Respiratory disease

COVID-19 Symptoms and Recommendations for Patients

COVID-19 and other respiratory infections share many similar symptoms. It's crucial to recognize these symptoms early to prevent the spread of the infection and take the necessary precautions. Vaccination remains the best defense against severe COVID-19 and other respiratory illnesses like the flu.

Symptoms of COVID-19 and Other Respiratory Infections

The common symptoms of respiratory infections, including COVID-19, are as follows:

- Continuous cough
- High temperature, fever, or chills
- Loss of or changes in the sense of taste or smell
- Shortness of breath
- Unexplained tiredness or lack of energy
- Muscle aches or pains not related to physical exercise
- Loss of appetite
- Headache (unusual or persistent)
- Sore throat, stuffy or runny nose
- Diarrhoea
- Nausea or vomiting

If you experience any of these symptoms, especially if you are eligible for COVID-19 treatments, you should follow the guidance for treatment and testing.

What to Do if You Have Symptoms

If you have symptoms of a respiratory infection, including COVID-19, and have a high temperature or feel too unwell to carry out daily activities, you should:

1. **Stay at home** until your temperature has returned to normal or you feel better.
2. **Work from home** if possible, or discuss alternatives with your employer if remote work is not feasible.
3. **Avoid close contact** with individuals at higher risk, especially those with weakened immune systems.
4. **Communicate with healthcare providers** if you have medical or dental appointments, informing them about your symptoms.
5. **Seek medical advice** if your symptoms worsen or if you're unable to manage them at home. In an emergency, dial 999.

Reducing the Spread of Infection

You can reduce the risk of transmitting the virus to others by:

- Wearing a well-fitting face mask, covering both your nose and mouth.

- Avoiding crowded places, including public transport and large social gatherings.
- Exercising outdoors where you won't come into close contact with others.
- Covering your mouth and nose when you cough or sneeze.
- Regularly washing your hands with soap and water for at least 20 seconds or using hand sanitizer.

Recommended Chest Doctors:

- **Amr Maher El-Tounsy:** Sh. El-Haram, Giza Square, Nasr Building
- **Mohamed Fawzy Badreldin Abbas:** Marad Tower, El-Giza

Testing for COVID-19

COVID-19 testing is generally recommended for specific groups, such as individuals who may be eligible for treatment. If you fall into one of these groups and develop symptoms, you should take a lateral flow test as soon as possible, even if your symptoms are mild.

If you test positive for COVID-19, follow the official guidance on isolation and medical advice.

Children and COVID-19

Respiratory infections are common in children, particularly in winter. Children with symptoms of a respiratory infection, including a high temperature, should stay at home until they feel well enough to return to school or childcare.

If your child is under two years old and you are concerned about their symptoms, seek medical advice.

Long COVID

Some individuals experience lingering symptoms weeks or months after the initial infection, a condition known as long COVID or post-COVID-19 syndrome. Symptoms include:

- Fatigue
- Breathlessness
- Brain fog (problems with memory or concentration)
- Pins and needles
- Headaches
- Dizziness
- Palpitations or chest pain
- Rashes
- Anxiety or depression

If symptoms persist four weeks after the initial infection, consult your GP for further tests and advice. You may be referred to a long COVID assessment or pulmonary rehabilitation service if the symptoms significantly impact your life.

General Recommendations for Staying Safe

To protect yourself and others, it's important to:

1. **Get vaccinated** when eligible and follow local guidelines.
2. **Maintain physical distance** of at least 1 meter from others and avoid crowds.
3. **Wear a mask** in settings where physical distancing isn't possible or in poorly ventilated areas.
4. **Practice good hygiene** by regularly cleaning your hands with soap and water or alcohol-based hand sanitizer.
5. **Avoid touching your face**, and cover your mouth and nose when sneezing or coughing.

Understanding Post COVID-19 Condition: What You Need to Know

While most individuals recover fully from COVID-19, some continue to experience persistent symptoms after the initial infection. This condition, commonly referred to as post COVID-19 condition or long COVID, affects approximately 10–20% of those who have had the virus. Despite ongoing research, the reasons why certain individuals develop long COVID while others do not remain unclear. This article delves into the key aspects of post COVID-19 condition, including symptoms, diagnosis, risk factors, and prevention strategies.

What is Post COVID-19 Condition?

Post COVID-19 condition, also known as long COVID, is a group of symptoms that persist after recovering from the acute phase of the virus. These symptoms may continue from the original illness or emerge after recovery. People affected by long COVID are often called "long-haulers," and their symptoms can fluctuate, sometimes relapsing or disappearing and reappearing.

Common Symptoms of Long COVID:

- Fatigue
- Shortness of breath
- Cognitive issues (e.g., confusion, memory problems)
- Chest pain
- Persistent cough
- Muscle pain or weakness
- Anxiety or depression
- Loss of smell or taste

These symptoms can disrupt daily life and affect work, household management, and social activities.

How is Post COVID-19 Condition Diagnosed?

Healthcare providers typically diagnose post COVID-19 condition when symptoms persist for at least three months after the initial infection. This timeframe helps distinguish long COVID from a prolonged recovery from the virus. To confirm the diagnosis, symptoms must last for at least two months, and other potential causes must be ruled out before diagnosing post COVID-19 condition.

Who is at Risk of Developing Long COVID?

Around 10–20% of COVID-19 patients develop long COVID. Individuals who had a severe case of COVID-19, especially those with symptoms such as breathlessness, are at a higher risk. Research also suggests that women may be more susceptible, but long COVID can affect anyone, regardless of the severity of their original illness.

How Long Does Post COVID-19 Condition Last?

The duration of long COVID varies. While some people gradually improve over time, others may continue experiencing symptoms for weeks or months. This aspect is still under investigation, and further research is needed to understand the long-term effects of the condition.

Managing Post COVID-19 Symptoms

If you experience lingering symptoms after COVID-19, seek medical help. A healthcare provider can evaluate your symptoms, rule out other causes, and suggest management strategies.

Current Management Approaches:

- Symptom relief through medications
- Physical therapy
- Cognitive and emotional therapies
- Holistic care to support recovery and improve quality of life

There are no specific treatments for long COVID at present, but managing symptoms can help restore function.

