EDITORIAL

# Increased physical activity in over 65s reduces CVD risk and overall mortality

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**MAINTAINING OR COMMENCING MODERATE TO VIGOROUS PHYSICAL ACTIVITY FOR AT LEAST** 20 minutes a day in older people improves cardiovascular outcomes, and mortality, a 20-year follow-up cohort study from Italy has found. The greatest benefits were seen around the age of 70.[1]

A total of 3,099 men and women aged ≥ 65 years, mean age 75 years, were recruited to the study. Baseline assessments were carried out between 1995 and 1997 and at two follow-up visits after four and seven years. Morbidity and mortality surveillance was extended up to the end of 2018 via linkage with hospital and mortality records. The prevalence and incidence of cardiovascular disease (CVD) were identified through clinical examination, medical records and questionnaires. Full data were available for 2,754 participants, 60% of whom were women.

Data on physical activity were collected by questionnaires at baseline and at the follow-up visits. The authors looked at moderate to vigorous physical activity as a time-varying variable and identified four physical activity trajectories: stable-low (inactive-inactive), high-decreasing (active-inactive), low-increasing (inactive-active) and stable-high (active-active).

Physical activity was associated with a significantly reduced risk of overall mortality in both sexes:

- Men HR 0.72 (95% CI: 0.62-0.84)
- Women HR 0.81 (95% CI: 0.72-0.92)

There were 1,037 cardiovascular events during the follow-up period. Incident coronary heart disease (CHD) and heart failure rates were lower for both men and women who were active.

Physical activity was associated with significantly lower risk of incident CVD, CHD and heart failure in men.

- CVD HR 0.74 (95% CI: 0.58-0.94)
- CHD HR 0.66 (95% CI: 0.50-0.87)
- Heart failure HR 0.72 (95% CI: 0.53-0.98)

The association between activity and a lower risk of any cardiovascular outcome was stronger earlier in late life (70-75 years). The risk was significantly reduced for men aged 70; HR 0.58 (95% CI: 0.39-0.84) and at the limit to significance at age 75; HR 0.74 (95% CI: 0.52-1.05).

Trajectories of stable-high physical activity were associated with a significantly lower risk of cardiovascular outcomes among men HR 0.48 (95% CI: 0.27-0.86) compared with those with stable-low trajectories. The greatest cardiovascular risk reduction was observed for at least 20 minutes/day of physical activity at around 70 years.

No significant association was found with stroke in any of the analyses.

Although risk reduction was non-significant among more physically active women, the rates of incident CHD and heart failure were consistently lower for participants with low-increasing and stable-high levels of physical activity, as opposed to high-decreasing and stable-low physical activity.

**'The greatest cardiovascular risk reduction was observed for at least 20 minutes/day of physical activity at around 70 years'**

The authors concluded that increasingly active trajectories of physical activity were associated with lower rates of CVD and overall mortality.

The study authors state: 'In the present study, increasing levels of physical activity as well as the persistence of an active lifestyle over time seem to be associated with a reduced risk of incident CVD in older age. Incidence rates of cardiovascular events were always lower among active men and women, as were overall mortality risks.'

These findings are consistent with public health messages that regular physical activity can reduce cardiovascular risk and quantifies that to at least 20 minutes/day.

Of course, the health benefits of exercise and physical activity extend beyond the cardiovascular system and include among others bone protection and reduced levels of anxiety and depression.

In an accompanying editorial *Physical activity in older people: better late than never, but better early than late*[2] the authors say the study findings show that 'movement is medicine' even in later life.

**REFERENCES**
**1** Barbiellini Amidei C, Trevisan C, Dotto M et al. Association of physical activity trajectories with major cardiovascular disease in elderly people. *Heart* Published Online First 14 February 2022
**2** Fabris E, Sinagra G. Physical activity in older people: better late than never, but better early than late. *Heart* Published Online First 14 February 2022

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