BONE HEALTH

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Menopause

- Defined as cessation of menses for at least one year
- Average age in U.S. is 51
- Vasomotor symptoms
- Vaginal dryness
Symptoms of Menopause

Systemic
- Weight gain
- Heavy night sweats

Psychological
- Dizziness
- Interrupted sleeping patterns
- Anxiety
- Poor memory

Breasts
- Enlargement
- Pain
- Inability to concentrate
- Depressive mood
- Irritability
- Mood swings
- Less interest in sexual activity

Skin
- Hot flashes
- Dryness
- Itching
- Thinning
- Tingling
- Transitional menstruations
  - Shorter or longer cycles
  - Bleeding between periods

Joints
- Soreness
- Stiffness
- Back pain

Urinary
- Incontinence
- Urgency
- Vaginal
  - Dryness
  - Painful intercourse
Osteoporosis

- Porous bone
- Skeletal disorder characterized by low bone mineral density
- Makes people susceptible to fracture (hip and vertebrate most common)
- Silent disease
- Women > men affected (8.2 million vs 2 million, aged >50)
- White/Hispanic race more susceptible
- Low estrogen at menopause greatly contributes to this
Evaluation

- History and physical exam, must review medical risk factors/medication use

- Checking height, because height loss related to vertebral fracture
Symptoms

- Loss of height—getting shorter by and inch or more
- Change in posture
- Bone fracture
- Lower back pain
Risk factors

- Medication use such as steroids
- Lifestyle -- the more inactive or sedentary, the greater the risk
- Smoking
- Alcohol use (two or more drinks per day)
Testing

Dexa—Dual energy X-ray absorptiometry

- Measures bone mineral density
- Hip and lumbar spine most accurate
- Measure T score—compares bone mass to that of young adult of same gender
- Measure Z score—compares bone mass to that of people their same age/gender/body type (if -2, maybe other things causing low bone mass)

- WHO criteria for diagnosis
  - Osteoporosis: T score less than or equat to -2.5 sd
  - Low bone mass: T score between -1.0 and -2.5 sd
  - Normal bone mass: T score -1 or greater
Prevention

- Routine aerobic and weight-bearing exercise
- Free weights, jogging, stepping, jumping rope
- Consuming RDA of Calcium and Vitamin D
- RDA calcium 1000 mg/day age 19-50 and 1200 mg > 50
- RDA Vitamin D 600 iu to age 70 and 800 iu after this
- Above is obtained from diet, no recommendation for supplementation
- Supplementation can lead to kidney stones
- Prevention of falls
- Smoking cessation, limit alcohol, less salt in the diet
Prevention looked at further

Falls

- Install grab bars
- Pick up grandchildren’s toys
- Improve lighting
- Wearing shoes that have a good grip
Dietary changes--foods to limit

- Foods high in salt
- Alcohol
- Beans (have chemicals that prevent calcium absorption)
- Excess Vit A
- Decrease caffeine intake
Screening

- Routine starts at age 65
- DEXA recommended
- Hip (femoral neck) and lumbar spine most accurate
- Interval between screenings is generally 2 years
- Preferable to do at same place that patient did before
Treatment

- HRT or hormone replacement therapy
- Bisphosphonates - antiresorptive drugs
- Biologics - injection every 6 months
- Anabolic agents - bone building
FRAX

- Fracture Risk assessment tool
- Computer based algorithm to estimate 10 yr risk of hip fracture and 10 year probability of major osteoporotic fracture in adults >40 y/o
- Helps assess need for BMD testing in people < 65 y/o
- Helps determine whether to start treatment in people with low bone mass
- A FRAX score >5% for a hip fracture, consider treatment with lifestyle changes
Treatment of menopausal symptoms

- Hormone replacement therapy
- Progestin
- Testosterone
- Herbal medications
Take home messages

- Eat a healthy diet, lots of green, leafy vegetables, well-balanced meal
- Exercise regularly
- Decrease use of unnecessary medication
- Decrease alcohol/smoking cessation
- AVOID FALLS, very important, seems so basic
- Keep davening for a long and healthy life to 120!
Thank you

Question & Answer
Conclusion

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