Protecting Yourself from Post COVID-19 Condition

The best protection against long COVID is to avoid COVID-19 infection altogether. Here are steps you can take:

- Practice regular handwashing
- Maintain social distancing
- Wear masks in crowded or poorly ventilated spaces
- Stay up to date with COVID-19 vaccinations and booster doses

These preventive measures reduce your risk of infection, which in turn lowers your chances of developing long COVID.

Can Long COVID Be Transmitted?

No, long COVID is not contagious. While the virus itself is infectious, the lingering symptoms of long COVID cannot be passed from one person to another.

Long COVID in Children and Adolescents

Children and adolescents can also experience long COVID. Common symptoms in younger individuals include persistent cough, fatigue, changes in smell or taste, and anxiety. Ongoing research is examining how long COVID affects younger populations and their recovery.

Pneumonia: Symptoms and Recommendations for Patients

Pneumonia is an infection that causes inflammation in the air sacs of one or both lungs, often resulting in fluid or pus buildup. Symptoms can range from mild to severe, and early diagnosis and treatment are crucial to prevent serious complications like respiratory failure, sepsis, or lung abscesses.

Causes of Pneumonia

Pneumonia is commonly caused by bacterial or viral infections, such as:

- Influenza (flu)
- Respiratory syncytial virus (RSV)
- COVID-19

In rare cases, pneumonia can be caused by fungal infections, especially in individuals with compromised immune systems. Aspiration pneumonia occurs when food, liquids, or other substances enter the lungs.

How to Reduce Your Risk of Pneumonia

Several vaccines are available to help prevent pneumonia-related infections:

- **Pneumococcal vaccine**: Recommended for infants, adults over 65, and those at higher risk.
- **Flu vaccine**: Recommended for pregnant women, older adults, and high-risk groups.
- **RSV vaccine**: Recommended for adults aged 75–79 and pregnant women to protect newborns.
- **COVID-19 vaccine**: Recommended for individuals at increased risk from COVID-19.

Additional Preventive Measures:

- Maintain good hygiene, such as regular handwashing.
- Lead a healthy lifestyle with balanced nutrition and regular exercise.
- Avoid smoking and limit exposure to pollutants.

Symptoms of Pneumonia

Pneumonia symptoms can vary based on the severity of the infection but often include:

- Chest pain when breathing or coughing
- Cough with phlegm (yellow, green, or rust-colored)
- Fever, chills, and sweating
- Shortness of breath
- Fatigue and weakness
- Nausea, vomiting, or diarrhea
- Confusion (especially in older adults)
- Low body temperature in severe cases

What to Do if You Have Symptoms

If you suspect pneumonia, especially if you're at high risk (elderly, children, or individuals with chronic health conditions), seek medical attention immediately. Early intervention can reduce the risk of complications.

Steps for Recovery:

- Rest and stay hydrated.
- Follow your healthcare provider's advice regarding medications.
- Avoid smoking and exposure to secondhand smoke.

Diagnosing Pneumonia

Diagnosis is based on a combination of:

- Physical exams to detect abnormal lung sounds
- Chest X-rays to identify lung inflammation
- Laboratory tests to check for infection
- Pulse oximetry to measure oxygen levels

Individuals with weakened immune systems, chronic health conditions, or older adults should be vigilant about pneumonia symptoms and seek prompt medical care.

Air Bronchogram

An air bronchogram is a radiological sign seen on chest X-rays and CT scans, where air-filled bronchi become visible against a backdrop of lung tissue that is either filled with fluid or consolidated. This finding is often indicative of underlying lung conditions that affect respiratory function and is a critical marker in diagnosing several pulmonary diseases.

Pathophysiology

In healthy lungs, the bronchi are surrounded by air, making them nearly invisible on imaging. However, in cases where the alveoli become filled with fluid, pus, or cellular debris, the air-filled bronchi stand out against the now-opaque lung tissue. This occurs in conditions such as:

- **Infections:** Bacterial, viral, or fungal pathogens can invade the lung tissue, leading to inflammation and consolidation.
- **Fluid Accumulation:** Pulmonary edema or pleural effusion causes fluid to seep into the alveoli, obscuring them.
- **Tumor Growth:** Lung tumors can obstruct airways and lead to changes in the surrounding lung tissue, contributing to air bronchograms.

Symptoms

Patients with conditions associated with air bronchograms typically experience respiratory symptoms, which may vary in severity:

- **Shortness of Breath:** Difficulty breathing is common, especially during physical activity, indicating compromised lung capacity.
- **Wheezing:** A high-pitched sound may occur during breathing due to airway constriction or obstruction.
- **Coughing:** Persistent coughing can be either dry or productive, with sputum as the body attempts to clear the airways.
- **Chest Discomfort:** Many patients report tightness, pain, or pressure in the chest, often worsening with deep breaths or coughing.

Patient Response and Actions

Patients experiencing these symptoms often seek medical help when breathing becomes difficult or uncomfortable. In some cases, the symptoms may be mild initially, but patients may visit a doctor when the symptoms persist or worsen. Based on the clinical evaluation, a chest X-ray or CT scan is usually ordered. Early detection through imaging can guide the diagnosis, allowing healthcare providers to identify the underlying condition and start appropriate treatment.

Differential Diagnosis

Air bronchograms are associated with several pulmonary conditions, including:

- **Pneumonia:** The most common cause, with bacterial pneumonia leading to lobar consolidation and viral pneumonia causing diffuse patterns.
- **Pulmonary Edema:** Often linked to heart failure, where fluid buildup in the alveoli leads to visible air-filled bronchi on imaging.
- **Lung Abscess:** Localized pus collections in the lung can result in air bronchograms, particularly when air-filled bronchi connect with the abscess cavity.
- **Bronchogenic Carcinoma:** Tumors obstructing the airways may cause air trapping, leading to the characteristic bronchograms.
- **Interstitial Lung Disease:** Diseases like sarcoidosis or pulmonary fibrosis can cause changes in lung tissue, resulting in air bronchograms.

Diagnostic Imaging Techniques

- **Chest X-ray:** The first imaging step, where air bronchograms appear as branching structures in areas of lung opacity.
- **CT Scan:** Offers a detailed view of the lung's internal structure, helping differentiate between conditions like pneumonia and assess complications such as abscesses or tumors.
- **Bronchoscopy:** In some cases, this procedure is used to directly visualize the bronchi, enabling biopsies or sample collection for lab testing.

