

## UPTODATE PATHWAYS • TABLE OF CONTENTS

**ANESTHESIOLOGY**

- Morphine milligram equivalent calculator for adults with chronic non-cancer pain

**CARDIOVASCULAR MEDICINE**

- Acute decompensated heart failure: Determining if a hospitalized adult is ready for discharge
- Acute decompensated heart failure: Discharge checklist
- Acute decompensated heart failure: Initial management of hypervolemic patients with adequate perfusion
- Acute decompensated heart failure: Selecting the site of care from the outpatient clinic
- Atrial fibrillation: Anticoagulation for adults with atrial fibrillation
- Evaluation of adults with apparent resistant hypertension
- Heart failure with preserved ejection fraction (HFpEF): Pharmacologic therapy for patients already taking a loop diuretic
- Heart failure: Initial pharmacologic therapy and dose titration for compensated heart failure with reduced ejection fraction (HFrEF)
- Heart failure: Secondary pharmacologic therapy in adults with compensated chronic heart failure with reduced ejection fraction (HFrEF)
- Heart failure: Selecting the site of care from the emergency department
- Hypertension: Initial management
- Lipids: Management of LDL cholesterol for primary prevention of cardiovascular disease in adults
- Lipids: Management of LDL cholesterol for secondary prevention of cardiovascular disease in adults

**EMERGENCY MEDICINE (ADULTS AND PEDIATRIC)**

- Chronic obstructive pulmonary disease: Identifying patients with an acute exacerbation who warrant hospitalization
- Community-acquired pneumonia: Determining the appropriate site of care for adults
- Community-acquired pneumonia: Empiric antibiotic selection for adults admitted to a general medical ward
- Community-acquired pneumonia: Empiric antibiotic selection for adults admitted to the intensive care unit
- Community-acquired pneumonia: Empiric antibiotic selection for adults in the outpatient setting
- Headache: Initial evaluation of adults in the emergency department
- Mild head trauma: Evaluation of adults in the emergency department
- Pulmonary embolism (confirmed or suspected): Initial management of hemodynamically stable adults
- Pulmonary embolism (confirmed or suspected): Initial management of hemodynamically unstable adults
- Pulmonary embolism: Diagnostic evaluation in adults who are hemodynamically stable
- Pulmonary embolism: Diagnostic evaluation in adults who are hemodynamically unstable despite resuscitative efforts

**ENDOCRINOLOGY AND DIABETES**

- Diabetes: Diagnosis of diabetes mellitus or prediabetes in non-pregnant adults
- Diabetes: Initial therapy for non-pregnant adults with type 2 DM
- Diabetes: Initiation and titration of insulin therapy in non-pregnant adults with type 2 DM
- Diabetes: Therapy for non-pregnant adults with type 2 DM and an inadequate response to metformin monotherapy
- Diabetes: Therapy for non-pregnant adults with type 2 DM and an inadequate response to sulfonylurea monotherapy
- Osteoporosis and osteopenia: Initial management in postmenopausal women
- Thyroid nodules: Initial evaluation in adults
- Thyroid nodules: Initial evaluation in pregnant women

**FAMILY MEDICINE AND GENERAL PRACTICE**

- Prescription of opioids for acute pain for opioid naïve adults in the ambulatory setting
- Gastroenterology and Hepatology
- Abnormal liver tests: Initial evaluation
- Colon polyps: Surveillance after colon polyp resection
- Colon polyps: Surveillance after colon polyp resection
- Colorectal cancer (CRC) screening: Asymptomatic patients with no history of colon polyps
- Diverticulitis: Indications for hospitalization and empiric antibiotic selection for adults
- Gallstones: Management of an adult with gallstones (symptomatic or asymptomatic)
- Colorectal cancer (CRC) screening: Asymptomatic patients with no history of colon polyps
- Diverticulitis: Indications for hospitalization and empiric antibiotic selection for adults
- Gallstones: Management of an adult with gallstones (symptomatic or asymptomatic)
- Gastroesophageal reflux disease: Identification of adults who require upper endoscopy
- Helicobacter pylori: Initial treatment for adults
- Hepatitis C virus: Interpretation and confirmation of initial screening tests in individuals older than 18 months
- Hepatitis C virus: Screening in adults

**HEMATOLOGY**

- Anemia: Indications for red blood cell transfusion in hospitalized adults
- Coronavirus disease 2019 (COVID-19): Anticoagulation in adults with COVID-19

