Clinical Guidelines in Primary Care

Fourth Edition

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TABLE OF CONTENTS

ACUTE CORONARY SYNDROME

DESCRIPTION

Acute coronary syndrome (ACS) is a spectrum of clinical presentations including ST elevation myocardial infarction (STEMI), non-ST elevation myocardial infarction (NSTEMI) and unstable angina (UA). ACS is associated with a mismatch between myocardial oxygen supply and demand that is often related to coronary artery obstruction. The resulting myocardial ischemia causes damage and, in some cases, permanent cell death of the cardiac musculature.

ACS Classifications
UA and NSTEMI are now classified as non-ST elevation acute coronary syndrome (NSTE-ACS).

Classification of ACS is based on ECG changes and the presence or absence of cardiac markers in blood. Distinguishing between NSTEMI and STEMI is useful because prognosis and treatment are different.

- **Unstable angina** (UA): result of acute coronary artery obstruction without myocardial infarction and is defined as:
  - Rest angina that is prolonged (usually >20 min)
  - New-onset angina
  - Increasing crescendo angina (e.g., previously diagnosed angina that has become distinctly more frequent, more severe, longer in duration, or lower in threshold)
- **Non-ST segment elevation MI** (NSTEMI): myocardial necrosis (evidenced by cardiac markers in blood; troponin I or troponin T and elevated CK) without acute ST segment elevation or Q waves. ECG changes such as ST segment depression, T-wave inversion, or both, may be present
- **ST segment elevation MI** (STEMI): myocardial necrosis with ECG changes showing ST segment elevation not quickly reversed by nitroglycerin or showing new left bundle branch block. Q waves may be present. Cardiac markers, troponin I or troponin T, and CK are elevated

ETIOLOGY

- Coronary thrombosis
- Plaque rupture
- Coronary artery vasospasm

INCIDENCE

- More than 200,000 cases and 1.8 million hospital admissions per year
- Men > women younger than 70; after age 70, equal incidence
- Women have worse prognosis after MI than men (higher risk of death, higher risk of death at 5 years)

RISK FACTORS

- Family history of premature coronary artery disease (before age 60)
- Hyperlipidemia
- Age (men older than 40 and postmenopausal women)
- Cigarette smoking
- Hypertension
- Sedentary lifestyle
- Obesity, especially central adiposity
- Diabetes mellitus, metabolic syndrome
- Stressful lifestyle
- Preeclampsia, gestational diabetes, or pregnancy-induced hypertension
- Evidence of subclinical atherosclerosis: coronary calcification, carotid plaque
- Autoimmune collagen vascular disease: lupus, rheumatoid arthritis

ASSESSMENT FINDINGS

- Pain, pressure, squeezing or a burning sensation across the precordium, with possible radiation to neck, shoulder, jaw, back, upper abdomen, or either arm. Symptoms last longer than 20 minutes; especially concerning if unrelieved by nitroglycerin
- Escalating severity of angina
- Nausea, vomiting from vagal stimulation
- Diaphoresis from sympathetic discharge
- Severe fatigue, weakness, syncope
- Feeling of impending doom
- Hypertension/hypotension
- Palpitations
- Dyspnea that resolves with pain or rest
- Decreased exercise tolerance
- Pulmonary edema and/or other signs of left-sided heart failure
- Jugular venous distention
- A third heart sound (S3) and, frequently, a fourth heart sound (S4)
- A systolic murmur related to dynamic obstruction of the left ventricular outflow tract
- Rales on pulmonary examination (suggestive of left ventricular dysfunction or mitral regurgitation)
- Silent (20% of the time in patients with diabetes, in women, and in older adults)

In comparison to men, women often have silent or vague symptoms. Common symptoms of ACS in women are severe fatigue, nausea, and pain in the jaw, arm or back. They may delay seeking treatment.

DIFFERENTIAL DIAGNOSES

- Esophageal spasm, GERD, gastritis, peptic ulcer
- Cholecystitis, pancreatitis
- Pericarditis, myocarditis
- Costochondritis

- Pulmonary emboli, pneumonia, pleurisy, tension pneumothorax, rib fracture
- Aortic dissection
- Cervical disc disease
- Neuropathic pain, herpes zoster
- Anxiety disorder/panic attack
- Somatization/psychogenic pain disorder

DIAGNOSTIC STUDIES

Electrocardiography (ECG) is an important diagnostic test for angina. ECG changes during angina episodes may include the following:

