HEALTH BASICS

Emergencies, rescue breathing and CPR

An explanation of how to recognise cardiac arrest and provide rescue breathing or CPR.

WHAT IT IS
Emergency actions for someone unresponsive or not breathing normally

WHERE IT COMES UP
Cardiac arrest, choking, drowning, overdose, or unresponsiveness

WHY IT MATTERS
Maintaining blood flow and oxygen until expert help arrives

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
Emergency dispatchers, CPR instructors, or emergency clinicians

HOW IT IS CHECKED
Responsiveness, normal breathing, and AED analysis

Overview

Cardiopulmonary resuscitation, or CPR, is emergency first aid for someone whose heart has stopped pumping blood effectively. This is called cardiac arrest . The person will be unresponsive and will not be breathing normally.

Rescue breathing means giving breaths to move air into another person's lungs. CPR combines chest compressions with rescue breaths. A person who is not trained or cannot give breaths can often provide hands-only CPR , using continuous chest compressions.

CPR is not a disease, diagnosis, or treatment for an underlying illness. It is a temporary way to support blood flow and oxygen while emergency help and an automated external defibrillator, or AED, are on the way.

If someone is unresponsive and not breathing normally, call your local emergency number now. Put the phone on speaker and follow the dispatcher's instructions. Occasional gasps, snorts, or irregular breaths are not normal breathing.

How it works

The heart normally pumps oxygen-rich blood to the brain and other organs. During cardiac arrest, that circulation stops or becomes too weak to sustain life. Chest compressions squeeze the heart between the breastbone and spine, creating some blood flow.

Rescue breaths place oxygen into the lungs. They are especially important when the emergency began because oxygen could not enter the body, such as drowning, choking, or some drug overdoses. Breaths are also important in CPR for babies and children, whose cardiac arrest is more often linked to a breathing problem.

An AED checks the heart's electrical rhythm. If it finds a rhythm that may respond to a shock, it tells the rescuer to deliver one. The device will not advise a shock when its analysis shows that a shock is not appropriate.

For an unresponsive adult or teenager who is not breathing normally:

If you cannot give rescue breaths, continue hands-only CPR. Do not stop to look for a pulse unless you are trained to do so. Continue until the person shows clear signs of normal breathing or movement, an emergency team takes over, the scene becomes unsafe, or you are physically unable to continue.

Techniques for babies and children differ in hand position, compression depth, and how breaths are given. Follow the emergency dispatcher's directions and use an age-appropriate CPR course to learn these skills.

- Make sure the area is safe enough to approach.
- Tap the person and speak loudly. Look for normal breathing.
- Call the emergency number, or ask someone else to call and bring an AED.
- Place the person on their back on a firm, flat surface.
- Put the heel of one hand in the centre of the chest and the other hand on top.
- Press hard and fast at 100 to 120 compressions each minute. For an adult, press at least 5 centimetres, or about 2 inches, and allow the chest to rise fully after each compression.
- If trained and willing to give breaths, use 30 compressions followed by 2 breaths. Give each breath over about one second, using only enough air to make the chest rise.
- Use an AED as soon as it arrives. Follow its spoken or visual instructions.

Why it matters for your health

Brain injury can begin when circulation and oxygen are interrupted. CPR cannot correct the cause of cardiac arrest, but it can support circulation until an AED or emergency treatment is

available.

A cardiac arrest is different from a heart attack. A heart attack happens when blood flow to part of the heart muscle is blocked. The person is often awake and breathing. A heart attack can sometimes trigger cardiac arrest, but the terms do not mean the same thing.

A person with possible heart attack symptoms, such as chest pressure, shortness of breath, sweating, or discomfort spreading to the arm, back, neck, or jaw, needs urgent emergency assessment. Start CPR only if the person becomes unresponsive and is not breathing normally.

Rescue breathing may be needed when breathing has stopped but circulation is still present. Checking for a pulse can be difficult, however. Untrained rescuers should follow the dispatcher's instructions rather than delaying CPR.

