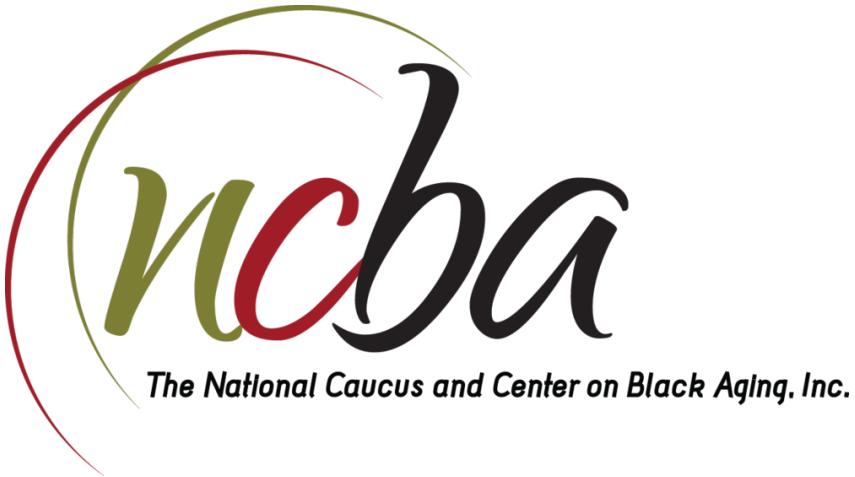




Osteoporosis in the Black Community

PRACTICAL TIPS AND ACTION

OCTOBER 19, 2020

Introductions

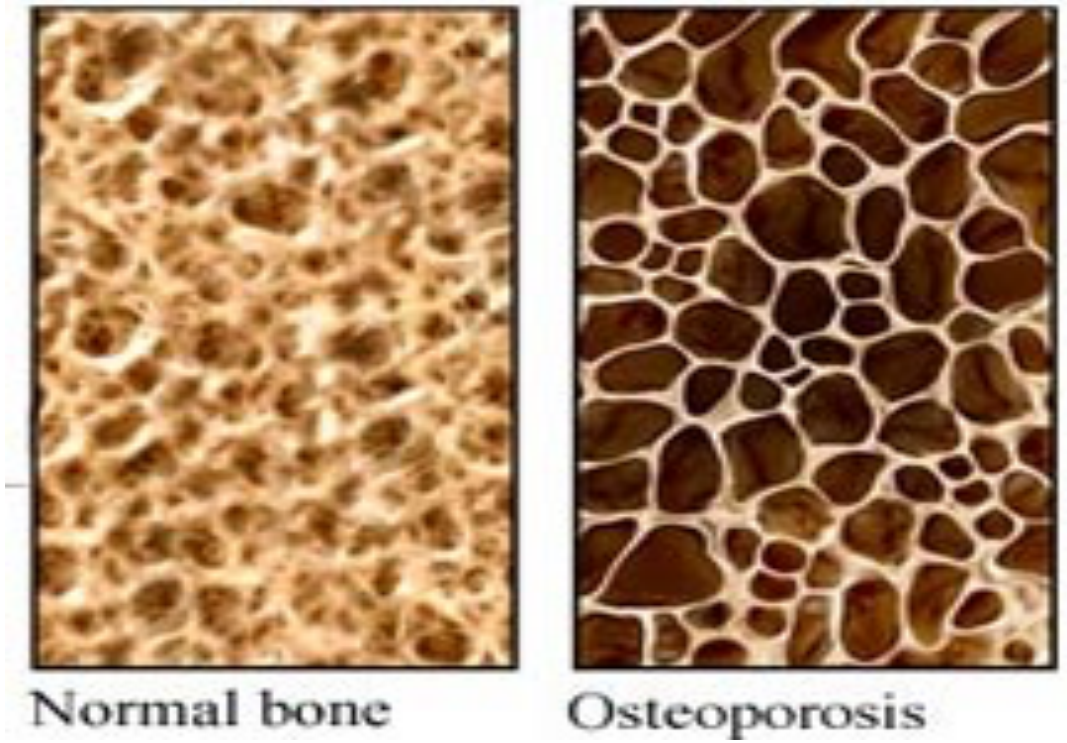
- **Nicole Wright, PhD, MPH**
  - Associate Professor, Dept. of Epidemiology, University of Alabama, Birmingham
- **Keisha Lewis, Occupational Therapist**
  - National Caucus and Center on Black Aging
- **Angie Boddie, Director of Health Programs**
  - National Caucus and Center on Black Aging
- **Claire Gill, CEO**
  - National Osteoporosis Foundation

