Swedish Twin Registry

SND-ID: ext0163-1.

Is part of collection at SND: Swedish Cohort Consortium (Cohorts.se)

Creator/Principal investigator(s)

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Research principal

Karolinska Institutet - Department of Medical Epidemiology and Biostatistics

Description

STR has been based at the Karolinska Institutet since 1959, first at the Institution of Hygien and thereafter at Medical Epidemiology and Biostatistics, MEB. STR was originally created primarily to study the importance of environmental factors for the development of cardiovascular/respiratory diseases and cancer, but has since then evolved to a resource for all epidemiological and genetic aspects of ill health.
The research that is based on STR is financed externally through grants that the users apply for individually. STR is in this way making up the basis for a lot of research; during the past decade over 50 articles have been published annually, where of several in high impact journals.
STR has during the past decade transformed from being primarily an epidemiological resource to forming a biobank of samples (DNA, blood and serum) for a large number of twins. Genome-wide genotyping of close to 30 000 participants have been undertaken and the plan is that all DNA samples shall become genotyped on a genome-wide platform the coming few years. Serum from 12 600 twins have so far been used for measurements of classical blood biomarkers. Generated genotypes and biomarker measurements builds in an effective manner up the value of STR as an molecular epidemiological resource.

Purpose:

The goal of the Swedish Twin Registry (STR) is to provide a longitudinal research infrastructure in the form of a population-based twin cohort of adequate size and content to enable powerful epidemiological and molecular medical studies. The study designs used are classical epidemiological investigations of risk-factors for disease and death (providing within twin pair designs), genetic association studies, heritability studies (both twin model based and molecular based), epigenetics, proteomics as well as other types of "-omics" approaches. STR is open for Swedish researchers and international researchers that have a Swedish collaborator.

Unit of analysis

Individual

Population

Twin pairs, both monozygotic and dizygotic, born in Sweden

Time Method

Longitudinal

Sampling procedure

Total universe/Complete enumeration

Time period(s) investigated

1961 – Ongoing

Biobank is connected to the study

Yes

Data format / data structure

Numeric

Other

Data collection 1

- Time period(s) for data collection: 1961–ongoing
- Source of the data: Registers/Records/Accounts: Medical/Clinical, Population group, Biological samples, Registers/Records/Accounts

Data collection 2

- Mode of collection: Self-administered questionnaire
- Time period(s) for data collection: 1961–ongoing
- Source of the data: Registers/Records/Accounts: Medical/Clinical, Population group, Biological samples, Registers/Records/Accounts

Data collection 3

- Mode of collection: Physical measurements and tests
- Time period(s) for data collection: 1961–ongoing
- Source of the data: Registers/Records/Accounts: Medical/Clinical, Population group, Biological samples, Registers/Records/Accounts

Geographic spread

Geographic description: Sweden

Responsible department/unit

Department of Medical Epidemiology and Biostatistics

Research area

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

Medical genetics (Standard för svensk indelning av forskningsämnen 2011)

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

Health (CESSDA Topic Classification)

Keywords

Behavior, Arthritis, rheumatoid, Child, Diabetes mellitus, Family, Genetics, Cardiovascular diseases, Health, Hypertension, Migraine disorders, Environment, Environmental exposure, Parkinson disease, Smoking, Disease, Tobacco, Fatigue, Heredity, Twin study, Youth, Feeding behavior, Swedish cohort

consortium (scc), Heritability, Cohorts.se

Publications

Magnusson PK, Almqvist C, Rahman I, Ganna A, Viktorin A, Walum H, Halldner L, Lundström S, Ullén F, Långström N, Larsson H, Nyman A, Gumpert CH, Råstam M, Anckarsäter H, Cnattingius S, Johannesson M, Ingelsson E, Klareskog L, de Faire U, Pedersen NL, Lichtenstein P. The Swedish Twin Registry: establishment of a biobank and other recent developments. Twin Res Hum Genet. 2013 Feb;16(1):317-29. doi: 10.1017/thg.2012.104. Epub 2012 Nov 9. PubMed PMID: 23137839.

Lichtenstein P, Sullivan PF, Cnattingius S, Gatz M, Johansson S, Carlström E, Björk C, Svartengren M, Wolk A, Klareskog L, de Faire U, Schalling M, Palmgren J, Pedersen NL. The Swedish Twin Registry in the third millennium: an update. Twin Res Hum Genet. 2006 Dec;9(6):875-82. PubMed PMID: 17254424.

If you have published anything based on these data, please notify us with a reference to your publication(s). If you are responsible for the catalogue entry, you can update the metadata/data description in DORIS.

Accessibility level

Access to data through an external actor
Access to data is restricted

Homepage

The study homepage

Contact for questions about the data

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Is part of collection at SND

Swedish Cohort Consortium (Cohorts.se)

Download metadata

DataCite

DDI 2.5

DDI 3.3

DCAT-AP-SE 2.0

JSON-LD

PDF

Citation (CLS)