

Preventive Medicine and Health Maintenance: Review Questions

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QUESTIONS

Choose the single best answer for each question.

1. A 30-year-old man presents to the clinic for a routine physical examination prior to starting employment at a local hospital. The patient has no complaints and has not seen a doctor since childhood. His immunizations are current, and he has never been hospitalized. The patient takes no medications and has no drug allergies. He has smoked 1 pack of cigarettes per day since age 18 years and drinks 3 to 4 beers per week. His father was diagnosed with lung cancer and had a 30 pack-year smoking history. Which of the following is the next step in this patient's management?

 - (A) Screening for hypertension
 - (B) Screening for hypertension and smoking cessation counseling
 - (C) Smoking cessation counseling
 - (D) Testicular examination
 - (E) Testicular examination and smoking cessation counseling
2. A 72-year-old African American man with a history of hypertension presents to the clinic for a 3-month follow-up appointment. He has no new complaints and states that his blood pressure has been adequately controlled with metoprolol 25 mg daily and lisinopril 10 mg daily. The patient continues to abstain from smoking since quitting 30 years ago and is able to perform activities of daily living without difficulty. He also has increased his exercise tolerance to walking 1 to 2 miles 3 times a week. Blood pressure is 125/70 mm Hg and heart rate is 61 bpm. What is the next best step in the management of this patient?

 - (A) Schedule an abdominal ultrasound
 - (B) Schedule an abdominal ultrasound and repeat in 5 years
 - (C) Schedule computed tomography of the abdomen and pelvis
 - (D) Schedule computed tomography of the abdomen and pelvis and repeat in 5 years
 - (E) No additional studies are needed at this time
3. A 61-year-old woman with rheumatoid arthritis presents to her primary care physician for a routine follow-up. The patient reports regular follow-up with her rheumatologist. She has been taking oral methotrexate 7.5 mg once a week for 2 years and has not experienced a flare during that time. She has no other medical problems except for an uncomplicated vaginal hysterectomy due to fibroids 6 years ago. With the help of regular smoking cessation counseling during clinic visits, the patient has reduced her smoking from 1 pack of cigarettes per day to a half pack per day. Physical examination reveals no abnormalities except for a small bruise on her left shin, which she states has improved since accidentally hitting her leg on the coffee table last week. The patient's vital signs include blood pressure of 128/72 mm Hg, heart rate of 65 bpm, respiratory rate of 18 breaths/min, and an oxygen saturation of 96% on room air. She weighs 112 lb and is 5 ft 4 in with a body mass index of 19.2 kg/m². Which of the following should be performed as part of routine screening?

 - (A) Abdominal ultrasound
 - (B) Ankle brachial index
 - (C) Dual energy x-ray absorptiometry (DEXA) scan
 - (D) Pelvic examination and Papanicolaou (Pap) smear
 - (E) Transvaginal ultrasound
4. A 67-year-old man with gastroesophageal reflux disease presents to the clinic for routine follow-up. One week ago, he cut his hand on a rusty nail while working in his garage, but the cut was minor and is healing well. The patient denies fevers or chills and pain or drainage from the wound. He feels well since being discharged from the hospital 1 month ago after evaluation of atypical chest pain. The symptoms were attributed to gastroesophageal reflux disease and completely resolved with twice-daily proton pump inhibitor therapy. A copy of his

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immunization records shows that he received a pneumococcal vaccine for the first time during his admission for atypical chest pain, an influenza vaccine 3 years ago, and a tetanus booster 7 years ago. He performs all daily activities without difficulty. Physical examination reveals no abnormalities. Vital signs include blood pressure of 128/65 mm Hg, heart rate of 62 bpm, respiratory rate of 18 breaths/min, and oxygen saturation of 96% on room air. Body mass index is 20 kg/m². Laboratory testing, including low-density lipoprotein cholesterol, high-density lipoprotein cholesterol, complete blood count, and basic metabolic panel, are normal. Which of the following is indicated at this time?

- (A) Influenza vaccine only
- (B) Influenza vaccine and pneumococcal vaccine
- (C) Influenza vaccine and tetanus booster
- (D) Tetanus booster only
- (E) No immunizations are indicated at this time

5. A 42-year-old man presents to the clinic to establish a primary care provider. He recently moved to the area with his wife and son after retiring from the military. His immunizations are current, and he takes no medications. The patient has no medical problems and has never had surgery. He does not smoke or drink alcohol and is interested in training for marathons. There is no family history of cardiovascular disease or colorectal cancer. He asks for recommendations for maintaining his health. Which of the following should be recommended at this time?

