

CHAPTER 1 ■ ADULT HEALTH MAINTENANCE

Table 1-1 Adult Immunization Schedule

Adult Immunization Schedule
<i>Tetanus, diphtheria (Td)</i> : For all ages, 1 dose booster q 10 years.
<i>Pertussis</i> : Consider single dose of pertussis in adults younger than 65 yo (as part of Tdap), at least 10 years since last tetanus dose. If patient has never received a pertussis booster, use Boostrix if 10 to 18 yo, Adacel if 11 to 64 yo.
<i>Influenza</i> : 1 yearly dose if age 50 yo or older. If younger than 50 yo, then 1 yearly dose if healthcare worker, pregnant, chronic underlying illness, household contact of person with chronic underlying illness, or household contact with children younger than 5 yo, or those who request vaccination. Intranasal vaccine indicated for healthy adults younger than 50 yo.
<i>Pneumococcal</i> (polysaccharide): 1 dose if age 65 yo or older. If younger than 65 yo, consider immunizing if chronic underlying illness, nursing home resident. Consider revaccination 5 years later if high risk, or if age 65 yo or older and received primary dose before age 65 yo. CDC recommends conjugate vaccine (Prevnar) for certain high-risk adults.
<i>Hepatitis A</i> : For all ages with clotting factor disorders, chronic liver disease, or exposure risk (travel to endemic areas, illegal drug use, men having sex with men), 2 doses (0, 6 to 12 months).
<i>Hepatitis B</i> : For all ages with medical (hemodialysis, clotting factor recipients, chronic liver disease), occupational (healthcare or public safety workers with blood exposure), behavioral (illegal drug use, multiple sex partners, those seeking evaluation or treatment of sexually transmitted disease, men having sex with men), or other (household/sex contacts of those with chronic HBV or HIV infections, clients/staff of developmentally disabled, more than 6 months of travel to high-risk areas, inmates of correctional facilities) indications, 3 doses (0, 1–2, 4–6 months). Hemodialysis patients require 4 doses and higher dose (40 mcg). Consider conjugate vaccine in high-risk adults.
<i>Measles, mumps, rubella (MMR)</i> : If born during or after 1957 and immunity in doubt, see www.cdc.gov .
<i>Varicella</i> : For all ages if immunity in doubt, age 13 yo or older, 2 doses separated by 4 to 8 weeks.
<i>Meningococcal</i> (conjugate vaccine is preferred for 55 yo or younger): For all ages with medical indications (complement deficiency, anatomic or functional asplenia) or other indications (travel to endemic regions, college dormitory residents, military recruits), administer 1 dose. Consider revaccination in 3 to 5 years if high risk.

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Table 1-1 Adult Health Maintenance (*continued*)

Adult Immunization Schedule
<i>Human papillomavirus</i> : Consider HPV vaccine in women 9 to 26 yo at 0, 2, and 6 months. Can be used in males 9 to 26 yo to decrease risk of genital warts.
<i>Herpes zoster</i> : Consider single dose of HZ vaccine in individuals 60 yo or older.
<i>Haemophilus influenzae type b (Hib)</i> : 1 dose in high-risk adults (sickle cell, leukemia, HIV, splenectomy) if not previously immunized.

Reproduced from 2013 schedule from the CDC, ACIP, & AAFP, see: www.cdc.gov/vaccines/schedules.

Table 1-2 Health Maintenance: Adult Screening Guidelines

Category	18–25 yrs	26–39 yrs	40–49 yrs	50–64 yrs	≥65 yrs
Health maintenance exam (HME)	q5 yrs	q2–3 yrs	q1–2 yrs	Annually	Annually
Ht, Wt, BP, and BMI	q2–4 yrs	q2–3 yrs	q1–2 yrs	q1–2 yrs	q1–2 yrs
Clinical breast exam (CBE) ¹	-	q2–3 yrs	Annually	Annually	Annually
Digital rectal exam (DRE) ²	-	-	-	Consider annually	Consider annually
Pelvic exam/pap smear ³	q3–5 yrs	q3–5 yrs	q3–5 yrs	q3–5 yrs	-
Chlamydia/gonorrhea screen ⁴	Annually	Annually	-	-	-

HME = health maintenance exam, Ht = height, Wt = weight, BP = blood pressure, BMI = body mass index, CBE = clinical breast exam, DRE = digital rectal exam, CA = cancer, HIV = human immunodeficiency virus

¹ The American College of Surgeons (ACS) recommends a CBE every 2–3 years between ages 20–39 and an annual CBE starting at age 40. The **National Comprehensive Cancer Network (NCCN)** recommends a CBE every 1–3 years between ages 25–40 and an annual CBE starting at age 40 until age 75. The **American Academy of Family Physicians (AAFP)** recommends a CBE every 1–2 years between ages 40–75 years.

² AAFP and the **United States Preventive Services Task Force (USPSTF)** recommend against routine prostate CA screening with either DRE or prostate specific antigen (PSA) testing. ACS recommends offering an annual DRE and PSA screening if the patient has over a 10-year life expectancy.

³ Annual screening starts at age 21 with pap smears q3 years and then stop screening at age 65 or earlier after hysterectomy performed for benign reasons. Alternative for women ages 30–65 is to screen every 5 years with a pap smear PLUS HPV testing.

