

Department of Family Medicine

Family Medicine Resident Information

Recommendations - Clinical Preventive Services

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Screening for Asymptomatic Coronary Artery Disease

There is insufficient evidence to recommend for or against screening middle-aged and older men and women for asymptomatic coronary artery disease, using resting electrocardiography (ECG), ambulatory ECG, or exercise ECG. Recommendations against routine screening can be made on other grounds for individuals who are not at high risk of developing clinical heart disease (see

Clinical Intervention). Routine screening is not recommended as part of the periodic health visit or pre-participation sports examination for children, adolescents, or young adults. Clinicians should emphasize proven measures for the primary prevention of coronary disease.

Screening for High Blood Cholesterol and Other Lipid Abnormalities

Periodic screening for high blood cholesterol is recommended for all men ages 35-65 and women ages 45-65. There is insufficient evidence to recommend for or against routine screening of asymptomatic persons over age 65, but recommendations to screen healthy men and women ages 65-75 may be made on other grounds (see Clinical Intervention). There is also insufficient evidence to recommend for or against routine screening in children, adolescents, or young adults. Recommendations for screening adolescents and young adults with risk factors for coronary disease, and against routine screening in children, may be made on other grounds (see Clinical Intervention). There is insufficient evidence to recommend for or against routine screening for other lipid abnormalities. All patients should receive periodic screening and counseling regarding other measures to reduce their risk of coronary disease.

Screening for Hypertension

Screening for hypertension is recommended for all children and adults

Screening for Asymptomatic Carotid Artery Stenosis

There is insufficient evidence to recommend for or against screening asymptomatic persons for carotid artery stenosis using the physical examination or carotid ultrasound. For selected high-risk patients, a recommendation to discuss the potential benefits of screening and carotid endarterectomy may be made on other grounds (see Clinical Intervention). All persons should be screened for hypertension (see Chapter 3), and clinicians should provide counseling about smoking cessation.

Screening for Peripheral Arterial Disease

Routine screening for peripheral arterial disease in asymptomatic persons is not recommended. Clinicians should be alert to symptoms of peripheral arterial disease in persons at increased risk and should evaluate patients who have clinical evidence of vascular disease.

Screening for Abdominal Aortic Aneurysm

There is insufficient evidence to recommend for or against routine screening of asymptomatic adults for abdominal aortic aneurysm with abdominal palpation or ultrasound.

Screening for Breast Cancer

Routine screening for breast cancer every 1-2 years, with mammography alone or mammography and annual clinical breast examination (CBE), is recommended for women aged 50-69. There is insufficient evidence to recommend for or against routine mammography or CBE for women aged 40-49 or aged 70 and older, although recommendations for high-risk women aged 40-49 and healthy women aged ≥ 70 may be made on other grounds (see Clinical Intervention). There is insufficient evidence to recommend for or against the use of screening CBE alone or the teaching of breast self-examination.

Screening for Colorectal Cancer

Screening for colorectal cancer is recommended for all persons aged 50 and older with annual fecal occult blood testing (FOBT), or sigmoidoscopy (periodicity unspecified), or both (see Clinical Intervention). There is insufficient evidence to determine which of these screening methods is preferable or whether the combination of FOBT and sigmoidoscopy produces greater benefits than does either test alone. There is also insufficient evidence to recommend for or against routine screening with digital rectal examination, barium enema, or colonoscopy, although recommendations against such screening in average-risk persons may be made on other grounds (see Clinical Intervention). Persons with a family history of hereditary syndromes associated with a high risk of colon cancer should be referred for diagnosis and management (see Clinical Intervention).

Screening for Cervical Cancer

Routine screening for cervical cancer with Papanicolaou (Pap) testing is recommended for all women who are or have been sexually active and who have a cervix. Pap smears should begin with the onset of sexual activity and should be repeated at least every 3 years (see Clinical Intervention). There is insufficient evidence to recommend for or against an upper age limit for Pap testing, but recommendations can be made on other grounds to discontinue regular testing after age 65 in women who have had regular previous screenings in which the smears have been consistently normal. There is insufficient evidence to recommend for or against routine screening with cervicography or colposcopy, or for screening for human papilloma virus infection, although recommendations against such screening can be made on other grounds (see Clinical Intervention).