Objectives

- Increase the awareness of osteoporosis in the Black community
- Gain insight into the risk factors associated with osteoporosis
- Identify the importance of proper nutrition
- Discuss the importance of physical activity and identify types of physical activity
- Discuss the role of proper body mechanics and posture
- Learn the role of balance in fall prevention
- Make a plan of action to move forward if you or a loved one has been diagnosed or is at risk for osteoporosis

What Is Osteoporosis

- Osteoporosis ≠ Osteoarthritis
- Is a characterized by low bone mineral density (BMD) and structural deterioration
- Leads to bone fragility and an increased susceptibility to fractures



Impact of Osteoporosis

- Fractures result in:
  - Serious injury/illness
  - Disability
  - Reduction in quality of life
  - Death
- The most common types of osteoporotic fractures are:
  - Spine
  - Hip
  - Wrist
- Fractures increase with age

Google people with osteoporosis

elderly | real | transparent | alcohol | bone | exercise | back | fitness | calcium | cane | walking | osteoporosis treatment | pl



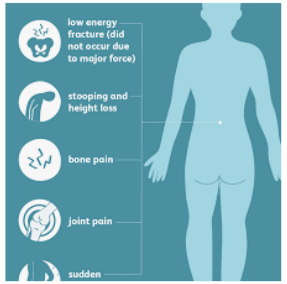
Osteoporosis - OrthoInfo - AAOS
orthoinfo.aaos.org



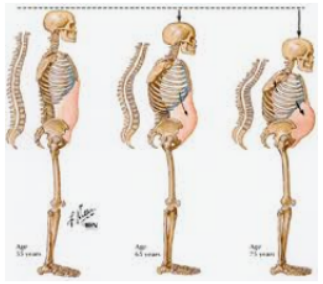
osteoporosis and spine fractures ...
iofbonehealth.org



Higher Risk for Sudden Deafness
hearingreview.com



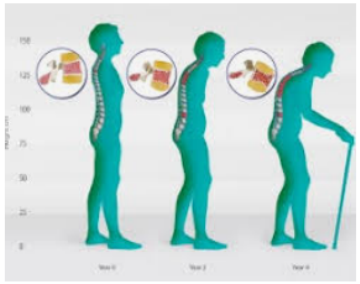
Osteoporosis: Signs, Sympto...
verywellhealth.com



Osteoporosis in Women with Can...
saintlukeskc.org



Does Osteoporosis Run in Your Family? | CDC
cdc.gov



bone density scans detect low bone ...
disnola.com



Osteoporosis: Everything You Need to Know
healthline.com



Famous Faces of Osteoporosis | Everyday ...
everydayhealth.com



Osteoporosis kills 1,100 a month and...
dailymail.co.uk

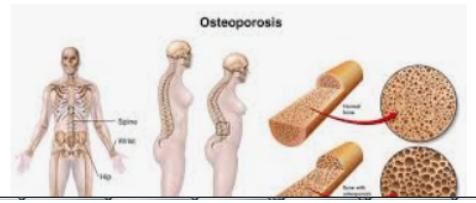


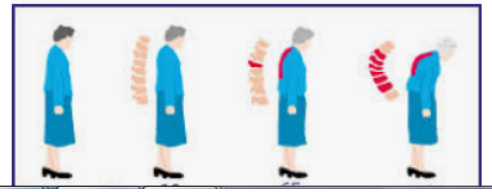
Osteoporosis - Wikiped...
en.wikipedia.org

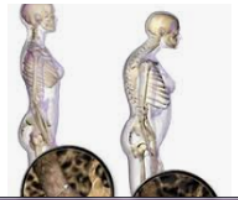


Three warning signs that you may have ...
iofbonehealth.org











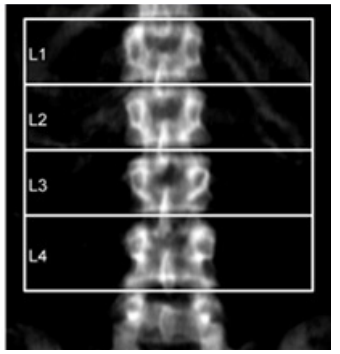


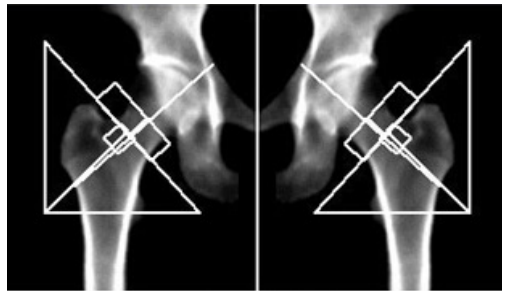

THAT'S OSTEOPOROSIS
Augustine, aged 97, relies on the care of her daughter Linda. Decades of bone and joint problems took her independence.
IOF
International Osteoporosis Foundation
Our vision is a world without fragility fracture in which healthy mobility is a reality for all
WorldOsteoporosisDay
October20
www.worldosteoporosisday.org

How is Osteoporosis Diagnosed?

