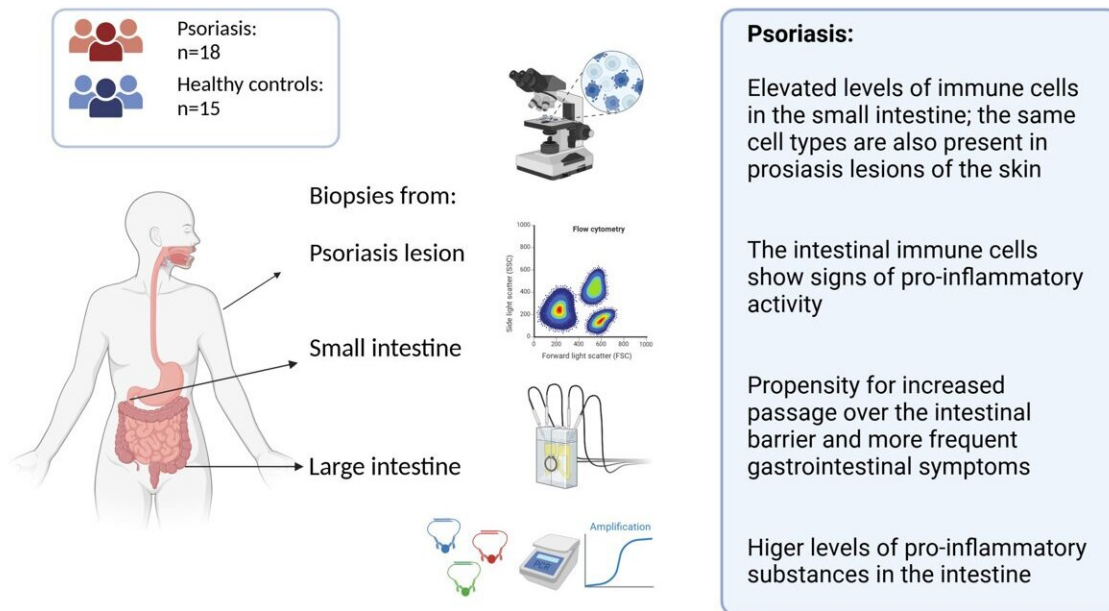


Inflammation may explain stomach problems in psoriasis sufferers

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Samples were taken from both their small and large bowel. The researchers then studied different types of immune cells in the mucous membrane. Credit: Maria Lampinen

People with the skin condition psoriasis often have invisible inflammation in the small intestine with an increased propensity for

"leaky gut," according to new research at Uppsala University. These changes in the gut could explain why psoriasis sufferers often have gastrointestinal problems and are more prone to developing Crohn's disease.

The study is [published](#) in *Biochimica et Biophysica Acta (BBA)*—*Molecular Basis of Disease*.

Psoriasis is a hereditary, [chronic skin condition](#) that can also result in [inflammation](#) of the joints. In Sweden, almost 300,000 people live with some form of the condition. Chronic inflammatory bowel diseases (IBD), especially Crohn's disease, are more common in patients with [psoriasis](#) than in the rest of the population.

"Previous research has also shown that people with psoriasis have more gastrointestinal problems than the general population. However, we didn't know much about why this is the case. With our study, we can now show that people with psoriasis often have invisible inflammation in their small intestines, with an increased risk of what's called leaky gut," says Maria Lampinen, researcher at Uppsala University.

Pro-inflammatory activity in the gut

The study involved 18 patients with psoriasis and 15 healthy controls as subjects. None of the participants had been diagnosed with gastrointestinal diseases. Samples were taken from both the small and large bowel. The researchers then studied different types of immune cells in the mucous membrane.

Lampinen says, "It turned out that psoriasis sufferers had higher numbers of certain types of immune cells in their small intestine, and the cells showed signs of pro-inflammatory activity. Interestingly, we found the same type of immune cells in skin flare-ups from psoriasis patients,

suggesting that the inflammation of the skin may have an impact on the gut, or vice versa."

Increased propensity for leaky gut

Normally, the [intestinal mucosa](#) acts as a protective barrier that also allows nutrients and water to pass through it. In some autoimmune diseases, the intestinal barrier may function poorly.

This is called having a leaky gut, and leads to bacteria and harmful substances leaking through the intestinal barrier and causing inflammation. This can also cause more widespread inflammation when these substances are spread via the bloodstream.

Half of the psoriasis patients in the study had increased intestinal barrier permeability or [leaky gut](#). These same patients also reported more [gastrointestinal symptoms](#) such as [abdominal pain](#) and bloating than patients with a normal intestinal barrier. They also had elevated levels of inflammatory substances in their intestines.

"Given that the psoriasis patients in our study had relatively mild skin disease and showed no visible intestinal inflammation in a gastroscopy, they had surprisingly clear changes in their [small intestine](#) compared to healthy controls. These changes could explain why psoriasis sufferers often have gastrointestinal problems, and an increased risk of developing Crohn's disease," says Lampinen.

Important research for these patients

The Psoriasisförbundet (the Swedish Psoriasis Association) member magazine published an article about this study. Following its publication, Lampinen received many e-mails from people who recognized this

phenomenon.

"They wanted to know more about the link between the gut and the skin because they recognized that symptoms from their gut and skin were often linked. So it feels like this research is needed and is important for the patients themselves," says Lampinen.

A greater understanding of gastrointestinal problems in psoriasis patients can help the health care system to pay more attention to the link between the gut and the skin in patients with psoriasis, and in the long term it could also lead to better treatment of these problems.

More information: Patrik Lundquist et al, Mild-to-moderate psoriasis is associated with subclinical inflammation in the duodenum and a tendency of disturbed intestinal barrier, *Biochimica et Biophysica Acta (BBA) - Molecular Basis of Disease* (2024). [DOI: 10.1016/j.bbadis.2024.167634](https://doi.org/10.1016/j.bbadis.2024.167634)

Provided by Uppsala University

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