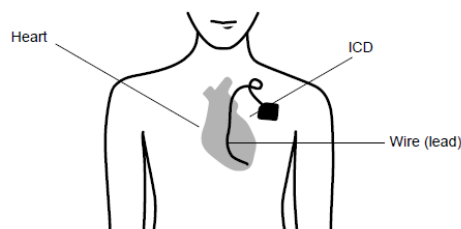




## Implantable Cardioverter Defibrillator (ICD) Information Sheet for Health Care Professionals

An implantable cardioverter defibrillator (ICD) is a device implanted in a patient's upper chest which monitors the heart rhythm, can act as a standard pacemaker, can provide anti-tachycardia pacing and if required, can deliver one or more high energy shocks to terminate potentially lethal arrhythmias such as ventricular tachycardia (VT) or ventricular fibrillation (VF). Receiving a shock can be painful and psychologically traumatic and is often described by patients as feeling like a kick in the chest.



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### Limitations of an ICD

Although ICDs reduce sudden cardiac death, patients will ultimately die from either heart failure or another disease. As a patient's disease progresses, physiologic changes may cause more arrhythmias and increase the frequency of shocks. Because ICD shocks can cause pain and anxiety and may not prolong a life of acceptable quality, it is important to consider deactivating the ICD when a patient's clinical status worsens and death is near.

### Deactivating an ICD with a programmer

MUST have a physician's order and a qualified health care provider to apply the magnet

Deactivating an ICD refers to turning off the defibrillator function of the device, not the pacemaker function. Deactivating an ICD is not a difficult procedure; however it does require the use of a programmer - a laptop computer specifically made by the device manufacturer. Typically an ICD is deactivated by a health care provider who is familiar with the programmer and is competent in adjusting the settings of an ICD.

It is possible to turn off the pacemaker function of the ICD; however this is generally not something that is done. While deactivating the defibrillator function prevents painful shocks, deactivating the pacemaker does not prevent pain and may actually worsen the patient's heart failure symptoms by reducing the amount of blood pumped out of the heart.

### Deactivating an ICD with a magnet

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The preferred method of deactivating an ICD is to use a programmer; however one may not always be available, particularly in urgent situations. If a programmer is not available, it is possible to prevent the delivery of a shock with the use of a magnet. Placing a large magnet (the size of a doughnut) over the device will temporarily suspend the arrhythmia detection function of the ICD and prevent the delivery of a shock. The site of magnet placement is important, as a poorly placed magnet may not inhibit shock therapy. Magnets are best placed directly on top of the ICD. When the magnet is removed, the ICD will return to its previous settings.

### Things to keep in mind

- Deactivating the ICD will not cause the patient's death; it is simply allowing nature to take its course.
- Deactivating the ICD will not cause the patient's death to be more painful.
- Deactivating the ICD will mean that the device will not prevent sudden death in the event of a dangerous arrhythmia.
- Patients may reach a point in their lives when their goal of care is to be comfortable during their remaining time and an active ICD is not congruent with that goal.
- It is not morally or legally wrong to stop any medical treatment if it no longer meets the patients' needs.