



# Electroconvulsive Therapy (ECT)

## **What is ECT?**

- ❖ Electroconvulsive therapy (ECT) is a physical therapy in which a patient under general anesthetic will have an electrical current passed through his or her brain, causing a seizure in the brain. This therapy was developed in the 1930s and has become a painless, safe, effective therapy for a number of psychiatric problems.

## **How does it work?**

- ❖ Current theories suggest that the seizure activity causes changes in brain chemistry.

## **When is ECT used?**

- ❖ ECT is used primarily for depressive illnesses. It is usually reserved for situations where medications have not worked, but it may be the first choice of therapy for frailer, older patients for whom medications may be more of a problem. If a patient has responded well to ECT in the past, it may be his or her own first choice. ECT is also used occasionally in mania, schizophrenia, and in severe Parkinson's disease.

## **How is the procedure carried out?**

- ❖ Patients are treated in specific ECT suites or in hospital operating rooms. You will be given an intravenous line. Sensors monitoring your heart and brain waves will then be applied to your head, and you will be given a short-acting general anesthetic. Once you are asleep, you will be given a muscle relaxant. When you are completely asleep and your muscles are relaxed, a brief electrical current will be applied to your brain either unilaterally (on one side), or bilaterally (on both sides). A brief seizure will follow, which will be modified by the muscle-relaxants so that medical staff may need to look carefully at brain wave monitors and observe your toe and hand movements to monitor it. The whole procedure takes only a few minutes. You will then be moved to a recovery area where a nurse will closely observe your pulse and blood pressure until you are awake enough to return to your room or to the outpatient clinic.

## **How many treatments are required?**

- ❖ Usually patients with acute psychiatric problems require 6 – 12 treatments, given either 2 or 3 times a week. Occasionally more treatments will be required for maximum benefit.
- ❖ In order to keep patients well, outpatient maintenance ECT is sometimes recommended. In such cases the treating physician determines the number and frequency of treatments by assessing specific clinical problems and needs.

### **What are the benefits of ECT?**

- ❖ ECT has produced substantial improvement in most of the patients who have been treated with it. It has been shown to be effective in many who have not responded to other forms of treatment. In fact, between 50 – 70% of patients who previously did not respond to medications will respond positively to ECT. Many depressed patients have problems with their memory; after their depression is relieved, which may occur after having ECT, their memory may improve. Improvement is gradual over several treatments until most or all symptoms of a depression are relieved. You may notice an improvement of appetite early on, later an improvement in energy, and finally an overall sense of feeling better. The treatment team will work with you to monitor your individual symptoms and response.

### **What are the side effects?**

- ❖ Immediately after ECT, you may experience some nausea, headache, and muscle aches. These are most often managed by taking plain Tylenol tablets. You may experience some acute confusion on the day of the ECT treatment, which most often resolves quickly. You may also forget recent events or events occurring around the time that you have the ECT. These memory problems are usually minor and may be decreased by slight changes in the procedure. Some patients experience longer-lasting problems with recalling memories from around the time of the ECT, and occasionally problems recalling some distant events. These memory effects generally subside once the ECT is completed. A few patients may have more severe problems remembering events from the distant past. Patients generally have fewer memory problems with unilateral ECT compared to bilateral ECT. Your treating psychiatrist will further explain this. You should always report possible side effects to your nurses or psychiatrist, so the treatment team can work to reduce them. ECT is considered very safe, and no more dangerous than a minor surgical procedure requiring a short general anesthetic. A current estimate of mortality in ECT is 2 in every 100,000 treatments. If you are worried about this, please discuss it with your psychiatrist.



# Patient Preparation for ECT Therapy

## **What will happen prior to the first ECT Treatment?**

- ❖ Consent – your doctor will explain the procedure and request that you sign a consent form
- ❖ You may be visited by some or all of the following people. We recommend that you write down any questions that you may have for each one:
  - The doctor who will give you Anesthesia
  - The doctor who will be giving you treatment
  - The nurse who is in charge of the Treatment Area

