

A jog a day keeps osteoporosis away

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(PhysOrg.com) -- A short burst of vigorous physical activity like running and jogging is important for building bones in children, whereas more gentle exercise like walking, even for a longer period, has little effect.

This suggests that while current recommendations on exercise aim to combat obesity and heart disease by promoting walking, these are unlikely to offer much protection against the risk of [osteoporosis](#) in later life.

This is the key finding of new research published online in the [Journal of Clinical Endocrinology and Metabolism](#), which compared the amount of day-to-day physical activity and bone development in 1,748 15-year-old boys and girls from the Avon Longitudinal Study of Parents and Children (ALSPAC/Children of the 90s) based at the University of Bristol.

Teenagers were asked to wear a physical activity monitor for one week to record day-to-day activity, this was then compared to bone thickness and size of the shinbone (tibia) in the lower leg. By analysing physical activity recordings within different bands of exercise intensity, defined as light, moderate and vigorous, the researchers were able to compare the level of activity against measures of bone development.

They found that the amount of vigorous activity, equivalent to jogging, running and playing sports, was related to tibial size and thickness. For example, bone size was 7mm² greater in the top 25 per cent of adolescents engaging in vigorous physical activity compared to those in the bottom 25 per cent. By contrast, no relationship was observed with the amount of less intense physical activity such as walking.

This is consistent with previous findings that women entering the menopause who combined a reduced-fat diet with increased levels of [moderate exercise](#), like walking, suffered from accelerated bone loss.

According to Professor Jon Tobias who headed this research, the findings have important implications in terms of public-health campaigns for promoting [physical activity](#). Speaking about the findings, he said: "Encouraging children to increase their daily activity is only likely to benefit their bone development, and thereby reduce their risk of osteoporosis when they are older, if this includes increased participation in more vigorous activities such as playing sports."

More information: 'Habitual levels of vigorous, but not moderate or light, physical activity is positively related to cortical bone mass in adolescents' by A. Sayers, et al. in the *Journal of Clinical Endocrinology and Metabolism*.

Provided by University of Bristol

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