

# The Northern Sweden MONICA Study 1999

**SND-ID:** ext0042-4.

**Is part of collection at SND:** [Swedish Cohort Consortium \(Cohorts.se\)](#), [Swedish Diet Cohort Consortium \(SDCC\)](#)

## **Creator/Principal investigator(s)**

Stefan Söderberg - Umeå university, Department of Public Health and Clinical Medicine

Ann-Sofie Forslund - Norrbotten County Council, Department of Research

## **Research principal**

[Umeå University](#) - Department of Public Health and Clinical Medicine

## **Description**

The Northern Sweden MONICA Study started with the WHO MONICA Study in 1985. The purpose was to monitor trends in mortality and morbidity in cardiovascular disease and relate them to trends in risk factors. Since 1985 21,000 strictly validated stroke events and 18,000 myocardial infarctions have been included in two registers. During the same period, six population based surveys have been taking place, the latest in 2009. The participation rates have been 69-81%. Subjects donated samples to the Northern Sweden Biobank. After 25 years since the start of the study, participants are starting to suffer from stroke, infarctions and diabetes in a rapidly increasing rate. We have successfully matched the event registers with population survey data, thereby creating a cost-effective prospective study design for MI, stroke and diabetes. Data from the three data bases has been used in more than 85 original studies and 14 dissertations since 2007. Increasingly other fields have been explored such as infectious diseases, nutrition and environmental toxins.

Purpose:

To study cardiovascular risk factors in the population and the incidence of myocardial infarction and stroke after strict validation.

A randomised sample of 2500 persons in ages 25-74 were invited to participate in the 1999 study.

## **Unit of analysis**

[Individual](#)

## **Population**

25-74 years old

## **Time Method**

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

## **Sampling procedure**

[Probability: Stratified](#)

## **Time period(s) investigated**

1999 - Ongoing

**Number of individuals/objects**

1823

**Response rate/participation rate**

73%

**Data format / data structure**

[Numeric](#)

**Data collection 1**

- Mode of collection: Field observation
- Time period(s) for data collection: 1999
- 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: paper
- Time period(s) for data collection: 1999
- Source of the data: Registers/Records/Accounts: Medical/Clinical, Population group, Biological samples, Registers/Records/Accounts

**Data collection 3**

- Time period(s) for data collection: 1999
- Source of the data: Registers/Records/Accounts: Medical/Clinical, Population group, Biological samples, Registers/Records/Accounts

**Data collection 4**

- Mode of collection: Physical measurements and tests
- Time period(s) for data collection: 1999
- Source of the data: Registers/Records/Accounts: Medical/Clinical, Population group, Biological samples, Registers/Records/Accounts

**Geographic spread**

Geographic location: [Sweden](#)

Geographic description: Norrbotten and Västerbotten Counties

**Lowest geographic unit**

County (NUTS3)

**Responsible department/unit**

Department of Public Health and Clinical Medicine

**Research area**

[Social and clinical pharmacy](#) (Standard för svensk indelning av forskningsämnen 2011)

[Endocrinology and diabetes](#) (Standard för svensk indelning av forskningsämnen 2011)

[Cardiac and cardiovascular systems](#) (Standard för svensk indelning av forskningsämnen 2011)

[Health sciences](#) (Standard för svensk indelning av forskningsämnen 2011)

## Keywords

[Epidemiologic studies](#), [Cohort studies](#), [Socioeconomic factors](#), [Risk factors](#), [Myocardial infarction](#), [Stroke](#), [Diabetes](#), [Emotional support](#), [Swedish cohort consortium \(scc\)](#), [Swedish diet cohort consortium \(sdcc\)](#), [Sdcc](#), [Cohorts.se](#)

## Publications

Eliasson M, Jansson JH, Lundblad D, Näslund U. The disparity between long-term survival in patients with and without diabetes following a first myocardial infarction did not change between 1989 and 2006: an analysis of 6,776 patients in the Northern Sweden MONICA Study. *Diabetologia*. 2011 Oct;54(10):2538-43. Epub 2011 Jul 21.

Isaksson R, Jansson J, Lundblad D, Näslund U, Zingmark K, Eliasson M. Better long-term survival in young and middle-aged women than in men after a first myocardial infarction between 1985 and 2006. An analysis of 8360 patients in the Northern Sweden MONICA Study. *BMC Cardiovasc Disord* 2011;11:1.

Warensjö E, Jansson JH, Cederholm T, Boman K, Eliasson M, Hallmans G, Johansson I, Sjogren P. Biomarkers of milk fat and the risk of myocardial infarction in men and women: a prospective, matched case-control study. *Am J Clin Nutr*. 2010 Jul;92(1):194-202.

