increased risk for cancer and 9.5% received results that showed increased risk for heart disease. These individuals were 8.6 times more likely to follow up with a health care professional and 3.23 times more likely to make a health behavior change.

Furthermore, among those that received genetic testing through their workplace, 31.4% received results from the pharmacogenomic testing that they felt might be informative for their future prescription medication use.

"Most participants reported that obtaining their genetic test results satisfied their curiosity about their health (74.7%)," said Elizabeth Charnysh, M.S., CGC, a genetic counselor at JAX and lead author of the study.

She noted that employees with negative test results (i.e., no detectable increased risk of cancer or heart disease) were more likely to feel that their test results reassured them they were healthy.

"However, all individuals have a baseline risk for cancer and heart disease. Having a negative test result also does not negate other factors that may increase a person's risk for cancer or heart disease, such as lifestyle and [family history](#)," said Charnysh, "so these findings raise some concerns about false reassurance and lack of understanding among employees."

## **The broader implications of workplace genetic testing**

The study is part of a larger project titled "Ethical, Legal, Social and Policy Implications of Workplace Genetic Testing." [The project](#), led by Charles Lee, Ph.D., FACMG, scientific director and the Robert Alvine Family Endowed Chair and professor at The Jackson Laboratory for Genomic Medicine and University of Michigan Professor Scott Roberts, Ph.D., is employing a multi-step approach to gather employee and employer perspectives regarding genetic testing in the workplace.

The goal is to help guide the future of wGT across the country. Charnysh also notes that insights from wGT may also inform other new genetic testing initiatives that are designed to be offered to others in the general population.

Upcoming research from this team will delve deeper into ethical frameworks and the broader implications of workplace [genetic testing](#), including its [potential benefits](#), potential harms, and considerations for maximizing the former and minimizing the latter.

"It was encouraging to see that many employees who learned from wGT results of their elevated risk for cancer and [heart disease](#) were taking steps that might aid prevention of future disease," said Roberts, a professor of Health Behavior and Health Education at the University of Michigan School of Public Health.

"However, it will be important for future studies to examine whether these potential health benefits are truly realized among employees undergoing wGT."

**More information:** Elizabeth Charnysh et al, Health care utilization and behavior changes after workplace genetic testing at a large US health care system, *Genetics in Medicine* (2024). [DOI:](#)

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