

Stone Age Scandinavians unable to digest milk

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The hunter-gatherers who inhabited the southern coast of Scandinavia 4,000 years ago were lactose intolerant. This has been shown by a new study carried out by researchers at Uppsala University and Stockholm University. The study, which has been published in the journal *BMC Evolutionary Biology*, supports the researchers' earlier conclusion that today's Scandinavians are not descended from the Stone Age people in question but from a group that arrived later.

"This group of hunter-gatherers differed significantly from modern Swedes in terms of the DNA sequence that we generally associate with a capacity to digest lactose into adulthood," says Anna Linderholm, formerly of the Archaeological Research Laboratory, Stockholm University, presently at University College Cork, Ireland.

According to the researchers, two possible explanations exist for the DNA differences.

"One possibility is that these differences are evidence of a powerful selection process, through which the Stone Age hunter-gatherers' genes were lost due to some significant advantage associated with the capacity to digest milk," says Anna Linderholm. "The other possibility is that we simply are not descended from this group of [Stone Age](#) people."

The capacity to consume unprocessed milk into adulthood is regarded as having been of great significance for human prehistory.

"This capacity is closely associated with the transition from hunter-gatherer to agricultural societies," says Anders Götherström of the Department of Evolutionary Biology at Uppsala University.

He serves as coordinator of LeCHE (Lactase persistence and the early Cultural History of Europe), an EU-funded research project focusing on the significance of [milk](#) for European prehistory.

"In the present case, we are inclined to believe that the findings are indicative of what we call "[gene flow](#)," in other words, migration to the region at some later time of some new group of people, with whom we are genetically similar," he says. "This accords with the results of previous studies."

The researchers' current work involves investigating the genetic makeup of the earliest agriculturalists in Scandinavia, with an eye to potential answers to questions about our ancestors.

More information: Paper: www.biomedcentral.com/1471-2148/10/89

Provided by Uppsala University

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