Screening for Prostate Cancer

Routine screening for prostate cancer with digital rectal examinations, serum tumor markers (e.g., prostate-specific antigen), or transrectal ultrasound is not recommended.

Screening for Lung Cancer

Routine screening for lung cancer with chest radiography or sputum cytology in asymptomatic persons is not recommended. All patients should be counseled against tobacco use (see Chapter 54).

Screening for Skin Cancer- Including Counseling to Prevent Skin Cancer

There is insufficient evidence to recommend for or against either routine screening for skin cancer by primary care providers or counseling patients to perform periodic skin self-examinations. A recommendation to consider referring patients at substantially increased risk of malignant melanoma to skin cancer specialists for evaluation and surveillance may be made on other grounds (see Clinical Intervention). Counseling patients at increased risk of skin cancer to avoid excess sun exposure is recommended, based on the proven efficacy of risk reduction, although the effectiveness of

Screening for Testicular Cancer

There is insufficient evidence to recommend for or against routine screening of asymptomatic men in the general population for testicular cancer by physician examination or patient self-examination. Recommendations to discuss screening options with selected high-risk patients may be made on other grounds (see Clinical Intervention).

Screening for Ovarian Cancer

Routine screening for ovarian cancer by ultrasound, the measurement of serum tumor markers, or pelvic examination is not recommended. There is insufficient evidence to recommend for or against the screening of asymptomatic women at increased risk of developing ovarian cancer. counseling has not been well established. There is insufficient evidence to recommend for or against sunscreen use for the primary prevention of skin cancer.

Screening for Pancreatic Cancer

Routine screening for pancreatic cancer in asymptomatic persons, using abdominal palpation, ultrasonography, or serologic markers, is not recommended

Screening for Oral Cancer

There is insufficient evidence to recommend for or against routine screening of asymptomatic persons for oral cancer by primary care clinicians. All patients should be counseled to discontinue the use of all forms of tobacco (see Chapter 54) and to limit consumption of alcohol (see Chapter 52). Clinicians should remain alert to signs and symptoms of oral cancer and premalignancy in persons who use tobacco or regularly use alcohol.

Screening for Bladder Cancer

Routine screening for bladder cancer with urine dipstick, microscopic urinalysis, or urine cytology is not recommended in asymptomatic persons. All patients who smoke tobacco should be routinely counseled to quit smoking (see Chapter 54).

Screening for Thyroid Cancer

Routine screening for thyroid cancer using neck palpation or ultrasonography is not recommended for asymptomatic children or adults. There is insufficient evidence to recommend for or against screening persons with a history of external head and neck irradiation in infancy or childhood, but recommendations for such screening may be made on other grounds (see Clinical Intervention).

Screening for Diabetes Mellitus

There is insufficient evidence to recommend for or against routine screening for diabetes mellitus in asymptomatic adults. There is also insufficient evidence to recommend for or against universal screening for gestational diabetes. Although the benefit of early detection has not been established for any group, clinicians may decide to screen selected persons at high risk of diabetes on other grounds (see Clinical Intervention). Screening with immune markers to identify persons at risk for developing insulin-dependent diabetes is not recommended in the general population

Screening for Thyroid Disease

Routine screening for thyroid disease with thyroid function tests is not recommended for asymptomatic children or adults. There is insufficient evidence to recommend for or against screening for thyroid disease with thyroid function tests in high-risk patients, but recommendations may be made on other grounds (see Clinical Intervention). Clinicians should remain alert to subtle symptoms and signs of thyroid dysfunction when examining such patients. Screening for congenital hypothyroidism is discussed in Chapter 45.

Screening for Obesity

Periodic height and weight measurements are recommended for all patients (see Clinical Intervention).

Screening for Iron Deficiency Anemia-Including Iron Prophylaxis

Screening for iron deficiency anemia using hemoglobin or hematocrit is recommended for pregnant women and for high-risk infants. There is insufficient evidence to recommend for or against routine screening for iron deficiency anemia in other asymptomatic persons, but recommendations against screening

may be made on other grounds (see Clinical Intervention). Encouraging parents to breastfeed their infants and to include iron-enriched foods in the diet of infants and young children is recommended (see also Chapter 56). There is currently insufficient evidence to recommend for or against the routine use of iron supplements for healthy infants or pregnant women.