- **Transient ST segment elevations**
- **Dynamic T wave changes: inversions, normalizations, or hyperacute changes**
- **ST depressions: junctional, downsloping, or horizontal**
- **Q-waves**

- **Troponin I:** detectable 3-6 hours after MI (if negative, consider repeating at 8-12 hours); peaks at 16 hours; declining levels over 9-10 days (best marker of cardiac damage, more sensitive and specific than CK-MB)
- **CK-MB isoenzymes:** presence in serum indicative of myocardial infarction
- **Coagulation studies:** PT INR, CBC, glucose, metabolic and lipid panels, TSH, and as indicated by history
- **Chest X-ray:** identify cardiomegaly, HF, and pulmonary diseases that may mimic or exacerbate cardiac disease
- **Angiography:** demonstrates narrowed coronary artery by atherosclerotic lesion
- **Echocardiogram:** 2D and M mode
- Contrast-enhanced chest CT scan or cardiovascular magnetic resonance imaging to differentiate an MI from an aortic dissection

PREVENTION

- Decrease coronary artery disease risk factors by managing hypertension, hyperlipidemia, diabetes mellitus, smoking cessation and physical activity
- Family history is a risk factor but is not modifiable
- Calculating a risk score can be useful to help focus on lifestyle modification using the Framingham risk score or other risk score calculators

NONPHARMACOLOGIC MANAGEMENT

- Immediate referral to nearest emergency department (give aspirin stat, O2, nitroglycerin, and transport)
- Stabilize patient to provide immediate relief of ischemia and prevent MI and death
- For unstable angina and NSTEMI, angiography within 24-48 hours of hospitalization to identify coronary lesions requiring percutaneous coronary intervention (PCI; stent) or coronary artery bypass graft surgery (CABG); fibrinolysis not helpful
- For STEMI, emergency PCI needed when door-to-balloon-inflation time is <90 minutes; fibrinolysis if timely PCI is not available

PHARMACOLOGIC MANAGEMENT

- Initial inpatient management can include antiplatelet agents (aspirin and P2Y12 [clopidogrel]), anticoagulants (bivalirudin, enoxaparin, unfractionated heparin), beta blockers, angiotensin-converting enzyme inhibitors, nitroglycerin, oxygen, and statin therapy

Acute Coronary Syndrome Pharmacologic Management

Nitrates

General Comments:

- MOA: stimulates cGMP production, resulting in vascular smooth muscle relaxation
- FDA indication: treatment of acute angina
- Nitrates do not improve mortality but provide symptomatic relief through coronary vasodilation, improved collateral blood flow, decrease in preload and decrease in afterload

Generic/Brand Availability	Dosage: Adult	Dosage: Pediatric	Side Effects/ Monitoring	Comments
Nitroglycerin/Nitrostat ***Availability:*** *SLTabs: 0.3 mg, 0.4 mg, 0.6 mg*	0.4 mg sublingually every 5 minutes; up to 3 doses as blood pressure allows	Not available	• **Major adverse events:** may cause hypotension • **Renal dosing:** no adjustment • **Hepatic dosing:** not defined • **Labs:** none	• **Interactions:** caution if hypotension, hypovolemia or in heart failure • **Contraindicated**: if phosphodiesterase type 5 inhibitor dosed within prior 24-48 hours

continued

Acute Coronary Syndrome Pharmacologic Management

Beta Blockers

General Comments:

- MOA: selectively antagonize beta-1 adrenergic receptors
- FDA indications: prevention of cardiovascular events, post-MI treatment
- Reduce oxygen demand and ventricular wall tension, reduce heart rate and blood pressure, decrease mortality and adverse cardiovascular events
- Choose metoprolol succinate, carvedilol or bisoprolol for patients with MI and decreased ejection fraction (EF <40%)

