

# Chronic exposure to staph bacteria may be risk factor for lupus, study finds

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Chronic exposure to even small amounts of staph bacteria could be a risk factor for the chronic inflammatory disease lupus, Mayo Clinic research shows. Staph, short for *Staphylococcus aureus*, is a germ commonly found on the skin or in the nose, sometimes causing infections. In the Mayo study, mice were exposed to low doses of a protein found in staph and developed a lupus-like disease, with kidney disease and autoantibodies like those found in the blood of lupus patients.

The findings are published online this month in *The Journal of Immunology*. The next step is to study [lupus patients](#) to see if the staph protein in question plays a similar role in humans, says co-author Vaidehi Chowdhary, M.D., a Mayo Clinic rheumatologist.

"We think this protein could be an important clue to what may cause or exacerbate lupus in certain genetically predisposed patients," Dr. Chowdhary says. "Our hope is to confirm these findings in lupus patients and hopefully prevent flares."

Another key question is whether treating at-risk people to eradicate staph can prevent lupus from forming in the first place. Lupus occurs when the immune system attacks tissues and joints. It may affect virtually any part of the body and can be tough to diagnose because it often mimics other ailments. There is no cure, only treatment to control symptoms. Lupus is more commonly diagnosed in women, African-Americans, Hispanics, Asians and people 15 to 40.

The cause is often unknown; it appears people genetically predisposed to lupus may develop it when something in the environment triggers it, such as infections, certain drugs or even sunlight.

Physicians do not really know what causes lupus, so the discovery of the staph protein's possible role is exciting, Dr. Chowdhary says.

In the mice studied, a staph protein known as a staphylococcal enterotoxin B, or SEB, activated autoreactive T and B lymphocytes, a type of [white blood cells](#), leading to an inflammatory illness mirroring lupus. Research on people has shown that carrying [staph bacteria](#) is linked to autoimmune diseases such as psoriasis, Kawasaki disease and granulomatosis with polyangiitis.

Provided by Mayo Clinic

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