Screening for Elevated Lead Levels in Childhood and Pregnancy

Screening for elevated lead levels by measuring blood lead at least once at age 12 months is recommended for all children at increased risk of lead exposure. All children with identifiable risk factors should be screened, as should all children living in communities in which the prevalence of blood lead levels requiring individual intervention, including residential lead hazard control or chelation therapy, is high or is undefined (see Clinical Intervention). Evidence is currently insufficient to recommend an exact community prevalence below which targeted screening can be substituted for universal screening. Clinicians can seek guidance from their local or state health department. There is insufficient evidence to recommend for or against routine screening for lead exposure in asymptomatic pregnant women, but recommendations against such screening may be made on other grounds. There is also insufficient evidence to recommend for or against counseling families about the primary prevention of lead exposure, but recommendations may be made on other grounds. Recommendations regarding the primary prevention of lead poisoning by population-wide environmental interventions are beyond the scope of this chapter.

Screening for Hepatitis B Virus Infection

Screening with hepatitis B surface antigen (HBsAg) to detect active (acute or chronic) hepatitis B virus (HBV) infection is recommended for all pregnant women at their first prenatal visit. The test may be repeated in the third trimester in women who are initially HbsAg negative and who are at increased risk of HBV infection during pregnancy. Routine screening for HBV infection in the general population is not recommended. Certain persons at high risk may be screened to assess eligibility for vaccination

Screening for Tuberculous Infection-Including Bacille Calmette-GuCrin Immunization

Screening for tuberculous infection with tuberculin skin testing is recommended for asymptomatic high-risk persons. Bacille Calmette-GuCrin (BCG) vaccination should be considered only for selected high-risk individuals (see Clinical Intervention).

Screening for Syphilis

Routine serologic screening for syphilis is recommended for all pregnant women and for persons at increased risk of infection (see Clinical Intervention). See Chapter 62 for recommendations on counseling to prevent sexually transmitted diseases.

Screening for Gonorrhea-Including Ocular Prophylaxis in Newborns

Routine screening for *Neisseria gonorrhoeae* is recommended for asymptomatic women at high risk of infection (see Clinical Intervention). All high-risk women should be screened during pregnancy. There is insufficient evidence to recommend for or against screening all pregnant women or screening asymptomatic men. Recommendations to screen selected high-risk young men may be made on other grounds (see Clinical Intervention). Routine screening is not recommended for the general adult population. Ocular antibiotic prophylaxis of all newborn infants is recommended to prevent gonococcal ophthalmia neonatorum.

Screening for Human Immunodeficiency Virus Infection

Clinicians should assess risk factors for human immunodeficiency virus (HIV) infection by obtaining a careful sexual history and inquiring about injection drug use in all patients. Periodic screening for infection with HIV is recommended for all persons at increased risk of infection (see Clinical Intervention). Screening is recommended for all pregnant women at risk for HIV infection, including all women who live in states, counties, or cities with an increased prevalence of HIV infection. There is insufficient evidence to recommend for or against universal screening among low-risk pregnant women in low-prevalence areas, but recommendations to counsel and offer screening to all pregnant women may be made on other grounds (see Clinical Intervention). Screening infants born to high-risk mothers is recommended if the mother's antibody status is not known. All patients should be counseled about effective means to avoid HIV infection.

Screening for Chlamydial Infection-Including Ocular Prophylaxis in Newborns

Routine screening for *Chlamydia trachomatis* infection is recommended for all sexually active female adolescents, high-risk pregnant women, and other asymptomatic women at high risk of infection (see Clinical Intervention). There is insufficient evidence to recommend for or against routine screening in asymptomatic men. Recommendations to screen selected high-risk male adolescents may be made on other grounds (see Clinical Intervention). Routine screening is not recommended for the general adult population. See Chapter 27 for recommendations regarding ocular prophylaxis to prevent ophthalmia neonatorum.

