

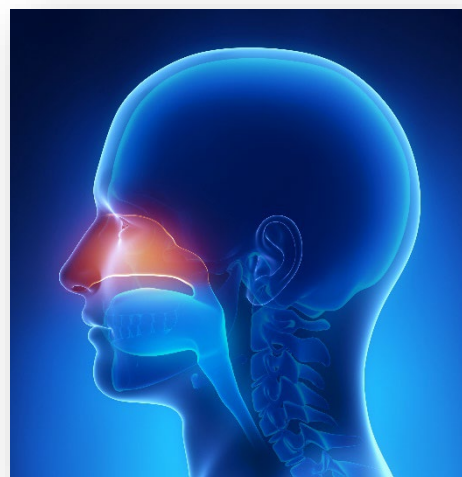
A NOSEFUL OF LIPIDS

In Human, the *olfactory mucosa* is located at the top of each nasal cavity. This mucosa contains the olfactory neurons, which are responsible for the detection of odorant compounds.

The wall or membrane of olfactory neurons contains the olfactory receptors that interact with odorant molecules to produce an olfactory signal - a nerve message transmitted to the brain. This membrane is mainly made up of lipids, which help the olfactory receptors function properly. However, the lipid composition of the olfactory mucosa has not been adequately characterized.

A collaborative study conducted by CSGA researchers and a German team analysed samples of olfactory mucosa collected from people who had had nose surgery. They found that the olfactory mucosa contains a significant amount of omega-6 fatty acids. More specifically, the researchers observed that the level of arachidonic acid - a fatty acid involved in the inflammatory response - is higher in the mucosa of people with an olfactory deficiency. A link was also observed between the concentration of arachidonic acid in the olfactory mucosa and that in the blood.

This study sheds new light on the lipid composition of the human olfactory mucosa. It also suggests that analysis of the level of arachidonic acid in the blood could be used to predict the level of the same fatty acid in the olfactory mucosa.



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To know more

Khoury S, Gudziol V, Grégoire S, Cabaret S, Menzel S, Martine L, Mézière E, Soubeyre V, Thomas-Danguin T, Grosmaître X, Bretillon L, Berdeaux O, Acar N, Hummel T, Le Bon AM (2021). Lipidomic profile of human nasal mucosa and associations with circulating fatty acids and olfactory deficiency. *Scientific Reports*, 11:16771.

Key words

Olfaction; olfactory mucosa; lipid; fatty acid; blood