Treatment

The management of air bronchograms focuses on treating the underlying condition:

- **Pneumonia:** Antibiotics are prescribed for bacterial infections, while antiviral medications are used for viral causes. Supportive care may include oxygen therapy or breathing treatments.
- **Pulmonary Edema:** Diuretics are given to remove excess fluid, and medications are administered to support heart function.
- **Lung Abscess:** Antibiotic therapy is the first line of treatment, though some cases may require surgical drainage.
- **Tumor-Related Air Bronchograms:** Depending on the type and stage of the tumor, oncological treatments like chemotherapy, radiation, or surgery may be necessary.

Prognosis and Follow-Up

The prognosis depends on the cause and the timeliness of treatment. Early intervention generally improves outcomes. Patients recovering from pneumonia, lung abscesses, or edema may require follow-up imaging to ensure resolution and monitor for any complications. Those recovering from lung infections or surgery may also benefit from pulmonary rehabilitation to regain lung function and improve overall quality of life

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Pneumonia: Symptoms and Patient Guidance

Pneumonia is a lung infection that causes inflammation in the air sacs (alveoli) of one or both lungs. These air sacs can fill with fluid or pus, leading to a range of symptoms, from mild discomfort to life-threatening conditions. Early detection and treatment are vital to prevent complications like respiratory failure, sepsis, or lung abscesses.

Causes of Pneumonia

Pneumonia can be triggered by bacterial, viral, or, less commonly, fungal infections. It can develop on its own or as a complication from other illnesses, including:

- **Influenza (Flu)**
- **Respiratory Syncytial Virus (RSV)**
- **COVID-19**
- **Aspiration Pneumonia: Occurs when food, liquids, or vomit enter the lungs, typically after choking or gagging.**

How to Reduce Your Risk of Pneumonia

To lower your chances of contracting pneumonia, consider the following preventive measures:

- **Vaccination:**
  - **Pneumococcal vaccine: Recommended for babies, adults over 65, and those at risk of severe infections.**
  - **Flu vaccine: Advised for individuals with chronic conditions, pregnant women, and older adults.**
  - **RSV vaccine: For adults aged 75 and older and pregnant women in their third trimester.**
  - **COVID-19 vaccine: Important for those at high risk of severe illness.**
- **Hygiene: Regularly wash your hands with soap and water for at least 20 seconds.**
- **Lifestyle: Maintain a balanced diet, exercise regularly, and avoid smoking or exposure to environmental pollutants.**

Symptoms of Pneumonia

The symptoms of pneumonia may vary based on the type and severity of the infection, but common signs include:

- **Chest pain: Often sharp, worsens with deep breathing or coughing.**
- **Cough: May produce mucus (phlegm) that is yellow, green, or rust-colored.**
- **Fever, chills, and sweating: Indicators of an active infection.**
- **Shortness of breath: Difficulty breathing, especially during physical activity or at rest.**
- **Fatigue and weakness: Feeling generally unwell and tired.**
- **Nausea, vomiting, or diarrhea: Symptoms of systemic infection.**
- **Confusion or mental changes: Particularly in older adults, this may signal a severe infection.**
- **Low body temperature: More common in the elderly or those with weakened immune systems.**

What to Do if You Have Pneumonia Symptoms

If you experience pneumonia-like symptoms, especially if you're at higher risk (e.g., elderly, infants, or individuals with chronic health conditions), follow these steps:

1. **Seek medical attention: Early treatment can prevent complications.**
2. **Rest and hydrate: Get plenty of rest and drink fluids like water, herbal teas, or broths to stay hydrated and help clear mucus.**
3. **Follow treatment guidelines: Take medications as prescribed by your healthcare provider, which may include antibiotics for bacterial infections or antivirals for viral pneumonia.**
4. **Avoid irritants: Stop smoking and stay away from secondhand smoke, which can worsen symptoms.**

Emergency Symptoms to Watch For

If you or a loved one has pneumonia, seek urgent medical care if any of the following occur:

- **Difficulty breathing or shortness of breath that worsens.**
- **Persistent chest pain or pressure.**
- **Severe confusion or extreme drowsiness.**
- **High fever that does not reduce with medication.**

Recommendations for Patients with Pneumonia

To help with recovery and reduce the spread of infection:

Do:

- **Rest until fully recovered: Avoid strenuous activity until you feel better.**
- **Drink plenty of fluids: Stay hydrated to help your body recover and loosen mucus.**
- **Take pain relievers: Medications like paracetamol or ibuprofen can reduce fever and pain.**
- **Practice good hygiene: Cover your mouth when coughing or sneezing, and dispose of tissues promptly.**

Don't:

- **Avoid cough suppressants: Coughing helps expel mucus and clear the infection from your lungs.**
- **Avoid smoking: Smoking will aggravate the lungs and prolong recovery.**

Diagnosing Pneumonia

Pneumonia is typically diagnosed through a combination of:

- **Physical examination: Your doctor will listen to your lungs for abnormal sounds like crackling.**
- **Chest X-ray: To check for inflammation or fluid in the lungs.**
- **Lab tests: Blood tests and sputum cultures can identify the cause of the infection (bacterial, viral, or fungal).**
- **Pulse oximetry: Measures blood oxygen levels to determine lung function.**

Long-Term Effects and Follow-Up Care

People recovering from pneumonia may continue to experience symptoms such as fatigue or reduced lung capacity. Those with weakened immune systems or chronic conditions should closely monitor their symptoms and attend follow-up appointments as needed.

Follow-Up Care: Your healthcare provider may recommend additional imaging or lung function tests to ensure full recovery and address any lasting lung issues.

Rehabilitation: Pulmonary rehabilitation may be necessary for those with lasting lung damage, helping to restore respiratory function and improve quality of life.

By staying vigilant and taking the right precautions, individuals with pneumonia can manage their symptoms and promote a smooth recovery.

Medical Tests for Knee Fractures: Symptoms and What Patients Should Do

When a knee injury occurs, especially with suspected fractures, several medical tests and imaging studies are crucial for an accurate diagnosis. These tests help assess the severity of the injury and detect any additional damage to ligaments, tendons, or surrounding structures. Here's a comprehensive look at the diagnostic steps, symptoms, and patient recommendations.