Screening for Genital Herpes Simplex

Routine screening for genital herpes simplex virus (HSV) infection by viral culture or other tests is not recommended for asymptomatic persons, including asymptomatic pregnant women. There is insufficient evidence to recommend for or against the examination of pregnant women in labor for signs of active genital HSV lesions, although recommendations to do so may be made on other grounds (see Clinical Intervention). See Chapter 62 for recommendations on counseling to prevent sexually transmitted diseases.

Screening for Asymptomatic Bacteriuria

Screening for asymptomatic bacteriuria by urine culture is recommended for all pregnant women (see Clinical Intervention). There is insufficient evidence to recommend for or against routine screening for asymptomatic bacteriuria in diabetic or ambulatory elderly women, but recommendations against such screening may be made on other grounds. Routine screening for asymptomatic bacteriuria in other persons is not recommended.

Screening for Rubella-Including Immunization of Adolescents and Adults

Routine screening for rubella susceptibility by history of vaccination or by serology is recommended for all women of childbearing age at their first clinical encounter. Susceptible nonpregnant women should be offered rubella vaccination; susceptible pregnant women should be vaccinated immediately after delivery. An equally acceptable alternative for nonpregnant women of childbearing age is to offer vaccination against rubella without screening (see Clinical Intervention). There is insufficient evidence to recommend for or against screening or routine vaccination of young men in settings where large numbers of susceptible young adults of both sexes congregate, such as military bases and colleges. Routine screening or vaccination of other young men, of older men, and of postmenopausal women is not recommended.

Screening for Visual Impairment

Vision screening to detect amblyopia and strabismus is recommended once for all children prior to entering school, preferably between ages 3 and 4. Clinicians should be alert for signs of ocular misalignment when examining infants and children. Screening for diminished visual acuity with Snellen visual acuity chart is recommended for elderly persons. There is insufficient evidence to recommend for or against screening for diminished visual acuity among other asymptomatic persons, but recommendations against routine screening may be made on other grounds (see Clinical Intervention).

Screening for Glaucoma

There is insufficient evidence to recommend for or against routine screening for intraocular hypertension or glaucoma by primary care clinicians.

Recommendations to refer high-risk patients for evaluation by an eye specialist may be made on other grounds (see Clinical Intervention).

Screening for Hearing Impairment

Screening older adults for hearing impairment by periodically questioning them about their hearing, counseling them about the availability of hearing aid devices, and making referrals for abnormalities when appropriate, is recommended. There is insufficient evidence to recommend for or against routinely screening older adults for hearing impairment using audiometric testing (see Clinical Intervention). There is also insufficient evidence to recommend for or against routinely screening asymptomatic adolescents and working-age adults for hearing impairment. Recommendations against such screening, except for those exposed to excessive occupational noise levels, may be made on other grounds (see Clinical Intervention). Routine hearing screening of asymptomatic children beyond age 3 years is not recommended. There is insufficient evidence to recommend for or against routine screening of asymptomatic neonates for hearing impairment using evoked otoacoustic emission testing or auditory brainstem response. Recommendations to screen high-risk infants may be made on other grounds (see Clinical Intervention). Clinicians examining infants and young children should remain alert for symptoms or signs of hearing impairment.

Screening Ultrasonography in Pregnancy

Routine third-trimester ultrasound examination of the fetus is not recommended. There is insufficient evidence to recommend for or against routine ultrasound examination in the second trimester in low-risk pregnant women (see Clinical Intervention).

Screening for Preeclampsia

Screening for preeclampsia with blood pressure measurement is recommended for all pregnant women at the first prenatal visit and periodically throughout the remainder of pregnancy (see Clinical Intervention).

Screening for D (Rh) Incompatibility

D (formerly Rh) blood typing and antibody screening is recommended for all pregnant women at their first prenatal visit. Repeat antibody screening at 24-28 weeks' gestation is recommended for unsensitized D-negative women (see Clinical Intervention).

Intrapartum Electronic Fetal Monitoring

Routine electronic fetal monitoring for low-risk women in labor is not recommended. There is insufficient evidence to recommend for or against

intrapartum electronic fetal monitoring for high-risk pregnant women (see Clinical Intervention).

