Best Beers for Bone Health?

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The old advertising slogan that "Guinness is Good for You" may have some truth to it after all. Every pint of the black stuff contains as much silicon as a pinch of sand -- and that silicon, according to recent but controversial research, may help to keep your bones strong in old age.

Charles Bamforth, a professor of malting and brewing sciences at the University of California, Davis, analyzed the components of 100 different commercial beers purchased at local grocery store. All of the beers contained high levels of silicon. The pale ales had the most, followed by dark malts and then wheat-based beers or light beers.

"Choose the beer you like," recommends Bamforth, whose research appeared in the *Journal of the Science of Food and Agriculture*. "Rejoice in the knowledge that there is a significant amount of silicon in any of them."

Silicon is common element in the Earth's crust found in many raw foods. Grains and fruits are loaded with it, and the human body contains a total of 5-10 grams. The beer brewing process extracts silicon largely from hops and the husks of grains and dissolves it into the liquid, where the body can easily absorb it.

Bamforth's study did not examine the health benefits of these dissolved silicon compounds.

Still, other experiments in petri dishes and with animals have shown that silicon can stimulate the growth of osteoblasts, cells that form bone in

the human body. A 2004 study published in the *Journal of Bone and Mineral Research* found that people who ate more silicon tended to have up to a 10 percent higher bone mass density in their hips, which could protect against osteoporosis and hip fractures later in life.

In 2009, Katherine Tucker of Tufts University found a positive connection between moderate drinking and bone mineral density -- a benefit for those who drank one or two beers a day.

"This surprised everyone because we know that high levels of alcohol consumption can cause osteoporosis," said Tucker, who also emphasized that more than three drinks a day had a strong negative effect on bone health.

Tucker suspects that the silicon in the beer is the connection to bone health. But other factors could also be playing a part. Beer is known to slightly increase levels of estrogen in men and contains B vitamins, both of which can contribute to bone mineral density.

But other researchers caution that the very idea that beer can improve bone health remains controversial.

Karen Wosje of the Cincinnati Children's Hospital Medical Center, whose own research showed a positive effect of alcohol on bone health, suggested that too few studies have been conducted to know for sure.

She also warned that the potential benefits of alcohol must be balanced against the risks.

"We do not support a universal recommendation for moderate drinking," said Wosje. "Other factors affecting fracture risk, such as the risk of falling, may be increased with alcohol intake."

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