1. Physical Examination

The first step in evaluating a suspected knee fracture is a physical exam by a healthcare provider. This exam typically includes:

- **Assessing range of motion: Evaluating how well the knee can bend and straighten.**
- **Checking knee stability: Determining if the joint remains stable under gentle pressure.**
- **Observing for swelling or bruising: Noting any visible signs of injury or deformity.**
- **Palpating the knee: Pressing on the knee to locate areas of tenderness or pain.**

2. X-rays

- **Standard X-rays: The most common imaging test for suspected knee fractures. X-rays can reveal fractures, dislocations, and bone deformities. Typically, multiple views are taken to assess the knee from different angles.**

3. MRI (Magnetic Resonance Imaging)

- **MRI: Used to evaluate soft tissue injuries that might accompany a fracture, such as ligament tears or cartilage damage. MRI provides detailed images of bones, ligaments, tendons, and cartilage, offering a comprehensive view of the knee.**

4. CT Scan (Computed Tomography)

- **CT Scan: If a fracture is complex or requires a more detailed evaluation of the bone structure, a CT scan may be used. This provides cross-sectional images, which help visualize the extent of the fracture and any involvement of surrounding structures.**

5. Ultrasound

- **Ultrasound: Sometimes used in paediatrics or to evaluate soft tissue injuries. It can visualize the knee joint, detect fluid build-up, and assess soft tissue structures.**

Knee Fracture States: Symptoms and Management

Knee fractures vary in severity, with symptoms ranging from mild discomfort to severe pain. Here are the different types of knee fractures, their symptoms, and what patients should do for each:

Mild Knee Fracture

- **Symptoms:**
  - **Swelling: Localized swelling around the knee due to inflammation.**
  - **Pain during movement: Discomfort when bending or bearing weight on the knee.**
  - **Bruising: Discoloration around the injury site.**
- **What to Do:**
  - **Rest: Avoid putting pressure on the knee and engage in minimal physical activity.**
  - **Ice therapy: Apply ice packs to reduce swelling and pain.**
  - **Compression: Use an elastic bandage or knee brace for support.**
  - **Elevation: Keep the knee elevated to reduce swelling.**

Severe Knee Fracture

- **Symptoms:**
  - **Severe pain: Intense pain that prevents normal movement.**
  - **Inability to walk: Difficulty putting weight on the leg due to pain or instability.**
  - **Visible deformity: Misalignment or displacement of the knee joint.**
- **What to Do:**
  - **Seek immediate medical attention: Urgent care is necessary to assess the extent of the injury.**
  - **Imaging studies: X-rays or MRI scans to evaluate the fracture and any related injuries.**
  - **Surgery: In some cases, surgical intervention may be required to realign and stabilize the fractured bones using plates, screws, or external devices.**
  - **Rehabilitation: After surgery, physical therapy is crucial to restore knee function and strength.**

Normal Knee State (Post-Injury Recovery)

- **Symptoms:**
  - **Minor pain: Occasional discomfort, especially during physical activities.**
  - **Slight swelling: Mild swelling may persist but does not affect knee movement.**
  - **Full range of motion: The knee can bend and straighten normally without significant pain.**
- **What to Do:**
  - **Monitor progress: Follow up with a healthcare provider to ensure complete recovery.**
  - **Gradual activity resumption: Slowly return to normal activities as tolerated.**
  - **Strengthening exercises: Engage in exercises that target the knee and surrounding muscles to prevent future injury.**

Osteoarthritis (Potential Long-Term Consequence)

- **Symptoms:**
    - **Joint stiffness: Especially after long periods of inactivity or first thing in the morning.**
    - **Grinding sensation: A creaking or grinding noise (crepitus) when moving the knee.**
    - **Pain during activity: Discomfort that worsens with physical activity and improves with rest.**
- **What to Do:**
    - **Lifestyle changes: Maintain a healthy weight and engage in low-impact activities (like swimming or cycling) to reduce stress on the knee.**
    - **Physical therapy: Exercises to strengthen the knee and improve flexibility.**
    - **Medications: Over-the-counter pain relievers like non-steroidal anti-inflammatory drugs (NSAIDs) can help manage pain and inflammation.**
    - **Injections: Corticosteroid or hyaluronic acid injections may provide temporary relief.**
    - **Surgery: In advanced cases, knee replacement surgery or other procedures may be required.**

Additional Recommendations for Patients

- **Monitor symptoms: Seek immediate medical attention if you experience severe pain, swelling, difficulty walking, or visible deformities in your knee.**
- **Follow prescribed treatments: Adhere to your healthcare provider's recommendations, whether rest, medication, or surgery.**
- **Participate in rehabilitation: Physical therapy is essential for restoring strength, flexibility, and full function to the knee after injury or surgery.**

By following these steps, patients can effectively manage knee fractures and minimize the risk of long-term complications.

Recommended Bone Doctors:

- **Adel Adawy:** Tahrir Square, Dokki Administrative Tower
- **Abdel Rahman El-Beshbeshy:** 34 Sh. Port Said, in front of Ahmed Maher Hospital
- **Atef Mohamed Morsi:** Prima Vista Tower, Magda Square, 6th of October
- **Khaled El-Sherebiny:** 26th of July St., Sphinx, Mohandessin
- **Fadi Michel Fahmy:** Sinan St., Gesr El-Suez, El-Zeitoun

Brain Stroke: A Comprehensive Overview

A brain stroke, often referred to as a "brain attack," occurs when there's a disruption in the blood supply to part of the brain. This can happen due to either a blockage in a blood vessel or bleeding within the brain. A brain stroke is a critical, life-threatening emergency

that requires immediate medical attention to prevent permanent brain damage, long-term disability, or death.

What is a Brain Stroke?

A brain stroke occurs when brain cells are deprived of oxygen and nutrients due to insufficient blood flow, which can happen for two primary reasons:

1. **Blocked Blood Vessel: The most common cause, where a clot blocks the flow of blood to part of the brain.**
2. **Bleeding in the Brain: A blood vessel bursts, causing internal bleeding and pressure buildup in the brain.**

Key Warning Signs of a Brain Stroke (BE FAST):

- **Balance issues: Sudden loss of balance or coordination.**
- **Eyes: Sudden vision loss, blurriness, or double vision.**
- **Face drooping: One side of the face may droop or feel numb.**
- **Arm weakness: Inability to lift or move one arm due to weakness or numbness.**
- **Speech difficulty: Slurred speech, difficulty speaking, or trouble understanding others.**
- **Time: Time is critical—act fast to seek medical help.**

Who Is at Risk?