Generic/Brand Availability	Dosage: Adult	Dosage: Pediatric	Side Effects/ Monitoring	Comments
Carvedilol/Coreg ***Availability:*** *Caps: 3.125 mg, 6.25 mg, 12.5 mg, 25 mg*	6.25 mg daily, titrate up to 25 mg daily as tolerated	Not available	• **Major adverse events:** may cause hypotension • **Renal function:** no adjustment • **Hepatic function:** no adjustment • **Monitoring**: BUN/Cr with dose increase; glucose in diabetics at treatment start, dose change and discontinuation; BP, HR	• **Interactions:** with P-gp substrate and P-gp inhibitors; CYP1A2 and CYP2D6 substrates; causes bradycardia, prolongs PR interval • **Contraindicated:** systolic BP <90 mm Hg, cardiogenic shock, severe bradycardia, second- or third-degree heart block, asthma or emphysema that is sensitive to beta blockers, peripheral vascular disease, uncompensated heart failure
Metoprolol tartrate/ Lopressor ***Availability:*** *Tabs: 25 mg, 50 mg, 100 mg*	25-50 mg q 12 hr	Not available	• **Major adverse events:** may cause hypotension • **Renal function:** no adjustment • **Hepatic function:** no adjustment • **Monitoring**: BP, HR	• **Interactions:** CYP2D6 substrates; causes bradycardia, prolongs PR interval • **Contraindicated:** systolic BP <90 mm Hg, cardiogenic shock, severe bradycardia, second- or third-degree heart block, asthma or emphysema that is sensitive to beta blockers, peripheral vascular disease, uncompensated heart failure; do not stop treatment abruptly; taper gradually over 1-2 wk

Angiotensin-Converting Enzyme Inhibitors (ACE Inhibitors)

General Comments:

- MOA: inhibit angiotensin-converting enzyme, interfering with conversion of angiotensin I to angiotensin II
- FDA indications: treatment of acute MI, HTN, HF
- Should be started and continued indefinitely in patients with EF <40% and patients with hypertension, diabetes mellitus or stable chronic kidney disease unless contraindicated

continued

Acute Coronary Syndrome Pharmacologic Management

Angiotensin-Converting Enzyme Inhibitors (ACE Inhibitors)

Generic/Brand Availability	Dosage: Adult	Dosage: Pediatric	Side Effects/ Monitoring	Comments
Captopril/Capoten ***Availability:*** *Caps: 12.5 mg, 25 mg, 50 mg, 100 mg*	6.25 to 12.5 mg TID; titrate up to 25-50 mg TID as tolerated	Not available	• **Major adverse events:** may cause angioedema, renal impairment/failure, hypotension, neutropenia • **Renal function:** CrCl 10-50: give 75% usual dose q 12-18 hr; CrCl <10: give 50% usual dose q 24 hr; hemodialysis: give 50% usual dose q 24 hr, on dialysis days administer after dialysis; peritoneal dialysis: give 75% usual dose q 12-18 hr • **Hepatic function:** not defined • **Monitoring**: BUN/Cr at baseline, then periodically or more often if HF, renal artery stenosis; electrolytes; BP, WBC with diff at baseline if renal impairment, then q 2 wk x 3 month, then periodically	• **Interactions:** P-gp inhibitors (weak); decreases renal perfusion, enhances insulin sensitivity, hyperkalemia • **Contraindicated:** fetal toxicity-do not use in pregnancy
Lisinopril/Zestril ***Availability:*** *Tabs: 2.5 mg, 5 mg, 10 mg, 20 mg, 30 mg, 40 mg*	2.5-5 mg per day, titrate up to 10 mg as tolerated	Not available	• **Major adverse events:** may cause angioedema, renal impairment/failure, hypotension, neutropenia • **Renal function:** CrCl 10-30: start 5 mg daily, max 40 mg daily; CrCl: <10: start 2.5 mg daily, max 40 mg daily; hemodialysis: start 2.5 mg daily, max 40 mg daily; peripheral dialysis: not defined • **Hepatic function:** not defined	• **Interactions:** P-gp inhibitors (weak); decreases renal perfusion, enhances insulin sensitivity, hyperkalemia • **Contraindicated:** fetal toxicity-do not use in pregnancy

continued

CONSULTATION/REFERRAL

- Dermatologist if questionable diagnosis

FOLLOW-UP

- Usually none needed
- Typically resolves in 6-12 weeks

EXPECTED COURSE

- Benign course; resolution in 1-14 weeks

POSSIBLE COMPLICATIONS

- Secondary bacterial infection from scratching

PSORIASIS

DESCRIPTION

A chronic, pruritic, inflammatory skin disorder characterized by rapid proliferation of epidermal cells. Frequent remissions and exacerbations are common.

Several variants of psoriasis exist. The most common is plaque psoriasis; it produces plaque-type lesions.

