

A TEAM OF U.S. researchers measured the bone density in the hind legs of sheep which stood on a rapidly vibrating platform for 20 minutes a day, five days a week for a year.

The barely perceptible shaking was found significantly to increase the density of the bones, and is now being tested on humans.

If effective, it could be used in a range of applications, from healing fractures and breaks to treating people with osteoporosis — brittle and fragile bones caused by loss of bony tissue often as a result of hormonal changes.

“We have thought for years that the big strains that come with vigorous exercise are the dominant determinant of bone morphology,” said Clinton Rubin, an author of the research published in the journal Nature.

“I am not disputing that they are important, but they are not the only player,” he told Reuters.

Rubin, of the State University of New York at Stony Brook, said the main stimulus for the human skeleton was mechanical signals from muscles while staying upright.

Elements of the muscle “buzz” at vibrations of 20 to 50 Hz and give small mechanical signals to the bone which are far weaker than the strains from sprinting during a soccer match but occur much more frequently.

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Rubin and his team measured bone density in sheep which stood on a rapidly vibrating platform for 20 minutes a day, five days a week for a year. The barely perceptible shaking was found significantly to increase the density of the bones, and is now being tested on humans. If effective, it could be used in a range of applications, from healing fractures and breaks to treating people with osteoporosis — brittle and fragile bones caused by loss of bony tissue often as a result of hormonal changes. “We have thought for years that the big strains that come with vigorous exercise are the dominant determinant of bone morphology,” said Clinton Rubin, an author of the research published in the journal Nature. “I am not disputing that they are important, but they are not the only player,” he told Reuters. Rubin, of the State University of New York at Stony Brook, said the main stimulus for the human skeleton was mechanical signals from muscles while staying upright. Elements of the muscle “buzz” at vibrations of 20 to 50 Hz and give small mechanical signals to the bone which are far weaker than the strains from sprinting during a soccer match but occur much more frequently.

He said scientists had conducted trials on post-menopausal women and on children with cerebral palsy.

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“We envisage th
is efficacious, to be u
treat osteoporosis by
formation, but to pre
loss,” he said.

“If someone is fa
of drug treatment to p
or the option of stand
device without pharm
intervention — I kno
would choose.”

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