A brain stroke can affect anyone, but the risk increases significantly with age. It is most common in individuals over 65 years old, particularly those with underlying health conditions such as:

- **High blood pressure: The leading risk factor for brain strokes.**
- **Diabetes: Increases the risk of both ischemic and hemorrhagic strokes.**
- **High cholesterol: Leads to artery blockages.**
- **Heart disease: Conditions like atrial fibrillation (irregular heartbeat) can raise the risk of stroke.**
- **Previous brain stroke or heart attack: People with a history of these events are at higher risk.**

How Common Are Brain Strokes?

Globally, brain strokes are a leading cause of death and disability:

- **Second leading cause of death worldwide.**
- **Fifth leading cause of death in the United States.**
- **A major contributor to long-term disability in adults.**

Types of Brain Strokes

1. **Ischemic Stroke (80% of cases): Occurs when a blood vessel supplying the brain becomes blocked.**
    - **Thrombosis: A clot forms in a blood vessel within the brain.**

    - **Embolism: A clot forms elsewhere in the body and travels to the brain.**
2. **Hemorrhagic Stroke: Involves bleeding in or around the brain due to ruptured blood vessels. This bleeding increases pressure on the brain, causing damage.**
    - **Intracerebral hemorrhage: Bleeding within the brain tissue.**
    - **Subarachnoid hemorrhage: Bleeding occurs between the brain and the tissue covering it.**

Symptoms of a Brain Stroke

- **One-sided weakness or paralysis: Often affects the face, arms, or legs on one side of the body.**
- **Speech difficulties (aphasia): Trouble speaking or understanding speech.**
- **Vision problems: Sudden loss of vision in one or both eyes, or double vision.**
- **Loss of coordination: Dizziness, difficulty walking, or loss of balance.**
- **Severe headaches: Sudden, severe headache, especially in hemorrhagic strokes.**
- **Confusion or memory loss: Difficulty concentrating or recalling recent events.**

A Transient Ischemic Attack (TIA), often called a "mini-stroke," is a temporary interruption of blood flow to the brain. While symptoms resolve quickly, a TIA is a warning sign of an impending full stroke and should be treated as an emergency.

Diagnosis and Tests

Diagnosing a brain stroke requires:

- **Neurological exams: To assess physical and cognitive functions.**
- **Imaging tests: CT or MRI scans are used to confirm whether the stroke is ischemic or hemorrhagic and determine the area affected.**
- **Blood tests: To check for clotting disorders, cholesterol levels, or infections.**
- **Heart evaluations: Electrocardiograms (ECGs) or echocardiograms detect underlying heart conditions, such as atrial fibrillation.**

Management and Treatment

Treatment varies based on the type of brain stroke:

1. **Ischemic Stroke: The goal is to restore blood flow quickly. This can be achieved through:**
    - **Thrombolytic drugs: Medications (e.g., tissue plasminogen activator, tPA) dissolve clots if administered within a few hours of symptom onset.**
    - **Thrombectomy: A minimally invasive procedure where a catheter is used to remove the clot from the blocked artery.**
2. **Hemorrhagic Stroke: Treatment focuses on controlling bleeding and reducing brain pressure. Methods include:**
    - **Blood pressure management: To prevent further bleeding.**
    - **Clotting agents: To help the blood clot and stop the bleeding.**
    - **Surgery: In some cases, surgery may be necessary to repair damaged blood vessels or relieve pressure on the brain.**

Prevention of Brain Stroke

Preventing a brain stroke involves managing risk factors and leading a healthy lifestyle:

- **Control high blood pressure and cholesterol: Keep blood pressure and cholesterol levels in a healthy range through medication, diet, and exercise.**
- **Manage diabetes: Monitor and control blood sugar levels.**
- **Quit smoking: Smoking damages blood vessels and accelerates artery blockage.**
- **Limit alcohol consumption: Excessive drinking raises blood pressure and can lead to strokes.**
- **Exercise regularly: Aim for at least 30 minutes of physical activity most days.**
- **Maintain a healthy diet: Focus on fruits, vegetables, whole grains, and lean proteins while limiting saturated fats, salt, and sugar.**

Brain tumour

A brain tumour occurs when cells in the brain grow abnormally and uncontrollably, forming a mass. These tumours are classified by their growth rate and the likelihood of returning after treatment.

Types and Grades of Brain Tumours

Brain tumours are categorized into grades based on how quickly they grow:

- **Low-grade tumours (Grade 1 & 2): Slow-growing and less likely to return after treatment.**
- **High-grade tumours (Grade 3 & 4): Faster-growing and more likely to recur, with a greater impact on health.**

There are two main types of brain tumours:

- **Non-cancerous (benign): These are typically low-grade (1 or 2), grow slowly, and are less likely to come back after treatment.**
- **Cancerous (malignant): These are high-grade (3 or 4) and may originate in the brain (primary) or spread from other parts of the body (secondary). They grow more quickly and have a higher risk of recurrence.**

Symptoms of Brain Tumours

Symptoms vary depending on which part of the brain is affected but can include:

- **Nausea and vomiting: Persistent feelings of sickness, often accompanied by drowsiness.**
- **Mental or behavioral changes: Memory issues, confusion, or changes in personality.**
- **Weakness or paralysis: Gradually worsening weakness on one side of the body.**
- **Vision or speech problems: Difficulty with seeing or speaking clearly.**

Symptoms may develop slowly over time, or they can appear suddenly and progress rapidly.

Brain Tumor Symptoms

Brain tumor symptoms depend on the area of the brain affected. Brain tumors can:

Invade and destroy brain tissue

Put pressure on nearby tissue

Take up space and increase pressure within the skull (intracranial pressure)

Cause fluids to accumulate in the brain

Block normal circulation of cerebrospinal fluid through the spaces within the brain

Cause bleeding

Brain tumor symptoms vary from person to person. They may include:

Headaches, which are often the first symptom. A headache due to a brain tumor usually becomes more frequent as time passes. It may not get better with over the counter pain medicine and it may come with nausea or vomiting. It can get worse when you lie down, bend over or bear down, such as when you have a bowel movement.

Seizures. Seizures can take many different forms, such as numbness, tingling, uncontrollable arm and leg movements, difficulty speaking, strange smells or sensations, staring and unresponsive episodes or convulsions.

Changes in mental function, mood or personality. You may become withdrawn, moody or inefficient at work. You may feel drowsy, confused and unable to think. Depression and anxiety, especially if either develops suddenly, may be an early symptom of a brain tumor. You may become uninhibited or behave in ways you never have before.