ETIOLOGY

- Unknown, but family history present in one-third of cases
- Beta hemolytic Streptococcal infections in children (acute guttate psoriasis)

INCIDENCE

- 3-5 million people in U.S.
- Approximately 300,000 people have generalized psoriasis
- Equal incidence in men and women
- Mean age of onset 22.5 years; usually develops before age 55; earlier onset in women; in children, mean age of onset is 8 years
- Comorbidities associated with aging

RISK FACTORS

- Streptococcal infection
- Family history
- Stress
- Diabetes, metabolic syndrome, obesity
- Local trauma or irritation
- Sunburn, scratching, surgery
- Drugs: lithium, beta blockers, antimalarials, systemic steroids (steroids can cause severe rebound effect)

ASSESSMENT FINDINGS

- Silvery white scales on erythematous base
- Pruritus
- Common distribution on elbows, knees, scalp, gluteal cleft, fingernails, toenails, palms, soles of feet
- May also appear on eyebrows, ears, trunk
- Nails may be pitted in 50% of patients
- Positive Auspitz sign (pinpoint bleeding when lesions scraped)
- Intergluteal area (gluteal pinking) lesions are smooth

Psoriasis can have a significant negative effect on quality of life and can be associated with profound negative self-image and self-esteem. Assess for this and treat or refer as needed.

DIFFERENTIAL DIAGNOSES

- Scalp: seborrheic dermatitis
- Trunk: pityriasis rosea, tinea corporis (guttate psoriasis)
- Candidal infections
- Contact dermatitis
- Eczema

DIAGNOSTIC STUDIES

- Usually diagnosed on basis of history and physical exam
- Biopsy if diagnosis uncertain
- Order Streptococcal swab if guttate psoriasis is suspected
- KOH to rule out fungal infection
- ESR, CRP: elevated
- If joint involvement: rheumatoid factor (negative)

PREVENTION

- Avoid sunburn; may trigger exacerbations
- Avoid known precipitants
- Avoid sudden withdrawal of steroids
- Avoid stimulating drugs: ACE inhibitors, beta blockers, NSAIDs, penicillin, salicylates, sulfonamides, tetracyclines

NONPHARMACOLOGIC MANAGEMENT

- Warm soaks to remove thickened plaques
- Moisturizers & emollients to clear plaques & minimize pruritus
- UV radiation to induce DNA damage in keratinocytes
- Colloidal oatmeal bath for itching
- Wet dressings (Burow's solution) for itching

PHARMACOLOGIC MANAGEMENT

Approximately 80% of patients who have psoriasis have mild to moderate disease and may receive benefit from a topical agent.

- American Academy of Dermatology (AAD) issued guidelines on biologic therapies in 2019 and guidelines on systemic nonbiologic therapies in 2020
- Keep skin well hydrated with emollient (Eucerin, Lubriderm, Cetaphil, etc.)
- Topical steroids: consider plastic occlusion in adults and older children (with caution) to hasten resolution (increases skin penetration tenfold)
- For scalp: use strong-potency steroid in alcohol base
- Face, intertriginous areas: low-potency steroid cream
- Plaques: initial treatment with high-potency steroid cream or ointment
- Limit use of steroids with high potency or super high potency to <2 weeks
- Intralesional steroid injections
- Tar solutions alone or in combination with topical steroids
- Salicylic acid gel or ointment as keratolytic agent
  - Ultraviolet lamps and sunlight in conjunction with topical agents
- Systemic treatments: cyclosporine, methotrexate, etanercept (Enbrel), adalimumab (Humira), apremilast (Otezla), ustekinumab (Stelara); often managed in specialist settings
- Calcipotriene topical (Dovonex) cream 0.005% vitamin D3 analog; calcitriol (Vectical), vitamin D3 analog
- Tazarotene (Tazorac) 0.05-0.1%: leave on plaques for 5 minutes and wash off
- Intralesional injections: triamcinolone (Kenalog) 5-10 mg/mL
- Anthralin in combination with UVB treatments 0.1%, 0.25%, 0.5%, 1.0%: irritation common; wash off in 20 minutes; may increase application time to 1 hour; wash hands after applying

Management may require multiple medications. If one is not effective, try another or add one from a different medication class.

Psoriasis Pharmacologic Management

Topical Steroid, Low Potency

General Comments:
- MOA: decreases inflammation and relieves pruritus
- FDA indication: treatment of moderate to severe inflammatory and pruritic manifestations of corticosteroid-responsive dermatoses
- Reserved for use on face & genitals; use with caution

Generic/Brand Availability	Dosage: Adult	Dosage: Pediatric	Side Effects/ Monitoring	Comments
Hydrocortisone butyrate 0.1%/Locoid ***Availability:*** *Cream/Ointment: 15 g, 30 g, 45 g* *Solution: 0.1%, 20 mL*	Apply thin film BID-QID	**>2 years:** apply thin film BID-QID	• For external use only	• Do not use longer than 3 wk

