

**Meat Consumption  
Tied to  
Risk of Gout**

Newly published research has found that diets high in meat raise one's risk of contracting gout.

Gout is an inflammatory arthritis that affects several million men and women in the US. Gout develops when elevated serum levels of uric acid lead to the deposition of urate crystals in the joints and tissues. The clinical manifestations of gout include recurrent attacks of arthritis, joint deformation, the formation of kidney stones, and kidney damage. The incidence of gout is increasing in the US and has reached epidemic proportions in some groups, such as the Maori of New Zealand.<sup>1</sup>

Obesity, alcohol consumption, and the use of diuretics generally are considered the dominant predisposing factors for gout. While genetic differences underlie the magnitude of uric acid levels to some degree, diet appears to correlate most strongly with the risk of developing gout.

A recent study clearly demonstrated that diets high in meats (more than 1.92 servings per day compared with less than 0.81 servings per day) led to an increase in the risk of gout.<sup>2</sup> In fact, the relative risk increased by as much as 21% with each additional portion of meat consumed daily. In like manner, increased seafood consumption (of greater than 0.56 servings per day compared with less than 0.15 servings per day) also increased the risk for gout, and even more so in men with a body mass index (BMI) of less than 25. No relationship was found to exist between total protein intake and the risk of gout, or between consumption of purine-rich vegetables and the risk of gout.

—Dean S. Cunningham, MD, PhD

**References**

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2. Choi HK, Atkinson K, Karlson EW, Willett W, Curhan G. Purine-rich foods, dairy and protein intake, and the risk of gout in men. *N Engl J Med*. 2004 Mar 11;350(11):1093-103.

# Homocysteine Raises Risk of Osteoporosis

Although preventable, osteoporosis or “brittle bones” afflicts one of every two American women and one of every four American men over the age of 50. A new study suggests a clear link between osteoporosis and high blood levels of the amino acid homocysteine.

The complications of osteoporosis take the form of noticeable height loss and fractures of the hip, spine, and wrist. Osteoporosis is implicated in more than 300,000 hip fractures in the US each year; of those affected, approximately 25% will die within one year and another 25% will no longer be able to walk without assistance.

Homocysteine is involved in methionine metabolism, and normally is recycled into methionine or converted into cysteine. An excessive accumulation of homocysteine in the body, however, entails a heightened risk for heart disease and stroke, among other diseases.

In the study, 2,406 men and women over the age of 55 were followed prospectively. Those with homocysteine levels in the highest quartile had twice the risk of osteoporotic fracture compared to those in the other three quartiles.<sup>1</sup> This increased risk is comparable to that of acquiring cardiovascular disease or dementia for those with high levels of homocysteine.

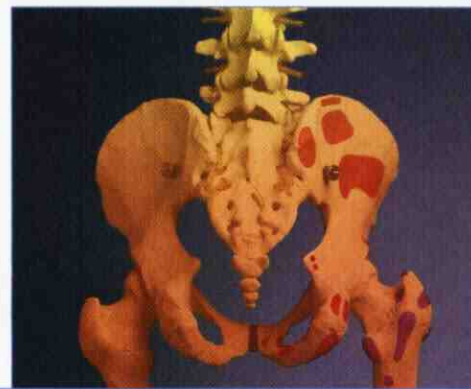
In a second study of 1,999 men and women recruited as part of the Framingham Study, men whose homocysteine levels placed them in the highest quartile were nearly four times more likely to sustain an osteoporotic fracture compared to other subjects.<sup>2</sup> Women whose homocysteine placed them in the highest quartile were twice as likely to sustain a fracture as other female subjects.

Dietary supplementation with folate and vitamins B6 and B12, even in the absence of measurable deficiencies of these nutrients, helps lower homocysteine levels and may help protect against osteoporosis.

—Dean S. Cunningham, MD, PhD

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