

**Patient's Name:** John Q. Patient  
**Healthcare Provider's Name:** First Hospital  
**Department:** Cardiology  
**Phone:** 617-555-1212  
**Date:** Thursday, May 8, 2014  
**Notes:** Nurses can write personalized notes to the patient here.

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## Heart Attack

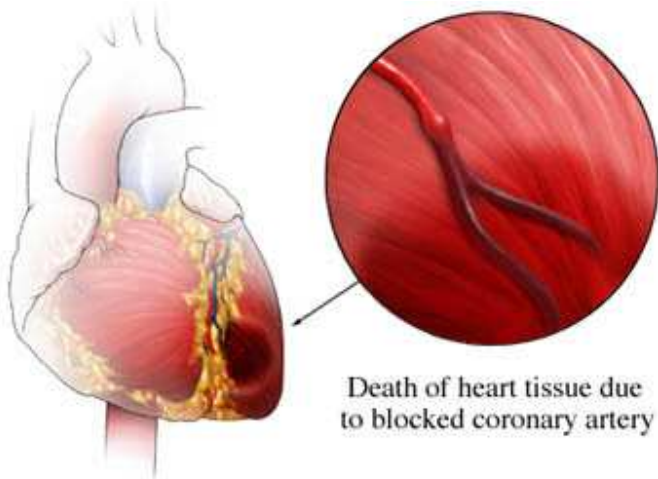
(Acute Myocardial Infarction [AMI]; Myocardial Infarction [MI]; ST-Segment-Elevation MI [STEMI]; Transmural Myocardial infarction)

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### Definition

A heart attack occurs when blood flow to the heart muscle is interrupted. Oxygen cannot get to the heart muscle, causing tissue damage or tissue death.

### Heart Attack



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### Causes

A heart attack may be caused by:

- Thickening of the walls of the arteries feeding the heart muscle (coronary arteries)
- Accumulation of fatty plaques in the coronary arteries
- Narrowing of the coronary arteries
- Spasm of the coronary arteries
- Development of a blood clot in the coronary arteries
- Embolism that affects the coronary arteries

### Risk Factors

The risk of heart attack is greater in males and older adults.

Factors that may increase your chance of developing a heart attack include:

- [Obesity](#)
- [Smoking](#)
- [High blood pressure](#)
- Sedentary lifestyle
- [High blood cholesterol](#) (specifically, high LDL cholesterol, and low HDL cholesterol)
- [High blood triglycerides](#)
- [Diabetes](#)
- Stress
- Family members with heart disease
- Using testosterone therapy medication

### [Symptoms](#)

Symptoms include:

- Squeezing, heavy chest pain behind breastbone, especially with:
  - Exercise or exertion
  - Emotional stress
  - Cold weather
  - A large meal
  - Usually comes on quickly
- Pain in the left shoulder, left arm, or jaw
- Shortness of breath
- Sweating, clammy skin
- Nausea
- Weakness
- Loss of consciousness
- [Anxiety](#), especially feeling a sense of doom or panic without apparent reason

Unusual symptoms of heart attack (may occur more frequently in women):

- Stomach pain
- Back and shoulder pain
- Confusion
- Fainting

**If you think you are having a heart attack, call for medical help right away.**

### [Diagnosis](#)

Tests may include:

- Blood tests—To look for certain enzymes found in the blood within hours or days after a heart attack.
- Urine tests—To look for certain substances found in the urine within hours or days after a heart attack.
- [Electrocardiogram \(EKG\)](#) —to look for evidence of blockage or damage.
- [Echocardiogram](#) —to examine the size, shape, function, and motion of the heart.
- [Stress test](#) —Records the heart's electrical activity under increased physical stress, usually done days or weeks after the heart attack.
- Nuclear scanning—show areas of the heart muscle where there is diminished blood flow.
- [Electron-beam computed tomography \(EBCT\)](#)—to make detailed pictures of the heart, coronary arteries, and surrounding structures.
- [Coronary angiography](#) —Uto look for narrowing or blockage in the coronary arteries.

### [Treatment](#)

Treatment includes:

- Aspirin
- Oxygen
- Pain-relieving medicine
- Nitrate medicines
- Other antiplatelet agents
- [Beta-blockers](#) and/or angiotensin-converting enzyme (ACE) inhibitor medicines
- Anti-anxiety medicine
- [Cholesterol-lowering medicines](#) (such as statin drugs)

Within the first six hours after a heart attack, you may be given medicines to break up blood clots in the coronary arteries.

## **Surgery**

If you have severe blockages you may need surgery immediately or after recovery, such as:

- [Balloon angioplasty](#) with or without stenting
- [Atherectomy](#)
- [Coronary artery bypass grafting \(CABG\)](#)

## **Physical or Rehabilitative Therapy**

During recovery, you may need physical or rehabilitative therapy to help you regain your strength.

## **Treatment for Depression**

You may feel [depressed](#) after having a heart attack. [Therapy](#) and medicine can help relieve depression.

If you have a heart attack, follow your doctor's [instructions](#).

## **[Prevention](#)**

Preventing or treating coronary artery disease may help prevent a heart attack.

- Maintain a [healthy weight](#).
- Begin a safe [exercise program](#). Follow your doctor's advice.
- If you smoke, [quit](#).
- Eat a [healthy diet](#). Your diet should be low in saturated fat and rich in [whole grains](#), [fruits](#), and [vegetables](#).
- Properly treat long-term conditions, like [high blood pressure](#), diabetes, and [high cholesterol](#).
- [Manage stress](#).
- Ask your doctor about taking a small, daily dose of aspirin.
  - Although most people are able to tolerate such a low dose of aspirin, even this small amount can rarely lead to serious bleeding, particularly from the gastrointestinal (GI) tract.
  - Aspirin may not work as well when combined with other pain medicines.

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