

Myocardial Infarction (Heart Attack)

What is Myocardial Infarction?

Myocardial infarction, commonly called a heart attack, occurs when blood flow to the heart muscle is suddenly blocked, usually by a blood clot, leading to damage of the heart tissue. It is a medical emergency that requires prompt treatment to restore blood flow and minimize heart damage.

Causes and Risk Factors

The primary cause is coronary artery disease, where plaque (cholesterol, fat, calcium) builds up in the arteries, narrowing them and sometimes rupturing to form a clot. Risk factors include high blood pressure, high cholesterol, smoking, diabetes, obesity, a sedentary lifestyle, and family history of heart disease. Some risk factors like age and genetics cannot be changed, but many can be controlled through lifestyle choices and medical treatment.

Symptoms

Common symptoms include intense chest pain or discomfort that may spread to the arms, neck, jaw, or back, shortness of breath, nausea, vomiting, lightheadedness, and sweating. Women may also experience atypical symptoms such as unusual tiredness, anxiety, and discomfort in the throat or back.

Diagnosis

Doctors diagnose a heart attack using tests like an electrocardiogram (ECG) to measure the heart's electrical activity, blood tests to check for enzymes released during heart muscle damage, echocardiograms, and imaging like coronary angiography to view blockages.

Treatment

Immediate treatments include medications such as aspirin, thrombolytics to dissolve clots, and anticoagulants, as well as emergency procedures like angioplasty with stenting or coronary artery bypass graft surgery (CABG). After stabilization, long-term medications like beta-blockers, ACE inhibitors, and statins help prevent future events.

Prevention

Preventive measures include maintaining a healthy diet rich in fruits, vegetables, and whole grains, engaging in regular physical activity, quitting smoking, managing stress, and controlling blood pressure, cholesterol, and blood sugar levels.

When to Seek Help

If you experience heart attack warning signs like chest pain, shortness of breath, or sudden discomfort, call emergency services immediately. Minutes matter: prompt medical attention can save

your life and reduce heart damage.