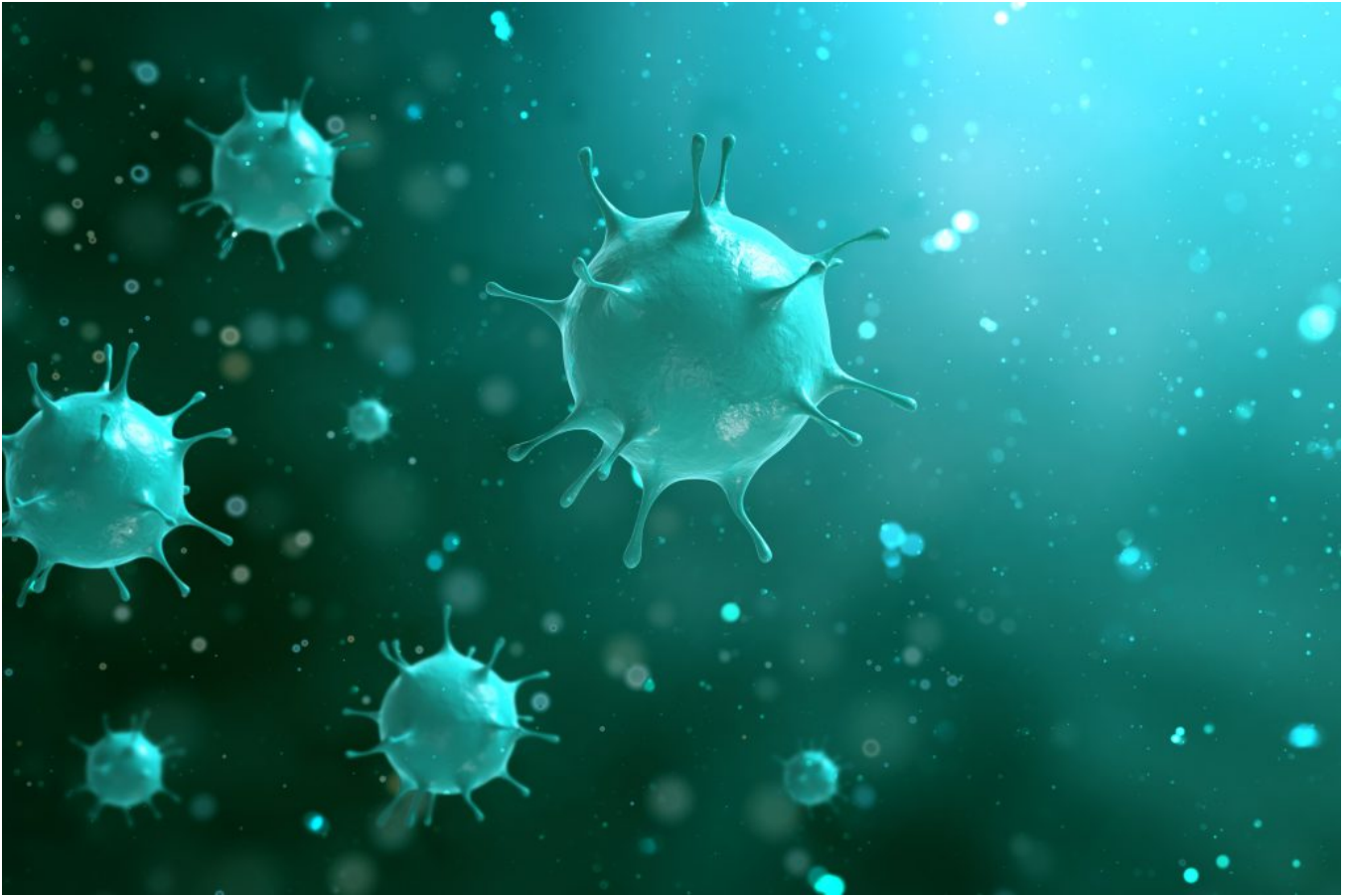


Infectious Diseases and Perceptions of Self

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Simply thinking about potential infection seems to increase people's concerns about their own physical appearance, especially if they are chronic germ worriers, according to new [research](#) in *Psychological Science*. The [findings](#) suggest that the possibility of contagion activates the so-called "behavioral immune system," leading individuals to focus not only on their vulnerability to disease but also how they appear to others.

"The behavioral immune system helps us search out signs of infection in others, even signs that are innocuous and don't actually indicate infection, and often leads us to avoid those people," says psychological scientist Joshua M. Ackerman of the University of Michigan, lead author on the new research. "Our findings show that when people are worried about pathogens, they also evaluate their own physical appearance, which motivates them to pursue behaviors and products intended to improve appearance, including exercise, makeup, and plastic surgery."

"This work is important because it demonstrates situations when people may engage in problematic health behaviors and spending, but also because it suggests that we might improve some of the negativity people have about their appearance by alleviating their concerns about infectious disease," Ackerman explains.

Ackerman and coauthors Joshua M. Tybur (Vrije Universiteit Amsterdam) and Chad R. Mortensen (Metropolitan State University of Denver) conducted a series of seven studies investigating the relationship between infection threat and self-image.

In one experiment, the researchers randomly assigned 160 participants to read a scenario about volunteering at a hospital (pathogen threat) or a scenario about organizing a home workspace (control). After reading the scenarios, the participants completed a budgeting task, in which they were given fictitious money to allocate as they wished to improve personal traits. They could choose to spend the money to boost a variety of traits including creativity, kindness, work ethic, intelligence, sense of humor, and physical attractiveness.

The results showed that participants who were especially worried about germs reported more concern about their appearance and allocated more money toward improving their physical attractiveness if they had read the hospital scenario compared with those who read the workspace scenario.

Subsequent experiments revealed that reading about a potential pathogen also boosted germ-averse participants' insecurity about their appearance and interest in appearance-related behaviors and products (e.g., plastic surgery, cosmetics).

“Perhaps the most surprising element in our findings was that infectious disease threat more consistently influenced evaluations of people’s own physical appearance than it influenced their evaluations of health,” says Ackerman. “We might expect that worries about disease would have lead people to care strongly about their own well-being and take steps to improve it, but this was less common than changes in how people saw their own appearance.”

These experiments are novel, Ackerman and colleagues argue, because they highlight the relationship between disease threat and how we think about the self, as opposed to research focusing on how we think about others. The researchers are now conducting follow-up studies, investigating, for example, whether interventions such as hand washing might disrupt the link between pathogen threat and appearance concern.

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All data and materials have been made publicly available via the [Open Science Framework](#). The hypotheses, data collection and analysis plans, and exclusion criteria for Studies 4, 5a, and 5b were preregistered at OSF ([1](#), [2](#)). The complete Open Practices Disclosure for this article is available [online](#).

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