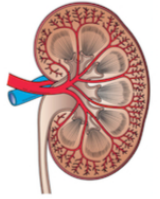


04/2010

★ Creatinine level (Chambers, 2010)

John C. Chambers, et al.
Nature Genetics

Kidneys

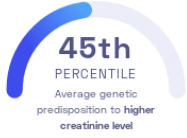


Blood flow in the kidney.

STUDY SUMMARY

Chronic kidney disease is linked to genetic variants that influence serum creatinine and cystatin C - two of the main *biomarkers* of kidney function.

YOUR RESULT



STUDY DESCRIPTION

Chronic kidney disease is a permanent loss of kidney function over time. This study examined the genomes of 23,812 people of European ancestry to identify genetic variants that are associated with an increased risk of chronic kidney disease. It discovered 4 novel variants all linked to serum creatinine, a *biomarker* of kidney function. Creatinine is a waste product produced by our bodies during muscle metabolism. Normally, it is excreted; however, if your kidneys aren't working well, creatinine can accumulate in your blood serum. A high serum creatinine level indicates that your kidneys aren't functioning properly. The study also found that the same 4 variants were associated with cystatin C, a protein that serves as another *biomarker* of kidney function.

DID YOU KNOW?

Keeping your blood sugar and blood pressure levels under control is the best way to prevent kidney disease. Eating a low-salt, low-fat diet, exercising at least 30 minutes on most days of the week, and limiting alcohol are also good ways to prevent kidney disease.

YOUR DETAILED RESULTS

To calculate your genetic predisposition to higher creatinine level we summed up the effects of genetic variants that were linked to higher creatinine level in the [study that this report is based on](#). These variants can be found in the table below. The variants highlighted in green have **positive effect sizes** and increase your genetic predisposition to higher creatinine level. The variants highlighted in blue have **negative effects sizes** and decrease your genetic predisposition to higher creatinine level. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to higher creatinine level. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for higher creatinine level to be 0.00**. To determine whether your score is high or low, we compared it to the scores of 5,000 other Nebula Genomics users. We found that your polygenic score for higher creatinine level is in the **45th percentile**. This means that it is higher than the polygenic scores 45% of people. We consider this to be an **average genetic predisposition to higher creatinine level**. 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 [Ⓞ]
rs10206899_C NEW	T / T	-1.00 (-)	22%	1.20×10^{-16}
rs4805834_T NEW	C / C	-1.00 (-)	13%	4.60×10^{-11}
rs8068318_C NEW	T / T	0.80 (-)	27%	3.40×10^{-10}
rs3127573_G NEW	A / A	1.10 (-)	13%	6.50×10^{-10}