Topical Steroids, Medium Potency

General Comments:
- MOA: decrease inflammation and relieve pruritus
- FDA indications: treatment of moderate to severe inflammatory and pruritic manifestations of corticosteroid-responsive dermatoses
- Used on skin folds and scalp; use with caution

Generic/Brand Availability	Dosage: Adult	Dosage: Pediatric	Side Effects/ Monitoring	Comments
Betamethasone valerate ***Availability:*** *Cream 0.1%*	Apply thin film once daily to BID *Max*: 2 consecutive wk	**>13 years:** apply thin film once daily to BID *Max*: 2 consecutive wk	• No dosage adjustment recommended for geriatric patients	
Fluocinolone acetonide ***Availability:*** *Cream/ointment: 0.01%, 0.025%,* *Oil: 0.01%*	Apply sparingly BID-QID depending on severity. Occlusive dressings may be used	Apply sparingly BID-QID depending on severity. Occlusive dressings may be used		• Wet or dampen hair and scalp thoroughly. Apply thin film of oil once daily, massage well and cover the scalp with supplied shower cap. Leave on overnight or for minimum 4 hr before washing off. Wash hair with regular shampoo and rinse thoroughly

continued

- The expected course of treatment is variable depending on prognostic indicators, availability of and readiness for treatment. With proper treatment involving cognitive and behavioral therapies and medication at proper dosages, at least partial remission of symptoms may be achieved, potentially achieving social and occupational improvements

POSSIBLE COMPLICATIONS

- Patients may require long-term psychotherapy and pharmacotherapy to achieve functional social and occupational relationships and quality of life

SLEEP DISORDERS

INSOMNIA

DESCRIPTION

A dissatisfaction with sleep quantity or quality resulting in clinically significant distress or impairment in social, occupational, or other important areas of functioning (DSM-5). Among adults with insomnia, the most commonly reported symptoms are difficulty falling asleep or remaining asleep. Many adults with insomnia have a false perception that they are not sleeping at all. Among children with insomnia, caregivers commonly report issues going to bed, difficulty sleeping alone, and/or frequent nighttime awakenings.

Insomnia is a clinical diagnosis based in part on a detailed sleep history including number and duration of awakenings, duration of problems, and sleep habits.

International Classification of Sleep Disorders (ICSD-3) Criteria	
Short-Term Insomnia:	• Essential feature is short-term difficulty initiating or maintaining sleep • One or more of the following: difficulty initiating sleep or maintaining sleep, waking up early with inability to return to sleep. Child: resistance going to bed or unable to fall or remain asleep without parent • One or more of the following: fatigue, reduced energy, concentration difficulty, impaired social and family interactions, irritability, daytime sleepiness, behavior problems, sleep dissatisfaction • Cannot be explained by lack of time or circumstances for sleep • Occurs at least 3 nights per week • <3 months' duration • Cannot be explained by coexisting mental disorder, medical condition, or other sleep disorder
Chronic Insomnia	• Reserved for patients whose symptoms exceed the minimal frequency and duration of short-term insomnia • One or more of the following: difficulty initiating sleep or maintaining sleep, waking up early with inability to return to sleep. Child: resistance going to bed or unable to fall or remain asleep without parent

International Classification of Sleep Disorders (ICSD-3) Criteria *continued*	
Chronic Insomnia	• One or more of the following: fatigue, reduced energy difficulty with concentration, impaired social and family interactions, irritability, daytime sleepiness, behavior problems, sleep dissatisfaction • Sleep disturbance occurs at least three times weekly or lasts more than 3 months • Cannot be explained by lack of time or circumstances for sleep

ETIOLOGY

Short-Term Insomnia Disorder (adjustment insomnia)	• Intermittent but persistent problems with sleep that last <3 months • Common causes are stress, jet lag, changes in environment (e.g., noise, excessive light, poor sleep hygiene) • Primary factor is the extent to which the sleep disturbance becomes a focal point for the patient • A cause of the insomnia can usually be identified
Chronic Insomnia Disorder (primary insomnia)	• Problem with sleep that lasts >4 weeks and occurs on most nights • Frequent and persistent dissatisfaction with sleep despite adequate time for sleep • Can occur with or without a comorbid mental or medical issue, or substance abuse • Generally, not associated with excessive daytime sleepiness
Other Insomnia Disorder (other insomnia not due to a substance or known physiologic condition)	• Assigned short term to patients who do not meet all criteria for short-term or chronic insomnia

