



**36<sup>TH</sup> EUROPEAN SYMPOSIUM ON CALCIFIED TISSUES  
VIENNA – 23-27 MAY 2009**

**PRESS RELEASE**

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**VITAMIN D AND CALCIUM SUPPLEMENTS HELP PREVENT BONE FRACTURE IN THE ELDERLY**

We all know that vitamin D and calcium are good for bones, but research teams in Europe and USA have shown that both taken daily reduces the rate of hip fracture in older people by 20%.

Speaking at the European Symposium on Calcified Tissue in Vienna today (27 May), Professor Bo Abrahamsen from the Copenhagen University Hospital Gentofte in Denmark, described the results from a major study analysing seven trials examining the effects of low doses of vitamin D with calcium in 68,500 patients.

Participants in the study were aged 47 – 107 years old, average age 69. Their age, gender and fracture history were taken into account, together with medication such as hormone replacement therapy and bisphosphonates (used in the treatment of post-menopausal osteoporosis and osteoporosis in males). Patients in all the trials included were randomised to receive either vitamin D (given alone or with calcium, usually in the form of 1000 mg calcium carbonate daily) or no active treatment. “The real strength of this study was that we were looking at groups and individuals, not just summary statistics. We were able to calculate absolute fracture rates and the time to treatment effects,” he said.

After about 16 months, the reduction in hip fracture rates by 20% was seen in people who took vitamin D (10ug; 400 IU) and calcium (1000 mg) together, regardless of age, gender and fracture history. Fracture rate in other bones was reduced by 10%. “Vitamin D on its own is not very effective, even if the dose is doubled,” said Professor Abrahamsen, a consultant physician at the hospital. “In people over fifty, the combination of vitamin D with calcium, however, seems to work equally well in people with or without a history of bone fractures – this is important new knowledge,” he said.

The impact of calcium plus vitamin D on fracture however is somewhat more modest than that seen for other osteoporosis interventions. People with a high risk of fracture will benefit more from being treated with specific osteoporosis drug therapies such as bisphosphonates, together with oral vitamin D and calcium.

Professor Tahir Masud from Nottingham University Hospital and a UK collaborator said, "Previous data have shown that there is a high degree of vitamin insufficiency in the older population in the UK. Many older people at high risk of fracture do not receive vitamin D and calcium supplements."

The study cannot separate the beneficial effects of daily vitamin D from daily calcium, but the results suggest that vitamin D by injection every three months given to many elderly patients does not make a big impact on fracture rates.

"We cannot yet recommend that all adult, healthy people should take oral vitamin D and calcium supplements to prevent bone fracture in later life, but our findings indicate that vitamin D supplements taken daily with calcium is a simple and cheap way of reducing the risk of bone fractures in people in late middle age and onwards," said Professor Abrahamsen.

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**Professor Bo Abrahamsen** <http://www.physician.dk/>

**Calcified tissues** are central to a healthy skeleton and to bone disorders, such as osteoporosis, back pain and fractures that make life a misery for countless people. Children, too, can inherit some forms of bone diseases causing bone pain, shortness and deformed limbs.

The mission of **The European Calcified Tissue Society** is to promote excellence in research into the field of calcified tissues within Europe, and to ensure the findings are disseminated to benefit patients with bone disease. [www.ectsoc.org](http://www.ectsoc.org)

Over 3000 delegates will be attending to hear the latest research and clinical updates at the **36<sup>th</sup> European Symposium on Calcified Tissues** in Vienna, 23-27 May 2009  
<http://www.ectsoc.org/vienna2009/>