



SECOND JOINT MEETING OF THE

European Calcified Tissue Society AND THE International Bone and Mineral Society

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Contact: Kara Dress: +1-202-367-2434, kara@ibmsonline.org

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DAILY AND CUMULATIVE DOSES OF BETA-BLOCKERS MAY REDUCE FRACTURE RISK

Geneva, Switzerland (27 June 2005)—Daily and cumulative doses of beta-blockers, such as atenolol and metoprolol, and other antihypertensive drugs appear to be effective in reducing the risk of hip and vertebral fractures, new research suggests. The findings were presented today by Frank de Vries, M.Sc., at the [Second Joint Meeting of the European Calcified Tissue Society and the International Bone and Mineral Society](#).

While another study conducted using the UK General Practice Research Database (GPRD) found a link between beta-blockers and decreased risk of fracture, the authors did not report whether daily or cumulative doses had the same effect.

Dr. de Vries and his team conducted a large, case-control study of 23,100 adult patients for more than a decade using data from the GPRD to evaluate how daily and cumulative doses impact the risk of fracture. Cases were defined as patients with a record of fracture of the hip or spine. For each case, a control patient without a history of fracture was matched by age, gender, and practice and index date. Use of beta-blockers, thiazides and other antihypertensives three months before the index date was compared to patients who had not used these drugs.

Study results indicate that patients who were daily users of beta-blockers or thiazides had a 25 percent lower risk of hip fracture. Risk of vertebral fracture was reduced by one-third among patients using beta-blockers; thiazides were not as effective in decreasing vertebral fracture risk. Among current

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users, a cumulative dose-response relationship between beta-blocker use and fracture risk was observed, with the strongest effect seen among patients in the highest dose category. Overall, beta-blocker use during three months appears to be more effective in reducing vertebral fracture risk than thiazide diuretics.

Patients who have hypertension, angina pectoris or congestive heart failure frequently use beta-blockers and other antihypertensives. Elderly patients, who are more likely to have these conditions, also are at greater risk for fracture.

“Beta-blockers appear to be a promising new class of drugs to prevent fractures,” explains Dr. de Vries. “While it is too early to recommend these medications as an osteoporosis treatment, randomized clinical trials may be able to confirm these findings.”

For more information about Dr. de Vries’ study, please visit www.ects-ibms-2005.org.

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[The European Calcified Tissue Society \(ECTS\)](#) is the major organization in Europe for researchers and clinicians working in the field of calcified tissues. [The International Bone and Mineral Society \(IBMS\)](#) is the international society working to promote the generation and dissemination of knowledge about bone and mineral metabolism.

The [ECTS-IBMS Second Joint Meeting](#), held in Geneva, Switzerland, 25-29 June 2005, brings together some 3,000 researchers, clinicians, physicians and other allied health professionals, will offer participants the opportunity to enhance their knowledge of bone biology, bone diseases and their correlation to mineral metabolism.

State-of-the-art research on bone and mineralized tissue, along with diagnostic and therapeutic aspects of metabolic bone diseases will be presented through symposia, workshops, training courses, lectures, posters and Meet the Professor sessions. Topics covered at the meeting include: osteoporosis assessment, treatment, genetics and physiology; clinical disorders other than osteoporosis; stem cells and bone cells; nutrition and bone; metabolic bone disease; bone imaging and assessment; and bone development.

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