Home Uterine Activity Monitoring

There is insufficient evidence to recommend for or against home uterine activity monitoring (HUAM) in high-risk pregnancies as a screening test for preterm labor, but recommendations against its use may be made on other grounds (see Clinical Intervention). HUAM is not recommended in normal-risk pregnancies.

Screening for Down Syndrome

The offering of amniocentesis or chorionic villus sampling (CVS) for chromosome studies is recommended for pregnant women at high risk for Down syndrome. The offering of screening for Down syndrome by serum multiple-marker testing is recommended for all low-risk pregnant women, and as an alternative to amniocentesis and CVS for high-risk women (see Clinical Intervention). This testing should be offered only to women who are seen for prenatal care in locations that have adequate counseling and follow-up services. There is currently insufficient evidence to recommend for or against screening for Down syndrome by individual serum marker testing or ultrasound examination, but recommendations against such screening may be made on other grounds

Screening for Neural Tube Defects_Including Folic Acid/Folate Prophylaxis

The offering of screening for neural tube defects by maternal serum α -fetoprotein (MSAFP) measurement is recommended for all pregnant women who are seen for prenatal care in locations that have adequate counseling and follow-up services available (see Clinical Intervention). Screening with MSAFP may be offered as part of multiple-marker screening (see Chapter 41). There is insufficient evidence to recommend for or against the offering of screening for neural tube defects by midtrimester ultrasound examination to all pregnant women, but recommendations against such screening may be made on other grounds (also see Chapter 36). Daily multivitamins with folic acid to reduce the risk of neural tube defects are recommended for all women who are planning or capable of pregnancy (see Clinical Intervention).

Screening for Hemoglobinopathies

Neonatal screening for sickle hemoglobinopathies is recommended to identify infants who may benefit from antibiotic prophylaxis to prevent sepsis. Whether screening should be universal or targeted to high-risk groups will depend on the proportion of high-risk individuals in the screening area, the accuracy and efficiency with which infants at risk can be identified, and other characteristics of the screening program. All screening efforts must be accompanied by comprehensive counseling and treatment services. Offering screening for

hemoglobinopathies to pregnant women at the first prenatal visit is recommended, especially for those at high risk. There is insufficient evidence to recommend for or against routine screening for hemoglobinopathies in high-risk adolescents and young adults, but recommendations to offer such testing may be made on other grounds

Screening for Phenylketonuria

Screening for phenylketonuria (PKU) by measurement of phenylalanine level on a dried-blood spot specimen is recommended for all newborns prior to discharge from the nursery. Infants who are tested before 24 hours of age should receive a repeat screening test by 2 weeks of age. There is insufficient evidence to recommend for or against routine prenatal screening for maternal PKU, but recommendations against such screening may be made on other grounds.

Screening for Congenital Hypothyroidism

Screening for congenital hypothyroidism with thyroid function tests on dried-blood spot specimens is recommended for all newborns in the first week of life (see Clinical Intervention).

Screening for Postmenopausal Osteoporosis

There is insufficient evidence to recommend for or against routine screening for osteoporosis with bone densitometry in postmenopausal women. Recommendations against routine screening may be made on other grounds (see Clinical Intervention). All postmenopausal women should be counseled about hormone prophylaxis (see Chapter 68) and be advised of the importance of smoking cessation, regular exercise, and adequate calcium intake (see Chapters 54-56). For those high-risk women who would consider estrogen prophylaxis only to prevent osteoporosis, screening may be appropriate to assist treatment decisions (see Clinical Intervention).

Screening for Adolescent Idiopathic Scoliosis

There is insufficient evidence to recommend for or against routine screening of asymptomatic adolescents for idiopathic scoliosis. Clinicians should remain alert for large spinal curvatures when examining adolescents.

Screening for Dementia

There is insufficient evidence to recommend for or against routine screening for dementia with standardized instruments in asymptomatic persons. Clinicians should remain alert for possible signs of declining cognitive function in older patients and evaluate mental status in patients who have problems performing daily activities (see Clinical Intervention).

Screening for Depression

There is insufficient evidence to recommend for or against the routine use of standardized questionnaires to screen for depression in asymptomatic primary care patients. Clinicians should maintain an especially high index of suspicion for depressive symptoms in those persons at increased risk for depression (see Clinical Intervention). Physician education in recognizing and treating affective disorders is recommended (see Chapter 50).

