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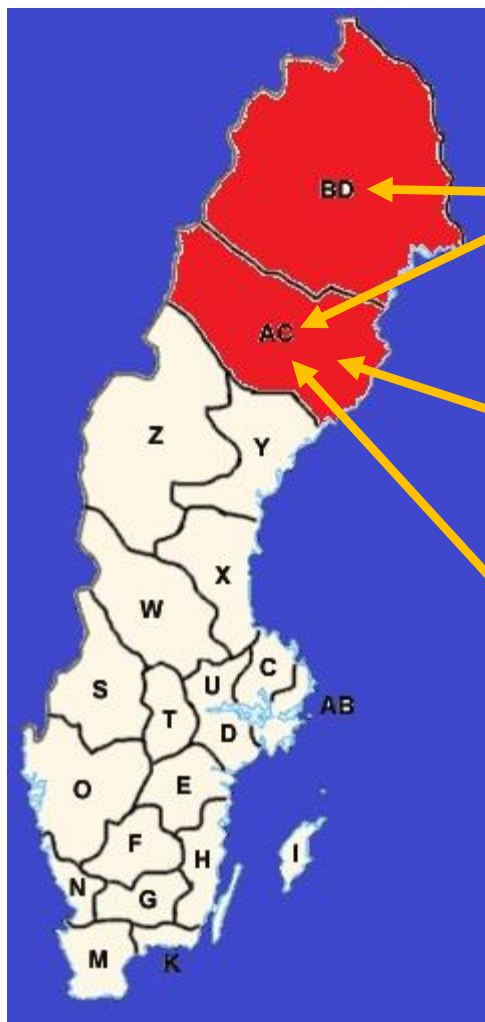
Northern Sweden Health and Disease Study (NSDHS) Cohort

Oulu 2016-06-13

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PhD, research coordinator
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Three sub-cohorts



- The Northern Sweden MONICA Project (MO)
- The Västerbotten Intervention Program (VIP)
- The Mammary Screening Project (MA)

MONICA + VIP



- ✓ undergo a medical examination including measurements of blood pressure, glucose tolerance, serum cholesterol, triglycerides and antropometry,
- ✓ donate a separate blood sample for later research purposes.
- ✓ complete a diet and life style questionnaire,

Food Frequency Questionnaire

Hur ofta äter Du nedanstående livsmedel?

Markera genomsnittlig konsumtion det senaste året. Markera endast ett alternativ på varje rad.

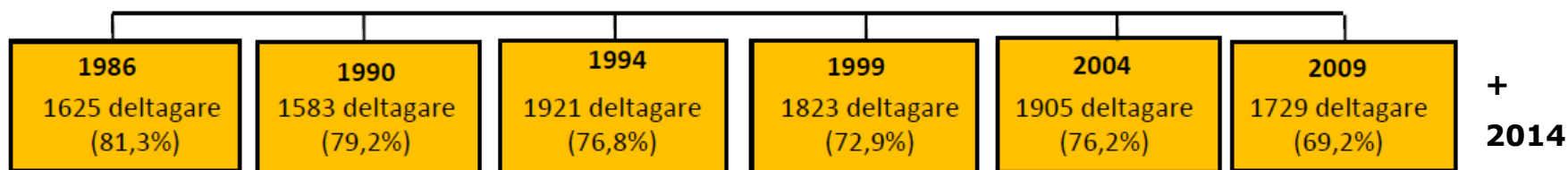
Födoämne	Frekvens									
	Aldrig 0	Någon gång per år 1	1-3 ggr per månad 2	1 gång per vecka 3	2-3 ggr per vecka 4	4-6 ggr per vecka 5	1 gång per dag 6	2-3 ggr per dag 7	4 ggr per dag el mer 8	
01 Bregott på smörgås	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
02 Smör på smörgås	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
03 Lättmargarin på smörgås	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
04 Margarin på smörgås	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
05 Smör till matlagning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
06 Margarin till matlagning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
07 Olja till matlagning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
08 Salladsdressing med olja	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
09 Grädde, creme fraiche, gräddfil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
10 Hårt bröd (ex Husmans)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
11 Grovt mjukt fullkornsbröd	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

64 - 84 food items



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The Northern Sweden MONICA project



MONICA = Multinational Monitoring of Trends and Determinants in Cardiovascular Disease

- initiated 1985 (WHO)
- 25-74 years old women and men
- the longest running population study in the world

- > 90 papers
- > 17 theses

Risk factors for CVD:

Smoking ↓

Blood pressure ↓

Cholesterol levels ↓

Obesity ↑

Diabetes 0

Education ↑





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The Västerbotten Intervention Programme (VIP)

