Effects of 3 weeks' moderate alcohol intake on bone and mineral metabolism in normal men.


Abstract
To study the effects of prolonged moderate alcohol intake on bone and mineral metabolism, 60 g/day of ethanol was administered to 10 healthy male volunteers during 3 weeks. The drinking period was preceded and followed by an abstinence period of 3 weeks. The serum level of osteocalcin decreased by 30% towards the end of the alcohol period (P less than 0.01), recovering by 25% after the termination of drinking (P less than 0.01). The serum level of intact parathyroid hormone increased to the end of the drinking period (P less than 0.05). After stopping drinking it came back to baseline (P less than 0.05) within a week. The serum levels of 25(OH)D3, 1,25(OH)2D3, 24,25(OH)2D3, the serum and urinary levels of calcium, and the intestinal absorption of calcium measured by stable strontium remained practically unchanged throughout the whole observation period. We conclude that prolonged moderate alcohol intake impairs osteoblastic function, leading to lowered serum levels of osteocalcin, but it does not derange vitamin D metabolism.

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