

# Osteopenia and Preventing Fractures

**O**steopenia means low bone density. This differs from **osteoporosis**, a common condition in which the bones are brittle and weak and fracture easily. Osteopenia is not a disease but is a marker for risk of fractures. Older persons are at risk of having unrecognized osteoporosis, which may be discovered only after a fracture (such as a broken hip). **Bone densitometry** is a simple, painless test that measures bone density. If the bone density is already abnormal, lifestyle changes can help slow progression of bone loss and reduce the occurrence of fractures. The December 6, 2006, issue of JAMA includes an article about osteopenia.

## RISK FACTORS

Several factors other than low bone density increase the risk of fractures:

- Age—The chance of having a fracture increases with age.
- Falling—Most fractures result from falls.
- Poor eyesight can lead to falls and fractures and should be corrected if possible.
- Smoking weakens bones.
- Drinking more than 2 drinks of alcohol a day increases the chance of hip fractures.
- Low body weight may lead to a higher risk of hip fracture.
- White women have about 2 or 3 times greater risk than men or black and Hispanic women.
- Previous fractures signal a higher risk.
- Spine fracture usually indicates osteoporosis and a particularly high risk of additional spine fractures.
- Having a parent who had hip fracture indicates a higher risk of hip fracture.
- Certain medications, particularly corticosteroids and aromatase inhibitors (used for breast cancer), cause bone loss and increase risk.
- Medical conditions including stroke with weakness, rheumatoid arthritis, diabetes, and Parkinson disease increase risk.

## PREVENTING FRACTURES

- Maintain a healthy weight, eat a balanced diet, and make regular exercise a daily habit. Weight-bearing exercise (such as walking) is good for building muscle, maintaining bone and joint health, and overall fitness.
- Expose your skin to 10 minutes of sunlight per day to make sure you have enough vitamin D formation in your body. Use vitamin D–fortified foods or take a vitamin D supplement if needed.
- Eat foods rich in calcium (dairy products, leafy green vegetables) and consider taking a calcium supplement.
- Have bone density tests as recommended by your doctor.
- Do not smoke.
- Medications are available to treat osteoporosis. These may include bisphosphonates (they slow bone loss and increase bone density), estrogen receptor modulators, estrogen hormone therapy, or other hormones that help to improve bone density. Some reduce the risk of spine fractures, not hip or other types of fractures. These medications may also have other effects and risks that you should discuss with your doctor.

## FOR MORE INFORMATION

- National Institutes of Health Osteoporosis and Related Bone Diseases National Resource Center  
800/624-BONE (2663)  
[www.osteoporosis.org](http://www.osteoporosis.org)
- National Osteoporosis Foundation  
202/223-2226  
[www.nof.org](http://www.nof.org)
- Surgeon General's Report on Bone Health  
866/718-BONE (2663)  
[surgeongeneral.gov/library/bonehealth/content.html](http://surgeongeneral.gov/library/bonehealth/content.html)

## INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page Index on JAMA's Web site at [www.jama.com](http://www.jama.com). Many are available in English and Spanish. A Patient Page on bone fractures was published in the May 5, 2004, issue; and one on vitamin D in the November 9, 2005, issue.

*Sources: National Institutes of Health Osteoporosis and Related Bone Diseases National Resource Center; National Institute on Aging; American Geriatrics Society; National Institute for Arthritis and Musculoskeletal and Skin Diseases*

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