⁴ Screen all sexually active women aged 18–25 years annually, pregnant women under 25 years of age, and sexually active women between 25–35 years in juvenile detention or jail annually, and sexually active homosexual men annually.

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Table 1-2 Health Maintenance: Adult Screening Guidelines (*continued*)

Category	18–25 yrs	26–39 yrs	40–49 yrs	50–64 yrs	≥65 yrs
Mammogram ⁵	-	-	q1–2 yrs	Annually	Annually
Fecal occult blood testing ⁶	-	-	-	Annually	Annually
Colon CA screen ⁶	-	-	-	q5–10 yrs	q5–10 yrs
Osteoporosis test ⁷	-	-	-	-	q2–3 yrs
Prostate CA screen ⁸	-	-	-	Consider annually if patient desires	
Depression screen	with HME	with HME	with HME	with HME	with HME
Lipoprotein levels ⁹	q5 yrs	q5 yrs	q5 yrs	q5 yrs	q5 yrs
Fasting glucose	-	-	q3 yrs (at 45 yrs)	q3 yrs	q3 yrs
Thyroid stimulating hormone ¹⁰	-	-	-	-	Consider q2–3 yrs
HIV and VDRL screening ¹¹	q3–5 yrs	q3–5 yrs	q3–5 yrs	Once (if first test)	-
Abdominal aortic aneurysm ¹²	-	-	-	-	65–75
Aspirin 81 mg PO daily	Men ≥45 yrs, women ≥55 yrs, or diabetics ≥40 yrs with a 10-yr risk of significant CAD ≥10%				

⁵ The ACS and NCCN recommend an annual screening mammogram starting at age 40. AAFP recommends a screening mammogram every 2 years starting at age 50. The USPSTF recommends a screening mammogram every 1–2 years starting at age 50. All organizations stop screening at age 75 years.

⁶ Options include colonoscopy every 10 years, or flexible sigmoidoscopy and air-contrast barium enema every 5 years, or CT colonography every 5 years (for patients refusing lower endoscopy), and can add annual fecal occult blood testing starting at age 50 years until age 75. No role for screening fecal DNA at this point.

⁷ Screen with dual-energy X-ray absorptiometry to assess bone mineral density. May screen postmenopausal women age 65 years or older and those age 60 years or older with osteoporosis risk factors every 2 years or men aged 70 years or older every 3 years.

⁸ USPSTF and the European Association of Urology (EAU) do **not** recommend routine PSA or DRE. The ACS and ACP recommend an informed discussion with patients about the risks/benefits of screening and offering PSAs or DREs annually if patient desires.

⁹ Start screening all patients at age 35 years for men and 45 years for women, but can start screening at age 20 years for individuals at high risk for coronary heart disease, and can stop at age 70 years.

¹⁰ May offer to elderly women, but there is insufficient evidence to recommend routine screening.

¹¹ Test all individuals 15–65 years and all women who are pregnant at least once for HIV. Test people with risk factors for sexually transmitted diseases for syphilis at the intervals designated in the table.

¹² One-time abdominal ultrasound for men age 65–75 years who have ever smoked, and the Canadian Society for Vascular Surgery recommends it in women over 65 years who smoke, and have cerebrovascular disease and a positive family history.

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Table 1-2 Health Maintenance: Adult Screening Guidelines (*continued*)

Category	18–25 yrs	26–39 yrs	40–49 yrs	50–64 yrs	≥65 yrs
Alcohol misuse screening ¹³	with HME	with HME	with HME	with HME	with HME
Get-up-and-go test (fall risk)	-	-	-	-	Annually
Calcium intake/day ¹⁴	-	-	-	1200	1500
Vitamin D 800 IU/d women ¹⁴	-	-	-	yes	yes
Vision/hearing impairment ¹⁵				Consider annual screening 65 yrs	

¹³ CAGE or the **Alcohol Use Disorders Identification Test (AUDIT)** tests can be used (both tools available at www.niaaa.nih.gov/).

¹⁴ Consider only for institutionalized postmenopausal women. Daily calcium intake expressed in milligrams of elemental calcium.

¹⁵ USPSTF and AAFP found insufficient evidence for routine screening of older adults, but the **Institute for Clinical Systems Improvement (ICSI)** recommends objective testing of all adults 65 years and older to screen for vision impairment. In addition, all three organizations suggest "questioning older adults periodically about hearing impairment."

Data from recommendations by the American Academy of Family Physicians, American Cancer Society, the National Cancer Institute (www.cancer.gov/), U.S. Preventive Services Task Force Guide to Clinical Preventive Services (www.ahcpr.gov/clinic/uspstfix.htm), the Centers for Disease Control, Institute for Clinical Systems Improvement (www.icsi.org/), the European Association of Urology (www.uroweb.org/), the National Comprehensive Cancer Network (www.nccn.org/), and <http://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/cervical-cancer-screening>.

COUNSELING TOPICS AND EXAMINATIONS FOR EVERY HEALTH MAINTENANCE VISIT

- Nutritional assessment and weight-loss counseling for obese patients
- Injury prevention: seat belt and helmet use, firearms in house, water safety
- Substance abuse screening
- Smoking cessation counseling
- Safe sex counseling
- Encourage regular exercise
- Complete skin exam with every health maintenance exam