Screening for Suicide Risk

There is insufficient evidence to recommend for or against routine screening by primary care clinicians to detect suicide risk in asymptomatic persons (see Clinical Intervention). Clinicians should be alert to signs of suicidal ideation in persons with established risk factors. The training of primary care clinicians in recognizing and treating affective disorders is recommended. Clinicians should be alert to signs and symptoms of depression (see Chapter 49) and should routinely ask patients about their use of alcohol and other drugs (Chapters 52 and 53).

Screening for Family Violence

There is insufficient evidence to recommend for or against the use of specific screening instruments to detect family violence, but recommendations to include questions about physical abuse when taking a history from adult patients may be made on other grounds (see Clinical Intervention). Clinicians should be alert to the various presentations of child abuse, spouse and partner abuse, and elder abuse.

Screening for Problem Drinking

Screening to detect problem drinking is recommended for all adult and adolescent patients. Screening should involve a careful history of alcohol use and/or the use of standardized screening questionnaires (see Clinical Intervention). Routine measurement of biochemical markers is not recommended in asymptomatic persons. Pregnant women should be advised to limit or cease drinking during pregnancy. Although there is insufficient evidence to prove or disprove harms from light drinking in pregnancy, recommendations that women abstain from alcohol during pregnancy may be made on other grounds (see Clinical Intervention). All persons who use alcohol should be counseled about the dangers of operating a motor vehicle or performing other potentially dangerous activities after drinking alcohol.

Screening for Drug Abuse

There is insufficient evidence to recommend for or against routine screening for drug abuse with standardized questionnaires or biologic assays. Including questions about drug use and drug-related problems when taking a history from all adolescent and adult patients may be recommended on other grounds (see Clinical Intervention). All pregnant women should be advised of the potential adverse effects of drug use on the development of the fetus. Clinicians should be alert to signs and symptoms of drug abuse in patients and refer drug abusing patients to specialized treatment facilities where available.

Counseling to Prevent Tobacco Use

Tobacco cessation counseling on a regular basis is recommended for all persons who use tobacco products. Pregnant women and parents with children living at home also should be counseled on the potentially harmful effects of smoking on fetal and child health. The prescription of nicotine patches or gum is recommended as an adjunct for selected patients. Anti-tobacco messages are recommended for inclusion in health promotion counseling of children, adolescents, and young adults

Counseling to Promote Physical Activity

Counseling patients to incorporate regular physical activity into their daily routines is recommended to prevent coronary heart disease, hypertension, obesity, and diabetes. This recommendation is based on the proven benefits of regular physical activity; the effectiveness of clinician counseling to promote physical activity is not established (see Clinical Intervention).

Counseling to Promote a Healthy Diet

Counseling adults and children over age 2 to limit dietary intake of fat (especially saturated fat) and cholesterol, maintain caloric balance in their diet, and emphasize foods containing fiber (i.e., fruits, vegetables, grain products) is recommended. There is insufficient evidence to recommend for or against counseling the general population to reduce dietary sodium intake or increase dietary intake of iron, beta-carotene, or other antioxidants to improve health outcomes, but recommendations to reduce sodium intake may be made on other grounds. Women should be encouraged to consume recommended quantities of calcium (see Clinical Intervention). Parents should be encouraged to breastfeed their infants. Providing pregnant women with specific nutritional guidelines to enhance fetal and maternal health is recommended. Although there is insufficient evidence to recommend for or against special assessment of the dietary needs and habits of older adults, recommendations to do so can be made on other grounds. There is insufficient evidence that nutritional counseling by physicians has an advantage over counseling by dietitians or community interventions in changing the dietary habits of patients. See Chapter 22 regarding the role of iron during pregnancy and in the diets of newborns and young children, and Chapter

42 regarding the use of folic acid by women of childbearing age. See Chapter 61 regarding intake of refined sugars and adherent carbohydrates that may affect dental health. Counseling regarding alcohol consumption is discussed in Chapter 52.

