

abilities or memory capacity have been shown to occur. Indeed, memory problems in patients with psychiatric illness result more often from medications, incompletely-treated illness, and aging.

## How Does ECT Work?

Although it is necessary for the brain cells to interact with each other chemically and electrically for ECT to work, exactly how this interaction is therapeutic needs further investigation. We believe that patients with melancholia have a severe biochemical disorder of the nervous system that ECT corrects. A number of rigorously-designed research projects are under way to study this question.

## Must a Patient Give Permission for ECT?

Virtually always, just as with any medical procedure. Most states require that informed consent for ECT be obtained in writing after an explanation of the procedure, its potential benefits, risks and side-effects, and a description of available alternative treatments. Of course, the patient can withdraw his consent at any time. Treatment of patients who have been declared incompetent by a court of law may require professional legal guidance.

## Why Does ECT's Public Image Suffer?

Just as with other medical treatment, from appendectomy to penicillin, ECT was used excessively in the past, mostly in large, understaffed mental hospitals in the 1940s. The drama of mental illness has also been exploited by fictional movies such as "The Snake Pit" that included stark and exaggerated portrayals of ECT to emphasize the story. More recently, quasi-religious groups have received media attention for unsubstantiated claims that all medical approaches to psychiatric illness are undesirable. This pamphlet is intended to provide the facts about ECT in order to further understanding of its value.



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# What you need to know about Electroconvulsive Therapy

A PATIENT INFORMATION PAMPHLET  
DISTRIBUTED AS A PUBLIC SERVICE BY



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## What is Electroconvulsive Therapy?

Electroconvulsive therapy (ECT) is a modern medical treatment for certain illnesses that have mental or emotional symptoms. In this treatment, the patient goes to sleep under general anesthesia, receives muscle relaxants and oxygen, and then receives a brief electrical stimulation to the scalp. The resultant nerve-cell activity releases chemicals in the brain and helps restore normal functioning. ECT resembles cardioversion, a common medical procedure in which the heart is stimulated electrically in order to restore its normal functioning, but ECT uses a much smaller amount of electricity.

## Is ECT Considered a Standard Psychiatric Treatment?

Yes, one that has been used for over 50 years. A blue-ribbon panel convened in 1985 by the U.S. Government's National Institutes of Mental Health found that ECT was "demonstrably effective for a narrow range of severe psychiatric disorders", including depression, mania and schizophrenia. In 1990, the American Psychiatric Association reaffirmed ECT as effective for all types of major depression and manic-depressive illness, and for some instances of schizophrenia.

## Hasn't ECT Been Replaced by Medication Therapy?

Medication helps many patients who might otherwise require ECT, but for over 30,000 U.S. patients each year ECT is the most effective treatment. Some patients do not respond to medications, others cannot tolerate the side-effects, and still others — those whose illness has made them seriously suicidal, for example — urgently require the reliable symptom relief that ECT can provide.

## What About Talk Therapy or Psychotherapy?

Psychotherapy employs techniques of education, suggestions and persuasion to help many people adjust to stress and emotional situations. Although it is usually not very helpful in treating the more serious illnesses that lead to hospitalization, psychotherapy may be useful once ECT has relieved the illness.

## What are the Indications for ECT?

Severe depression (melancholia) is the most frequent indication for ECT. Patients with this illness experience sadness and despair, have difficulty concentrating, lose their appetite and weight, sleep poorly, blame themselves, are unable to enjoy life, and often think

of suicide. Mania and Schizophrenia are other illnesses that can be helped by ECT.

## Who Gives ECT, and Where?

ECT is given by a treatment team of doctors, nurses, and nursing assistants, often with an anesthesia specialist. Virtually all ECT is given in a hospital, in a specially-equipped area, either on an inpatient or outpatient basis.

## How is ECT Given?

With the patient reclining, a sleeping medication is injected in a vein and the patient rapidly falls asleep. A muscle-relaxing medication is then injected, while the patient breathes pure oxygen. When the patient's muscles are relaxed, a brief electrical charge is applied to the scalp, stimulating the brain into rhythmical activity that lasts about a minute and is accompanied by release of chemicals from nerves in the brain. Mild contractions of the muscles occur during the "convulsion." When it is over, the patient is taken to a recovery area and observed by trained staff until he awakens, usually in about 20 minutes.

## How Many Treatments Are Given and How Often?

ECT is usually given two to three times a week, typically on Mondays, Wednesday and Friday mornings, for a total of 6 to 12 treatments. A few patients may require more than 12 treatments for maximum benefit.

## Is ECT Curative?

ECT is an exceptionally effective medical treatment helping 90% of patients who take it. Most patients remain well for many months afterwards. The tendency to relapse after a favorable treatment outcome can often be countered by medication taken for about half a year after ECT. Permanent cures for psychiatric illnesses are rare, however, regardless of the treatment given.

## How Safe is ECT?

A recent study in California found about one death per 50,000 treatments, far below the risk of childbirth. Another study observed that death from heart attacks and suicide were less frequent among depressed patients who had received ECT than among those who had not. With modern anesthesia, fractures and oxygen deprivation virtually never occur, and many patients with high blood pressure or heart conditions can now be treated.

## What Are the Main Side-Effects of ECT?

On awakening from ECT, it is customary for patients to experience some confusion, which generally clears within an hour. Memory for recent events, dates, names of friends, public events, addresses and telephone numbers may not be as good. In most patients the memory disturbance goes away within a few days or weeks, but it occasionally continues in a mild form for a period of months, or longer. Many patients will find that their memories are somewhat hazy for the time that they were ill; the same problem is frequently experienced by depressed patients who do not receive ECT. Memory disturbances are not needed for ECT to work, and doctors use special techniques (such as brief pulse and right unilateral ECT) to minimize or avoid any effects on memory.

## Can ECT Cause Brain Damage?

The available evidence speaks against this possibility. Patients receiving ECT show no elevation of brain enzymes that are released into the bloodstream when brain damage occurs, such as after a stroke. Carefully-controlled animal studies have shown no evidence of brain damage from brief seizures as given with ECT, and sensitive brain-imaging studies performed months after ECT have shown no structural changes. The amount of electricity used raises brain temperature far less than 1/10 of a degree and can not cause electrical injury.

## Is ECT a Frightening Procedure?

The dramatization of ECT in movies like "One Flew Over the Cuckoo's Nest" bears no resemblance to modern ECT, which is neither painful nor a punishment. Most patients surveyed after ECT said that it was no worse than going to the dentist, and many found ECT less stressful.

## Does ECT Cause Permanent Memory Loss?

Not in most people. Most importantly, ECT does not interfere with the ability to learn, and many studies have shown better learning after ECT than before it, probably because of improved concentration from relief of depression. A few patients, however, still have not regained some specific personal memories when tested six months or longer after receiving a form of treatment called bilateral ECT. Generally, these memories are for events in the months immediately preceding ECT. No long-term or persistent effects of ECT on intellectual

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