

# Interventions among healthy people save the most lives

June 12 2015

Mortality from coronary heart disease declined in Sweden from 1986 to 2002. The improvement was due mainly to a reduction in risk factors among the healthy population (primary prevention) and, to a lesser extent, treatment of people who already had developed heart disease (secondary prevention). A study conducted at Sahlgrenska Academy explored the reasons for the trend.

Deaths from <u>coronary heart disease</u> fell by 53% among men and 52% among women in 1986-2002. The improvement was evident among all age groups.

A study conducted by researchers at Sahlgrenska Academy, University of Gothenburg, set out to quantify the trend: to what extent was it due to <u>primary prevention</u> (changes in risk factors among healthy people) and to what extent was it due to <u>secondary prevention</u> (treatment and changes in risk factors among people who had already been diagnosed with <u>heart disease</u>)?

## **Changes in three important factors**

The study found that 75% of the decline was a result of primary prevention.

"Most of the improvement stemmed from changes in three <u>risk factors</u> among the healthy population," says Lena Björck, a researcher at



Sahlgrenska Academy. "They smoked less, had lower <u>cholesterol levels</u> and had lower blood pressure."

## Variety of registers

Using data from a variety of registers in order to include the entire Swedish population, the researchers relied on a statistical model to calculate percentages for each risk factor:

- Lower cholesterol levels accounted for 54% of the reduction in mortality among the entire population, as opposed to 16% among people with heart disease. According to Dr. Björck, "The main reason for the lower cholesterol levels was diet, whereas drugs were responsible for very little of the improvement."
- Lower blood pressure accounted for 17% of the reduction in mortality among the entire population, as opposed to 1% among people with heart disease.
- Smoking cessation accounted for 7% of the reduction in mortality among both the entire population and people with heart disease.

### More effect on women

The study found that the greatest impact of both primary and secondary prevention was among people over 55. The effect of prevention was more pronounced among men than women.

"The most important conclusion of the study is that promoting health poses a challenge to the entire population," Dr. Björck says. "The Swedish healthcare system, which has traditionally focused on secondary prevention, has its work cut out for it in terms of adopting a broader and more inclusive approach."



**More information:** "Decline in Coronary Mortality in Sweden between 1986 and 2002: Comparing Contributions from Primary and Secondary Prevention." *PLoS One.* 2015 May 5;10(5):e0124769. DOI: 10.1371/journal.pone.0124769

### Provided by University of Gothenburg

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