Counseling to Prevent Motor Vehicle Injuries

Counseling all patients, and the parents of young patients, to use occupant restraints (lap/shoulder safety belts and child safety seats), to wear helmets when riding motorcycles, and to refrain from driving while under the influence of alcohol or other drugs is recommended (see Clinical Intervention). There is currently insufficient evidence to recommend for or against counseling patients to prevent pedestrian injuries. See Chapter 58 for recommendations on the prevention of bicycling injuries.

Counseling to Prevent Household and Recreational Injuries

Periodic counseling of the parents of children on measures to reduce the risk of unintentional household and recreational injuries is recommended. Counseling to prevent household and recreational injuries is also recommended for adolescents and adults based on the proven efficacy of risk reduction, although the effectiveness of counseling these patients to prevent injuries has not been adequately evaluated. Persons with alcohol or drug problems should be identified, counseled, and monitored (see Chapters 52 and 53). Those who use alcohol or illicit drugs should be warned against engaging in potentially dangerous activities while intoxicated. Counseling elderly patients on specific measures to prevent falls is recommended based on fair evidence that these measures reduce the risk of falls, although the effectiveness of counseling elders to prevent falls has not been adequately evaluated. More intensive individualized multifactorial intervention is recommended for high-risk elderly patients in settings where adequate resources to deliver such services are available. There is insufficient evidence to recommend for or against the use of external hip protectors to prevent fall injuries. Counseling to prevent motor vehicle and pedestrian injuries is discussed in Chapter 57.

Counseling to Prevent Youth Violence

There is insufficient evidence to recommend for or against clinician counseling of asymptomatic adolescents and adults to prevent morbidity and mortality from youth violence. Adolescent and adult patients should be screened for problem drinking (see Chapter 52). Clinicians should also be alert for symptoms and signs of drug abuse and dependence (see Chapter 53), the various presentations of family violence (see Chapter 51), and suicidal ideation in persons with established risk factors

Counseling to Prevent Low Back Pain

There is insufficient evidence to recommend for or against counseling patients to exercise to prevent low back pain, but recommendations for regular physical activity can be made based on other proven benefits (see Chapter 55). There is also insufficient evidence to recommend for or against the routine use of educational interventions, mechanical supports, or risk factor modification to prevent low back pain

Counseling to Prevent Dental and Periodontal Disease

Counseling patients to visit a dental care provider on a regular basis, floss daily, brush their teeth daily with a fluoride-containing toothpaste, and appropriately use fluoride for caries prevention and chemotherapeutic mouth rinses for plaque prevention is recommended based on evidence for risk reduction from these interventions. Educating parents to curb the practice of putting infants and children to bed with a bottle is also recommended based on limited evidence of risk reduction. The effectiveness of clinician counseling to change any of these behaviors has not been adequately evaluated. Appropriate dietary fluoride supplements are recommended for children living in communities with inadequate water fluoridation. While examining the oral cavity, clinicians should be alert for obvious signs of oral disease (see Clinical Intervention). Screening for oral cancer is discussed in Chapter 16, and recommendations regarding counseling to promote healthful diets are provided in Chapter 56.

Counseling to Prevent HIV Infection and Other Sexually Transmitted Diseases

All adolescent and adult patients should be advised about risk factors for human immunodeficiency virus (HIV) infection and other sexually transmitted diseases (STDs), and counseled appropriately about effective measures to reduce the risk of infection (see Clinical Intervention). Counseling should be tailored to the individual risk factors, needs, and abilities of each patient. This recommendation is based on the proven efficacy of risk reduction, although the effectiveness of clinician counseling in the primary care setting is uncertain. Individuals at risk for specific STDs should be offered testing in accordance with recommendations on screening for syphilis, gonorrhea, hepatitis B virus infection, HIV infection, and chlamydial infection (see Chapters 24, 26-29). Injection drug users should be advised about measures to reduce their risk and referred to appropriate treatment facilities (see Chapter 53).

