



PATIENT GUIDE TO AN ELECTRICAL CARDIOVERSION

For the treatment of Atrial Fibrillation or Atrial Flutter

WHAT IS AN ELECTRICAL CARDIOVERSION?

An electrical cardioversion is a short procedure where an electrical shock is delivered to the heart through patches on your chest to attempt to convert an abnormal heart rhythm back to a normal sinus rhythm.

PREPARING FOR YOUR ELECTRICAL CARDIOVERSION

Once you and your healthcare provider have decided to proceed with an electrical cardioversion to treat your atrial fibrillation and/or atrial flutter, you will be scheduled and given a procedure date. You may be asked to obtain blood work prior to the procedure. Your doctor's office will help coordinate the timing of the procedure and help arrange any other necessary diagnostic studies.

THE DAY BEFORE YOUR CARDIOVERSION

You should expect a call from a nurse in the EP lab by 6pm the weekday before your procedure, to confirm your appointment. During this call you will also be instructed where you should check in once you arrive at MGH. Since you will receive anesthesia, it is essential that you:

1. Do not eat or drink after midnight the night before your procedure.
2. Do not take any medication the morning of your procedure, unless instructed to do otherwise by your physician or a nurse from the EP Lab. Please bring your medications with you to take after the procedure.
3. You must have an adult accompany you home since you will receive anesthesia.
4. Please arrange for transportation home as you will not be allowed to drive for the remainder of the day; failure to do so will result in cancellation of your procedure.

WHAT TO EXPECT THE DAY OF YOUR ELECTRICAL CARDIOVERSION?

Where do I check in?

You should come directly to the Electrophysiology Lab (EP Lab) in the Gray building, suite 109, located across from Coffee Central. Once you have checked in to the EP lab, a nurse will come to the waiting room and escort you into the lab when they are ready.

What to expect prior to the procedure?

Cardioversions are performed in the EP lab. We will provide you with a hospital gown and ask that you undress from the waist up. A nurse will review your past medical history and confirm your current daily medications (please bring a written list of all your current medications). An anesthesiologist will obtain your health history and review the procedure, discuss the risks involved and ask you to sign an informed consent. The procedure is very short; however you should expect to be in the lab for an hour which includes prep time and recovery time.

Prep prior to the procedure

A number of electrodes will be applied to your chest in order to obtain an electrocardiogram (EKG). Two large adhesive pads will be applied; one on your back and the other one on the left side of your chest. Men with chest hair may need to be shaved in order for the adhesive pads and EKG electrodes to adhere appropriately. Please do not use any moisturizing lotion or oils the day of the procedure. The nurse will place an intravenous (IV) line in your arm in order to administer the short acting anesthesia used with the procedure. Once all the consents are signed, the procedure will begin.

The procedure

You will be given short acting anesthesia and IV fluids. You will begin to get sleepy; once you are asleep (but still breathing on your own), the procedure will be performed. A nurse, and/or anesthesiologist are present throughout the procedure to monitor your breathing, blood pressure and heart rhythm. The chest pads are connected to an external defibrillator by a cable. The defibrillator allows our team to continuously monitor your heart rhythm and to deliver an electrical shock to attempt to restore your heart's rhythm back to normal. The healthcare provider will charge the defibrillator to a specified energy level and then deliver the shock by pressing a button on the defibrillator. The shock is transmitted through pads on the chest where the energy is delivered across the chest wall to the heart muscle. Additional shocks at higher energy levels may be delivered to attempt to restore normal sinus rhythm if the first shock is unsuccessful.

Once the cardioversion is finished

Once the procedure is finished, the anesthesia will start to wear off. You will become aware of your surroundings; you will not remember being shocked due to the amnesia effects of the sedation medication. The nurses will take off all the electrodes and allow you to get dressed. Once the anesthesia has worn off completely, post procedure and medication instructions will be reviewed with you. We will provide you with written instructions as well to review with your family. You will be given time to ask questions, when all your questions are answered you will be free to go.

ANTICOAGULATION REQUIREMENTS FOR CARDIOVERSION

When the heart is in atrial fibrillation, the upper chambers of the heart fibrillate or quiver and do not squeeze uniformly, therefore blood may pool and blood clots can form. If a blood clot were present in the heart; restoring the heart to a normal rhythm could potentially dislodge a blood clot and cause a heart attack or a stroke. Because of this risk it is essential for your blood to be thinned prior to your cardioversion. The process of thinning the blood is called anticoagulation. Most frequently your healthcare provider will prescribe an oral medication called Warfarin (Coumadin) or Dabigatran (Pradaxa). If you are taking Warfarin (Coumadin), you will be instructed to have a blood drawn once a week to monitor your International Normalized Ratio (INR). The INR reflects the thickness or thinness of your blood. The recommended INR for people who have Atrial Fibrillation and/or Atrial Flutter is usually between 2.0 and 3.0. Your healthcare provider will typically recommend that you have therapeutic INRs for 3-4 weeks prior to having a cardioversion. If you are taking Dabigatran (Pradaxa), you will be required to take this drug twice a day for 4 weeks prior to your cardioversion to eliminate the risk of stroke. Dabigatran (Pradaxa) does not require weekly monitoring; therefore a nurse will confirm your compliance prior to your cardioversion. If you do not comply with the twice a day dosing of this medication your risk of developing a blood clot or having a stroke is higher.

If you are taking Warfarin (Coumadin) and your INR is less than 2.0 at any time in the 4 weeks prior to the procedure; your physician may require you to have a trans-esophageal echocardiogram (TEE). The same would apply if you are taking Dabigatran (Pradaxa) instead of Warfarin (Coumadin) and you happened to miss a dose. A TEE will verify that there is no

blood clot present in the left atrium, where blood clots typically form. This involves placing a probe into the esophagus to image your heart. You will be asleep during this test. If there is any evidence of a blood clot the procedure may be postponed to a later date.

Please note that if you require a TEE prior to your cardioversion, there will be an additional 30 minutes added to your total procedure time.

ONCE AT HOME

Minor skin redness and irritation may occur at the sites where the cardioversion pads were placed. Over-the-counter Hydrocortisone cream or Benadryl gel can be applied to help relieve the discomfort. This should resolve in a few days. Due to the residual effects of anesthesia, you may feel tired, so rest. You may resume your normal activity the following day. You may resume your normal diet. Do not drink alcohol, drive, operate heavy machinery or make important decisions for at least 24 hours. You will be instructed to continue your anticoagulation medications until your follow up appointment, when you and your healthcare provider can discuss your stroke risk.

FOLLOW UP APPOINTMENT

If you should go back into Atrial Fibrillation and/or Atrial Flutter you should call the healthcare provider who ordered the cardioversion to set up an appointment to discuss future treatment options.

INSURANCE REFERRALS

If you have a health insurance carrier other than Medicare, contact your Primary Care Physician (PCP) or insurer to determine whether or not a referral is required for this procedure. Tell your PCP or insurer that you are scheduled for a Cardioversion. Referrals must be obtained in advance. Referrals can be faxed to the Cardiac Arrhythmia Service at 617-726-3852. If you should have questions about the referral process, please call 617-726-0194.