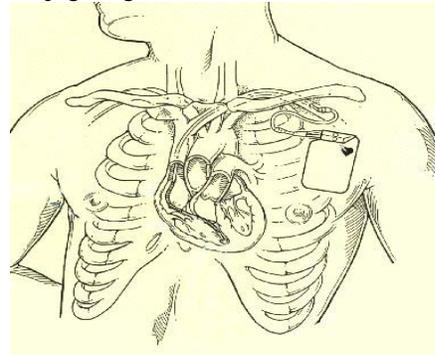


# 25. Automatic Implantable Cardioverter-Defibrillator (AICD)

## Device:

- 1) Implanting AICD's are better than just drugs (like sotalol and amiodarone) in preventing arrhythmic deaths and total mortality. (MADIT, Wever, SCD-HeFT)
- 2) If arrhythmia is detected, it will try pacing in a faster rate to terminate the tachycardia.
- 3) If rapid pacing fails, it will charge for cardioversion or defibrillation by giving a "shock".
- 4) Newer devices now have dual chamber pacing and sensing ability so that the arrhythmias can be detected more reliably detected. Most Biventricular pacingals are AICD.



## General Guidelines:

- 1) Treat AICD patients like any other patient.
- 2) If AICD discharges while you are touching the patient, you may feel a slight sensation. It will not harm you.
- 3) Do not wait for the device to fire in the presence of VT or VF. Begin CPR and defibrillate with external paddles as necessary. This will not harm the device.
- 4) Most patients with AICD's will carry a wallet card or Medic-Alert bracelet with cut off information.
- 5) AICD will deliver the first shock after recognizing arrhythmia within 10-30 seconds. Subsequent shocks will be delivered every 10-30 seconds.
- 6) AICD will generally shock only 4-5 times, (depending on the model) and requires 35 seconds of non-VT/VF rhythm, including asystole, to reset itself.

## Deactivating an AICD:

1. To deactivate AICD, place donut magnet over device. Usually application of magnet to generator box will disable tachycardia sensing thus preventing inappropriate shock the upper left corner of the pulse generator. Some AICD's after about 30 seconds, R-wave synchronous tones will become a constant, high-pitched tone.
2. To activate AICD, remove magnet. Some require placing donut magnet over the upper left corner of the pulse generator. After about 30 seconds, a constant tone will change to a pulsed tone.
3. Because AICD tones are very high-pitched, many older individuals are unable to hear the tone. If in doubt, have a young person confirm the presence or absence of the tone. The tones may be nearly impossible to hear due to noise.

## Indications 1

- Cardiac arrest due to VF or VT without reversible cause
- Spontaneous sustained VT with structural heart disease
- Syncope with VT or VF on EP study

## Indications 2A

- EF < 35% one month post MI or 3 month post CABG