

Stomach-protecting medicines can trigger allergies

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Stomach-protecting drugs are widely used. Now, using quantitative prescribing data from Austria, a study conducted by MedUni Vienna in collaboration with the Austrian Social Insurance Institutions, has shown that stomach-protecting drugs (especially so-called proton pump inhibitors or PPIs) correlate with subsequent prescriptions for anti-

allergy medication. Based on virtually the entire population, this now validates the finding of previous epidemiological and experimental studies that stomach-protecting drugs can intensify or even trigger allergies. The risk of an allergic reaction to allergens that requires anti-allergy treatment is doubled or even tripled. The results were recently published in *Nature Communications*.

Gastric [acid](#) inhibitors reduce the production of [gastric acid](#), relieve heartburn and promote healing of any damaged [gastric mucosa](#). They are frequently prescribed in support of drug therapies to prevent stomach problems or to counteract bloating. They are often the [drug](#) of choice for stress responses leading to reflux (heartburn). In 2013, health insurers in Austria paid for [prescriptions](#) for at least one pack of PPIs for 1,540,505 people.

A country-wide study conducted by MedUni Vienna has now found a correlation between taking stomach protectors, especially from the family of [proton pump inhibitors](#), and the subsequent prescription of anti-allergy drugs.

The study analyzed prescriptions of anti-allergy medication (antihistamines, allergen immunotherapies) to people who had previously had prescriptions for stomach protectors from the years 2009 to 2013. The data for this quantitative study were primarily provided by all the Austrian Social Insurance Institutions. The correlation was striking, explains first author Galateja Jordakieva: "People who take stomach-protecting medication such as PPIs double or even triple their risk of developing allergic symptoms that require treatment."

Gastric acid fulfills an important function in the digestive tract. The acid-dependent enzymes contained in it break down proteins in the food and take them for further processing. It also acts as a barrier against bacteria and other pathogens. If these functions are diminished because of

inhibited gastric acid production, allergens can find their way into the gut unprocessed. This can trigger allergies or aggravate the symptoms of people with pre-existing allergies.

Principal investigator Erika Jensen-Jarolim warns against uncontrolled use: "So-called 'stomach protectors' should not be used for any longer than necessary. They prevent protein digestion, change the microbiome in the gastro-intestinal tract and increase the risk of allergic reactions. As soon as they have fulfilled their prescribed medical function, they should be stopped as quickly as possible."

Moreover, gastric acid inhibitors only treat the symptoms and not the cause of a complaint. "Treating doctors should therefore ensure that such drugs are taken for the shortest possible time. Where they are used to treat stress symptoms such as heartburn, it is therefore better to make a lifestyle change or address one's [work-life balance](#)," says Jensen-Jarolim.

More information: Galateja Jordakieva et al. Country-wide medical records infer increased allergy risk of gastric acid inhibition, *Nature Communications* (2019). [DOI: 10.1038/s41467-019-10914-6](https://doi.org/10.1038/s41467-019-10914-6)

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