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☆ Perceived intensity of fish smell (Gisladdottir, 2020)

Rosa Gisladdottir, et al.
Current Biology

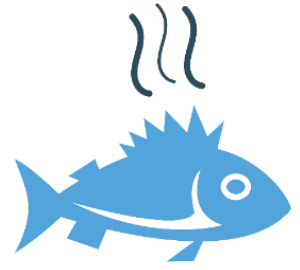
Nose Senses

STUDY SUMMARY

Identification of a region of the genome associated with how intensely fish smell is perceived.

STUDY DESCRIPTION

The perception of smell is enabled by olfactory receptors, which are proteins that bind odor molecules. Humans have about 350 olfactory receptor genes that each can detect a number of different odor compounds that together can create a vast number of different scents. However, when presented with the same smell, different individuals may perceive the smell's intensity differently. This genome-wide association study looked at the genomes of over 11,000 Icelandic people to identify the genetics underlying differences in perception of the smell of fish. Researchers found one variant, located in a gene known as TAAR5, that is associated with how strongly people perceive the smell of fish. Interestingly, the TAAR5 gene encodes an olfactory receptor that has been found to be activated by odor molecules present in rotten but not fresh salmon. This suggests that the TAAR5 receptor may have a role in discouraging the ingestion of bacteria present in spoiled fish and other foods. The TAAR5 receptor has also been shown to detect other "stinky" odors, such as other animal smells, sweat, and bad breath.



Some people perceive fish smell more intensely.

DID YOU KNOW?

Anosmia, or the loss of the sense of smell, can be an early sign of neurodegenerative disorders such as Alzheimer's and Parkinson's disease.

YOUR DETAILED RESULTS

The variants highlighted in green have **positive effect sizes** and increase your genetic predisposition to increased intensity of fish smell perception. The variants highlighted in blue have **negative effect sizes** and decrease your genetic predisposition to increased intensity of fish smell perception. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to increased intensity of fish smell perception. However, please note that genetic predispositions do not account for important non-genetic factors like lifestyle. Furthermore, the genetics of most traits has not been fully understood yet and many associations between traits and genetic variants remain unknown. For additional explanations, click on the column titles in the table below and visit our [Nebula Library tutorial](#).

VARIANT [ⓘ]	YOUR GENOTYPE [ⓘ]	COMMENTS	EFFECT SIZE [ⓘ]	VARIANT FREQUENCY [ⓘ]	SIGNIFICANCE [ⓘ]
rs41286168_G 	A / A	In the TAAR5 gene	-0.37 [-]	5%	5.60×10^{-16}