

Even with personalized assessments, many underestimate disease risks

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People with a family history of certain diseases, including heart disease and diabetes, often underestimate their risk for developing them, even after completing a risk assessment and receiving personalized prevention messages, finds a new study in the *American Journal of Preventive Medicine*.

"We wanted to see if making people aware of their potential risks or increased risk status for [common diseases](#) like heart disease, stroke, diabetes or various cancers would make them realize that they should be more proactive about taking care of their health, and take action," said lead author Catharine Wang, Ph.D., M.Sc., an Associate Professor in the Department of Community Health Sciences at Boston University School of Public Health.

For the study, 3786 patients in 41 primary care practices were randomized to intervention and control groups. People's perceived risk for six diseases, including heart disease, stroke, diabetes, [colon cancer](#), ovarian cancer and [breast cancer](#), were assessed at baseline and six months later.

After the initial survey, the intervention group completed the Family Healthware assessment tool, developed by the [Center for Disease Control and Prevention](#) (CDC) to assess [familial risk](#) for diseases, and received appropriate personalized prevention messages. Messages were based on patient risks for the six diseases and tailored to age, gender, reported [health behaviors](#), and screening history.

The researchers focused on people who tended to underestimate their perception of risk. While these patients who completed the Family Healthware tool had an increased awareness of their risk of disease, their estimates still remained lower than their actual probable risks. Those at risk for diabetes saw the greatest shift with 18 percent of people using the tool changing their [risk perception](#) compared with just 11 percent of those who did not use the tool. Those at risk for colon, breast or ovarian cancer tended to have more accurate perceptions of their risk.

Wang said, "We are happy we saw the (statistically) significant shifts, although, we were surprised at how low these numbers were. For heart disease, the tool was able to increase risk perceptions by 15 percent, compared to a 9 percent increase observed among those in the control arm. This means that 85 percent didn't shift in their perceptions for heart disease even though we told them they're at elevated risk because of their family history."

Melanie Myers, Ph.D., director of the genetic counseling graduate program and assistant professor at Cincinnati Children's Hospital Medical Center, said, "A lot of different factors go into risk perceptions and into changing risk perceptions," including cultural beliefs, knowledge and understanding of disease, literacy levels, education levels, socioeconomic status and emotions.

More information: Wang, C., et al. (2012). Family History Assessment: Impact on Disease Risk Perceptions, *American Journal of Preventive Medicine*, In Press.

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