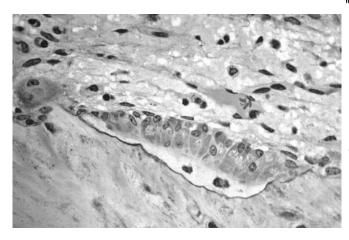


One minute of running per day associated with better bone health in women

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Osteoblasts actively synthesizing osteoid. Credit: Robert M. Hunt; Wikipedia.

A single minute of exercise each day is linked to better bone health in women, new research shows.

Scientists from the University of Exeter and the University of Leicester found those who did "brief bursts" of high-intensity, weight-bearing activity equivalent to a medium-paced run for premenopausal women, or a slow jog for postmenopausal women, had better <u>bone health</u>.

Using data from UK Biobank, the researchers found that women who on average did 60-120 seconds of high-intensity, weight-bearing activity per day had 4% better <u>bone</u> health than those who did less than a minute.

"We don't yet know whether it's better to accumulate this small amount of <u>exercise</u> in bits throughout each day or all at once, and also whether a slightly longer bout of exercise on one or two days per week is just as good as 1-2 minutes a day," said lead author Dr Victoria Stiles, of the University of Exeter.

"But there's a clear link between this kind of highintensity, weight-bearing exercise and better bone health in women.

"Because this is a cross-sectional study - which assesses data taken from a subset of the population at a particular point in time - we can't be sure whether the high-intensity physical activity led to better bone health, or whether those with better bone health do more of this exercise.

"However, it seems likely that just 1-2 minutes of running a day is good for bone health."

The researchers looked at data on more than 2,500 women, and compared activity levels (measured by wrist-worn monitors) with bone health (measured by an ultrasound scan of heel bone).

As well as finding 4% better bone health among women who did one to two minutes of highintensity, weight-bearing exercise, they found 6% better bone health among those who did more than two minutes a day.

Dr Stiles said data from UK Biobank - taken from monitors worn for a week - was broken down into single seconds to understand how people go about their daily activities.

"We wanted to make every second count in our analysis, because short snippets of high-intensity activity are more beneficial to bone health than longer, continuous periods," she said.

"We were careful not to ignore short bursts of activity throughout the day."

As a suggestion for anyone interested in increasing their day-to-day levels of activity, Dr Stiles said: "The UK's National Osteoporosis Society recommends increasing your walking <u>activity</u> first.

"Further on, we would suggest adding a few



running steps to the walk, a bit like you might if you were running to catch a bus."

Good bone health has multiple <u>health</u> benefits, including a reduced risk of osteoporosis and fractures in older age.

More information: Victoria H Stiles et al, A small amount of precisely measured high-intensity habitual physical activity predicts bone health in pre- and post-menopausal women in UK Biobank, *International Journal of Epidemiology* (2017). DOI: 10.1093/ije/dyx080

Provided by University of Exeter

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