Changes in speech (trouble finding words, talking incoherently, inability to express or understand language)

Changes in the ability to hear, smell or see, including double or blurred vision

Loss of balance or coordination

Change in the ability to feel heat, cold, pressure, a light touch or sharp objects

Changes in pulse and breathing rates if brain tumor compresses the brain stem

When to See a Doctor

It’s important to consult a GP if you experience these symptoms, especially if headaches worsen or feel different. While these signs don’t always indicate a brain tumour, they should be investigated. The GP may refer you to a neurologist for further assessment and possibly a brain scan if no other clear cause is found.

Recommended Cancer Doctors :

- **Ahmed Bakir:** Sh. Al-Manial
- **Mohamed Ahmed Abdel Hamid:** 51 Sh. Al-Tahrir, Dokki
- **Mohamed Attia Al-Kurdi:** Sh. Al-Lasalky, Maadi, near Moamen
- **Ali Zidan Tahami:** Sh. Al-Maadi, near Al-Shabrawi, Maadi
- **Ramz Abd El-Masih:** Sh. Osman Ibn Affan, Ismailia Square, Cairo
- **Amr Kamel:** Sh. Sudan, Mohandessin

Who is Affected

Brain tumours can develop in people of all ages, including children, but they are more common in older adults. In the UK, over 12,000 people are diagnosed with a primary brain tumour each year, with about half being cancerous.

Causes and Risk Factors

The exact cause of brain tumours is often unknown, but several risk factors can increase the likelihood of developing one:

- **Age: The risk increases with age, especially in people aged 85 to 89, though some types are more common in children.**
- **Radiation: Exposure to radiation, such as radiotherapy for other cancers, slightly increases the risk.**
- **Genetics: Certain inherited genetic conditions, such as tuberous sclerosis and neurofibromatosis, raise the risk of brain tumours.**

Treatment Options

Treatment depends on several factors, including the type, size, location, and spread of the tumour, as well as the patient's overall health. Common treatments include:

- **Steroids: These help reduce swelling around the tumour.**
- **Medications: Anti-seizure drugs may be prescribed for those experiencing seizures, while painkillers can relieve headaches.**
- **Surgery: Surgeons aim to remove as much of the tumour as possible. In cases where complete removal isn’t feasible, further treatment may be necessary.**
- **Radiotherapy and Chemotherapy: These are often used to target any remaining tumour cells after surgery or in inoperable cases.**

Treatment for non-cancerous tumours is often successful, leading to a full recovery, though regular check-ups are necessary to monitor for any recurrence.

Outlook and Survival

The prognosis for brain tumours varies based on factors such as age, tumour type, and the effectiveness of treatment. Although brain tumours are relatively rare, survival rates for cancerous tumours are often difficult to predict. Generally, about 17 out of every 100 people diagnosed with a malignant brain tumour survive for five years or more.

If you're diagnosed with a brain tumour, your medical team will provide more detailed information about your specific outlook. Regular monitoring and timely interventions can significantly improve outcomes in many cases.

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parkinsonism

Parkinsonism refers to a group of conditions characterized by slowed movements (bradykinesia), muscle stiffness (rigidity), and tremors. These conditions can be caused by various factors, such as genetics, medication reactions, or other medical conditions. **Parkinson's disease (PD)** is the most common form of parkinsonism, making up about 80% of cases.

Key Differences Between Parkinsonism and Parkinson's Disease:

- **Parkinsonism** encompasses several conditions that exhibit similar symptoms to PD, including **multiple system atrophy** and **corticobasal degeneration**.
- **Parkinson's disease**, specifically, is a neurodegenerative condition caused by a loss of dopamine-producing neurons in the brain, leading to motor and non-motor symptoms such as tremors, muscle stiffness, constipation, and sleep issues.

Causes:

- **Parkinson's disease** results from the progressive loss of dopamine, affecting brain regions like the **basal ganglia**, which controls movement.
- **Secondary parkinsonism** can result from conditions such as stroke (vascular parkinsonism), head injuries (post-traumatic), or medication-induced parkinsonism.

Treatment:

While Parkinson's disease is incurable, treatments like **levodopa** can help manage symptoms. In contrast, secondary parkinsonism may improve once the underlying cause is treated or resolved.

Symptoms:

Common symptoms of all forms of parkinsonism include:

- **Slowed movements** (bradykinesia)
- **Tremors**
- **Stiffness or rigidity**

Other specific forms, like **vascular parkinsonism**, may present with additional balance or speech issues.

Prevention:

While parkinsonism is often unpredictable, certain types—like **toxin-induced** or **vascular parkinsonism**—can be prevented by avoiding environmental toxins or managing cardiovascular health.

Prognosis:

The outlook depends on the underlying condition, with some forms treatable or curable, while others, like Parkinson's disease, progressively worsen over time.

Recommended Brain Doctors:

- **Mostafa Kamel El-Fouly:** Sh. Mostafa El-Nahhas, Doctors Tower, Nasr City
- **Nabil Sayed Hamida Ammar:** Sh. El-Nadi El-Riyadi, Doctors Tower, Faisal
- **Samir Saber Mohamed Ash:** Hassan El-Anwar, King Salah Underpass, Misr El-Qadima

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Heart attack

A heart attack, also known as a myocardial infarction, occurs when the flow of blood to the heart is significantly reduced or completely blocked. This blockage typically results from the buildup of fat, cholesterol, and other substances within the coronary arteries, forming plaques. The gradual accumulation of these plaques is known as atherosclerosis.

When a plaque ruptures, it can cause a blood clot that obstructs blood flow, leading to damage or death of heart muscle tissue.

What Happens During a Heart Attack

A heart attack takes place when an artery that supplies oxygen-rich blood to the heart becomes blocked. Over time, fatty deposits containing cholesterol build up in the heart's arteries, forming plaques. If one of these plaques ruptures, a blood clot forms around it, potentially blocking the artery completely. Without proper blood flow, the heart muscle tissue begins to die, which can result in significant damage to the heart.

