

RESEARCH NEWS



Highlighting risk of diseases is most effective in changing attitudes to vaccines, US study finds

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Giving people information about the dangers posed by communicable diseases is more persuasive at convincing sceptics of the benefits of vaccination than trying to counter misconceptions about vaccine risks, a US study has shown.

The study, published in the *Proceedings of the National Academy of Sciences*,¹ asked 315 people recruited through a crowd sourcing website—Amazon Mechanical Turk, which pays people for completing tasks—to fill in a questionnaire testing their attitude to vaccination and other health issues.

The next day the participants were randomly assigned to one of three groups to receive information on disease risk, information correcting myths about vaccines, or control materials.

The first group was asked to look at information about the risk of diseases that can be prevented by vaccination. This included a paragraph written from a mother's perspective about her child contracting measles; pictures of a child with measles, a child with mumps, and an infant with rubella; and three short warnings about the importance of vaccinating children.

The second group was asked to read a summary of recent research showing that vaccines do not increase the risk of autism in children, based on information from the US Centers for Disease Control and Prevention.

The people in the control group read a vignette on a scientific topic unrelated to vaccination.

After reading their assigned materials the study participants repeated the vaccine attitudes questionnaire and were then asked about their past vaccine behaviours and intentions to vaccinate their child in the future.

Results showed that people given the information on disease risk became more positive in their attitudes to vaccination than those given either the information on vaccines and autism

($P=0.017$) or those in the control group ($P=0.003$), and no difference was seen between those two groups ($P=0.721$). Parents and non-parents had similar reactions to the different interventions.

The researchers, led by Zachary Horne, of the University of Illinois at Urbana-Champaign in Illinois, USA, said, "It is difficult to provide compelling evidence for the absence of risk. For these reasons, it is often easier to replace an existing belief with an alternative belief rather than attempting to directly counter it.

"We found that directing people's attention to the risks posed by not getting vaccinated, like getting measles, mumps and rubella and the complications associated with those diseases, changed people's attitudes positively towards vaccination—and that was for even the most sceptical participants in the study." Horne added, "The largest effect sizes were for people who were the most sceptical."



[Image: Gareth Fuller/PA]

1 Horne Z, Powell D, Hummel J, Holyoak K. Counteracting antivaccination attitudes. *Proc Natl Acad Sci USA* 2015; doi:10.1073/pnas.1504019112.

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