**HOSPITAL MEDICINE**

- Clostridioides (formerly Clostridium) difficile infection: Treatment of adults with an initial or recurrent infection
- Empiric antibacterial therapy for hospitalized patients with acute exacerbations of chronic obstructive pulmonary disease

**INFECTIOUS DISEASES**

- Acute bacterial rhinosinusitis: Evaluation and management for adults who have failed initial antibiotic treatment
- Acute bronchitis: Evaluation of suspected acute bronchitis in adults
- Acute pharyngitis in adults: Evaluation
- Acute rhinosinusitis: Initial evaluation of adults
- Acute rhinosinusitis: Initial management and antibiotic selection in adults
- Cellulitis and skin abscesses: Empiric antibiotic selection for adults
- Coronavirus disease 2019 (COVID-19): Initial telephone triage of adult outpatients
- Pneumococcal vaccination: Indications and administration in adults
- Streptococcal pharyngitis in adults: Treatment
- Urinary tract infection (UTI): Empiric antibiotic selection for acute complicated UTI in adults
- Urinary tract infection (UTI): Empiric antibiotic selection for acute simple cystitis in women

**NEPHROLOGY AND HYPERTENSION**

- Acute kidney injury (hospital acquired): Initial diagnostic approach in adults
- Acute kidney injury (hospital acquired): Subsequent diagnostic approach in adults
- Hematuria: Evaluation in adults
- Hyponatremia: Evaluation in adults
- Hyponatremia: Initial inpatient management in adults with moderate to severe hyponatremia

**OBSTETRICS, GYNECOLOGY AND WOMEN'S HEALTH**

- Cervical cancer screening in resource-rich settings: Screening asymptomatic women who are at average risk for cervical cancer
- Cervical cancer screening: Follow-up of a Pap test reported as "unsatisfactory"
- Cervical cancer screening: Follow-up of a Pap test showing partially obscuring blood or inflammation

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**OBSTETRICS, GYNECOLOGY AND WOMEN'S HEALTH (continued)**

- Cervical cancer screening: Follow-up of a Pap test showing partially obscuring blood or inflammation
- Cervical cancer screening: Follow-up of a Pap test with an absent endocervical transformation zone
- Trial of labor after cesarean: Shared decision making with a pregnant woman

**ONCOLOGY**

- Lung cancer: Screening
- Prostate cancer: Screening

**PRIMARY CARE (ADULT)**

- Chronic obstructive pulmonary disease: Initial diagnosis
- Chronic obstructive pulmonary disease: Severity assessment and selection of initial therapy in adults
- Gout: Initial management of adults with a gout flare
- Knee osteoarthritis: Management in adults
- Low back pain: Evaluation of an adult with acute, non-traumatic low back pain

**PULMONARY AND CRITICAL CARE MEDICINE**

- Chronic obstructive pulmonary disease: Identifying patients with an acute exacerbation who warrant hospitalization
- Chronic obstructive pulmonary disease: Initial diagnosis
- Chronic obstructive pulmonary disease: Severity assessment and selection of initial therapy in adults
- Pulmonary embolism (confirmed or suspected): Initial management of hemodynamically stable adults
- Pulmonary embolism (confirmed or suspected): Initial management of hemodynamically unstable adults
- Pulmonary embolism: Diagnostic evaluation in adults who are hemodynamically stable •
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## LAB INTERPRETATION • TABLE OF CONTENTS

**CHEMISTRY LAB MONOGRAPHS**

- Abnormal lipid profile: High total cholesterol, low HDL cholesterol, high LDL cholesterol, or high triglycerides in adults
- Abnormal liver panel: High alkaline phosphatase and high conjugated bilirubin in adults
- High alanine aminotransferase (ALT) or aspartate aminotransferase (AST) in adults
- High alkaline phosphatase in adults
- High amylase or high lipase in adults
- High bicarbonate in adults
- High bilirubin in adults
- High blood urea nitrogen in adults
- High brain natriuretic peptide (BNP) in adults
- High calcium in adults
- High carbon monoxide (carboxyhemoglobin) level in adults
- High chloride in adults
- High lactate in adults
- High lactic dehydrogenase (LD or LDH) in adults
- High N-terminal pro-brain natriuretic peptide in adults
- High phosphorus in adults
- High potassium in adults
- High procalcitonin in adults
- High serum creatinine in adults
- High skeletal muscle creatine kinase in adults
- High sodium in adults
- High triglycerides in adults
- High troponin in adults
- High urate in adults
- Lipid screen: High total cholesterol or low HDL cholesterol in adults
- Low alpha-1 antitrypsin in adults
- Low bicarbonate in adults
- Low C1q in adults
- Low calcium in adults
- Low chloride in adults
- Low glucose in adults
- Low magnesium in adults
- Low phosphorus in adults
- Low potassium in adults
- Low sodium in adults
- Low total hemolytic complement (CH50) in adults
- Positive blood lead levels in adults