Symptoms of a Heart Attack

Symptoms can vary greatly between individuals. Some people may experience mild symptoms, while others may have severe or even no symptoms. Common symptoms of a heart attack include:

- **Chest pain or discomfort**: This may feel like pressure, tightness, squeezing, or aching in the chest.
- **Pain spreading**: The discomfort may radiate to the shoulders, arms, back, neck, jaw, or even the upper abdomen.
- **Cold sweat**: Feeling sweaty or clammy without physical exertion.
- **Fatigue**: Unusual or extreme tiredness that is unrelated to physical activity.
- **Heartburn or indigestion**: Some people may feel like they have indigestion.
- **Lightheadedness or dizziness**: This can be accompanied by other symptoms.
- **Nausea**: Feeling sick to your stomach.
- **Shortness of breath**: Difficulty breathing, which can happen with or without chest discomfort.

Women, in particular, may experience atypical symptoms, such as brief or sharp pain in the neck, arm, or back. Sometimes, the first symptom of a heart attack can be sudden cardiac arrest.

Some heart attacks occur without warning, but many people experience warning signs such as recurring chest pain or discomfort (angina) that doesn't go away with rest. Angina is caused by a temporary reduction in blood flow to the heart.

What To Do During a Heart Attack

If you suspect you're having a heart attack, immediate medical attention is crucial. Take the following steps:

1. **Call for emergency help**: Dial 911 or your local emergency number as soon as possible. If you don't have access to emergency services, have someone drive you to the nearest hospital. Only drive yourself if there are no other options.
2. **Take prescribed medication**: If you have nitroglycerin prescribed by your doctor, take it as instructed while waiting for emergency help.
3. **Take aspirin if advised**: Aspirin may help reduce heart damage by preventing blood clots from forming. However, only take aspirin if advised by your healthcare provider or emergency personnel.

Heart Doctors:

- **Ibrahim Ahmed Mostafa:** Protomedical Unit 5, First Settlement
- **Ahmed Hussein Mahmoud:** Sh. Misr Helwan Agricultura, Dar El-Salam
- **Hossam Abdel-Aleem Shaheen:** Sh. Qawmeya Arabia, Imbaba
- **Khaled El-Tahamy Moharread:** Tower, Faisal Road, in front of College of Physical Education

If You See Someone Having a Heart Attack

If you witness someone who might be experiencing a heart attack and they are unconscious, follow these steps:

1. **Call 911**: Get emergency help immediately.
2. **Check for breathing and pulse**: If the person isn't breathing or you can't find a pulse, begin CPR.
3. **Perform hands-only CPR**: Push hard and fast on the center of the person's chest at a rate of 100–120 compressions per minute if you are untrained in CPR. If you're trained, start with 30 chest compressions followed by two rescue breaths.

Causes of Heart Attacks

The most common cause of a heart attack is coronary artery disease, where cholesterol-containing plaques narrow the arteries and reduce blood flow to the heart. When a plaque ruptures, it can cause a blood clot that leads to a complete or partial blockage of the artery.

There are different classifications of heart attacks based on ECG readings:

- **ST Elevation Myocardial Infarction (STEMI)**: Caused by a complete blockage of a major heart artery, this type requires urgent treatment.
- **Non-ST Elevation Myocardial Infarction (NSTEMI)**: Often caused by partial blockage but can still lead to significant heart damage.

Heart attacks can also result from conditions like coronary artery spasms, infections (such as COVID-19), or spontaneous coronary artery dissection (SCAD).

Risk Factors

Certain factors increase the likelihood of having a heart attack, including:

- **Age**: Men 45 and older and women 55 and older are at higher risk.
- **Tobacco use**: Smoking or long-term exposure to secondhand smoke increases risk.
- **High blood pressure**: Damaged arteries can lead to heart attacks, especially when combined with conditions like diabetes or high cholesterol.
- **High cholesterol or triglycerides**: High levels of bad cholesterol (LDL) or triglycerides raise the risk.
- **Obesity**: Excess weight is linked with high blood pressure, diabetes, and other heart-related issues.
- **Diabetes**: Poorly managed blood sugar levels increase heart attack risk.
- **Lack of physical activity**: A sedentary lifestyle is associated with heart disease.
- **Unhealthy diet**: A diet high in processed foods, sugars, and unhealthy fats contributes to the risk.
- **Stress**: Emotional stress can trigger heart attacks, especially during moments of extreme anger.
- **Drug use**: Stimulants like cocaine can cause coronary artery spasms, leading to heart attacks.

Complications

A heart attack can lead to serious complications, including:

- **Irregular heartbeats (arrhythmias)**: Disruptions in electrical signals can lead to deadly heartbeat irregularities.
- **Heart failure**: Significant damage to the heart muscle may result in its inability to pump blood effectively.
- **Cardiogenic shock**: The heart suddenly fails to pump enough blood, causing a life-threatening emergency.
- **Cardiac arrest**: The heart can stop suddenly without warning, which can be fatal without immediate intervention.

Prevention

Preventing a heart attack involves adopting a healthy lifestyle, including:

- **Avoid smoking**: Quitting smoking is one of the most effective ways to lower risk.
- **Healthy diet and exercise**: A balanced diet rich in fruits, vegetables, and fiber, along with regular exercise, promotes heart health.
- **Manage health conditions**: Control conditions like high blood pressure and diabetes by working with your healthcare provider.
- **Take medications as prescribed**: If your doctor prescribes medications to reduce heart attack risk, take them as directed.

Cardiovascular Diseases (CVDs): Overview and Patient Response

Cardiovascular diseases (CVDs) are the leading cause of death worldwide, responsible for an estimated 17.9 million deaths in 2019, or 32% of all global fatalities. Of these deaths, 85% are caused by heart attacks and strokes. Over 75% of CVD-related deaths occur in low- and middle-income countries. In 2019, 38% of premature deaths (before age 70) from noncommunicable diseases were due to CVDs.

Preventable Nature of CVDs
Many CVDs are preventable by addressing behavioral and environmental risk factors, such as:

- Smoking
- Unhealthy diets and obesity
- Physical inactivity
- Harmful alcohol consumption
- Air pollution

Early detection is crucial for managing CVDs through lifestyle changes, counseling, and medication.

Types of Cardiovascular Diseases

CVDs include a range of disorders affecting the heart and blood vessels:

1. **Coronary Heart Disease** – Narrowing of the arteries supplying blood to the heart muscle.
2. **Cerebrovascular Disease** – Conditions affecting the blood vessels in the brain, often leading to strokes.
3. **Peripheral Arterial Disease** – Narrowing of blood vessels in the arms and legs.
4. **Rheumatic Heart Disease** – Damage to the heart valves and muscle from rheumatic fever.
5. **Congenital Heart Disease** – Birth defects affecting the heart's structure and function.
6. **Deep Vein Thrombosis (DVT) and Pulmonary Embolism** – Blood clots in the leg veins that can travel to the heart and lungs.