Norlund S, Reuterwall C, Hoog J, Lindahl B, Janlert U, Birgander LS. Burnout, working conditions and gender--results from the northern Sweden MONICA Study. *BMC Public Health*. 2010;10:326.

Eriksson M, Holmgren L, Janlert U, Jansson JH, Lundblad D, Stegmayr B, Soderberg S, Eliasson M. Large improvements in major cardiovascular risk factors in the population of northern Sweden: the MONICA study 1986-2009. *J Intern Med*. 2010 Nov 3.

Lilja M, Rolandsson O, Shaw JE, Pauvaday V, Cameron AJ, Tuomilehto J, Alberti KG, Zimmet PZ, Soderberg S. Higher leptin levels in Asian Indians than Creoles and Europeans: a potential explanation for increased metabolic risk. *Int J Obes (Lond)*. 2010 Feb 2.

Alssema M, Vistisen D, Heymans MW, Nijpels G, Glumer C, Zimmet PZ, Shaw JE, Eliasson M, Stehouwer CD, Tabak AG, Colagiuri S, Borch-Johnsen K, Dekker JM. The Evaluation of Screening and Early Detection Strategies for Type 2 Diabetes and Impaired Glucose Tolerance (DETECT-2) update of the Finnish diabetes risk score for prediction of incident type 2 diabetes. *Diabetologia*. 2010 Dec 12.

Van Guelpen B, Hulthén J, Johansson I, Witthoft C, Weinehall L, Eliasson M, Hallmans G, Palmqvist R, Jansson JH, Winkvist A. Plasma folate and total homocysteine levels are associated with the risk of myocardial infarction, independently of each other and of renal function. *J Intern Med*. 2009 Feb 27.

Karvanen J, Silander K, Kee F, Tiret L, Salomaa V, Kuulasmaa K, Wiklund PG, Virtamo J, Saarela O, Perret C, Perola M, Peltonen L, Cambien F, Erdmann J, Samani NJ, Schunkert H, Evans A. The impact of newly identified loci on coronary heart disease, stroke and total mortality in the MORGAM prospective cohorts. *Genet Epidemiol*. 2009 Apr;33(3):237-46.

Janunger T, Nilsson-Ardnor S, Wiklund PG, Lindgren P, Escher SA, Lackovic K, Nilsson AK, Stegmayr B, Asplund K, Holmberg D. A novel stroke locus identified in a northern Sweden pedigree: linkage to chromosome 9q31-33. *Neurology*. 2009 Nov 24;73(21):1767-73.

Lundblad D, Holmgren L, Jansson JH, Naslund U, Eliasson M. Gender differences in trends of acute myocardial infarction events: the Northern Sweden MONICA study 1985 - 2004. BMC Cardiovasc Disord. 2008;8:17.

Lilja M, Eliasson M, Stegmayr B, Olsson T, Soderberg S. Trends in obesity and its distribution: data from the Northern Sweden MONICA Survey, 1986-2004. Obesity (Silver Spring). 2008 May;16(5):1120-8.

Isaksson RM, Holmgren L, Lundblad D, Brulin C, Eliasson M. Time trends in symptoms and prehospital delay time in women vs. men with myocardial infarction over a 15-year period. The Northern Sweden MONICA Study. Eur J Cardiovasc Nurs. 2008 Jun;7(2):152-8.

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

### **Contact for questions about the data**

Stefan Söderberg

[stefan.soderberg@medicin.umu.se](mailto:stefan.soderberg@medicin.umu.se)

### **Related research data in SND's catalogue**

[The MONICA survey in Gothenburg](#)

[The MONICA survey in Gothenburg 1990](#)

[The MONICA survey in Gothenburg 1995](#)

[The Northern Sweden MONICA Study 1986](#)

[The Northern Sweden MONICA Study 1990](#)

[The Northern Sweden MONICA Study 1994](#)

[The Northern Sweden MONICA Study 2004](#)

[The Northern Sweden MONICA Study 2009](#)

[The Northern Sweden MONICA Study: Myocardial Infarction Registry](#)

[The Northern Sweden MONICA Study: Stroke Registry](#)

[Northern Sweden Diet Database \(NSDD\)](#)

[The Northern Sweden MONICA Study 2014](#)

### **Is part of collection at SND**

[Swedish Cohort Consortium \(Cohorts.se\)](#)

[Swedish Diet Cohort Consortium \(SDCC\)](#)

### **Download metadata**

[DataCite](#)

[DDI 2.5](#)

[DDI 3.3](#)

[DCAT-AP-SE 2.0](#)

[JSON-LD](#)

[PDF](#)

[Citation \(CLS\)](#)