**COAGULATION LAB MONOGRAPHS**

- Low antithrombin in adults
- Low fibrinogen in adults
- Low protein C in adults
- Low protein S in adults
- Positive D-dimer in adults
- Positive factor V Leiden or abnormal activated protein C resistance in adults
- Prolonged PT or prolonged aPTT in adults

**ENDOCRINOLOGY LAB MONOGRAPHS**

- Abnormal thyroid profile: High TSH and high free T4 in adults
- Abnormal thyroid profile: High TSH and low free T4 in adults
- Abnormal thyroid profile: High TSH and normal free T4 in adults
- Abnormal thyroid profile: Low TSH and high free T4 in adults
- Abnormal thyroid profile: Low TSH and low free T4 in adults
- Abnormal thyroid profile: Low TSH and normal free T4 in adults
- High 17-hydroxyprogesterone in adults
- High cortisol in adults
- High fractionated metanephrines (urine or plasma) in adults
- High free T4 in adults
- High FSH in women
- High glucose in adults
- High glycated hemoglobin (A1C) in adults
- High hCG (tumor marker) in men
- High insulin-like growth factor-1 in adults
- High prolactin in adults
- High renin (PRA or PRC) and high aldosterone in adults
- High renin (PRA or PRC) and low aldosterone in adults

- Low serum calcium and high parathyroid hormone in adults
- Low serum calcium and low or low-normal parathyroid hormone in adults
- Low testosterone in men
- Low thyroid-stimulating hormone (TSH) in adults
- Low vitamin D (25-OH vitamin D) in adults
- Normal serum calcium and high parathyroid hormone in adults
- Normal serum calcium and low parathyroid hormone in adults
- Positive hCG in women

**HEMATOLOGY LAB MONOGRAPHS**

- Abnormal iron profile: Low ferritin or low iron in adults
- Abnormal serum protein electrophoresis (SPEP) in adults
- Abnormal white blood cell count in adults
- High eosinophils in adults
- High ferritin in adults
- High hemoglobin, hematocrit in adults
- High lymphocytes in adults
- High neutrophils in adults
- High platelet count in adults
- High reticulocytes in adults
- Low CD4 count in adults with HIV infection
- Low folate in adults
- Low haptoglobin in adults
- Low hemoglobin, hematocrit in adults
- Low lymphocytes in adults
- Low neutrophils in adults
- Low platelet count in adults
- Low vitamin B12 and low folate in adults
- Low vitamin B12 in adults
- Positive Coombs test, direct and indirect in adults
- Positive ELISA PF4-heparin antibody in adults

**IMMUNOLOGY LAB MONOGRAPHS**

- Abnormal immunoglobulin levels in adults
- Abnormal serum free light chains in adults
- High C-reactive protein in adults
- High erythrocyte sedimentation rate in adults
- High total immunoglobulin E in adults
- High tryptase in adults
- Low C4 and/or C3 in adults
- Positive ANCA in adults
- Positive antinuclear antibodies (ANA) in adults
- Positive Epstein-Barr virus antibodies in adults
- Positive lupus anticoagulant, anticardiolipin antibody, or anti-beta2-glycoprotein antibody in adults
- Positive rheumatoid factor (RF)

**MICROBIOLOGY LAB MONOGRAPHS**

- Positive Clostridioides (formerly Clostridium) difficile in adults
- Positive hepatitis B serology in adults
- Positive HIV screening test in adults
- Positive Lyme disease antibody in adults
- Positive or uninterpretable interferon-gamma release assay in adults
- Positive serologic tests for syphilis in adults

**TUMOR MARKER LAB MONOGRAPHS**

- Elevated CA 125 in women
- High prostate-specific antigen in men