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## Pacemakers and Implantable Defibrillators

An arrhythmia [<https://medlineplus.gov/arrhythmia.html>] is any disorder of your heart rate or rhythm. It means that your heart beats too quickly, too slowly, or with an irregular pattern. Most arrhythmias result from problems in the electrical system of the heart. If your arrhythmia is serious, you may need a cardiac pacemaker or an implantable cardioverter defibrillator (ICD). They are devices that are implanted in your chest or abdomen.

A pacemaker helps control abnormal heart rhythms. It uses electrical pulses to prompt the heart to beat at a normal rate. It can speed up a slow heart rhythm, control a fast heart rhythm, and coordinate the chambers of the heart.

An ICD monitors heart rhythms. If it senses dangerous rhythms, it delivers shocks. This treatment is called defibrillation. An ICD can help control life-threatening arrhythmias, especially those that can cause sudden cardiac arrest [<https://medlineplus.gov/suddencardiacarrest.html>] (SCA). Most new ICDs can act as both a pacemaker and a defibrillator. Many ICDs also record the heart's electrical patterns when there is an abnormal heartbeat. This can help the doctor plan future treatment.

Getting a pacemaker or ICD requires minor surgery. You usually need to stay in the hospital for a day or two, so your doctor can make sure that the device is working well. You will probably be back to your normal activities within a few days.

### Start Here

- Cardioverter-Defibrillator: A Treatment for Arrhythmia [<https://familydoctor.org/cardioverter-defibrillator-a-treatment-for-arrhythmia/?adfree=true>] (American Academy of Family Physicians)  
Also in Spanish [<https://es.familydoctor.org/cardiovensor-desfibrilador-un-tratamiento-para-la-arritmia/?adfree=true>]
- What Are Defibrillators? [<https://www.nhlbi.nih.gov/health/defibrillators>]  (National Heart, Lung, and Blood Institute)  
Also in Spanish [<https://www.nhlbi.nih.gov/es/salud/desfibriladores>]
- What Are Pacemakers? [<https://www.nhlbi.nih.gov/health/pacemakers>]  (National Heart, Lung, and Blood Institute)  
Also in Spanish [<https://www.nhlbi.nih.gov/es/salud/marcapasos>]
- What Is a Pacemaker? [<https://www.heart.org/-/media/files/health-topics/answers-by-heart/what-is-a-pacemaker.pdf>]  
**Easy-to-Read** (American Heart Association) - PDF

### Living With

- Coping with My Partner's ICD and Cardiac Disease [<https://www.ahajournals.org/doi/full/10.1161/circulationaha.109.877613>] (American Heart Association)
- Living with Your Implantable Cardioverter Defibrillator (ICD) [<https://www.heart.org/en/health-topics/arrhythmia/prevention--treatment-of-arrhythmia/living-with-your-implantable-cardioverter-defibrillator-icd>] (American Heart Association)

### Related Issues

- Coping with Trauma and Stressful Events As a Patient with an Implantable Cardioverter-Defibrillator [<https://www.ahajournals.org/doi/10.1161/CIRCULATIONAHA.112.127563>] (American Heart Association)

- Devices that May Interfere with ICDs and Pacemakers [<https://www.heart.org/en/health-topics/arrhythmia/prevention--treatment-of-arrhythmia/devices-that-may-interfere-with-icds-and-pacemakers>] (American Heart Association)
- Questions to Ask Your Doctor: Implantable Cardioverter Defibrillator (ICD) [<https://www.heart.org/en/health-topics/arrhythmia/prevention--treatment-of-arrhythmia/questions-to-ask-your-doctor--implantable-cardioverter-defibrillator-icd>] (American Heart Association)
- Sexual Health for Patients with an Implantable Cardioverter Defibrillator [<https://www.ahajournals.org/doi/10.1161/CIRCULATIONAHA.110.949628>] (American Heart Association)

## Specifics

- Cardiac Resynchronization Therapy (CRT) [<https://www.heart.org/en/health-topics/heart-failure/treatment-options-for-heart-failure/cardiac-resynchronization-therapy-crt>] (American Heart Association)

## Clinical Trials

- ClinicalTrials.gov: Defibrillators, Implantable [<https://clinicaltrials.gov/search?intr=defibrillator&aggFilters=status:not%20rec NIH>] (National Institutes of Health)
- ClinicalTrials.gov: Pacemaker, Artificial [<https://clinicaltrials.gov/search?intr=artificial+pacemaker&aggFilters=status:not%20rec NIH>] (National Institutes of Health)

## Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: Psychometric Performance of Florida Patient Acceptance Survey in Danish Implantable Cardioverter... [<https://www.ncbi.nlm.nih.gov/pubmed/40518690>]
- Article: Battery longevity of a helix-fixation dual-chamber leadless pacemaker: results from the... [<https://www.ncbi.nlm.nih.gov/pubmed/40474610>]
- Article: Implanting Cardiac Electronic Devices with Uninterrupted Antithrombotic Therapy: A Novel Approach... [<https://www.ncbi.nlm.nih.gov/pubmed/40365971>]
- Pacemakers and Implantable Defibrillators -- see more articles [[https://pubmed.ncbi.nlm.nih.gov/?term=%22Pacemaker%2C+Artificial%22%5Bmajr%3Anoexp%5D+OR+%22Defibrillators%2C+Implantable%22%5Bmajr%3Anoexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+1+Year%22+%5Bedat%5D+AND+%28patient+education+handout%5Bpt%5D+OR+guideline%5Bpt%5D+OR+clinical+trial%5Bpt%5D%29++NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+\]](https://pubmed.ncbi.nlm.nih.gov/?term=%22Pacemaker%2C+Artificial%22%5Bmajr%3Anoexp%5D+OR+%22Defibrillators%2C+Implantable%22%5Bmajr%3Anoexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+1+Year%22+%5Bedat%5D+AND+%28patient+education+handout%5Bpt%5D+OR+guideline%5Bpt%5D+OR+clinical+trial%5Bpt%5D%29++NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+)

## Find an Expert

- American Heart Association [<https://www.heart.org/en/>]
- Find a Specialist [<https://upbeat.org/find-a-specialist>] (Heart Rhythm Society)
- National Heart, Lung, and Blood Institute [<https://www.nhlbi.nih.gov/>] NIH
- UpBeat.org [<https://upbeat.org/>] (Heart Rhythm Society)

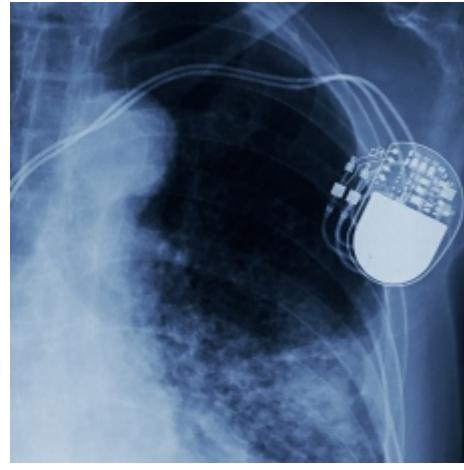
## Children

- My Child Needs or Has an Implantable Cardioverter-Defibrillator: What Should I Do? [<https://www.ahajournals.org/doi/10.1161/CIRCULATIONAHA.112.098541>] (American Heart Association)

## Patient Handouts

- Heart failure - surgeries and devices [<https://medlineplus.gov/ency/patientinstructions/000363.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000363.htm>]
- Heart pacemaker [<https://medlineplus.gov/ency/article/007369.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007369.htm>]

- Heart pacemaker - discharge [<https://medlineplus.gov/ency/patientinstructions/000097.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000097.htm>]
- Implantable cardioverter defibrillator - discharge [<https://medlineplus.gov/ency/patientinstructions/000108.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000108.htm>]
- Implantable cardioverter-defibrillator [<https://medlineplus.gov/ency/article/007370.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007370.htm>]



## MEDICAL ENCYCLOPEDIA

- Heart failure - surgeries and devices [<https://medlineplus.gov/ency/patientinstructions/000363.htm>]
- Heart pacemaker [<https://medlineplus.gov/ency/article/007369.htm>]
- Heart pacemaker - discharge [<https://medlineplus.gov/ency/patientinstructions/000097.htm>]
- Implantable cardioverter defibrillator - discharge [<https://medlineplus.gov/ency/patientinstructions/000108.htm>]
- Implantable cardioverter-defibrillator [<https://medlineplus.gov/ency/article/007370.htm>]

## Related Health Topics

- Arrhythmia [<https://medlineplus.gov/arrhythmia.html>]
- Heart Failure [<https://medlineplus.gov/heartfailure.html>]

## National Institutes of Health

The primary NIH organization for research on *Pacemakers and Implantable Defibrillators* is the National Heart, Lung, and Blood Institute [<http://www.nhlbi.nih.gov/>]

## Other Languages

Find health information in languages other than English [<https://medlineplus.gov/languages/pacemakersandimplantabledefibrillators.html>] on *Pacemakers and Implantable Defibrillators*

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[\[https://medlineplus.gov/criteria.html\]](https://medlineplus.gov/criteria.html).

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