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🌟 Cytokine S100B levels (Wang, 2020)

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PLoS Genetics

Inflammation Blood

STUDY SUMMARY

Discovery of 2 genetic variants associated with the levels of S100B cytokine in the blood, a marker of inflammation.

STUDY DESCRIPTION

Inflammation is a defense response formed by the body's immune system in response to injury or illness, but can also be initiated due to stress and environmental factors. While acute inflammation generally helps repair damage in the body, chronic inflammation can cause a host of issues such as arthritis, heart disease, and dementia. One group of proteins particularly important for the inflammatory process are known as cytokines. Cytokines circulate in the blood and help coordinate the immune system response. One such cytokine is S100B. Elevated S100B levels have previously been connected to traumatic head injury and neurodegenerative diseases. This genome-wide association study attempted to discover variants associated with S100B levels in the blood by examining genetic data from around 12,000 individuals of European ancestry. Two unique regions of the genome were found to be associated with S100B levels. Remarkably, the variant rs62224256 alone was found to account for 18% of the variation in S100B levels.



DID YOU KNOW?

Stress has been associated with an increased risk of getting sick. Stress leads to elevated levels of inflammatory markers in the blood, which reduce the body's ability to fight infections.

YOUR DETAILED RESULTS

The variants highlighted in green have **positive effect sizes** and increase your genetic predisposition to higher cytokine S100B levels. The variants highlighted in blue have **negative effect sizes** and decrease your genetic predisposition to higher cytokine S100B levels. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to higher cytokine S100B levels.

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 [ⓘ]	EFFECT SIZE [ⓘ]	VARIANT FREQUENCY [ⓘ]	SIGNIFICANCE [ⓘ]
rs62224256_A 	G / G	-0.61 (-)	49%	1.00×10^{-300}
rs28397289_T 	C / C	0.15 (-)	24%	7.67×10^{-19}