Are methadone users at risk for osteoporosis?

Because HIV can be spread through sharing substance-using equipment, many injection drug users (IDUs) are infected with HIV. Some IDUs manage their addiction with the use of methadone.

Opioids—including codeine, heroin and morphine—can impair the functioning of cells that repair bones. These drugs can also impair the formation of new bones. Opioids can also reduce the level of hormones such as testosterone, estrogen and DHEA. Less-than-normal levels of these hormones may cause unexpected tiredness, depression and bone loss.

Researchers in Boston conducted a study with 92 volunteers who were using methadone as part of an addiction recovery program. They found that 83% of participants had thin bones. Indeed, 35% had osteoporosis and none of them had previously received this diagnosis. Many study participants had several risk factors for developing thinning bones.

Study details

The research team recruited volunteers from a methadone treatment program. The average profile of participants was as follows:

- 64% female, 36% male
- age – 42 years
- 40% were obese
- 91% currently smoked tobacco
- most had been using heroin for 14 years
- 28% were HIV positive

Bone density was assessed with DEXA scans.

Results

Generally, men had a more serious degree of bone loss than women. This is not normally the case among HIV negative people, where women are more likely to have thinner bones than men. The proportion of participants who had thinning bones was as follows:

**Osteopenia (moderately thin bones)**

- men – 36%
- women – 54%

**Osteoporosis (very thin bones)**

- men – 61%
- women – 20%

Risk factors

In this group of volunteers, researchers assessed possible risk factors for low bone density and found the following:

- being male
• a lower-than-ideal body weight
• years of heavy alcohol use

The results from this study suggest that some methadone users may be at increased risk for fractures. People with addictions are often at high risk for accidents and injuries, so preventing fractures and bone loss should become a concern for their care providers.

The reasons for the unexpectedly high rates of osteoporosis in men in this study are not clear.

**Design issues**

The type of study conducted by the Boston researchers is called a cross-sectional study; it is a snapshot in time. It cannot definitively link the concepts of cause and effect.

Moreover, the study team regrettably did not take into account other factors that could have affected participants’ risk for bone loss, such as family history of osteoporosis or their level of physical activity.

Despite these limitations, the study’s findings underscore the need for getting recovering substance users into comprehensive medical care. Additional studies on bone density should be performed in other regions to confirm the Boston researchers’ findings. If they are confirmed, then scans for bone density should be part of that care as should support for osteoporosis prevention and recovery.

**REFERENCE:**

Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner knowledgeable about HIV- and hepatitis C-related illness and the treatments in question.

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