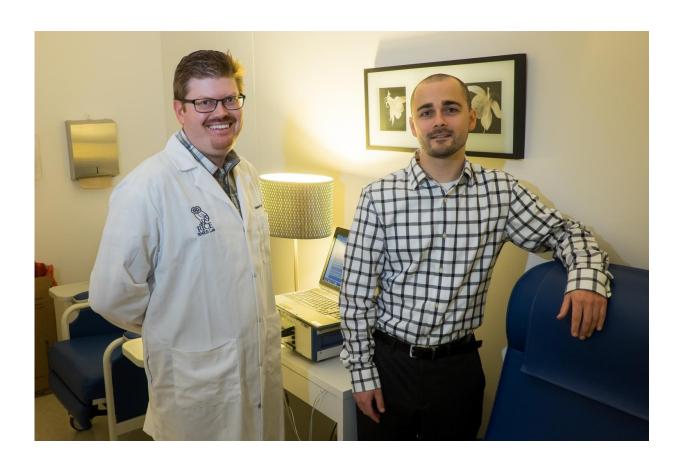


## Self-rated health worth doctors' attention

July 14 2016, by Mike Williams



Christopher Fagundes, left, and Kyle Murdock. Credit: Jeff Fitlow/Rice University

Patients' self-rated health is a better long-term predictor of illness and death than standard blood tests, blood pressure measurements or other symptomatic evidence a doctor might gather, according to a new study from Rice University.



The study in *Psychoneuroendocrinology* lays out mounting statistical evidence to support this conclusion.

The team led by Christopher Fagundes, a Rice assistant professor of psychology, and postdoctoral researcher Kyle Murdock found evidence to bolster their theory that self-rated <a href="health">health</a> – what you'd say when a doctor asks how you feel your health is in general – is as good as and perhaps even better than any test to describe one's physiological condition.

"A couple of years ago there was a boom of work in psychology and medicine about what we call patient-reported outcomes, the idea that what patients actually feel like and say they feel like seems to be more prognostic of morbidity and mortality than all the cholesterol ratings and blood tests we get from doctors' offices," Fagundes said.

"That was an odd finding," he said. "You would think that objective markers like blood pressure would be more accurate. The way people generally report how they feel is more often linked to a future disease or mortality than what the doctor accesses.

"As psychologists, we think, 'They're sensing something. There's something going on here.' That's what took us to this paper."

The researchers set out to find evidence that would connect the dots between feelings and fate. They found it in existing data that established solid links between self-rated health and rising levels of herpesvirus activity, an important marker of poor cellular immunity that promotes high levels of inflammation.

Fagundes has a long-standing collaboration with a team at the University of Texas Medical Branch at Galveston and was able to take advantage of a unique dataset it gathered a decade ago for the Texas City Health and



Stress Study. The study assessed the relationship between stress and health in the community that hosts petrochemical industries at the mouth of the Houston Ship Channel.

The survey of the residents gathered self-assessments (through a 36-item questionnaire) and blood samples for nearly 1,500 individuals. Those samples were analyzed for levels of active herpesviruses and biomarkers for inflammation.

"We found that self-rated health was associated with reactivation of herpesviruses," Murdock said. "We're not talking about the sexually transmitted disease, but viruses that are associated with things like cold sores that are ubiquitous among adults."

"Herpesvirus activity is a very good functional marker of cellular immunity, because almost everybody has been exposed to one type of the virus or another," Fagundes said. "It doesn't mean you're sick; it's probably been dormant in your cells for most of your life. But because it reactivates at a cellular level and prompts the immune system to fight it, it becomes a great marker of how the system is working.

"You can imagine that when the immune system's fighting something, you get more inflammation throughout the body, and inflammation contributes to disease. That's it in a nutshell," he said.

Previous studies by Fagundes and others demonstrated the link between herpesvirus activation and inflammation. While patients may not be aware of active herpesviruses or inflammation, the researchers suspected a mechanism stronger than mere instinct was responsible for their expressions of discomfort.

"We found that poor self-rated health was associated with more reactivation of these latent herpesviruses, which was associated with



higher inflammation, and we know those two things are associated with morbidity and mortality, as well as some cancers, type 2 diabetes and cardiovascular disease," Murdock said.

After eliminating data for 251 individuals who showed no sign of herpesvirus, the team wound up with a snapshot that clearly showed those who reported feeling in good health had low virus and inflammation levels, while those who said they felt poorly were high on the virus and inflammation scales.

The researchers noted that <u>primary care physicians</u> are highly unlikely to check for herpesvirus activity or inflammation. "It's too hard an assay to do clinically and takes too much time," Fagundes said. "They look at things like white blood cell counts in cancer patients but would never do a herpesvirus latency test, and tests for <u>inflammation</u> would be rare. These are good markers for long-term health, but not for things that are going to impact you tomorrow."

He said scientists haven't yet identified the channel that gives people a sense of impending illness. One theory is that fatigue is a marker. "I've heard many primary care physicians say they've never seen anyone with a disease that wasn't associated with fatigue," Fagundes said. Another possibility is a sense of imbalance in the gut microbiome, another avenue of future study.

But doctors should still pay close attention to what patients report. "When a patient says, 'I don't feel like my health is very good right now,' it's meaningful thing with a biological basis, even if they don't show symptoms," he said.

"When I go to patient-advocate conferences, people say they're grateful we're finding biological mechanisms because they feel like doctors have ignored them for years, saying, 'It's in your head.' Well, it's in your head,



but there's a reason."

**More information:** Kyle W. Murdock et al. The effect of self-reported health on latent herpesvirus reactivation and inflammation in an ethnically diverse sample, *Psychoneuroendocrinology* (2016). <u>DOI:</u> 10.1016/j.psyneuen.2016.06.014

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