



PACEMAKERS IN CHILDREN



♥ A Parent's Guide to Understanding Pediatric Pacemakers ♥

WHAT IS A PACEMAKER?

A pacemaker is a small electronic device that helps control the heartbeat when the heart beats too slowly or when the heart's electrical system is not working properly.

 Battery-powered generator

 One or more leads (wires)

 Computer that monitors and regulates heart rhythm



Goal: Keep the heart beating at a safe and effective rate.

WHY MIGHT A CHILD NEED A PACEMAKER?



Congenital Complete Heart Block

Present before birth or diagnosed in infancy
Causes an abnormally slow heart rate



After Heart Surgery

Some congenital heart surgeries may affect the heart's electrical pathways



Sinus Node Dysfunction

The heart's natural pacemaker does not work properly



Neuromuscular Disorders

Certain genetic conditions can affect the heart's conduction system



Symptomatic Bradycardia

A slow heart rate causing:

- Fatigue
- Dizziness
- Fainting
- Exercise intolerance

COMMON SYMPTOMS

INFANTS



Poor feeding



Poor weight gain



Excessive sleepiness



Breathing difficulties



OLDER CHILDREN



Dizziness



Poor exercise tolerance



Fatigue



Fainting (Syncope)



Palpitations



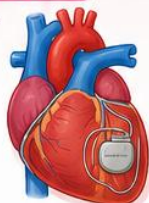
TYPES OF PACEMAKERS

EPICARDIAL PACEMAKER

Leads attached to the outside of the heart.

Best for:

- Infants
- Small children
- Complex congenital heart disease

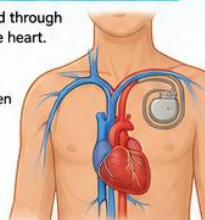


TRANSVENOUS PACEMAKER

Leads inserted through a vein into the heart.

Best for:

- Older children
- Teenagers



BENEFITS OF A PACEMAKER

- ✓ Prevents excessively slow heart rates
- ✓ Improves blood flow to the body
- ✓ Reduces dizziness and fainting
- ✓ Improves exercise capacity
- ✓ Supports normal growth and development
- ✓ Enhances quality of life



LIVING WITH A PACEMAKER

Most children can:

-  Attend school normally
-  Participate in many sports and activities
-  Travel safely
-  Enjoy an active lifestyle

IMPORTANT TIPS

- ♥ Attend all follow-up appointments
- ♥ Protect the device site from direct trauma
- ♥ Inform healthcare providers before procedures
- ♥ Follow your cardiologist's sports recommendations



BATTERY LIFE

Most pacemaker batteries last:

**7-15
YEARS**



Battery life depends on:

- Device type
- Pacing needs
- Device settings

Battery replacement is usually less complex than the initial implant.



FOLLOW-UP CARE

Regular evaluations include:

-  Device checks
-  Battery monitoring
-  Rhythm analysis
-  Lead assessment

 Many modern pacemakers allow remote home monitoring.

WHEN TO CALL YOUR CARDIOLOGIST

Contact your doctor if your child develops:

- ! Fainting
- ! Persistent dizziness
- ! Unusual fatigue
- ! Palpitations
- ! Fever after implantation
- ! Redness, swelling, drainage, or pain at the pacemaker site



KEY MESSAGE

Pacemakers are safe, reliable, and life-improving devices for children with heart rhythm disorders. With proper care and regular follow-up, most children with pacemakers can live healthy, active, and fulfilling lives.



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