

## The Population Study of Women in Gothenburg

The Population Study of Women in Gothenburg (PSWG) started in 1968. The aim was to study different aspects of women's health, with special reference to cardiovascular, reproductive, mental and functional health in middle aged women with the intention to follow five age strata of women at least during 10 years. The sample of participants was obtained from the Revenue Office Register. The sampling method was based on date of birth (women born on day 6, 12, 18, 24 or 30 of each month were invited). During September 1968 to August 1969 1462 women participated in the first examination (participation rate 90,1%) in age strata 38, 46, 50, 54 and 60 years (i.e. born in 1930, 1922, 1918, 1914 and 1908). One of the main reasons for choosing the age strata was to obtain information from both pre- and postmenopausal phase. Details from the examination 1968-69 are described in reference 1 (1). Six years after the first examination, all women were invited to a second examination in 1974-75 (2). Participation rate in this examination was 89.1%, calculated from all women participating in the 1968-69 examination.

In 1980-81 a third examination was conducted, twelve years after the baseline examination. Of the 1462 women who originally participated in 1968-69 examination, 78.9 % participated (3). For reasons of representativity and study of secular trends, women born in 1942, aged 38, were invited to this examination. Additionally, women born in 1930, who had moved to Gothenburg after 1968 (n=144) were invited and added the original sample of 50-year-old women. Also, women aged 26 and who would be 38 in the forthcoming examination in 1992, were invited.

In 1992-93 a fourth examination was launched and of the original participants from 1968-69, still alive, 70.1 % participated (4). In 2000-01 a fifth examination was conducted and 71 % of the original 1968-69 cohort and still alive participated (5).

The non-participants in the examinations were followed-up after 12 years in 1980. There was a higher mortality during this 12-year period in those women who declined participation or who were inaccessible at the time of the baseline examination. Risk ratio for death was 1.8 (95% CI 1.0-3.3) compared to participants. Women in 1968-69 examination who did not later participate in 1980-81 differed from participants 1980-81 concerning smoking, waist-hip ratio and mean systolic blood pressure (higher among non-participants).

In 1992, relative age standardized survival was calculated for participants and non-participants in the baseline examination 1968-69. Survival was lower in non-participants, 24-year death risk ratio was 1.65 (CI 1.14-2.38) (4).

## References:

1. Bengtsson C, Blohmé G, Hallberg L, Hällström T, Isaksson B, Korsan- Bengtsen K, et al. The study of women in Gothenburg 1968-1969 – a population study. General design, purpose and sampling results. *Acta Med Scand* 1973;193:311-8.
2. Bengtsson C, Blohmé G, Hallberg L, Hällström T, Isaksson B, Lennartsson J, Lindquist O, Lindstedt S, Noppa H, Redvall L, Samuelsson S, The population study of women in Göteborg 1974-75 – the second phase of a longitudinal study. General deign, purpose and sampling results, *Scand J Soc Med* 1978;6:49-54
3. Bengtsson C, Hallberg L, Hällström T, Hultborn A, Isaksson B, Lapidus L, et al. The population study of women in Gothenburg 1980-81- the third phase of a longitudinal study. Comparison between participants and non-participants. *Scand J Soc Med.* 1989;17:141-5.
4. Bengtsson C, Ahlqwist M, Andersson K, Björkelund C, Lissner L, Söderström M. The Prospective Population Study of Women in Gothenburg, Sweden, 1968-69 to 1992-93. A 24-year follow-up study with special reference to participation, representativeness, and mortality. *Scand J Prim Health Care* 1997; 15: 214-9.
5. Lissner L, Skoog I, Andersson K, Beckman N, Sundh V, Waern M, Edin Zylberstein D, Bengtsson C, Björkelund C. Participation bias in longitudinal studies: experience from the Population Study of Women in Gothenburg, Sweden. *Scand J Prim Health Care* 2003;21:405-8.