- (A) Colonoscopy
- (B) Digital rectal examination and prostate-specific antigen testing
- (C) Fecal occult blood testing and flexible sigmoidoscopy
- (D) Lipid panel
- (E) No additional testing is needed at this time

ANSWERS AND EXPLANATIONS

1. **(B) Screening for hypertension and smoking cessation counseling.** Hypertension screening by measuring blood pressure is recommended by the US Preventive Services Task Force (USPSTF) for patients aged 18 years and older (“A” rating). Additionally, screening for smoking is recommended for adults of any age. If the patient is a smoker, smoking cessation counseling and interventions such as behavioral counseling (duration, ≤ 3 min) during office visits and pharmacotherapy (if necessary) are indicated. The USPSTF recommends against (“D” rating) routine screening for testicular cancer in men who are asymp-

tomatic. There is currently no evidence to suggest that clinical testicular examination or self-examination decreases mortality from testicular cancer.¹

2. **(A) Schedule an abdominal ultrasound.** Men who smoke or have smoked are at increased risk for developing abdominal aortic aneurysm (AAA) as compared with men who have never smoked. In a meta-analysis of 4 randomized controlled trials of population-based screening for AAA in men, screening significantly reduced AAA-related mortality in men aged 65 to 80 years (odds ratio, 0.57 [95% confidence interval, 0.45–0.74]).² The USPSTF currently recommends screening for AAA with abdominal ultrasound in men aged 65 to 75 years with a current or past smoking history. The USPSTF makes no recommendation for or against screening for AAA in men aged 65 to 75 years who have never smoked.² Conversely, in women, the USPSTF recommends against (“D” rating) screening for AAA.² A randomized study of women aged 65 to 80 years showed no differences in either AAA-related mortality or all-cause mortality between patients who received screening for AAA as compared with those who did not.³

3. **(C) DEXA scan.** The USPSTF currently recommends that women aged 65 years and older receive routine screening for osteoporosis with DEXA scan.⁴ Although this patient does not meet the age requirement for screening, her low body weight of 112 lb indicates that she is at increased risk for osteoporosis and thus she should undergo a DEXA scan. Lower body weight (< 70 kg [~ 154 lb]) is the single best predictor of low bone mineral density,^{5,6} with less evidence to support screening in patients aged younger than 65 years with risk factors such as smoking, family history of osteoporosis, decreased physical activity, alcohol or caffeine use, or low vitamin D or calcium intake. There are currently no guidelines for or against screening for osteoporosis in women aged younger than 60 years or in women aged 60 to 64 years not at increased risk for osteoporotic fractures.⁴ As mentioned previously, screening for AAA with abdominal ultrasound in women is not recommended. The USPSTF recommends against routine screening for ovarian cancer with transvaginal ultrasound or screening for peripheral arterial disease using the ankle brachial index.

4. **(C) Influenza vaccine and tetanus booster.** The influenza vaccine is recommended for individuals aged 50 years and older on an annual basis.⁷

Because the patient received the influenza vaccine 3 years ago, he is overdue for the next vaccination. A tetanus booster (tetanus toxoid) is recommended routinely every 10 years. In cases in which patients have wounds that may be contaminated with tetanus bacilli (in this case, due to injury involving a rusty nail), a tetanus booster is recommended if it has been 5 years or more since the last tetanus vaccination.⁷ Pneumococcal vaccination is recommended for adults aged 65 years and older;⁷ this patient was recently vaccinated (1 month prior to this clinic visit) and therefore does not require revaccination.

5. **(D) Lipid panel.** Routine screening for dyslipidemia is recommended by the USPSTF for men aged 35 years and older and women aged 45 years and older (“A” rating).⁸ If risk factors for coronary heart disease are present (eg, diabetes, smoking, hypertension, family history of cardiovascular disease before age 50 yr in male relatives and age 60 yr in female relatives, family history suggestive of familial hyperlipidemia), routine screening should begin at age 20 to 35 years for men and age 20 to 45 years for women. Digital rectal examination or prostate-specific antigen testing are not indicated in this case due to insufficient evidence to recommend for or against screening on a routine basis (“I” rating

based on the current USPSTF recommendation).⁸ Based on this patient’s personal and family history, he is not at increased risk for developing colorectal cancer; therefore, screening with colonoscopy or fecal occult blood testing and flexible sigmoidoscopy would be recommended starting at age 50 years.

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