**Venus AND Mars: Helping Women AND Men with Osteoporosis**

Pharmacy Technician Post-test

After completing this continuing education activity, pharmacists will be able to

1. List the basic pathology and symptoms of osteoporosis
2. Differentiate common over the counter and prescription treatments used in osteoporosis
3. Describe the technician as a touch point to help with OTC options for osteoporosis
4. Identify when to refer patients to the pharmacists for recommendations or referrals

**1. A 70-year-old male with newly diagnosed osteoporosis will begin therapy. Which of the following is a first line prescription medication?**

1. Alendronate
2. Romosozumab
3. Calcium carbonate and vitamin D

**2. Which of the following medications interacts with calcium-containing foods and supplements?**

1. Levothyroxine
2. Orlistat
3. Lisinopril

**3. A patient asks you, the pharmacy technician, which of the following over-the-counter products can reduce osteoporosis risk?**

A. Nicotine replacement therapy for smoking cessation

B. A multivitamin for added nutritional benefit

C. Vitamin K2 for bone health

**4. Which of the following is associated with a rapid decrease in bone mineral density?**

A. Menopause

B. Sedentary lifestyle

C. Gastroesophageal reflux disease (GERD)

**5. A 60-year-old female patient asks you, the pharmacy technician, about Vitamin D intake for osteoporosis prevention. Which of the following is most important to covey to the patient?**

1. Inform the patient that Vitamin D supplementation is not needed.
2. Inform the patient that Vitamin D should only be obtained through dietary sources.
3. Educate the patient on recommended daily intake.

**6. How long before food, drink, and other medications should oral bisphosphonates (except risedronate delayed release) be taken?**

1. At least 15 minutes
2. At least 30-60 minutes\*\*\*
3. At least 60-120 minutes

**7. A man shares with you that he is taking alendronate 70 mg PO weekly for osteoporosis. He said the doctor just called to tell him he has a fracture following a fall yesterday. The patient asks, “Which medication is best for me now?” Which of the following statements should you reply with?**

A. “You should take calcium and vitamin D in addition to the alendronate.”

B. “You probably need an injectable medication.”

C. “Let me have you talk with the pharmacist who can better answer your question.”

**8. A 58-year-old Asian female (height 62 inches, weight 135 pounds, BMI 24.7 kg/m2) presents to the primary care clinic for her annual wellness visit. Her family history is significant for osteoporosis (mother), COPD (father), and hypertension (mother and father). Her last menstrual period was at age 52. She drinks 1 glass of wine a few times a week and quit using tobacco 12 years ago. She walks for 20 minutes daily and follows the DASH diet closely. Her past medical history includes rheumatoid arthritis and hypertension.**

**How many risk factors does this patient has for osteoporosis?**

A. 3

B. 6

C. 8

**9. Which of the following statements is the best recommendation about calcium supplementation?**

1. Calcium supplementation can increase cardiovascular risk.
2. Calcium citrate will be best absorbed if taken with food.
3. Calcium carbonate will be best absorbed if taken with food.

**10. You are filling a patient’s prescription for alendronate 70 mg PO weekly and notice that the prescription is six months past its last fill date. (Patient previously received a 3-month supply.) What should you do?**

1. Not mention anything to the pharmacist or patient because restarting the prescription today is sufficient.
2. Alert the pharmacist to explore reasons for sub-optimal adherence when the patient picks up the prescription.
3. Suggest the patient to switch to a different medication.