

Malaria

Disease Name: Malaria

Symptoms:

- Cyclical fever pattern, chills and rigors, fatigue, travel history to endemic regions, headaches, muscle pain, nausea, vomiting, diarrhea, jaundice

Risk Factors:

- Children <5, elderly, pregnancy, asplenia, sickle cell disease, recent travel to malaria-endemic areas.

Diagnostic Criteria:

- Fever, chills, and travel history to endemic regions. Key diagnostic tests include Microscopy, PCR, and Rapid Diagnostic Tests (RDT).

Threshold Values:

- Malaria PCR [*Plasmodium* spp.]: Ct value ≤ 40

- Thick-film Microscopy: ≥ 1 parasite / 100 high-power fields

Basic Management (Home Care):

Begin prompt treatment with prescribed antimalarial medication as soon as diagnosis is confirmed.

Maintain adequate hydration; oral rehydration solution or clear fluids for fever-related losses.

Use acetaminophen/paracetamol for fever and body aches (avoid NSAIDs if platelet count is low).

Rest under insecticide-treated bed-net to reduce further mosquito exposure.

When to Seek Medical Care / Urgency:

Signs of severe malaria: repeated vomiting, altered mental status, seizures, jaundice, respiratory distress, or urine output drop.

Fever persisting >48 h after starting treatment.

Pregnant women, children <5 years, or immunocompromised patients—seek hospital care immediately.

Which Doctor to See:

Initial evaluation by primary-care or internal-medicine physician; refer to infectious-disease or tropical-medicine specialist for severe or complicated cases.

Lifestyle & Prevention:

Sleep under treated bed-nets, wear long sleeves, and apply DEET repellent.

Undertake chemoprophylaxis before travel to endemic zones.

Remove standing water near housing; support local vector-control campaigns.

Tuberculosis (TB)

Disease Name: Tuberculosis (TB)

Symptoms:

- Chronic cough lasting more than three weeks. Hemoptysis (blood-tinged sputum), unexplained weight loss, fever, night sweats, chest pain, recent close contact with TB patients, Fatigue, loss of appetite, and malaise.

Risk Factors:

- HIV infection, malnutrition, smoking, diabetes, close contact with TB patients, high-risk countries, weakened immune systems.

Diagnostic Criteria:

- Clinical symptoms, chest X-ray, sputum smear microscopy, and PCR-based tests to detect *Mycobacterium tuberculosis*. A positive tuberculin skin test (TST) is also used for screening.

Threshold Values:

- TB PCR Ct value ≤ 40

- Sputum Smear Microscopy: ≥ 1 acid-fast bacillus / 100 high-power fields

Basic Management (Home Care):

Strict adherence to 6-month multidrug regimen (isoniazid, rifampin, pyrazinamide, ethambutol in intensive phase).

Adequate caloric intake and balanced diet to counter weight loss.

Separate sleeping space and cough etiquette until sputum smear-negative.

When to Seek Medical Care / Urgency:

Hemoptysis >2 tablespoons, severe chest pain, or breathlessness.

Drug side-effects (jaundice, severe rash, vision change, persistent vomiting).

Any neurologic signs (possible TB meningitis).

Which Doctor to See:

Pulmonologist or infectious-disease specialist for regimen initiation; routine follow-up at DOTS clinic or chest-disease centre.

Lifestyle & Prevention:

Complete full course without interruption.

Smoking cessation and alcohol limitation to improve lung recovery.

Household screening and BCG vaccination for children where endemic.

Dengue Fever

Disease Name: Dengue Fever

Symptoms:

- High fever, severe joint pain, muscle pain, severe headache, living or traveling in tropical regions or village, pain behind the eyes, rash, nausea and vomiting, petechiae, bleeding

Risk Factors:

- Living or traveling in tropical and subtropical regions where mosquitoes carrying the virus are present.

Diagnostic Criteria:

- Clinical symptoms, serology (dengue IgM and IgG antibodies), PCR for dengue virus detection.

Threshold Values:

- Dengue RT-PCR: Ct value ≤ 40

- Dengue IgM/IgG ELISA: ≥ 4 -fold rise in IgM titer (acute vs. convalescent)

- Platelet count: $< 150\,000 / \mu\text{L}$ [severe dengue]

Basic Management (Home Care):

Oral rehydration (ORS); aim 60–80 mL/kg/day.

Paracetamol for fever; avoid aspirin/NSAIDs to reduce bleeding risk.

