

NewTwin - Genetic, Social and Environmental Factors Impact on Health and Behavior - A Study from the Swedish Twin Registry

SND-ID: 2024-486.

Is part of collection at SND: [The Swedish Twin Registry](#)

Associated documentation

NewTwin_Codebook.xlsx (50.46 KB)

NewTwin_Survey.pdf (343.64 KB)

Creator/Principal investigator(s)

[Patrik Magnusson](#) - Karolinska Institutet, Department of Medical Epidemiology and Biostatistics

Research principal

[Karolinska Institutet](#) - Department of Medical Epidemiology and Biostatistics

Description

This ongoing twin study, initiated in 2021, focuses on all twins born in Sweden. Parents are invited to complete an online questionnaire when their twins are approximately nine months old. The questionnaire includes areas such as pregnancy, neonatal care, screen time and parental health habits. Additionally, saliva samples are collected to determine the twins' zygosity and genotyping. The genotype data is used in genetic association studies to explore diseases, health-related traits and behaviors.

Question Areas:

Parents' education, income and occupation

Fertility treatment

Parents' health

Parents' smoking and alcohol habits (current and during pregnancy)

Pregnancy from the mother's perspective

Pregnancy from the twins' perspective

Birth weight and length

Neonatal care

Breastfeeding

Vaccinations

Twin development

Sleep habits of the twins

Zygosity, twin similarities and differences

Family screen time and screen use

Data contains personal data

Yes

Sensitive personal data

Yes

Type of personal data

Pseudonymised, health data, social security number, pregnancy, lifestyle, exposures, names, addresses

Code key exists

Yes

Language

[English](#)

[Swedish](#)

Unit of analysis

[Family](#)

[Individual/Patient](#)

Population

Twins born in Sweden since January 1, 2021, onwards, at approximately 9 months of age.

Time Method

[Cross-section](#)

[Longitudinal: Cohort/Event-based](#)

Study design

Cohort study

Description of study design

Data collection is conducted via a web-based survey. Participation in the study is based on informed consent.

Sampling procedure

[Total universe/Complete enumeration](#)

Parents of twins born in Sweden, where both twins are alive, are invited to participate when the twins are between 7 and 10 months old. Twins are excluded if they have protected identity, have emigrated, or if their parents have opted out of contact with the Swedish Twin Registry. Only complete twin pairs are invited.

Time period(s) investigated

2021-11-01 - Ongoing

Biobank is connected to the study

The study has collected samples/material which are stored in a scientific collection or biobank
Scientific collection or biobank name: KI Biobank

Type(s) of sample: DNA from saliva

Variables

276

Number of individuals/objects

4480

Response rate/participation rate

53%

The total number of participating twins (through the participation of a parent) is 4 480 out of 8 480 invited (December 2024), resulting in a response rate of 53%. Of the respondents, there is genotype data for about 800 twins, 18%.

Data format / data structure

[Numeric](#)

[Text](#)

Data collection 1

- Mode of collection: Self-administered questionnaire
- Description of the mode of collection: An invitation to a web survey is sent to all parents of Swedish-born twins aged 7–10 months, followed by two reminders. The parents are also asked whether they wish to provide saliva samples from the twins. If they agree, they receive a saliva kit by mail, which they then send to KI Biobank along with a consent form.
- Time period(s) for data collection: 2021-11-01-ongoing
- Data collector: Karolinska Institutet
- Source of the data: Registers/Records/Accounts: Medical/Clinical, Registers/Records/Accounts

Geographic spread

Geographic location: [Sweden](#)

Geographic description: Nationwide

Lowest geographic unit

Parish

Highest geographic unit

Country

Responsible department/unit

Department of Medical Epidemiology and Biostatistics

Funding 1

- Funding agency: Karolinska Institutet
- Funding information: Government grants

Funding 2

- Funding agency: The Swedish Research Council
- Funding information: Grant numbers: 2017-00641, 2023-00180

Ethics Review

Swedish Ethical Review Authority - Ref. 2021-02032

Ethical approval: 12 July 2021

Research area

[Drug abuse, alcohol and smoking](#) (CESSDA Topic Classification)

[Employment](#) (CESSDA Topic Classification)

[Unemployment](#) (CESSDA Topic Classification)

[Children](#) (CESSDA Topic Classification)

[Medical and health sciences](#) (Standard för svensk indelning av forskningsämnen 2011)

[Public health, global health, social medicine and epidemiology](#) (Standard för svensk indelning av forskningsämnen 2011)

[Reproductive health](#) (CESSDA Topic Classification)

[Health](#) (CESSDA Topic Classification)

[Income, property and investment/saving](#) (CESSDA Topic Classification)

[General health and well-being](#) (CESSDA Topic Classification)

[Medication and treatment](#) (CESSDA Topic Classification)

[Specific diseases, disorders and medical conditions](#) (CESSDA Topic Classification)

[Social conditions and indicators](#) (CESSDA Topic Classification)

Keywords

[Phenotype](#), [Genetics](#), [Genotype](#), [Twins](#), [Twins, dizygotic](#), [Twins, monozygotic](#), [Gene-environment interaction](#), [Saliva dna](#), [Zygoty](#)

Accessibility level

Access to data through an external actor

Access to data is restricted

License

[CC0 1.0](#)

Homepage

[The Swedish Twin Registry](#)

[strdata.se](#)

Contact for questions about the data

str-research@meb.ki.se

Is part of collection at SND

[The Swedish Twin Registry](#)

Download metadata

[DataCite](#)

[DDI 2.5](#)

[DDI 3.3](#)

[DCAT-AP-SE 2.0](#)

[JSON-LD](#)

[PDF](#)

[Citation \(CSL\)](#)