



BIVENTRICULAR IMPLANTABLE CARDIOVERTER/DEFIBRILLATOR (ICD)

The purpose of this document is to provide written information regarding the risks, benefits and alternatives of the procedure named above. This material serves as a supplement to the discussion you have with your physician. It is important that you fully understand this information, so please read this document thoroughly.

The Procedure: *Cardioverter / Defibrillator (ICD)* implantation recognizes and corrects certain abnormal heart rhythms by one of the following methods: (1) May shock the heart one or more times and / or (2) may stimulate the heart at very fast intervals.

An ICD has a **built in pacemaker** and is implanted in the same manner as a regular pacemaker. The pacemaker within the ICD keeps the heart from beating too slowly. **Biventricular pacing** is believed to improve pumping function in some patients by stimulating both the right and left ventricle to contract simultaneously. This eliminates the electrical time delay of the ventricles seen in some people with heart failure and is referred to as **resynchronization therapy**. Continuous pacing is necessary to obtain this benefit. Up to three coated “wires” (leads) are inserted in the heart through a vein and attached to the ICD generator. One is placed in the right atrium, a second in the right ventricle, and the third in the coronary sinus (CS), an opening in the right atrium leading to veins which overlie the left ventricle.

Benefits

If your implantation is successful, you might receive the following benefits. The doctors cannot guarantee you will receive any of these benefits. Only you can decide if the benefits are worth the risk.

1. A properly functioning **cardioverter /defibrillator** can protect you against the po-

tential for life-threatening cardiac arrhythmias.

2. With a properly functioning **biventricular cardioverter /defibrillator** your tolerance to exercise may improve and you may experience a greater sense of well-being.

Risks

Before undergoing this procedure, understanding the associated risks is essential. No procedure is completely risk free. The following risks are well recognized, but there may also be risks

not included in this list that are unforeseen by your doctors.

1. You may develop adverse reactions to medications used during the procedure.

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| <ol style="list-style-type: none"> 2. You may have a heart attack that may be life-threatening and cause life-long disability. 3. Air may leak into the chest cavity causing the lung to collapse (pneumothorax) which may require placement of a chest tube. 4. Lead movement may occur after the procedure and may require lead repositioning in a subsequent procedure. 5. Placement of the lead(s) may dislodge a clot that could travel to a distant organ or brain and cause a stroke. 6. Insertion of the leads could initiate a dangerous cardiac rhythm requiring external shock(s). 7. Hematoma (bleeding under the skin) may result at the incision site. 8. Lead placement could result in cardiac perforation, where blood leaks into the sac around the heart and compromises the heart's pumping action. A needle under the breast bone is used to remove the blood, also called pericardiocentesis. 9. Any of the leads may damage a blood vessel or the coronary sinus which could require immediate surgical repair with open heart surgery. | <ol style="list-style-type: none"> 10. There could be excessive bleeding requiring blood or blood component replacement. Separate information about blood and blood transfusion, product, and alternatives is available. 11. It may not be possible to place the coronary sinus lead. The physician may implant a standard single or dual chamber cardioverter / defibrillator in place of a biventricular type. The procedure may have to be stopped without placement of any ICD system. 12. Intravascular contrast (dye) is generally required for placement of the coronary sinus or other leads. You may have an adverse reaction which may lead to temporary or permanent kidney damage, abandonment of the procedure, or cause an extended hospital stay. 13. You may develop an infection that would require a course of antibiotics and an increase in your hospital stay. 14. You may die during the procedure. 15. Pain may be associated with this procedure and the healing process. |
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Alternatives

The alternatives include:

1. Not having the procedure.
2. Initiation, or continuation, of a medication regimen.

If you decide not to have this procedure, there are associated risks to this decision. Please discuss it with your doctor.

If you have any questions regarding the procedure, risk, benefits or alternatives to this procedure, ask your physician prior to signing any consent forms.



Patient Signature

Date