Sick Body, Vigilant Mind

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We know that in keeping the body physically healthy, the mind both conscious and unconscious is a principle actor. Indeed, research has shown that the biological, or physiological, immune system that fights pathogens once they've entered the body can be kick-started by the "behavioral immune system," with which we notice, feel repulsed by, and act to avoid people who might make us sick.

Now a study in an upcoming issue of *Psychological Science*, a journal published by the Association for Psychological Science, offers intriguing new evidence of the connection moving in the other direction: from physiological to psychological immune reactions. "When people have been recently sick, and therefore recently activated their physiological immune systems, they are more likely to pay attention to and display avoidance of disfigured faces"—which they read, like a rash or a sneeze, as a sign of contagion, says University of Kentucky psychologist Saul Miller. Miller conducted the study with Jon K. Maner of Florida State University.

Two experiments showed that the recently ill more vigilantly pay attention to and avoid others who might make them sick. In the first, faces, some disfigured and some normal, were displayed on a screen. When they disappeared, either a circle or square appeared, and the person had to press a key, as quickly as possible, indicating which shape they saw. When the face appeared in a different portion of the screen, the participant had to shift her attention to it. A longer lag in switching meant more attention was paid to the face. After 80 trials, participants answered a questionnaire about whether they had been ill—"feeling a little under the weather," "had a cold or flu recently," for instance—and if so, when, from today to a year or more ago. Other questions measured feelings of vulnerability to disease and germs. The results: Independent of their conscious worries, those who had more recently been ill paid more attention to the disfigured faces than to the normal faces. Those who hadn't been ill showed no difference in reaction time.

In the second experiment participants had to push a joystick—a tested indication of avoidance—in response to a disfigured face and pull (showing approach) for normal face. Everyone was quicker to push away the disfigured one or pull the normal one. But those who'd been sick were even quicker than normal in avoiding the "sick" face, and the sicker they'd been, the faster they pushed. The not-ill people showed no difference.

The findings have implications beyond the scientific. "When we're sick, we tend to show biases against people stereotypically associated with disease—the obese, the elderly, foreigners," says Miller. Avoiding people who might make us sick is hardwired behavior when we ourselves our ill, he says. But we're taught to be repelled by certain people—like the obese, old, or foreign—who present no threat of contagion. While scientists learn the pathways between psychological and physiological immunity, he suggests, the rest of us can unlearn our fears and treat people better.