INCIDENCE

- Sleep disorders affect 50-70 million U.S. residents
- Women experience more often than men

- 45% of U.S. adults report poor or insufficient sleep on 1 of 7 days
- 20-25% of children and adolescents report insomnia
- Only 17% of patients with insomnia tell their healthcare provider about it

RISK FACTORS

- **Predisposing factors**
  - Demographic factors (e.g., aging, female sex, living alone)
  - Familial/hereditary conditions (a personal or family history of insomnia)
  - Psychologic factors (e.g., anxiety, depression, personality trait)
  - Physiologic and lifestyle factors (e.g., increased arousability, caffeine and alcohol intake, smoking)
  - Willis-Ekbom disease/restless legs syndrome, undiagnosed obstructive sleep apnea
- **Precipitating factors**
  - Stressful life events (e.g., relationships, divorce, grief, financial worries, work-related stressors)
  - Psychological and health-related factors (e.g., pain, shortness of breath, mental health problems)
  - Patients who tend to have sleep issues related to stress, and traditionally "light" sleepers, are more predisposed to chronic insomnia
- **Perpetuating factors**
  - Maladaptive sleep habits, spending excessive amounts of time in bed to make up for perceived sleep loss
  - Distress and concern about poor sleep
  - Sleep "performance anxiety" and other dysfunctional/unhelpful beliefs and cognitions about the ability to sleep; with time, become self-fulfilling prophecies

ASSESSMENT FINDINGS

- Subjective Sleep Evaluation Tools:
  - Epworth Sleepiness Scale
  - Pittsburgh Sleep Quality Index
  - Sleep Matrix Scale
  - Sleep journal
  - Insomnia Severity Index

DIFFERENTIAL DIAGNOSES

- Circadian rhythm disorders (disorders of day and night cycle)
  - Shift work disorder
  - Rapid time zone change syndrome
  - Delayed sleep phase syndrome
  - Advanced sleep phase syndrome
  - Non-24-hour sleep-wake disorder
  - Irregular sleep-wake rhythm disorder
- Parasomnias (abnormal sleep physiology or behaviors)
- Obstructive sleep apnea
- Periodic limb movement disorder (movement while asleep)
- Restless legs syndrome
- Delayed and advanced sleep-wake phase disorders
- **Associated medical conditions:**
  - **Cardiac:** ischemia and heart failure
  - **Neurologic:** stroke, degenerative conditions, dementia, peripheral nerve damage, myoclonic jerks, restless legs syndrome, hypnic jerk, and central sleep apnea
  - **Endocrine:** hyperthyroidism, hormonal fluctuations (menopause, menses, etc.), pregnancy, and hypogonadism
  - **Pulmonary:** COPD, obstructive sleep apnea
  - **Gastrointestinal**: gastroesophageal reflux disease

DIAGNOSTIC STUDIES

- Diagnostic testing is indicated based on history and physical. These include multiple sleep latency tests for narcolepsy; psychiatric testing; ECG, thyroid function, blood glucose, A1C, etc. to rule out other conditions
- Polysomnography if obstructive sleep apnea or periodic limb movement disorder suspected

PREVENTION

- Advise patients to go to bed and awaken around the same time
- Advise patients to not "force" sleep
- Bed should only be used for sleep or sex; avoid watching TV, reading, etc. while in bed
- Regular exercise, preferably not close to bedtime
- Avoid use of smartphones/e-readers close to bedtime
- Limit intake of caffeine, tobacco, alcohol
- Relaxation therapy
- Sleep restriction

NONPHARMACOLOGIC MANAGEMENT

- Goals of treatment are to improve sleep quality, quantity and repair daytime impairments
- Limit daytime naps
- Limit intake of caffeine, smoking and alcohol
- Relaxation therapy
- Sleep restriction
- Phototherapy for delayed sleep phase insomnia
- Chronotherapy for circadian rhythm disorders
- Cognitive behavioral therapy for insomnia (CBT-I)

PHARMACOLOGIC MANAGEMENT

- Pharmacologic management of insomnia should be for the short term. Selection of a specific pharmacologic agent should be directed by: 1) symptom pattern, 2) treatment goals, 3) past treatment responses, 4) patient preferences, 5) cost, 6) availability of other treatments, 7) comorbid conditions, 8) contraindications, 9) concurrent medications and potential interactions, and 10) side effects
- All nonbenzodiazepines and benzodiazepine agonist hypnotics should be used with caution during pregnancy; focus on nonpharmacologic methods