

Causes of cardiac arrest in children and what to do when it happens



It is important to understand the causes, be able to identify the symptoms and know the proper steps to take in the event of a sudden pediatric cardiac arrest.

About sudden cardiac arrest in children

Sudden cardiac arrest happens when the heart suddenly stops beating, resulting in a loss of blood pumping to the brain and other major organs in the body. When this occurs, your child becomes unconscious and unresponsive within seconds. If immediate action is not taken to restore the heartbeat, this can cause sudden cardiac death. **However, with proper and quick action, survival is possible.**

Causes of cardiac arrest

Often, cardiac arrest in children occurs if there are underlying heart problems or injuries. Some of these common causes include:

- **Congenital heart disease (known or unknown):** Some children are born with heart problems, such as cardiomyopathy or arrhythmias, potentially leading to cardiac arrest.
- **Respiratory issues:** If a child experiences respiratory issues like asthma and choking, this may lead to sudden cardiac arrest.
- **Trauma:** Traumatic injuries such as car accidents, sports injuries or drowning can affect a child's heart rhythm.
- **Electrical problems:** Cardiac arrest can be caused by ventricular fibrillation (VF), an abnormality in the heart's electrical system. VF causes the heart to quiver and prevents blood flow to the body and brain.
- **Infections:** In some cases, viral infections can inflame the heart, leading to cardiac arrest.
- **Family history:** If a family member has a previous medical history of sudden cardiac arrest, your child may be at risk too.

Symptoms of cardiac arrest

While cardiac arrest happens quickly without much warning, here are a few signs to watch for before or during the episode:

- Sudden collapse
- Shortness of breath
- No pulse or signs of breathing
- Unconsciousness
- Chest pain or discomfort
- Dizziness or lightheadedness
- Racing or irregular heart rate



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Immediate actions

If your child experiences any of the warning signs, it is crucial to follow these steps immediately for the best chances of survival:

- Call 911
- While you wait for the emergency team, start cardiopulmonary resuscitation (CPR), focusing primarily on chest compressions. This helps circulate blood and oxygen back into the body.
- Use an automated external defibrillator (AED), a device that helps deliver an electric shock to revive the heart. These are easy to use and can be found in many public places.

Post-cardiac arrest care

After your child experiences cardiac arrest, they will need regular follow-up care to help monitor their recovery and prevent future episodes. This may include using diagnostic tests to determine how the condition first happened, such as:

- Electrocardiogram (EKG) to check for abnormal heart rhythms
- Echocardiogram to view the heart's structure
- Blood tests, genetic tests or imaging to look for infections or inherited conditions

In addition, other follow-up care options might include:

- Medications to help prevent another cardiac arrest
- Implantable devices, like a pacemaker or defibrillator, to keep the heart functioning properly
- Rehabilitation services for physical and emotional recovery

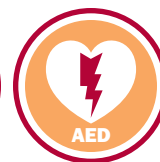
Ways to prevent cardiac arrest

While cardiac arrest is not always preventable, especially if caused by a pre-existing condition, there are easy ways you can prevent an episode from occurring, such as:

- Ensure your child goes to their scheduled doctor's appointments
- Encourage physical activity
- Implement a healthy diet and proper hydration
- Get regular sports physicals if your child participates in sports

While sudden cardiac arrest in children is rare, it can happen anywhere at any time, and as a parent, it is important to **recognize the signs** to know how to act quickly. Whether it is learning CPR or familiarizing yourself with an AED, your prior awareness can make the greatest difference for your child. Not only is **AED awareness crucial**, but cardiac emergency response plan preparation is also essential. By creating a plan to act in a cardiac emergency, the risk of cardiac death can be lessened.

At Riley Children's Health, our expert pediatric cardiology team is specially trained, equipped with the resources, care and compassion to help your child if cardiac arrest arises. Because when it comes to your child's heart, we'll always be there to support.



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