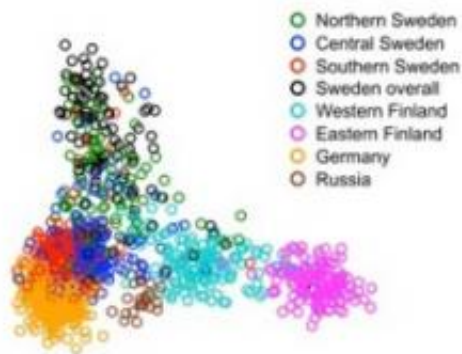


Northern, Southern Swedes are genetically different

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Genetic distances between 1665 Northern Europeans. Individuals are coloured according to their origin.

(PhysOrg.com) -- People from northern and southern Sweden differ from each other genetically, according to the largest genetic study of the Swedish population yet. Swedes also have genetically more in common with Germans and British than with Finns. The study, performed jointly at Karolinska Institutet in Sweden and University of Helsinki, has been published in *PLoS ONE*.

"Knowledge of the population's genetic structure is important for understanding where we come from and for identifying genes that underlie diseases," says one of the leaders of the study, Professor Per Hall from the Department of Medical Epidemiology and Biostatistics at

Karolinska Institutet.

The study showed that people from Northern and Southern Sweden are genetically different from each other. However, the [genetic change](#) from south to north is gradual, and no strong genetic borders exist within Sweden. In the study, the researchers used more than 350,000 genetic markers called single [nucleotide polymorphisms](#) (SNPs) that are distributed across the human [genome](#). More than 1500 people of Swedish origin from different parts of the country were analyzed, and also compared to many neighboring populations.

"Despite close contacts within the Nordic region, the Swedes appeared genetically closer to Germans and British than to Finns", says Professor Juha Kere from the Department of Biosciences and Nutrition at Karolinska Institutet.

The results also show that local genetic differences are small in Southern Sweden but larger in the North. These differences are a result of population history: in the north, the population has been smaller, which has led to pronounced local differences.

More information: The full study can be found here:
www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0016747

Provided by Karolinska Institutet

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