

May 26, 2010

This is the print preview: [Back to normal view](#) »

## Wray Herbert

Award-winning journalist who writes the "We're Only Human" blog

Posted: May 26, 2010 09:45 AM

# Mind, Body and the War Against Germs

Flu season may be winding down, but make no mistake--there are still plenty of nasty bugs going around. I was in my doc's office the other day for something routine, and the waiting room was full of drippy-eyed people sniffing and sneezing. There was a video on the TV about the importance of hand washing to prevent the spread of germs. My throat started to feel a little sore.

I'm fine. I apparently escaped without exposure to anything sickening. But my mind was on high alert the entire time I was there. Such waiting room vigilance is not unusual, and indeed has long been recognized as a kind of behavioral immune system. Simply seeing signs of disease triggers thoughts and emotions that motivate us to take extra precautions around any possible contagion.

And it may trigger our bodies as well, according to new research from the University of British Columbia. Psychologist Mark Schaller and his colleagues suspected that psychological defenses might be just part of a broader immune response--one involving the natural killer cells and cytokines and other biochemical defenses that fight off invading germs. They decided to test this idea--by seeing if they could trick healthy bodies into action. Here's the study:

The scientists recruited healthy men and women and had them watch slide shows. All of the volunteers watched a 10-minute slide show about furniture; this was deliberately boring, to act as a control condition. Then a bit later, half the volunteers watched a fairly disgusting slide show, with images of skin lesions and oozing pox, in addition to garden variety sneezes and coughs. The other volunteers watched a slide show about guns--not just guns, but people brandishing firearms, and mostly pointing the weapons directly at the viewer.

The guns were important, because guns are very threatening--especially when they're aimed at you--but they're not related at all to disease or infection. The scientists wanted to rule out threat--any threat--as the cause of any immune response they measured. And that's just what

they saw. They drew blood from the volunteers before and after each slide show, and measured the levels of a cytokine called IL-6, a major fighter in the immune war. Those who had viewed the depictions of sickness showed a dramatic jump in IL-6 production--more than 23 percent. These same volunteers had no biological response to looking at furniture and--more important--the volunteers who looked at brandished weapons also showed no significant immune response.

One possible interpretation of these results is that looking at pox and sores is stressful, and that the stress triggered the immune response. But the scientists ruled that out. They measured self-reported stress, and in fact those who had watched the guns were under more--not less--stress. The psychologists also ruled out personality as an explanation: They measured traits like neuroticism and agreeableness as well as the volunteers' perceived vulnerability to illness. None of these traits distinguished the gun viewers from the disease viewers. The only explanation, it appears, is that simply seeing other people's sickness prompted the volunteers' immune systems to act as if they were under attack.

Is this a good thing? Perhaps not as good as it sounds. As the researchers explain in the on-line version of the journal *Psychological Science*, a direct link between perception and immune response may have helped our ancient ancestors respond quickly and efficiently to pathogens. It may even have helped us evolve as a social species by permitting early humans to gather in groups. But that doesn't mean it's still a good thing. All sorts of social cues can today mimic actual disease threats, causing the immune system to respond aggressively even when there is no real threat. Too many false starts could compromise immune function over time, with serious consequences for human health and welfare.

### Books & More From Wray Herbert



Share this  
Healthy Idea

ARTICLE TOOLS SPONSORED BY:



imagination at work

healthymagination

Share  
Facebook  
Twitter  
Buzz up!