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Want to avoid a cold? Try a tattoo or twenty, says researcher

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There's no known cure for the common cold, but receiving multiple tattoos can strengthen your immunological responses, potentially making you heartier in fighting off common infections, according to research by a trio of University of Alabama scholars.

However, receiving a single tattoo can, at least temporarily, lower your resistance, says Dr. Christopher Lynn, UA associate professor of anthropology. The research was published online March 4 in the *American Journal of Human Biology*.

Lynn said he had earlier noted first-hand that receiving tattoos can be physically draining.

"They don't just hurt while you get the tattoo, but they can exhaust you," Lynn said. "It's easier to get sick. You can catch a cold because your defenses are lowered from the stress of getting a tattoo."

The body's response to tattooing is akin to that experienced from exercising in the gym when you're out of shape, said Lynn. Initially, muscles become sore, but if you continue, the soreness fades following subsequent workouts.

"After the stress response, your body returns to an equilibrium," Lynn said. "However, if you continue to stress your body over and over again, instead of returning to the same set point, it adjusts its internal set points and moves higher."

You're getting stronger.

Lynn hypothesized that repeated tattooing might show similar benefits. Research results produced by former UA graduate student Johnna Dominguez, Lynn and Dr. Jason DeCaro, UA associate professor of anthropology, back up the hypothesis. Dominguez's work was done before receiving her UA master's degree.

Approaching volunteers at tattoo businesses in Tuscaloosa and Leeds, Dominguez surveyed them, obtaining information on the number of tattoos received and time involved in the tattooing procedures.

Saliva samples from the businesses' customers were obtained both before and after their tattoo experience. The researchers analyzed the samples, measuring levels of immunoglobulin A, an antibody that lines portions of our gastrointestinal and respiratory systems, and cortisol, a stress hormone known to suppress immune response.

"Immunoglobulin A is a front line of defense against some of the common infections we encounter, like colds," Lynn said.

Levels of immunoglobulin A dropped significantly in those receiving initial tattoos, as would be expected because of the immunosuppressant effects of cortisol, responding to the stress of tattooing. But the immunoglobulin A decrease was less so among those receiving tattoos more frequently, Lynn said.

"People with more tattoo experience have a statistically smaller decrease in immunoglobulin A from before to after," said Lynn.

When receiving a tattoo, the body mobilizes immunological agents to fight possible infections at the site of the new tattoo, Lynn said.

And, as with the weightlifter, the body that is tattooed repeatedly ratchets up the threshold that would necessitate an immunological response. They, too, the research indicates, are getting stronger, immunologically.

How does this study of tattooing relate to Lynn's previous research into fireside relaxation or speaking in tongues?

"I'm interested in neuroanthropology, or how culture gets into the body at a neurological level," Lynn said. "Many of the things I study have a 'catchy' quality to them. It's a concept I actually borrowed from my study of religion. Catch students' attention and get them interested in anthropology. Blow their minds a bit, then get them to dig deeper. I do that on purpose.

"The trick is to find ways to study catchy concepts that are also important. Nobody had done anything like this tattooing study, looking at the potential benefits from a biological perspective."

More information: Christopher D. Lynn et al. Tattooing to "Toughen up": Tattoo experience and secretory immunoglobulin A, *American Journal of Human Biology* (2016). DOI: 10.1002/ajhb.22847

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