Daily monitoring of temperature and warning signs.

When to Seek Medical Care / Urgency:

Persistent abdominal pain, vomiting, mucosal bleeding, cold clammy skin, restlessness, or platelet count $< 100\,000 / \mu\text{L}$.

Sudden drop in fever with worsening weakness (possible shock).

Which Doctor to See:

Primary-care for uncomplicated cases; hospital emergency or internal medicine for warning signs or platelet fall.

Lifestyle & Prevention:

Eliminate mosquito breeding sites (standing water).

Use insecticide spray, window screens, and daytime repellents (Aedes bites peak dawn/dusk).

Community fogging during outbreaks.

HepatitisB

Disease Name: HepatitisB

Symptoms:

- Fatigue, nausea, abdominal pain, jaundice, dark urine, pale-colored stool, Loss of appetite, Joint pain

Risk Factors:

- Injection drug use, unprotected sex, blood transfusions, exposure to contaminated needles.

Diagnostic Criteria:

- Liver function tests, Hepatitis B surface antigen (HBsAg), Hepatitis B DNA PCR.

Threshold Values:

- HBV PCR [HBV DNA]: ≥ 2000 IU/mL [active HBV infection]

Basic Management (Home Care):

Adequate rest and balanced diet; avoid alcohol and hepatotoxic drugs.

Antiviral therapy (e.g., tenofovir, entecavir) for chronic active infection as prescribed.

Monitor LFTs every 3–6 months.

When to Seek Medical Care / Urgency:

Jaundice worsening, severe fatigue, abdominal distension (ascites), confusion (hepatic encephalopathy).

INR >1.5 or rapid ALT/AST rise—possible fulminant hepatitis.

Which Doctor to See:

Hepatologist or gastroenterologist for chronic management; primary-care for routine monitoring.

Lifestyle & Prevention:

Safe sex practices and barrier contraception until viral load undetectable.

Household contacts vaccinated; do not share razors or toothbrushes.

Maintain healthy weight; control diabetes to reduce fatty-liver co-injury.

Asthma

Disease Name: Asthma

Symptoms:

- Wheezing, shortness of breath, chest tightness, and coughing especially at night or early morning, Worse during triggers like cold air exercise allergens respiratory infections, symptoms may be intermittent

Risk Factors:

- Family history of asthma, allergies, exposure to environmental pollutants or tobacco smoke, respiratory infections in childhood.

Diagnostic Criteria:

- Spirometry (FEV1/FVC ratio), peak flow measurement, bronchial provocation tests.

Threshold Values:

- Spirometry FEV1/FVC ratio: < 0.70 [post-bronchodilator]

- Peak Expiratory Flow: $< 80\%$ predicted or personal best

Basic Management (Home Care):

Daily inhaled corticosteroid \pm long-acting beta-agonist per step-plan.

Short-acting beta-agonist (albuterol) as rescue; monitor peak-flow.

Identify and avoid triggers (dust, smoke, pet dander).

When to Seek Medical Care / Urgency:

Peak-flow $< 50\%$ of personal best, inability to speak full sentences, persistent wheeze after 2 rescue doses.

Blue lips/fingertips—call emergency.

Which Doctor to See:

Primary-care for mild-moderate; pulmonologist/allergist for uncontrolled or severe persistent asthma.

Lifestyle & Prevention:

Annual influenza and COVID vaccination; healthy weight and regular exercise.

Smoking cessation and indoor allergen control (mattress covers, HEPA filter).

Gastroesophageal Reflux Disease (GERD)

Disease Name: Gastroesophageal Reflux Disease (GERD)

Symptoms:

- Heartburn, regurgitation, chest pain, difficulty swallowing, chronic cough, burping often frequent, Sensation of a lump in the throat, hoarseness.

Risk Factors:

- Obesity, pregnancy, smoking, large meals, lying down after eating, and certain medications.

Diagnostic Criteria:

- Clinical symptoms, endoscopy, 24-hour pH monitoring, esophageal manometry.

Threshold Values:

- 24-hour Esophageal pH Monitoring: pH < 4 for > 4.5 % of total time

Basic Management (Home Care):

Weight reduction if overweight; elevate head of bed 6–8 in.

Avoid late-night meals, large fatty meals, caffeine, alcohol, chocolate.

Daily proton-pump inhibitor 30 min before breakfast for 4–8 weeks.