What can go wrong

CPR and rescue breathing relate to several emergencies, including:

If a choking person can speak or cough strongly, encourage coughing and watch closely. If they cannot breathe, speak, or cough effectively, call emergency services and provide age-appropriate choking first aid. If they become unresponsive, begin CPR. Do not perform a blind finger sweep inside the mouth.

For a suspected opioid overdose, give naloxone if it is available and you know how to use it. Naloxone is a medicine that can reverse opioid effects temporarily. Call emergency services and provide CPR or rescue breathing as directed. Do not wait for naloxone to work before supporting breathing.

Chest compressions can cause bruising or broken ribs. These risks do not outweigh the need for CPR when someone is unresponsive and not breathing normally. Vomiting can also occur. If the person begins breathing normally but remains unresponsive, place them on their side if you can do so safely, unless you suspect a serious neck or back injury.

Do not enter traffic, deep water, a fire, or an electrically unsafe area to begin CPR. Tell emergency services about the hazard and wait for trained rescuers to make the scene safe.

- Cardiac arrest: the heart is no longer pumping blood effectively
- Respiratory arrest: breathing has stopped, although the heart may still be beating
- Choking: an object blocks the airway
- Drowning: water exposure interrupts breathing
- Opioid overdose: opioids like oxycodone or morphine can slow or stop breathing

- Electrical injury or major trauma: these may disrupt breathing or heart function

What you can do

In an emergency, act on unresponsiveness and abnormal breathing rather than trying to identify the exact cause. Call emergency services, start CPR, and use an AED when available.

Outside an emergency, practical preparation can help:

There is no routine blood test, scan, or home measurement that shows whether someone will need CPR. An AED performs its own rhythm check during an emergency.

Anyone who receives CPR, rescue breathing, an AED shock, or naloxone needs emergency medical assessment, even if they wake up or appear to recover. The cause may still need treatment, and the problem can return.

If you performed CPR, feeling shaken, tired, or upset afterward can be understandable. This is not usually an emergency, but you can speak with your primary care clinician, an employee support service, or a mental health professional if the experience continues to trouble you.

- Take a recognised CPR and AED course with hands-on practice
- Learn child and infant CPR if you care for children
- Know where AEDs are located at work, school, or community venues
- Keep naloxone available if opioid overdose is a known risk in your household
- Record important medical conditions and emergency contacts where appropriate

Common questions

Can I make things worse by starting CPR?

If someone is responsive or breathing normally, do not start chest compressions. If the person is unresponsive and not breathing normally, the danger from delaying CPR is greater than the risk of chest injury. An emergency dispatcher can guide you.

Do I have to give mouth-to-mouth breaths?

For a suddenly collapsed adult or teenager, hands-only CPR is appropriate if you are not trained, cannot make a seal, or are unwilling to give breaths. Rescue breaths are particularly valuable for babies, children, drowning, choking, and emergencies caused by a lack of oxygen.

Can I use an AED without medical training?

Yes. Public AEDs are designed to guide users step by step. Attach the pads as shown, make sure nobody is touching the person during rhythm analysis or a shock, and follow the device's prompts.

Should I stop CPR if the person gasps?

No. Gasping can occur during cardiac arrest and is not the same as normal breathing. Continue CPR unless regular breathing or other clear signs of life return, or the emergency team tells you to stop.

What if the person has a pacemaker?

Use the AED. If you can see or feel a small implanted device under the skin, place the AED pad beside it rather than directly over it. Do not delay CPR.

Does coughing replace CPR?

No. "Cough CPR" is not a substitute for calling emergency services, chest compressions, or an AED when a person is unresponsive and not breathing normally.

Sources

- American Heart Association. 2020 American Heart Association Guidelines for CPR and Emergency Cardiovascular Care
- American Heart Association. Hands-Only CPR
- International Liaison Committee on Resuscitation. Consensus on Science with Treatment Recommendations
- Resuscitation Council UK. Adult basic life support guidelines
- Resuscitation Council UK. Paediatric basic life support guidelines
- U.S. Food and Drug Administration. Automated External Defibrillators