Causes of Heart Attacks and Strokes

Heart attacks and strokes occur due to a blockage in blood flow to the heart or brain, commonly caused by fatty deposits building up in blood vessels. Strokes may also result from bleeding in the brain.

Risk Factors for CVD

The main behavioral risk factors for CVD are:

- Unhealthy diet
- Lack of physical activity
- Tobacco use
- Harmful alcohol consumption

Environmental factors like air pollution also contribute. These risk factors may lead to intermediate conditions such as high blood pressure, elevated blood glucose, increased blood lipids, and obesity, which increase the risk of CVD complications.

Managing Risk Factors

Preventative measures include:

- Quitting smoking
- Reducing salt intake
- Eating more fruits and vegetables
- Regular physical activity
- Limiting alcohol consumption
- Improving air quality through health policies

Addressing underlying socioeconomic factors such as poverty, stress, and genetic predisposition can also help reduce CVD risk.

For patients with conditions like hypertension, diabetes, or high blood lipids, medication is often necessary to prevent heart attacks and strokes.

Symptoms of Cardiovascular Diseases

Heart Attack Symptoms
A heart attack may be the first sign of CVD. Common symptoms include:

- Chest pain or discomfort (center of the chest)
- Pain radiating to the arms, left shoulder, elbows, jaw, or back
- Shortness of breath
- Nausea or vomiting
- Dizziness or fainting
- Cold sweats and pallor

Women may experience more subtle symptoms like back or jaw pain and nausea.

Stroke Symptoms
The most common stroke symptom is sudden weakness, typically on one side of the body. Additional symptoms include:

- Numbness in the face, arm, or leg
- Confusion or difficulty speaking
- Vision problems
- Dizziness or loss of balance
- Severe headache
- Loss of consciousness

Immediate medical attention is crucial for both heart attacks and strokes.

Rheumatic Heart Disease

Rheumatic heart disease results from rheumatic fever, which is caused by an abnormal immune response to a streptococcal bacterial infection (e.g., strep throat). It primarily affects children in developing countries and can lead to heart valve damage. Symptoms include shortness of breath, fatigue, chest pain, and irregular heartbeats.

CVD in Low- and Middle-Income Countries

The burden of CVD is disproportionately higher in low- and middle-income countries, where access to primary healthcare and early detection is limited. Consequently, CVDs often go undetected until later stages, resulting in higher mortality rates, especially among younger populations. The economic burden of CVDs in these regions is significant, leading to poverty due to high healthcare costs.

Reducing the CVD Burden

Key strategies to reduce the CVD burden include:

- Integrating CVD management into universal health coverage packages
- Investing in health systems for better management of hypertension and other risk factors
- Ensuring access to essential medications such as aspirin, beta-blockers, ACE inhibitors, and statins

Surgical interventions like coronary artery bypass, balloon angioplasty, and valve repairs may also be necessary for severe cases.

What Should Patients Do?

Patients should seek medical attention immediately if they experience symptoms of a heart attack or stroke. Timely diagnosis and treatment can significantly improve outcomes. Regular health check-ups, lifestyle modifications, and adherence to prescribed medications are essential in managing CVD risk.

Left-Sided Heart Failure

Baptist Health is recognized for its advanced care in the diagnosis, management, and treatment of heart diseases, particularly left-sided heart failure. In 2016, we received the **Get With the Guidelines® Bronze Award** from the American Heart Association for our consistent application of quality measures in treating heart failure.

What is Left-Sided Heart Failure?

Left-sided heart failure refers to a condition where the left side of the heart is weakened, affecting its ability to pump oxygen-rich blood throughout the body. Rather than being classified as a specific disease, it is a progressive process that can occur in two forms:

1. **Systolic Heart Failure with Reduced Ejection Fraction (HFrEF)**
   This type occurs when the left ventricle fails to contract forcefully enough, leading to inadequate blood circulation. The heart compensates by working harder, which ultimately weakens the left ventricle further. This results in blood backing up into organs, causing fluid accumulation in the lungs and swelling in other areas of the body.
2. **Diastolic Heart Failure with Preserved Ejection Fraction (HFpEF)**
   In this type, the left ventricle becomes stiff or thickened, impairing its ability to fill properly. This reduces the amount of blood pumped to the body, leading to blood buildup in the left atrium and subsequently in the lungs, causing congestion and heart failure symptoms.

Signs and Symptoms

Initially, symptoms of left-sided heart failure may go unnoticed, but they tend to worsen over time. Regular checkups with a healthcare provider are essential for early diagnosis and

effective management to prevent complications such as kidney or liver disease and heart attacks.

Common symptoms include:

- Awakening at night with shortness of breath
- Shortness of breath during physical activity or when lying flat
- Chronic coughing or wheezing
- Difficulty concentrating or confusion
- Persistent fatigue
- Fluid retention causing swelling (edema) in the ankles, legs, and feet
- Lack of appetite and feelings of nausea
- Rapid or irregular heartbeat
- Sudden weight gain

As these symptoms develop, the heart compensates by attempting to pump harder, leading to further complications such as:

- **Enlarged Heart**: The heart grows in size as it tries to meet increased demands.
- **Rapid Heart Rate**: An elevated heart rate can occur as the heart struggles to circulate blood effectively.
- **High Blood Pressure**: Increased pressure can result from the heart's efforts to pump blood.
- **Reduced Blood Flow**: Less blood may reach the arms and legs, causing fatigue and weakness.

What Patients Can Do

Patients experiencing any symptoms of left-sided heart failure should consult their healthcare provider promptly. Here are steps they can take to manage their condition:

- **Regular Checkups**: Schedule routine appointments for monitoring heart health.
- **Medication Adherence**: Follow prescribed medication regimens to manage symptoms and reduce fluid retention.
- **Lifestyle Changes**: Adopt heart-healthy habits, including:
    - Reducing sodium intake to manage blood pressure
    - Engaging in regular, moderate exercise as recommended by a physician
    - Maintaining a healthy weight
    - Avoiding smoking and limiting alcohol consumption
- **Monitor Symptoms**: Keep track of any changes in symptoms and communicate these to your healthcare provider, especially sudden weight gain or increased shortness of breath.