Counseling to Prevent Unintended Pregnancy

Periodic counseling about effective contraceptive methods is recommended for all women and men at risk for unintended pregnancy (see Clinical Intervention). Counseling should be based on information from a careful sexual history and should take into account the individual preferences, abilities, and risks of each

patient. Sexually active patients should also receive information on measures to prevent sexually transmitted diseases

Counseling to Prevent Gynecologic Cancers

There is insufficient evidence to recommend for or against routine counseling of women about measures for the primary prevention of gynecologic cancers. Clinicians counseling women about contraceptive practices should include information on the potential benefits of oral contraceptives, barrier contraceptives, and tubal sterilization with respect to specific gynecologic cancers (see Chapter 63). Clinicians should also promote other practices (maintaining desirable body weight, smoking cessation, and safe sex practices) that may reduce the incidence of certain gynecologic cancers and have other proven health benefits (see Chapters 21, 54, and 62).

Childhood Immunizations

All children without established contraindications should receive diphtheria-tetanus-pertussis (DTP), oral poliovirus (OPV), measles-mumps-rubella (MMR), conjugate *Haemophilus influenzae* type b, hepatitis B, and varicella vaccines, in accordance with recommended schedules (see Clinical Intervention). Hepatitis A vaccine is recommended for children and adolescents at high risk for hepatitis A virus (HAV) infection. Pneumococcal vaccine and annual influenza vaccine are recommended for children and adolescents at high risk (see Clinical Intervention and Chapter 66). See Chapter 67 for recommendations on postexposure prophylaxis against selected infectious diseases, and Chapter 25 for recommendations regarding the Bacille Calmette-GuCrin (BCG) vaccine.

Adult Immunizations-Including Chemoprophylaxis Against Influenza A

Annual influenza vaccine is recommended for all persons aged 65 and older and persons in selected high-risk groups (see Clinical Intervention). Pneumococcal vaccine is recommended for all immunocompetent individuals who are age 65 years and older or otherwise at increased risk for pneumococcal disease (see Clinical Intervention). There is insufficient evidence to recommend for or against pneumococcal vaccine for high-risk immunocompromised individuals, but recommendations for vaccinating these persons may be made on other grounds. The series of combined tetanus-diphtheria toxoids (Td) should be completed for adults who have not received the primary series, and all adults should receive periodic Td boosters. Vaccination against measles and mumps should be provided to all adults born after 1956 who lack evidence of immunity. A second measles vaccination is recommended for adolescents and young adults in settings where such individuals congregate (e.g., high schools and colleges). See Chapter 32 for recommendations for rubella vaccine. Hepatitis B vaccine is recommended for all young adults not previously immunized and for all persons at high risk for infection (see Clinical Intervention). Hepatitis A vaccine is

recommended for persons at high risk for hepatitis A virus (HAV) infection (see Clinical Intervention). Varicella vaccine is recommended for susceptible adults (see also Chapter 65). See Chapter 25 for recommendations regarding the Bacille Calmette-GuCrin (BCG) vaccine. Recommendations for postexposure prophylaxis against selected infectious diseases are in Chapter 67; see also Chapter 24, Screening for Hepatitis B Virus Infection.

Postexposure Prophylaxis for Selected Infectious Diseases

Postexposure prophylaxis should be provided to selected persons with exposure or possible exposure to Haemophilus influenzae type b, hepatitis A, hepatitis B, meningococcal, rabies, or tetanus pathogens (see Clinical Intervention). See Chapter 66 for recommendations on postexposure prophylaxis against influenza A.

Postmenopausal Hormone Prophylaxis

Counseling all perimenopausal and postmenopausal women about the potential benefits and risks of hormone prophylaxis is recommended. There is insufficient evidence to recommend for or against hormone therapy for all postmenopausal women. Women should participate fully in the decision-making process, and individual decisions should be based on patient risk factors for disease, clear understanding of the probable benefits and risks of hormone therapy, and patient preferences

Aspirin Prophylaxis for the Primary Prevention of Myocardial Infarction

There is insufficient evidence to recommend for or against routine aspirin prophylaxis for the primary prevention of myocardial infarction (MI) in asymptomatic persons. Although aspirin reduces the risk of MI in men ages 40-84, its use is associated with important adverse effects, and the balance of benefits and harms is uncertain. If aspirin prophylaxis is considered, clinicians and patients should discuss potential benefits and risks for the individual before beginning its use

Aspirin Prophylaxis in Pregnancy

There is insufficient evidence to recommend for or against the routine use of aspirin to prevent preeclampsia or intrauterine growth retardation in pregnant women, including those at high risk.