- Dual Energy X-ray Absorptiometry (DXA)
- Most common for older adults
  - Warranted at younger ages if you have certain risk factors
- Provides T-score
  - Comparative amount of bone to that of a young reference population
- T-Score:
  - Normal: ≤-1.0
  - Low BMD: >-1.0 - <-2.5
  - Osteoporosis: ≥-2.5

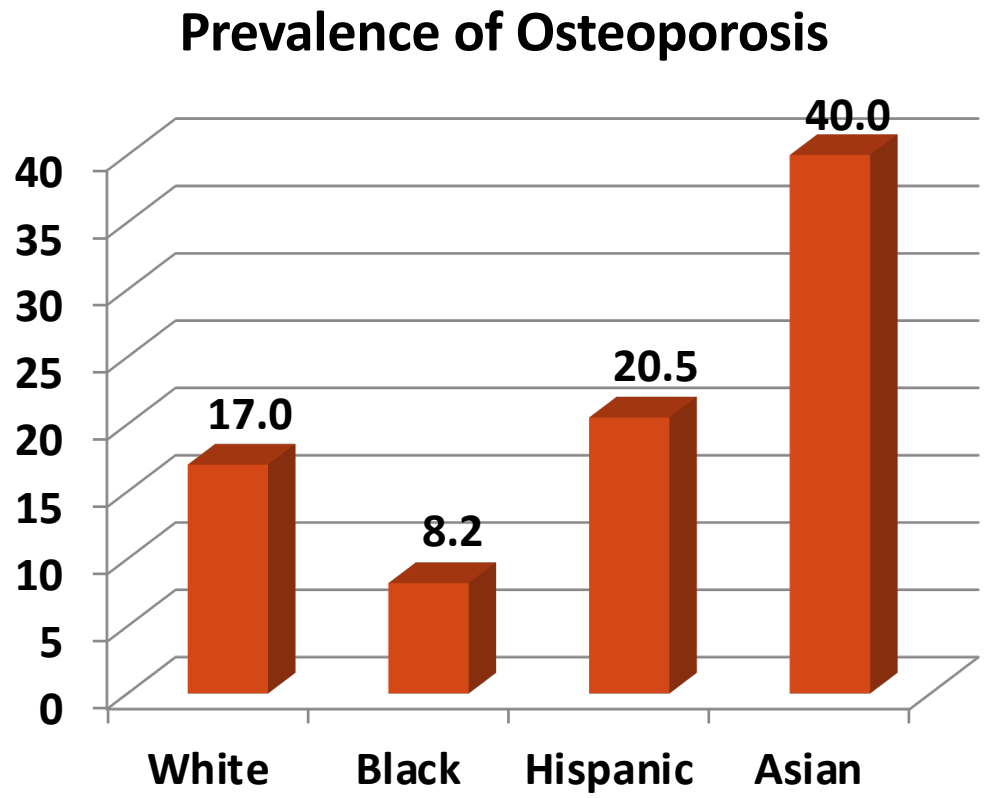






Osteoporosis in the Black Community

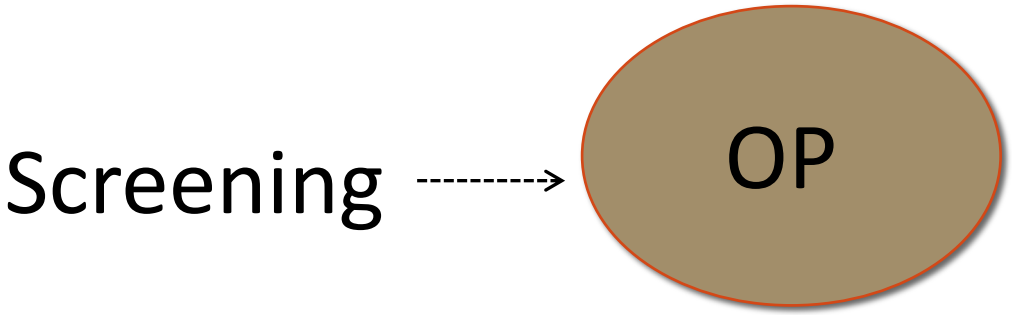
- Blacks have lower prevalence of osteoporosis
  - 2.5% higher BMD than East Asians
  - 4.5% higher BMD than European



