

When flying leads to stomach pain

September 16 2013

Patients with a chronic intestinal inflammation often experience bouts of inflammation after a journey. The main cause of this is not the stress of travelling, but the lack of oxygen experienced in an aircraft or during high altitude stays in the mountains. By taking this new risk factor into account further bouts can be prevented. This is the conclusion of a study supported by the Swiss National Science Foundation (SNSF).

A [lack of oxygen](#) or the proverbial thin air, as is common at high altitudes or during flights, can trigger inflammation in the intestinal tract in people with a corresponding predisposition. Researchers of the Swiss IBD Cohort Study have now confirmed this correlation in studies of some one hundred patients suffering from [inflammatory bowel disease](#) (IBD). In the month following a stay at [high altitude](#) or a flight, bouts of inflammation occurred far more frequently, as researchers led by Stephan R. Vavricka of the Triemli hospital in Zurich reported in their recently published study.

Travel stress is not to be blamed

Patients with IBD are often aware of the link between travelling and occurrences of inflammation and therefore frequently decide not to travel to remote destinations at all due to past experience. In general, however, the outbreaks are blamed on the stress of travelling or infections picked up abroad, says Vavricka. But the gastroenterologist and first author of the study is certain that a lack of oxygen triggers bouts of inflammation. A flight corresponds to a stay at 2,500 metres above sea level as regards the [oxygen concentration](#) in the air. The results

show that flying and travelling to the mountains cause a similar increase in the frequency of bouts of inflammation. The correlation can also be proven in the laboratory using tissue samples that show an [inflammatory reaction](#) in the event of [oxygen starvation](#), says Vavricka.

If stays at higher altitudes and flights are considered as major [risk factors](#) for bouts of inflammation in IBD patients, this can make patients' lives easier. Doctors, for instance, will be able to prescribe medication before a journey, in order to mitigate the bowels' reaction to the lack of oxygen and to prevent an outbreak of inflammation.

Environmental influences play a key role

The same group of researchers only recently showed that IBD patients also experience more frequent bouts of inflammation during heat waves. This makes it increasingly clear that environmental influences play a pivotal role in inflammation of the [intestinal tract](#). Further research is needed to shed light on these correlations in coming years, so that doctors can be supplied with better information as a basis for their diagnoses. In this regard, several series of experiments utilizing pressure chambers are planned.

Swiss IBD cohort study

With the aim of gaining a better understanding of inflammatory bowel diseases or IBD, specialist hospitals, private practice physicians and university institutions have come together to pool their knowledge. They are collecting the medical data of now nearly 2,000 affected persons who are participating in this long-term study. The study has been supported by the Swiss National Science Foundation since 2005.

More information: Vavricka, S. et al. (2013), High altitude journeys

and flights are associated with an increased risk of flares in inflammatory bowel disease patients, *J Crohns Colitis*. DOI: [10.1016/j.crohns.2013.07.011](https://doi.org/10.1016/j.crohns.2013.07.011)

Provided by Swiss National Science Foundation

Citation: When flying leads to stomach pain (2013, September 16) retrieved 26 April 2024 from <https://medicalxpress.com/news/2013-09-stomach-pain.html>

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