When to Seek Medical Care / Urgency:

Dysphagia, odynophagia, GI bleeding, unexplained weight loss (alarm signs).

Heartburn persisting despite 8 weeks PPI.

Which Doctor to See:

Primary-care initially; gastroenterologist for endoscopy or refractory symptoms.

Lifestyle & Prevention:

Quit smoking; moderate alcohol intake.

Smaller, frequent meals; avoid lying flat <3 h after eating.

Irritable Bowel Syndrome (IBS)

Disease Name: Irritable Bowel Syndrome (IBS)

Symptoms:

- Abdominal pain, bloating, diarrhea, constipation, mucus in stool.

Risk Factors:

- Family history, stress, certain food triggers, female gender.

Diagnostic Criteria:

- Rome IV criteria for IBS, stool tests to rule out infection, colonoscopy if alarm features are present.

Threshold Values:

- Rome IV criteria met: ≥ 6 months abdominal pain relieved by defecation plus change in stool frequency/form

Basic Management (Home Care):

Low-FODMAP diet trial or fiber (soluble) for constipation-predominant IBS.

Peppermint-oil capsules or antispasmodics for pain.

Stress-reduction (yoga, CBT) shown to decrease symptom flares.

When to Seek Medical Care / Urgency:

GI bleeding, nocturnal diarrhea, unexplained weight loss, or onset >50 years (evaluate for organic disease).

Which Doctor to See:

Gastroenterologist for diagnosis confirmation and refractory symptoms; dietitian for structured dietary plan.

Lifestyle & Prevention:

Regular exercise, adequate hydration, consistent meal timing.

Sleep hygiene; limit caffeine and high-gas foods.

Anemia

Disease Name: Anemia

Symptoms:

- Fatigue, pallor, shortness of breath, dizziness, cold hands and cold feet, headaches, brittle nails.

Risk Factors:

- Poor diet, heavy menstrual periods, pregnancy, gastrointestinal blood loss.

Diagnostic Criteria:

- Complete blood count (CBC), serum ferritin, serum iron, total iron-binding capacity (TIBC).

Threshold Values:

- Hemoglobin: < 12 g/dL [women] or < 13 g/dL [men]

- Serum Ferritin: < 30 ng/mL

Basic Management (Home Care):

Oral ferrous sulfate 60–65 mg elemental iron TID with vitamin C-rich juice; recheck Hb in 4 weeks.

Treat underlying bleed (e.g., menstrual, GI).

When to Seek Medical Care / Urgency:

Shortness of breath at rest, chest pain, syncope.

Failure of Hb to rise ≥ 1 g/dL after 4–6 weeks therapy.

Which Doctor to See:

Primary-care; gastroenterology for occult GI bleed; gynecology for heavy menses.

Lifestyle & Prevention:

Iron-rich foods (lean red meat, legumes, green leafy veg) plus vitamin C.

Space tea/coffee 2 h away from iron to improve absorption.

Depression

Disease Name: Depression

Symptoms:

- Persistent sadness, loss of interest in activities, fatigue, changes in appetite or weight, sleep disturbances, suicidal thoughts.

Risk Factors:

- Family history, chronic medical conditions, stress, trauma, substance abuse.

Diagnostic Criteria:

- The Patient Health Questionnaire-9 (PHQ-9) is used to diagnose depression. The patient answers 9 questions about their mood over the past two weeks. The responses are scored, and the score helps in diagnosing the severity of depression.

Threshold Values:

-N/A

Basic Management (Home Care):

Daily schedule with physical activity (30 min brisk walk), regular sleep, balanced meals.

First-line SSRI/SNRI per clinician; start low, titrate.

Cognitive-behavioral therapy (CBT) equally effective for mild-moderate cases.

When to Seek Medical Care / Urgency:

Suicidal thoughts, self-harm behavior, inability to perform basic daily tasks—immediate psychiatric evaluation.

Which Doctor to See:

Primary-care for screening and initial SSRI; psychiatrist for moderate-severe, treatment-resistant, or suicidal risk.

Lifestyle & Prevention:

Maintain social connections; limit alcohol; mindfulness/meditation; routine exercise proven protective.

Anxiety Disorders

Disease Name: Anxiety Disorders

Symptoms:

- Excessive worry, restlessness, fatigue, difficulty concentrating, irritability, sleep disturbances.

Risk Factors:

- Genetics, environmental stress, substance abuse, history of trauma.

Diagnostic Criteria:

- Generalized Anxiety Disorder-7 (GAD-7), clinical interview.

