

Evidence found of genetic evolution in Europeans over past several thousand years

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A team of researchers affiliated with several institutions in China has found evidence of natural selection based evolutionary changes to people living in Europe over the past two to three thousand years. In their paper published in the journal *Nature Human Behavior*, the group describes their comparative study of people living in the U.K. today, with those living across Europe over the past several thousand years.

Noting that few studies have been conducted with the goal of learning more about [evolutionary changes](#) in people living in relatively [modern times](#), the researchers designed a study that was meant to learn more about how natural selection has impacted people living in Europe over the past several thousand years.

To that end, they obtained access to the U.K. Biobank and the data it holds, some of which is genetic. They also obtained similar data from other entities holding [genetic material](#) retrieved from the remains of people living in Europe over the past several thousand years. The team then selected 870 [human traits](#) that have been identified as being associated with certain genes related to phenotype and compared those found in modern British people (most of whom have European backgrounds) with those found in people living across Europe over the past few thousand years.

In looking at the data, the researchers found evolution at work in 755 genes related to the traits they had selected over the past 2,000 to 3,000 years—and they included skin pigmentation, dietary traits and body measurements. All three traits were found to be under near constant selection pressure, leading to near constant changes to the genome.

They note that [skin pigmentation](#) changes were expected due to the differences in exposure to ultraviolet light—the early migrators to Europe were known to have dark skin; over time, they became lighter. They also found changes related to consumption of vitamin D, heat regulation and body measurements. Such changes they note, were also likely due to changes in climate. The researchers also found that some expected changes had not come about—genetic factors associated with inflammatory bowel disease and anorexia nervosa, for example, had not changed much.

The research team acknowledges that their results are still preliminary as

more detailed work is needed.

More information: Weichen Song et al, A selection pressure landscape for 870 human polygenic traits, *Nature Human Behaviour* (2021). [DOI: 10.1038/s41562-021-01231-4](https://doi.org/10.1038/s41562-021-01231-4)

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