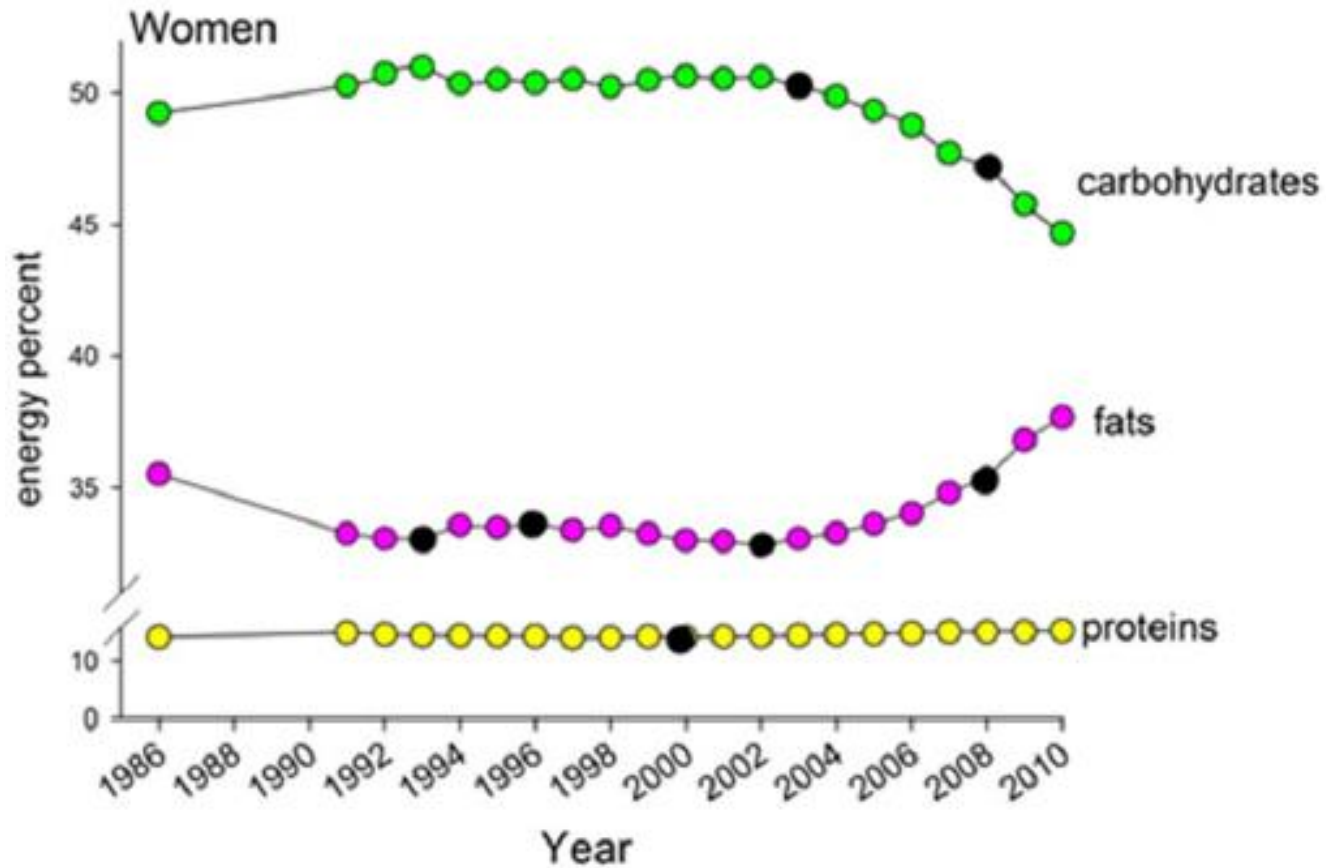
VIP is a long-term project intended for health promotion of the population of Västerbotten (approx. 255.000 inhabitants).

All individuals **40, 50 and 60 years of age** in the population of the county are invited to their local health care center.

Participation rate has varied; it was 48–57% from 1991 to 1995 and thereafter increased to around **70%** from 2005 and onwards.

The project started in 1985 and the cohort covered in August 2013, **129 308** sampling occasions and **95 033** unique individuals.