Osteoporos Int (2017) 28:1979–1988

Mol Biol Evol. 2015 Nov;32(11):2961-72

Disparities in Osteoporosis Screening



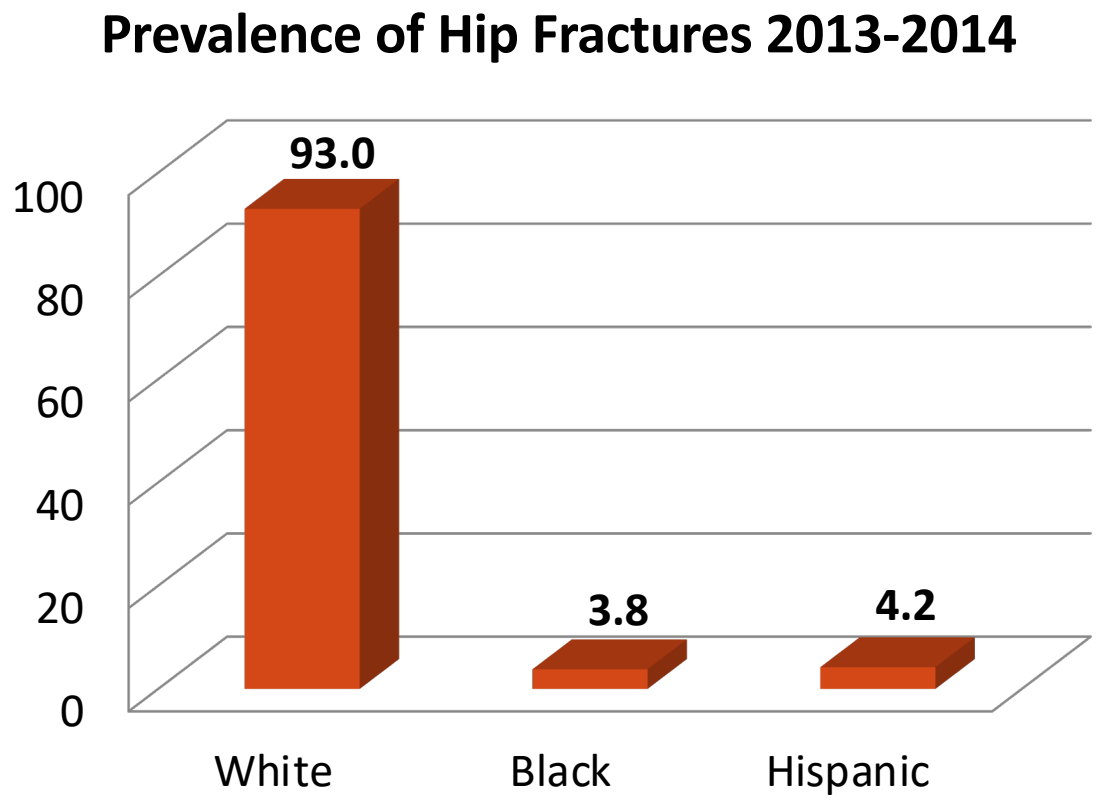
- Black men and women often go undiagnosed
- The Black community is less likely to be screened
  - 8-20% less likely depending on age

Am J Med (2017) 130, 306-316

How is Osteoporosis Diagnosed?

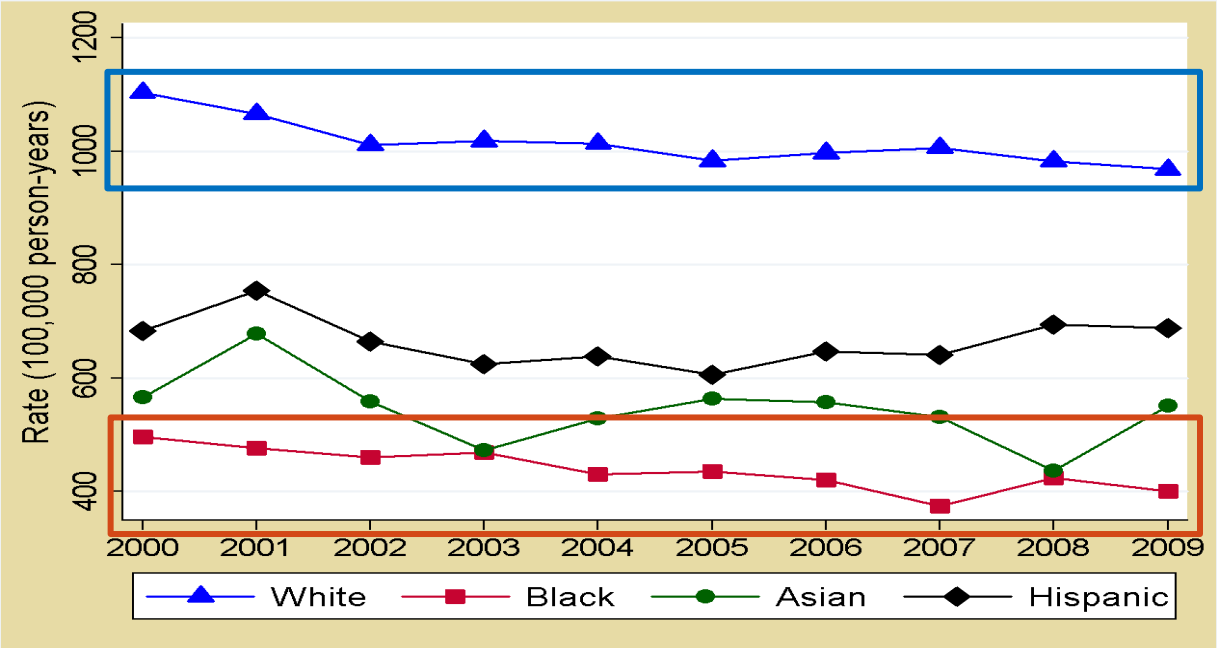
- Osteoporosis can also be diagnosed if you have sustained a fracture:
  - Hip
  - Spine



