



News Release

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Cannabis excess linked to bone disease and fractures, study finds

People who regularly smoke large amounts of cannabis have reduced bone density and are more prone to fractures, research has found.

The study also found that heavy cannabis users have a lower body weight and a reduced body mass index (BMI), which could contribute to thinning of their bones.

Researchers say this could mean heavy users of the drug are at greater risk of osteoporosis in later life.

Scientists at the University of Edinburgh assessed 170 people who smoke cannabis regularly for recreational purposes and 114 non-users.

The team used a specialised x-ray technique called a DEXA scan to measure the bone density of study participants. They found that the bone density of heavy cannabis users was about five per cent lower than cigarette smokers who did not use cannabis.

Fractures were more common in heavy users compared to non-users, the study found. Moderate users, however, showed no difference from non-users.

The researchers defined heavy users as those who reported smoking cannabis on 5000 or more occasions in their lifetime. In this study, however, the average heavy cannabis user had taken the drug more than 47,000 times. Moderate users had, on average, taken the drug about 1000 times.

Smoking cannabis is often associated with increased appetite so the researchers were surprised to find that heavy cannabis users had a lower body weight and BMI than non-users. This could be because cannabis may reduce appetite when taken in large amounts over a long period of time, the team says.

The study is the first to investigate bone health amongst cannabis users. Researchers say further studies are needed to better understand the link between use of the drug and thinning of the bones.

The study – funded by Arthritis Research UK – is published in the *American Journal of Medicine*.

Lead researcher Professor Stuart Ralston, of the University of Edinburgh's Centre for Genomic and Experimental Medicine, said: "We have known for a while that the components of cannabis can affect bone cell function but we had no idea up until now of what this might mean to people who use cannabis on a regular basis.

"Our research has shown that heavy users of cannabis have quite a large reduction in bone density compared with non-users and there is a real concern that this may put them at increased risk of developing osteoporosis and fractures later in life."

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