Threshold Values:

- N/A

Basic Management (Home Care):

CBT or mindfulness-based stress reduction as first-line non-pharm.

SSRIs/SNRIs for persistent symptoms; short-term benzodiazepine only for crisis.

Regular aerobic exercise 4–5 days/week.

When to Seek Medical Care / Urgency:

Panic attacks with chest pain rule-out; inability to work/sleep; suicidal ideation.

Which Doctor to See:

Primary-care or psychiatrist; psychologist for CBT sessions.

Lifestyle & Prevention:

Structured relaxation (deep breathing, progressive muscle relaxation); limit caffeine and stimulants; consistent sleep schedule.

Disease Name: Viral Fever

Symptoms:

- fever
- body aches

- headache
- sore throat
- cough/cold
- fatigue
- mild rash possible
- decreased appetite
- runny nose
- congestion
- nausea
- diarrhea

Risk Factors: Recent viral exposure (crowded settings, seasonal surges/monsoon), close contact with sick individuals, extremes of age (young children, older adults).

Diagnostic Criteria (Clinical Working Dx): Fever <7 days without localizing bacterial focus; viral URI or systemic viral symptoms; no red-flag features strongly suggestive of severe bacterial infection or dengue warning signs (e.g., severe abdominal pain, mucosal bleeding, rapidly falling platelets). Basic exam + symptom history; labs usually not required in mild cases. Consider CBC if severe, prolonged, or to rule out dengue.

Threshold Values :

- Fever $\geq 38^{\circ}\text{C}$

- Platelet count: $> 150\,000 / \mu\text{L}$ [argues against dengue]

Basic Management (Home Care): Rest, maintain hydration (oral fluids, soups, ORS if poor intake), use acetaminophen/paracetamol for fever & aches (avoid NSAIDs until dengue excluded in high-risk settings), light diet as tolerated. Monitor temperature and symptoms daily.

When to Seek Medical Care / Urgency: Fever $\geq 39.4^{\circ}\text{C}$ (103°F) in adults; any fever $\geq 104^{\circ}\text{F}$; severe headache, stiff neck, confusion, breathing difficulty, persistent vomiting, abdominal pain, rash with bleeding, or not improving after ~3-5 days. Children, elderly, immunocompromised: lower threshold for evaluation.

Which Doctor to See: Primary care / general practitioner first; escalate to infectious disease or internal medicine if severe, prolonged, or atypical; emergency care for red-flag signs above.

Lifestyle & Prevention: Hand hygiene, mask when ill, avoid close contact when febrile, stay up-to-date on recommended vaccines (influenza, COVID, etc.), adequate rest/nutrition to support immunity.

Migraine

Disease Name: Migraine

Symptoms:

- Mood changes
- Moderate to severe throbbing chronic headache
- Neck stiffness
- headache usually unilateral but can be bilateral
- nausea
- sensitive to light
- sensitive to sound
- pain in the head for long hours
- Visual disturbances like flashes spots zigzag lines blind spots

Risk Factors: Personal or family history of migraine; female sex; hormonal fluctuations; sleep disruption; certain foods (e.g., aged cheese, MSG); stress; obesity (linked with chronic migraine risk).

Diagnostic Criteria: Clinical diagnosis using history; International Classification of Headache Disorders (ICHD-3) criteria (≥ 5 attacks fulfilling typical features: 4-72 h; ≥ 2 of unilateral/pulsating/moderate-severe/aggravated by routine activity; and ≥ 1 of nausea/vomiting or photophobia+phonophobia); aura subtype requires reversible focal neurologic symptoms. Neuro exam usually normal; imaging if red flags.

Threshold Values:

- Headache frequency: ≥ 4 days/month

Basic Management (Acute): Early treatment when pain mild: NSAID or acetaminophen for mild-moderate; triptans first-line specific therapy for moderate-severe; antiemetics if nausea. Hydration, quiet dark room, sleep. Consider gepants or ditans if triptan-intolerant.

Preventive Options: Beta-blockers, topiramate, CGRP monoclonal antibodies; lifestyle trigger management; weight control; some evidence for magnesium, riboflavin, CoQ10 supplements (adjunct).

When to Seek Medical Care / Urgency: New "worst headache," neurologic deficits lasting >1 h, fever with headache, change in pattern/frequency, or headaches not responding to usual meds. Emergency evaluation for thunderclap onset.

