

Impact of obesity on trends in life expectancy among different European countries, 1975-2012

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Background

During the last 20 years, a threefold increase in obesity prevalence has occurred in Europe, which is likely to affect trends in life expectancy. Previous studies on the impact of obesity on populations' life expectancy focused on the United States or only provided estimates for a single year. We assessed the impact of obesity on life expectancy for 30 European national populations over the period 1975 to 2012.

Methods

We calculated obesity-attributable mortality fractions by applying the weighted sum method to obesity prevalence data (NCD Risk Factor Collaboration, 2016) and age and sex specific European RRs (DYNAMO). We estimated potential gains in life expectancy (PGL) by eliminating obesity-attributable mortality using associated single decrement life tables. All-cause mortality and exposure data came from the Human Mortality Database.

Results

In the 30 European countries studied, the PGL due to obesity in 2012 ranged from 0.86 to 1.73 years among men, and from 0.66 to 1.54 years among women. In all studied European countries, the PGL increased over time, from average levels of 0.48 (men) and 0.65 (women) years in 1975, to average levels of 1.23 (men) and 1.00 (women) years in 2012. Time trends in PGL ranged from an annual increase of 2.63 to 8.76 percent

among men, and from 0.09 to 5.99 percent among women. In some countries (Denmark, Switzerland, women in Eastern European countries) the increase is leveling off.

Conclusions

The impact of obesity on life expectancy is increasing over time in Europe, especially among men. The leveling off as observed in some western European countries could potentially point to successful anti-obesity public health initiatives.

Key messages:

- Important differences in the impact of obesity on life expectancy between European countries exist.
- Although the effect of obesity on life expectancy is generally increasing over time in Europe, some European countries witnessed a leveling off.