

## **Even low levels of leisure time physical activity lowers risk of death**

*And being active for longer or participating in vigorous sports has additional health benefits*

Even low-level physical activities, such as walking or gardening, are associated with a lower risk of death from cardiovascular disease, cancer or any cause finds a large observational study published online in the ***British Journal of Sports Medicine***.

Higher amounts of activity or more vigorous activities, such as running, cycling and competitive sports, are associated with additional health benefits that are not outweighed by the risks of participating in these activities, the authors say.

Every year, a representative sample of the US population is asked about their health and lifestyle behaviours for the National Health Interview Surveys. The authors used data collected through the surveys between 1997 and 2008 to estimate the activity levels of 88,140 people aged 40–85 years, and linked that data with registered deaths up until 31 December 2011.

They calculated the total leisure time physical activity of participants using definitions in 2008 US guidelines, which roughly equate one minute of vigorous activity such as running, fast cycling or competitive sports as equivalent to two minutes of moderate-intensity activity, such as brisk walking, gardening or dancing. Only activities lasting at least 10 continuous minutes were taken into account.

Compared with individuals who were inactive, those who participated in just 10–59 min/week of moderate physical activities during their leisure time had an 18% lower risk of death from any cause over the study period, and the health benefits continued to mount as activity levels went up.

US 2008 guidelines recommend at least 150 minutes per week of moderate activity done in at least 10 minute bouts, and individuals who participated in 150–299 min/week reduced their overall risk of death by 31%. Those who clocked up ten times this amount - 1500 min or more per week - almost halved their risk (46% lower).

Reductions in risk of death from cancer also corresponded with increasing activity levels.

In terms of risk of death from cardiovascular events such as strokes and heart attacks, individuals who were active for 10-59 min/week during their leisure time saw their risk fall by 12%, and those who did 120-299 min/week by 37%, compared with people who were inactive.

However, much greater levels of physical activity were not associated with any greater benefits; individuals who were active for 1500 min or more per week had a reduced risk of death from cardiovascular disease of 33% - so their risk of death was slightly higher than those who met recommended activity levels but undertaking more moderate amounts.

This is an observational study, and as such, can't establish cause, and also relied on participants self-reporting activity levels. However, the authors point out that the study

also has many strengths, including its large sample size representative of the US population, and that their findings support US recommendations on activity levels.

The study also showed that individuals who participated in vigorous physical activities had significantly lower risk of death than those who only did light/moderate physical activity, so the authors recommend, like the US guidelines, that people short of time should consider more vigorous activities.

Attaining the highest levels of physical activity assessed - 1500 min or more/week "is difficult to achieve for a working adult", they admit. "Participation in vigorous-intensity activity is more time-efficient than moderate-intensity activity," the authors say.

"Vigorous-intensity physical activity may be an attractive option for able-bodied individuals with limited time."