## **What will happen before, during and after each ECT Treatment?**

- ❖ **NIGHT BEFORE: Bath/Shower and Shampoo**
  - This aids in relaxation & promotes sleep
  - Clean hair provides for better conduction of the electric current
  - It is important that hair be dry before treatment is given, therefore hair should be washed the night before
  - The gel used with the electrodes leaves a sticky residue, you may prefer to shampoo after each treatment.
- ❖ **Wearing Hospital Clothing:** Is necessary to prevent soiling of personal clothing
- ❖ **Remove Nail Polish and Make-up:** This allows for better assessment of your physical condition during the anesthetic
- ❖ **Jewelry:** Please NO NOT bring valuables
- ❖ **NOTHING to Eat or Drink after Midnight the Night Before**
  - This includes candy, gum, & water
  - This is to prevent aspiration of food if vomiting occurs during or after treatment
- ❖ **Treatment Time:**
  - You will be informed the day before of the time your treatment is scheduled
- ❖ **Medication:** Sometimes a medication will be given the night before and/or the monitoring of your treatment

## The Morning of ECT Therapy:

\*\*\*\*\**NOTHING TO EAT OR DRINK until AFTER your Treatment*\*\*\*\*\*

- ❖ **Remove** jewelry, hair accessories, contact lens, glasses, hearing aids, and dentures.
- ❖ **Vital Signs:** Temperature, pulse, respirations and blood pressure will be taken prior to treatment
- ❖ **Dentures:** You will be asked to remove your dentures before receiving the anesthetic
- ❖ **Glasses/Contacts:** You will be asked to remove your glasses/contact lenses. IF you wish to wear your glasses to the treatment area, please bring the case with you.
- ❖ **Bladder:** You will be asked to empty your bladder about 15min prior to your treatment. This is to avoid incontinence during the treatment.
- ❖ **Medication:** Occasionally a medication will be given 1-2 hrs prior to treatment. This will be taken with a small sip of water. Your regular medications will usually be held and given to you after your treatment is finished.
- ❖ **Escort:** You will be accompanied to your treatment area approximately 5-45min prior to your scheduled time of treatment.
  - **Outpatients:** Have a responsible adult accompany you to the hospital and Be prepared to be at the hospital for 4 hrs or more.

## After ECT Therapy:

- ❖ **Recovery Room:** Following your treatment you will be moved on a stretcher to the Recovery Room while still asleep. When you awaken you will find nurses in attendance who carry out the following procedures:
  - Blood pressure, pulse and respirations taken every 5-10min.
  - Oxygen is given by mask or nasal prongs.
  - A heart monitor may be used to provide nursing staff with the information about your heart beat.
  - Nurse will be asking you for your name and if you know who you are. This is to assure your level of consciousness.
  - Nurses will ask you to grip their hand and lift your head off your pillow. This is to test muscle strength.
  - A needle inserted in your vein which was used to give you your anesthetic will be removed. A band aid may be applied to your area. This can be removed.
- ❖ **Inpatients:** You will be returned to your room via wheelchair or stretcher
- ❖ **Outpatients:** You will be allowed to rest until you are fully awake.

## **Outpatients: Discharge Information – What do I Need to Know?**

- ❖ You have had a general anesthetic and the effects persist for many hours. The following precautions are advised by your anesthesiologist and psychiatrist:
  - Have a responsible adult pick you up from the recovery Room and stay with you for the first 24hrs.
  - Rest quietly at home for the remainder of the day
  - DO NOT drive your car for at least 24hrs
  - DO NOT drink alcohol for 24hrs
  - DO NOT travel alone for the rest of the day

## **What are the Most Common Side Effects?**

- ❖ **Muscle Stiffness**- caused by medication given to relax your muscles
  - Ways to relieve
    - Inform your nurse or doctor
    - Take a warm bath
    - OTC medications such as Tylenol may help
    - Do some moderate exercises
  
- ❖ **Confusion**: Maybe temporality confused/disoriented due to the effects of the treatment
  - Ways to relieve
    - Have a trusted family member or friend with you after treatment
  
- ❖ **Memory Loss**: Temporary memory loss is a common side effect of ECT it is recommended that you postpone major decision making.
  - Ways to relieve
    - Keep a diary – record events of the day
    - Write important dates and times down prior to your first treatment and as you go along. Keep a calendar- mark each day off
    - Seek assistance with reorienting yourself
  
- ❖ **Headache**: Can be caused by the anesthetic, by the treatment or being without food for an extended time.
  - Ways to relieve
    - Have something to eat
    - Take OTC medication or pain medication prescribed by your doctor
    - Use relaxation tapes to reduce muscle tension
    - Use distraction techniques (counting, imagining)
    - Rest in a dark room
    - Apply a cold cloth to forehead
  
- ❖ **Nausea**: Can be caused by the anesthetic or being without food for extended time.
  - Ways to relieve
    - Eat small amounts of food
    - Rest
    - Take medication before nausea becomes too severe