

Most Women Unaware of Risk for Debilitating Fractures

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Nelson Watts, MD

(PhysOrg.com) -- Many women with an elevated risk for osteoporosis-related fractures fail to perceive themselves as high risk compared with other women of the same age.

These findings—part of the international Global [Longitudinal Study of Osteoporosis](#) in Women (GLOW)—are published in the April 1, 2010, edition of the journal *Osteoporosis International*. The GLOW study includes data from more than 60,000 women in 10 countries.

Of the 28,000 U.S. women enrolled in GLOW, 3,128 were from Southwest Ohio. University of Cincinnati (UC) professor and UC Health endocrinologist Nelson Watts, MD, led the local arm of GLOW, which found that of the 3,128 women studied, only 40 percent of those with two or more risk factors perceived themselves to be at higher risk for

fracture than their age-matched peers.

Of the 60,000 women studied across the globe, one in three (33 percent) with two or more risk factors perceived themselves to be at higher risk for fracture. Risk factors included diagnosis of osteoporosis, previous fracture, low weight, recent falls and parental hip fracture.

Authors of the study say the failure by women to appreciate their personal risk of fracture presents a barrier to receiving appropriate management and safe and effective treatments.

Watts, director of UC's [Bone Health](#) and Osteoporosis Center and professor of medicine, says, "Too few patients at risk for osteoporosis are being tested and treated. A fracture can be a life-changing event, and many of the fractures due to osteoporosis could be prevented."

Study authors urge improved education of both physicians and [postmenopausal women](#) about osteoporosis risk factors.

Osteoporosis causes bones to become fragile and therefore more likely to break. If left untreated, the disease can progress painlessly until a fracture occurs. One in two women will suffer an osteoporosis-related fracture after age 50. These fractures often carry with them [chronic pain](#), reduced mobility, loss of independence and, especially in the case of hip fracture, an increased risk of death. Because the likelihood of fractures increases substantially with age, fracture numbers are projected to rise as the population ages. Several risk factors for fractures have been identified and should be considered by physicians treating women age 55 and over:

- older age
- low body weight
- parental [hip fracture](#)

- personal history of fracture (clavicle, arm, wrist, spine, rib, hip, pelvis, upper leg, lower leg, ankle) since age 45
- two or more falls in the past year
- current use of cortisone or prednisone (steroids often prescribed for a number of medical conditions)
- rheumatoid arthritis
- cigarette smoking
- consumption of three or more alcoholic beverages daily.

Other risk factors include a variety of medical conditions and medications. Although tools for diagnosis and risk assessment, including bone density testing and the World Health Organization FRAX fracture risk assessment tool, are widely available, the connection between identified risk factors and serious fracture outcomes is not being made by a majority of women who are at the highest risk. Since many fractures can be prevented by appropriate treatment, it is important that elevated risk be recognized.

GLOW is based at the Center for Outcomes Research at the University of Massachusetts Medical School and is supported by a grant from the Alliance for Better Bone Health (formerly sanofi-aventis and P&G Pharmaceuticals, now sanofi-aventis and Warner Chilcott) and is being directed by the Center for Outcomes Research, University of Massachusetts Medical School. Watts serves as a speaker and consultant for both sanofi-aventis and Warner Chilcott as well as other companies with products to treat osteoporosis.

Watts and UC environmental health researcher Amit Bhattacharya, PhD, recently formed a company based on technology they have developed called "Bone Shock Absorbance." The company, OsteoDynamics, was formed with the help of Integrated BioScience Solutions, LLC (IGBS), and the business incubator BIOSTART, and will develop a new diagnostic tool to test a patient's risk of bone fracture based on the Bone

Shock Absorbance concept.

Bone Shock Absorbance is a non-invasive and painless test that measures how the energy associated with simple heel strike by a patient is propagated, absorbed and dissipated as its shock wave moves up a patient's skeleton. The test provides information that measures a patient's bone quality and appears to be a better indicator of fracture risk than the commonly used methods that simply measure the mineral density of a patient's bones.

Provided by University of Cincinnati

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