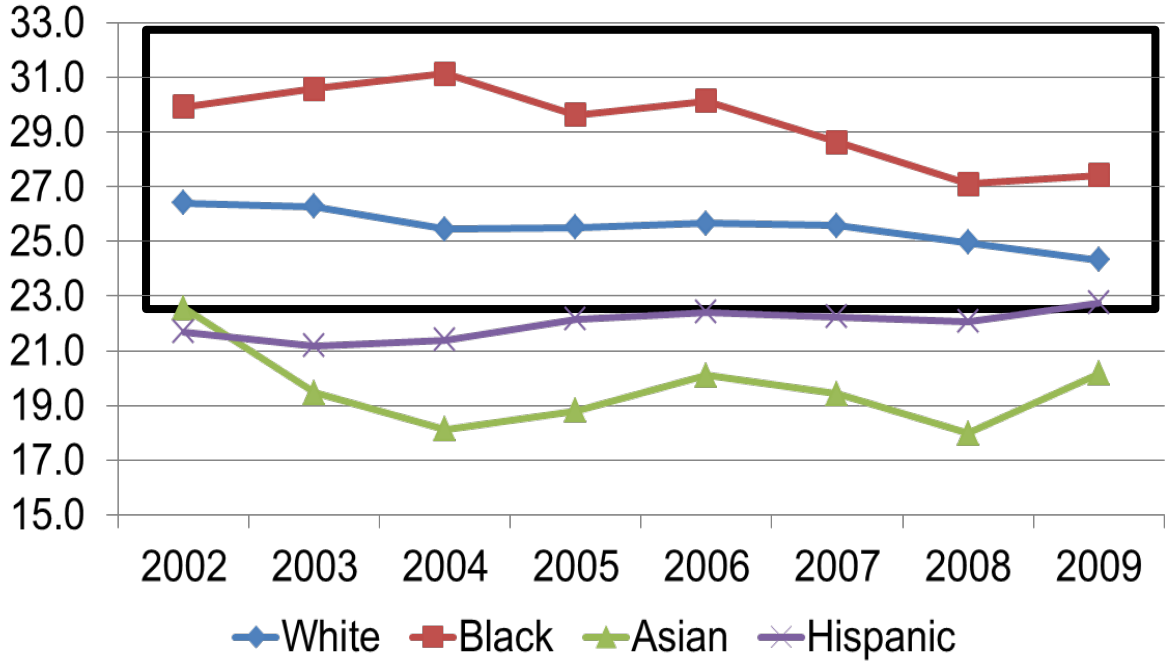


Racial Disparities in Fracture Outcomes

Racial Difference in Hip Fracture Incidence



Racial Difference in One-Year Mortality Following Hip Fracture



J Bone Miner Res. 2012 Nov;27(11):2325-32

Racial Disparities in Fracture Outcomes

- Study of three post fracture outcomes using 2010-2015 national Medicare data
  - Death
  - Long-term nursing home stay
  - Medicaid dependency

	Hip	Spine
Death	24%	7%
Long-term Nursing Home	19%	-
Medicaid Dependency	245%	240%

J Am Geriatr Soc. 2020 Aug;68(8):1803-1810

Reasons for Disparities in Fracture Outcomes

1. **Screening**
2. **Treatment:** 5-20% lower in the Black community
3. **Greater time to surgical repair:** 44% to 200% higher odds of surgical repair >2 days
4. **Improper rehabilitation:** 30% higher odds of not receiving PT
5. **Risk factors in the Black community**
6. **Patient knowledge and awareness**

