

The PEAK-25 cohort: baseline

SND-ID: ext0267-1.

Is part of collection at SND: [Swedish Cohort Consortium \(Cohorts.se\)](#), [Scania Metadatabase for Epidemiology \(SME\)](#)

Associated documentation

List of publicationsPEAK25.pdf (508.49 KB)

Creator/Principal investigator(s)

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Description

The PEAK25-cohort, women 25 yrs at inclusion, addresses factors contributing to peak bone mass. In 2014 the PEAK25 cohort is still unique since there are no cohorts nationally or internationally which have been specifically designed to identify genetic and other risk factors for bone strength at this critical age or which has been followed longitudinally.

By investigating 10yr change in BMD we have the potential to identify genes important for bone homeostasis, without confounding from perimenopausal hormonal changes. Parents and grandparents have also been collected. This cohort is an important resource in terms of providing normative data for young Swedish women, providing reference data for future studies in women and investigating long-term changes in risk factors in pre-menopausal women.

In PEAK-25, a total of 1,061 (response rate 49 %) underwent baseline investigation (1999-2004). Enrollment was continuous throughout the year to avoid seasonal bias. All women were 25 years old at inclusion. Exclusion criteria was pregnancy at the time of the baseline investigation or during the 12 months prior to inclusion. The cohort was followed up at 10-years.

The investigations included bone mineral density (BMD) and body composition measurements, anthropometrics and BioDex isokinetic muscle force. Questionnaires provide information on lifestyle, recreational physical activity, health, food/nutrition, birthweight and hormonal function. Validated instruments for outcome (SF-36, EQ5D and Qualeffo-radius), ADL-function are also available. Information on fractures sustained prior to baseline and during followup were collected. Blood and urine samples were collected.

Extensive phenotyping includes: bone turnover markers and a number of serum markers GWAS genotyping will be available in Spring 2017 (Illumina GSA Arrays "Infinium iSelect 24x1 HTS Custom Beadchip Kit").

Purpose:

This cohort was designed to include women at an age closely representing 'pure' peak bone mass, prior to any major perturbations from external or internal factors causing loss of bone. Essentially it is a period of intact coupling between bone formation and resorption. The aim of the study was identification of gene variants and other associated risk factors for osteoporosis on the attainment of

peak bone mass.

Unit of analysis

[Individual](#)

Time Method

[Cross-section](#)

[Longitudinal](#)

Sampling procedure

[Probability](#)

The subjects were randomly selected through the computerized administrative population system. All women were Swedish citizens and resident in Malmö. A total of 2,394 invitations were sent shortly after their 25th birthday and 1,166 agreed to participate (response rate, 49%). After exclusion of 102 women who were pregnant or had been pregnant during the previous 12 months) and 3 who were out with the age criteria (range 25.01-25.99) the final cohort consists of n=1061 young adult women. This sample represents xx% of all women of this age living in Malmö during the study.

Time period(s) investigated

1999 – Ongoing

Biobank is connected to the study

Yes

Number of individuals/objects

1061

Response rate/participation rate

49%

Data format / data structure

[Numeric](#)

Data collection 1

- Mode of collection: Measurements and tests
- Time period(s) for data collection: 1999 – 2004
- Source of the data: Biological samples

Data collection 2

- Mode of collection: Observation
- Time period(s) for data collection: 1999 – 2004
- Source of the data: Population group

Data collection 3

- Mode of collection: Self-administered questionnaire
- Time period(s) for data collection: 1999 – 2004
- Source of the data: Population group

Geographic spread

Geographic location: [Sweden](#), [Skåne County](#)

Geographic description: The OPRA participants were randomly selected from the Malmö city files.

Responsible department/unit

Department of Clinical Sciences

Contributor(s)

Region Skåne

Funding

- Funding agency: Swedish Research Council
- Funding agency's reference number: K2015-52X-14691-13-4

Ethics Review

Lund - Ref. 567/2008

Research area

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

[Health](#) (CESSDA Topic Classification)

Keywords

[Activities of daily living](#), [Blood specimen collection](#), [Body composition](#), [Longitudinal studies](#), [Osteoporosis](#), [Urine specimen collection](#), [Women](#), [Phenotype](#), [Bone density](#), [Anthropology](#), [Premenopause](#), [Epihealth_skåne](#), [Cohorts.se](#)

Accessibility level

Access to data through an external actor

Access to data is restricted

Contact for questions about the data

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Related research data in SND's catalogue

[Malmö Osteoporosis Prospective Risk Assessment cohort \(OPRA\) - baseline](#)

[Malmö Osteoporosis Prospective Risk Assessment cohort \(OPRA\) - 5-year follow-up](#)

[Malmö Osteoporosis Prospective Risk Assessment cohort \(OPRA\) - 10-year follow-up](#)

[The PEAK-25 cohort: 10-year follow-up](#)

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