

Australian public strongly supports DNA screening for risk of medically actionable conditions: Study

December 1 2022



DNA Screen is screening young Australians for risk of some cancers and heart disease. Credit: Monash University

Nine in 10 Australians would participate in preventive DNA screening for risk of medically actionable conditions, a new national survey has found.

Published in the *Journal of Medical Genetics*, the Monash University-led survey results come as a world-first Australian DNA screening program for some cancers and [heart disease](#) called DNA Screen recently attracted more than 20,000 volunteers in its first week.

The new study surveyed Australians randomly selected from the electoral roll, and described a hypothetical adult population DNA screening program to detect medically actionable genetic risk of cancers and heart disease that can be prevented or treated if detected early.

Respondents were asked about their willingness to participate, preferred delivery methods and concerns. Of 1,060 respondents (mean age 58),

92% were willing to have DNA screening.

Most (56%) favored early adulthood (18–40 years) for testing, rather than at birth or childhood. Many wanted samples and data kept for re-screening (36%) or research (43%), while some (21%) preferred samples to be destroyed.

Issues that decreased the likelihood of participation included life insurance implications (86%) and privacy concerns (75%).

First author and Monash University Public Health Genomics Ethical, Legal & Social Adviser, Jane Tiller, said population-based DNA screening for medically actionable conditions would save lives and improve [public health](#) through the early detection, treatment and/or prevention of cancers and heart disease.

However, she said [public attitudes](#) and willingness to participate are critical aspects, and had not been well investigated; this survey was believed to be Australia's first on national DNA-based population screening programs.

"Our findings show a remarkable level of interest from the general population in [genetic testing](#) for risk of medically actionable conditions," she said. "But the public also have concerns—including about genetic discrimination in [life insurance](#)—that affect their willingness to participate in such life-saving programs.

"We need the Australian Government to introduce legislation to guarantee better consumer protection against discrimination and ensure [public trust](#) in genetic testing and research."

Among other things, the survey's results are informing the national pilot DNA Screen program,

which is testing for high genetic risk of some cancers and heart disease. Those with increased risk are counseled and have access to possible preventative actions and/or treatments.

Launched in August 2022, DNA Screen is the world's first preventive DNA screening study designed specifically to assess population DNA screening through a national health care system.

The test is free and involves placing a saliva sample into a small tube received and returned by mail. It aimed to test 10,000 Australians aged 18–40 and received over 20,000 registrations in the first week.

Senior author and Monash University Associate Professor Paul Lacaze, from the Monash University School of Public Health and Preventive Medicine, said the new survey could inform future screening programs.

"We are hearing loud and clear just how interested the Australian public are in participating in preventive DNA screening—and we know it will save lives," he said. "So it's our responsibility to develop the most responsible, ethical and cost-effective DNA screening program possible, addressing public concerns, and deliver it through the public health care system."

More information: Jane M Tiller et al, Public willingness to participate in population DNA screening in Australia, *Journal of Medical Genetics* (2022). DOI: [10.1136/jmg-2022-108921](https://doi.org/10.1136/jmg-2022-108921)

Provided by Monash University

APA citation: Australian public strongly supports DNA screening for risk of medically actionable conditions: Study (2022, December 1) retrieved 10 December 2022 from <https://medicalxpress.com/news/2022-12-australian-strongly-dna-screening-medically.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.