J Gen Intern Med 24(8):956–62
J Am Geriatr Soc 61:1855–1862, 2013

Am J Manag Care. 2015 Mar 1;21(3):e206-14.
J Bone Joint Surg Am. 2016;98:858-65

Medical care 2000: 38: 1119-1130

Risk Factors for Osteoporosis

Fixed risk factors

- Age
- Female Gender
- Family History
- Previous Fracture
- Race and Ethnicity
- Menopause
- Long term steroid use
- Rheumatoid Arthritis
- Hypogonadism in men
- Secondary risk factors

Modifiable risk factors

- Alcohol
- Smoking
- Low body mass index (BMI)
- High BMI
- Poor Nutrition
- Vitamin D Deficiency
- Eating disorders
- Estrogen Deficiency
- Insufficient exercise

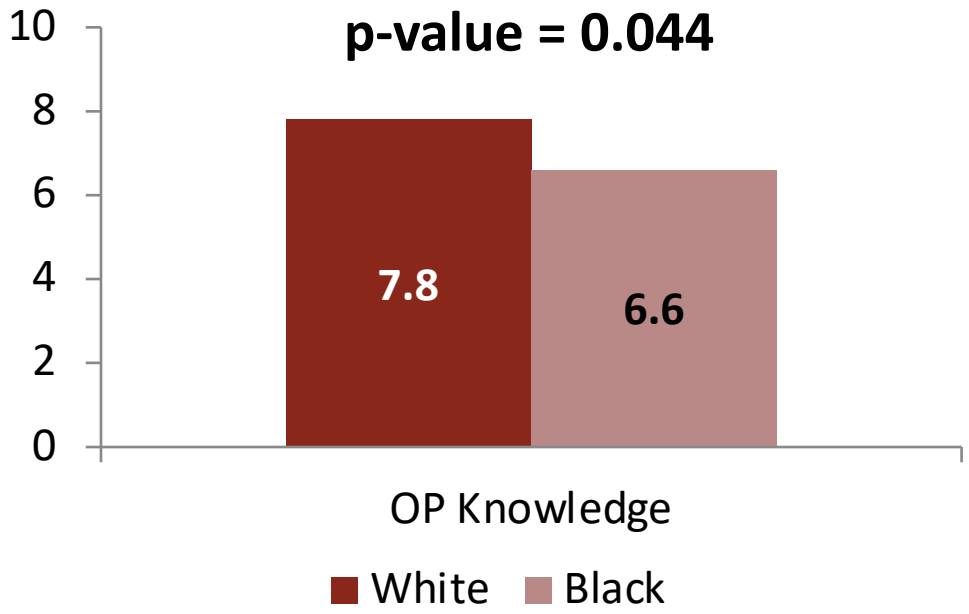
5. Risk Factors for Osteoporosis

- **High BMI**
  - Studies are now showing that high BMI not protective against fracture
  - Increase the risk for ankle and wrist fractures
- **Poor nutrition**
  - Quality of food in Black neighborhoods
- **Vitamin D deficiency**
- **Secondary Risk Factors**
  - Diabetes
  - Stroke
  - Sickle cell disease
  - Breast Cancer
  - Lupus

J Bone Miner Res. 2014 Jan;29(1):223-33.
Osteoporos Int. 2016 Nov;27(11):3149-3154
Int J Surg. 2020 Mar;75:13-23
Nat Rev Endocrinol. 2017 Apr;13(4):208-219.
Bone. 2013 Jan;52(1):206-11.

6. Patient Knowledge and Awareness

- Evaluated knowledge, attitudes, and beliefs about osteoporosis in Black and White women with osteoporosis



	White Mean (SD)	Black Mean (SD)
Internal	23.3 (4.8)	27.2 (6.3)
Powerful Others*	18.5 (4.6)	23.8 (6.0)
Chance	15.8 (3.2)	17.3 (7.0)

J Racial Ethn Health Disparities. 2019 Aug;6(4):707 - 718

6. Patient Knowledge and Awareness

Focus Group Data

- **Osteoporosis knowledge** - Lower in Black women
- **Types of physical activity** - Black: walking vs. White: other strength-based
- **Coping with multi-morbidity** - Osteoporosis is lower priority in Black women
- **Physician trust** – Needed in Black women for bone health activity activation
- **Religion** – Spiritual guidance with respect to health in Black women
- **Patient activation** - Higher in White women around bone health activities

J Racial Ethn Health Disparities. 2019 Aug;6(4):707 - 718

Bone Health in the Black Community

- Healthy bones are essential!
- Knowing risk factors for and management of osteoporosis can reduce fractures and their subsequent outcomes



Practical Tips and Actions

WHAT ARE YOUR NEXT STEPS?

Proper Nutrition

- Black Americans may be at an increased risk for osteoporosis due to lack of calcium and vitamin D
- Bone is a living tissue and nutrients serve as an important part in maintaining good bone health
- Inadequate nutrition leads to significant loss of bone and place individuals at an increased risk of fracture

Calcium

- Many Black American women may be at an increased risk for osteoporosis because they consume less calcium than the Recommended Dietary Allowance (RDA)
- Calcium is necessary for normal bone development and is absorbed best by consuming calcium-rich foods



How to Increase Calcium?