Trends in VIP 1986-2010





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NSHDS - Major endpoints*

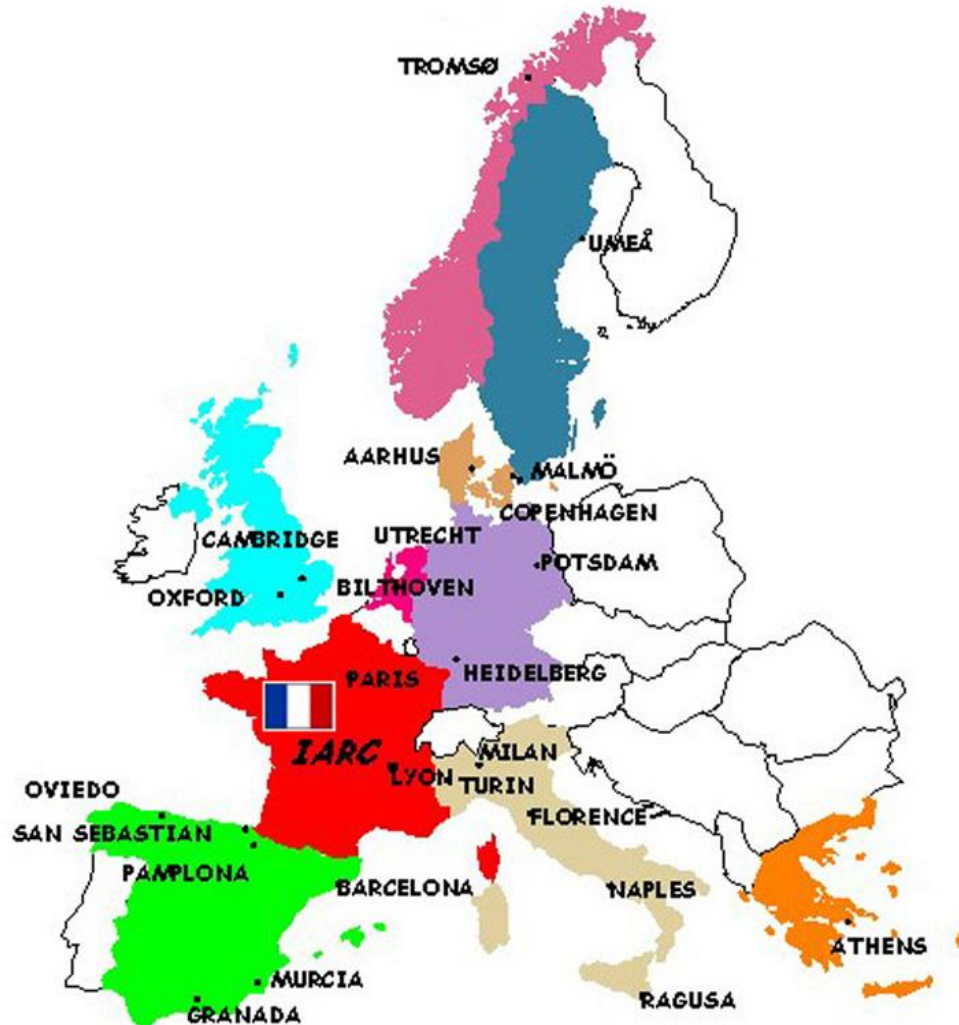
- Coronary heart disease: 2500
- Stroke: 2000
- Breast cancer: 1650
- Colorectal cancer: 1100
- Prostate cancer: 1700
- Diabetes > 10 000

* blood + questionnaires + clinical information + family studies



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Established collaborations in Europe and the US



- **EPIC**
- **HELGA**
- **CHANCES**





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But a lack of circumpolar collaborations...





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HLA-B27: double-edged sword



Enhanced antiviral

immunity:

Malaria

Hepatitis C

HIV



**Predisposing for
Spondyloarthritides:**

Ankylosing spondylitis

Reactive Arthritis

Colitis associated sp

Psoriatic sp

(Acute Anterior) Uveitis



HLA-B27: an Arctic tissue type

People	%	Source
Haida	50	1
Inuit	37	1
Navajo	26-36	1
Sami	26	2
Northern Sweden	17	3
Norway	16	1
Finland	14-16	3
Cree	14	1
Western Europe	6-9	1
Mexico	3-5	1

- 1. Peschken & Esdaile**, Seminars in Arthritis and Rheumatism, 28:368-391, 1999
- 2. Johnsen et al.**, Scand Card J, 43:176-180, 2009
- 3. Bjelle et al.**, Scand J Rheumatology 11:23-26, 1982



Katarina Pirak Sikku, Art Museum of Umeå 2014

"measuring tape?"



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Bullet points

- NSHDS cohort is unique in size and duration
- NSHDS cohort reflects an Arctic population
- Risk associations in the Arctic may differ from the rest of the world
- **Increased collaboration between prospective Arctic population based cohort studies is warranted!**



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Kiitos, merci de votre attention!