Which Doctor to See: Start with primary care; refer to neurologist or headache specialist for diagnostic uncertainty, frequent attacks, or preventive therapy need.

Lifestyle & Prevention: Regular sleep, meals, hydration; stress management; exercise; trigger diary; limit acute med use to avoid medication-overuse headache.

Disease Name: Acute Diarrheal Illness

Symptoms:

- diarrhea
- abdominal pain
- nausea
- vomiting
- light fever
- blood in stool
- mucus in stool
- dehydration
- thirst
- dry mouth

- reduced urine

Risk Factors: Contaminated food/water; travel; poor sanitation; recent antibiotic use; daycare exposure; immunocompromise.

Diagnostic Criteria: ≥ 3 unformed stools in 24 h or stool consistency change plus symptoms; classify by duration (< 14 d acute); stool cultures or multiplex PCR if severe, bloody, febrile, or high-risk host.

Threshold Values:

- Dehydration: $> 5\%$ body-weight loss or clinical signs

- ORT dosing: 50–100 mL/kg over 4 hours

Basic Management: Oral rehydration solution (correct salt/glucose); continue feeding (age-appropriate diet); zinc (esp. children) often bundled with ORS; consider loperamide for non-bloody, afebrile adult diarrhea; cautious antimicrobial use based on suspected pathogen.

When to Seek Medical Care / Urgency: Signs of dehydration, persistent high fever, bloody stools, severe abdominal pain, inability to keep fluids, diarrhea > 3 days (adults) or any concern in young children/elderly.

Which Doctor to See: Primary care for most; emergency care if severe dehydration or shock; infectious disease or gastroenterology for recurrent/severe cases.

Lifestyle & Prevention: Safe water/food hygiene, handwashing, rotavirus vaccination (children), traveler's precautions.

Disease Name: COVID

Symptoms:

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue

- close contact with COVID patients
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

Risk Factors:

- Age ≥ 65 years
- Chronic medical conditions (e.g., diabetes, hypertension, cardiovascular disease, chronic respiratory diseases)
- Immunocompromised states (e.g., cancer treatment, organ transplant recipients)
- Pregnancy
- Obesity (BMI ≥ 30)
- Smoking
- Male sex
- Long COVID history

Diagnostic Criteria:

- Clinical presentation with fever, cough, shortness of breath, or loss of taste/smell
- Positive SARS-CoV-2 detection via:
 - Real-Time Reverse Transcription Polymerase Chain Reaction (RT-PCR)
 - Rapid Antigen Tests (RATs)
 - Nucleic Acid Amplification Tests (NAATs)
- Chest imaging (e.g., CT scans) may reveal ground-glass opacities indicative of pneumonia.

RT-PCR tests with cycle thresholds (Ct) ≤ 40 are considered positive; however, higher Ct values may indicate lower viral loads.

Threshold Values:

- RT-PCR Test: Ct value ≤ 40
- Oxygen Saturation: Oxygen saturation $< 94\%$

Basic Management (Home Care):

- Isolate to prevent transmission.
- Rest and maintain adequate hydration.
- Use over-the-counter medications (e.g., acetaminophen) to alleviate fever and pain.
- Monitor oxygen saturation using a pulse oximeter; seek medical attention if levels drop below 94%.
- Maintain a healthy diet and avoid smoking or alcohol.

Home care is appropriate for mild cases; individuals with underlying health conditions should consult healthcare providers.

When to Seek Medical Care / Urgency:

- Difficulty breathing or shortness of breath
- Persistent chest pain or pressure
- New confusion or inability to stay awake
- Bluish lips or face
- Fever lasting more than 3 days despite treatment
- Worsening of chronic medical conditions

Immediate medical attention is required for severe symptoms.

Which Doctor to See:

- Primary care physician for initial evaluation
- Infectious disease specialist for complex or severe cases

- Pulmonologist for respiratory complications
- Cardiologist for cardiovascular concerns
- Neurologist for neurological symptoms

Lifestyle & Prevention:

- Vaccination against COVID-19 and influenza.
- Regular hand hygiene and use of alcohol-based hand sanitizers.
- Wearing masks in crowded or enclosed spaces.
- Maintaining physical distancing where appropriate.
- Ensuring proper ventilation in indoor spaces.
- Avoiding close contact with symptomatic individuals.
- Staying home when feeling unwell or after exposure to confirmed cases.

Preventive measures are crucial in reducing transmission and protecting vulnerable populations.