

Screening for Osteoporosis to Prevent Fractures

The US Preventive Services Task Force (USPSTF) has recently published recommendations on screening for osteoporosis to prevent bone fractures in adults.

Osteoporosis and Fracture Risk

Bones are constantly being broken down and rebuilt throughout life. As people get older, the rate of bone thinning starts to overtake the rate of bone building. Over time, this can lead to low bone mineral density (BMD) and ultimately to **osteoporosis** (severe low bone density). People with osteoporosis are more likely to have fractures, especially after trauma, such as a fall. Hip fractures in particular can lead to lifelong problems such as disability, chronic pain, and decreased quality of life.

In women, the decrease in estrogen levels that occurs during menopause leads to increased bone breakdown. As a result, postmenopausal women have a greater risk of osteoporosis compared with men and women who have not gone through menopause. Other risk factors for osteoporosis include smoking, excess alcohol use, low body weight, and a history of hip fracture in a parent. Several risk assessment tools can be used to calculate risk of osteoporosis based on these factors.

What Tests Are Used to Screen for Osteoporosis?

The most commonly used screening test for osteoporosis is a special type of x-ray that measures bone mineral density, called **dual-energy x-ray absorptiometry (DXA)**. Most DXA tests performed are central DXAs, meaning that they look at the "central" bones of the body, including the hip and the spine; these locations are thought to be best for measuring BMD. Sometimes a peripheral DXA test is performed on a bone such as the forearm or heel. Ultrasound is another method of looking at peripheral bones and assessing osteoporosis risk without measuring BMD.

What Is the Patient Population Under Consideration for Screening for Osteoporosis?

This USPSTF recommendation applies to adults who do not have a history of fractures, do not have an increased risk of falls, do not have other medical conditions that may cause osteoporosis (such as thyroid disease), and are not taking medications (such as glucocorticoids) that may cause osteoporosis.

What Are the Potential Benefits and Harms of Screening for Osteoporosis?

The goal of screening for osteoporosis is finding and treating the condition to ultimately prevent fractures. There is evidence that DXA tests are accurate in finding osteoporosis and also that treating osteoporosis is effective in preventing fractures. Potential harms of

screening are small, as DXA testing is noninvasive and accurate with minimal side effects. Potential harms from side effects of treatment with medications for osteoporosis are also small.

How Strong Is the Recommendation to Screen for Osteoporosis?

For all women older than 65 years and for postmenopausal women younger than 65 years who have an increased risk of osteoporosis (as determined by a risk calculator tool), the USPSTF concludes with moderate certainty that the potential benefits of screening for osteoporosis outweigh the potential harms. For men, there is not enough evidence to assess the balance of benefit and harm.

Screening for Osteoporosis to Prevent Fractures	
Population	USPSTF recommendation grade
 WOMEN Aged 65 y and older	 Recommended
 WOMEN Aged younger than 65 y who are postmenopausal and at increased risk of osteoporosis	 Recommended
 MEN	 There is insufficient evidence to make a recommendation.

FOR MORE INFORMATION

US Preventive Services Task Force
<https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/osteoporosis-screening1>

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