Dietary Sources	Examples
Dairy	Cheese, Yogurt, Milk
Fish	Sardines or Canned Salmon
Beans	Lima Beans, Kidney Beans
Nuts	Almonds
Certain Dark Leafy Greens	Collard Greens, Spinach, Kale
Fortified Food	Bread, Cereal, Soy Products









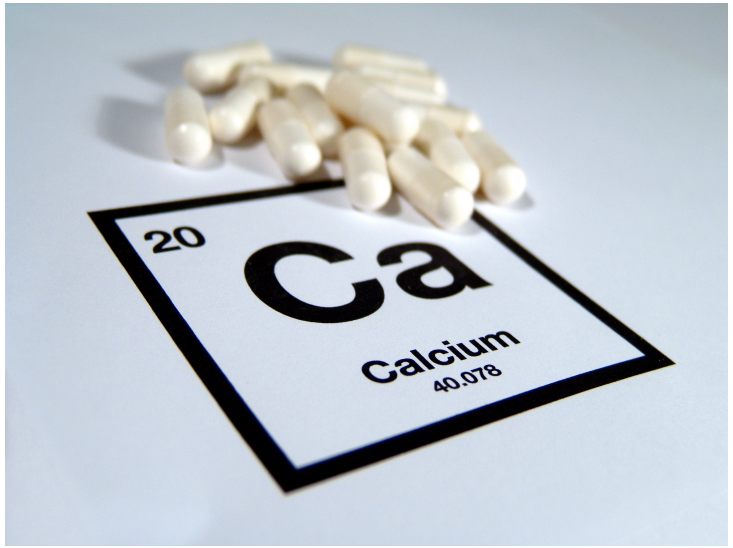


Consume 3 servings of dairy or other calcium rich foods a day

How to Increase Calcium?

Calcium: Recommended Dietary Allowance (RDA) for adults

Men	Daily RDA	Daily upper limit
19-50 years	1,000 mg	2,500 mg
51-70 years	1,000 mg	2,000 mg
71 and older	1,200 mg	2,000 mg
Women	**Daily RDA**	**Daily upper limit**
19-50 years	1,000 mg	2,500 mg
51 and older	1,200 mg	2,000 mg



Choose calcium supplements that contain vitamin D

https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/calcium-supplements/art-20047097

Vitamin D

- Vitamin D is essential for proper function of nerves, muscles and the immune system
- Older adults and Black Americans are at an increased risk of developing vitamin D insufficiency



How to Increase Vitamin D?

- Sunshine (avoid extended exposure to sunlight without sunscreen)
- Vitamin D supplements
  - Vitamin D Intake should not exceed 100 mcg (4000 IU) in a day
  - Recommended daily amount for adults 19-70 years is 15 mcg (600 IU)
  - Recommended daily amount for adults 71 years and older is 20 mcg (800 IU)
- Dietary sources

Dietary sources
Fatty fish (salmon, trout, tuna)
Beef liver
Egg yolks

Exercise for Osteoporosis

- **Benefits of regular exercise:**
  - Increase your muscle strength
  - Improve your balance
  - Decrease your risk of bone fracture
  - Maintain or improve your posture
  - Relieve or decrease pain
- Please remember if you have osteoporosis, are at high risk for a fall or fracture, or have a medical condition, affecting your ability to exercise, check with your health care provider/team before beginning an exercise program



Weight Bearing Exercises

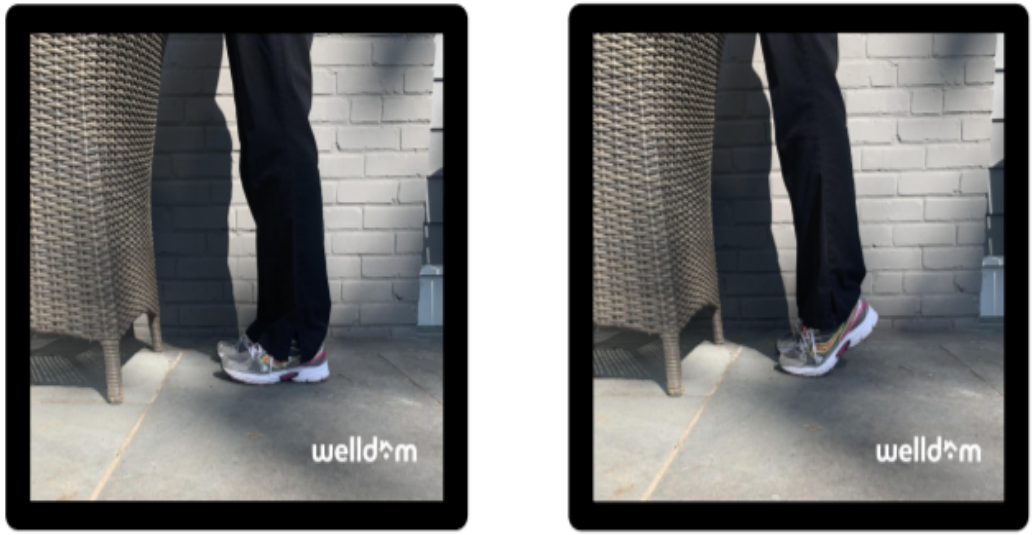
- Weight-Bearing exercises
  - Walking
  - Jogging
  - Dancing



Squats



Toe Raises



Strengthening Exercises

Strengthening Exercise

- Strengthening/Resistance Training
  - Lifting weights
  - Using exercise bands



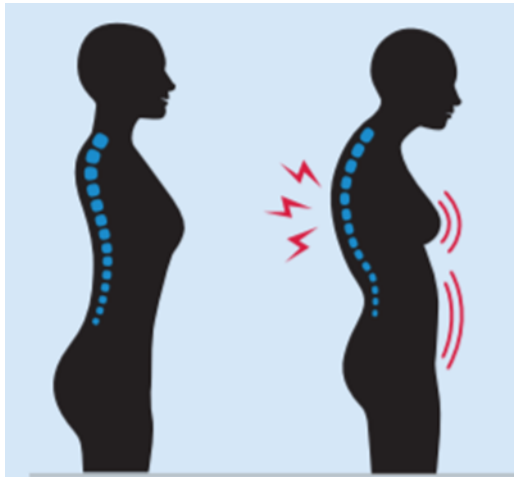
Wall push ups

Bicep Curls



Posture

- Postural changes may be associated with osteoporosis
- Poor posture can cause pressure and affect different areas of your spine



https://cdn.nof.org/wp-content/uploads/2016/09/OC-Too-Fit-To-Fracture-Osteo-Exercise-Book.pdf

- Postural exercises help you stand straight, reduce pain and discomfort associated with osteoporosis, and prevent spine fractures

Good Body Mechanics

- Avoid exercises and daily activities which cause you to round the spine
  - leaning over to make your bed
  - getting groceries out of the trunk of the car
  - bending over to pick up an object from the floor

- Key points for posture:
  - Keep your back, stomach, and leg muscles strong and flexible
  - Do not slouch
  - Ask for help when lifting heavy objects
  - Maintain a regular exercise routine

Postural don’ts





Postural do's







Tips for Daily Living

Lifting Items

- Know your own strength and only lift what you can handle
- Always lift and carry close to the body
- Bend your knees and let your legs do all the work
- Don’t twist your back, turn with your feet

Safe Sitting

- Avoid low soft chairs that have poor back support
- Use an upright firm chair that does not allow your lower back to slouch
- Get up and straighten your back out at least every thirty minutes

Tips for Daily Living

Standing

- Avoid bending forward
- Have your working surface at a comfortable height

Getting In/Out of Bed

- Using a firm mattress will give your back more support.
  - Sit at the side of the bed
  - Lower yourself onto your elbow
  - Lower further onto your shoulder bending your knees at the same time
  - Draw your knees up until your legs are on the bed
  - Roll body and knees together to face the ceiling
  - The reverse sequence should be used when getting out of bed.

Balance Matters

- Are you at risks for falling?
- Common risk factors
  - Visual loss
  - Fear of falling
  - Poor balance
  - Muscle weakness
  - Unstable blood pressure
  - Poor sensation
  - Certain medications



Balance Matters

- Good balance will decrease your risk of falling
- Fall Prevention exercises will improve balance and reduce your risk of falling
- Work with a physical or occupational therapist for a detailed assessment of your needs
- Take a free balance assessment to assess your falls risk
  - NCOA Falls Free Checkup (Online Tool)

  Visit https://www.ncoa.org/healthy-aging/falls-prevention/falls-free checkup/
  - Welldom, LLC (Free virtual falls risk assessment)

  Visit: www.livewelldom.com

Make a Plan of Action

01

Start a conversation with your doctor if you have a family history of osteoporosis or other risk factors that may put you at increased risk for the disease

02

Ask your doctor if a test to measure bone density is needed

03

Have a conversation with your doctor or pharmacist about dietary supplements and medicines you take to identify your risk

04

Live a healthy lifestyle including eliminating the risk factors you can change

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Thank you!

- Please enter your questions in the Chat or Q&A feature
- For more information, please visit:
  - www.nof.org
  - https://ncba-aging.org/