Electroconvulsive Therapy (ECT)

1 : How ECT is given

Q. What is ECT?

ECT (Electroconvulsive Therapy) is a treatment used in psychiatry for severe mental illness/distress. It was originally developed in the 1930s and was used very widely during the 1950s and 1960s for a variety of conditions. Since then its use has declined. ECT has changed a lot in recent years and modern ECT is undertaken only occasionally in severe illnesses. Usually the person having it will be in hospital, though many units can now offer ECT as a day case treatment.

ECT remains a controversial treatment, which some people have very strong feelings about. There are those who claim it can be a life-saving procedure while others feel it should be banned.

Q. How is ECT given?

ECT is a way of causing someone to have a seizure, and it is this seizure that is needed for the treatment to work. The seizure is made to happen by passing an electrical current across the person's brain in a carefully controlled way from a special ECT machine. The current can be given to the whole brain (bilateral ECT) or just one side (unilateral ECT). The seizure itself is very similar to the seizures that occur in people with certain types of epilepsy, but it is caused on purpose in very controlled circumstances. ECT does not cause epilepsy.

Just like in a surgical operation, the person will have an anaesthetic before the treatment and will also receive a muscle relaxant so the physical effects of the seizure are as small as possible. By finding the right dose of electricity, the ECT team will try to cause a seizure between 10 and 50 seconds long.

A senior anaesthetist gives the anaesthetic and the person will have heart, blood pressure, breathing, oxygen levels, etc monitored while they are asleep. Many units also monitor the brain waves during the seizure using an electroencephalograph (EEG) machine. The person is unconscious for around 5 minutes, though they take longer to fully recovery from the anaesthetic.

Most units give ECT twice a week.

Q. Where is ECT given?

ECT should always be given in a special ECT suite. This suite should have separate places for people to wait, have their treatment, wake up fully from the anaesthetic and then recover properly before leaving the suite. There should also be enough properly qualified staff to look after the person all the time they are there so any distress is kept to a minimum.
Q. What happens during ECT?

From the point of view of the person having ECT, they should arrive at the ECT suite with an experienced nurse who they know and who is able to explain what is happening to them. Many ECT suites are happy for family members to be there. When the person arrives in the suite they should be met by a member of the ECT staff, who will do routine physical checks if these have not already been done. The staff member will also check that the person is still happy to have ECT and there will be someone else to answer any particular questions.

When the person is ready they will be accompanied into the treatment area and be helped onto a trolley. The anaesthetist and anaesthetic assistant will connect monitoring equipment to check their heart rate, blood pressure, oxygen levels, etc. They may also be connected to an EEG machine, to check the brain waves (a way of measuring normal brain activity). A needle will then be put into a small vein, probably on the back of their hand, though which the anaesthetist will give the anaesthetic drug and, once they are asleep, a muscle relaxant. While the person is going off to sleep the anaesthetist will also give them oxygen to breathe. Once the person is asleep and fully relaxed a doctor will give the treatment. The muscle relaxant wears off quickly (within a couple of minutes) and as soon as the anaesthetist is happy that the person is waking up, they will move through to the recovery area, where an experienced nurse will monitor them until fully awake. Most ECT suites have a second area for light refreshments. The person will leave the suite when they feel ready and when everyone is happy they are OK. The whole process usually takes around half an hour.

Q. What about bilateral and unilateral ECT?

In bilateral ECT, the electrical current is passed across the whole brain; in unilateral ECT, it is just passed across one side. Both of them cause a seizure in the whole of the brain.

Although there is a lot of research being done, it’s still not clear which type of ECT is “best”. Bilateral ECT seems to work more quickly and effectively and it’s probably the most widely used in Britain; however, bilateral ECT seems to cause more side effects. Unilateral ECT has fewer side effects, but may not be as effective; unilateral ECT is also more difficult to do properly. Sometimes ECT clinics will start a course of treatment with bilateral ECT and switch to unilateral if the patient experiences side effects. Alternatively they may start with unilateral and switch to bilateral if recovery isn’t happening.

The choice of bilateral or unilateral ECT will depend on the needs and wishes of the patient, the opinion of their doctor and the skills of the ECT team.

Q. How many times is ECT given?

Most units give ECT twice per week, often on a Monday and Thursday, or Tuesday and Friday. It is impossible to predict how many treatments someone will need, however, in general it will take 2 or 3 treatments before any response is seen and people start to improve after 4 to 5 treatments. Some people having ECT report others tell them they are looking better before they feel so themselves. On average, a course will usually last for 6 to 8 treatments though some times as many as 12 may be needed. If someone has shown no response at all after 12 treatments it is unlikely that ECT is going to help.

A doctor should see the person after each treatment and their consultant see them after every two. ECT should be stopped as soon as the person has made a recovery or at any time if they withdraw their consent.
Q. What happens after ECT?

Even when someone finds it effective, ECT is only a part of the treatment. It can help to ease problems so that the sufferer is able to look at why they became unwell. Hopefully they can then take steps to continue their recovery and perhaps find ways to make sure the situation doesn’t happen again. Psychotherapy and counselling might help and many sufferers also find their own ways to help themselves. Medication is usually needed to help to maintain the benefits. Certainly people who have ECT and then do not have other forms of help are at very high risk of quickly becoming unwell again.

Q. What if I really don’t want ECT?

If you have very strong feelings about ECT you should make them known to relevant people, who would include the doctors and nurses caring for you, but also friends, family or other advocates who can speak for you. Doctors must consider these views when they think about what to do. If you have made it very clear that you do not wish to have ECT then you should not receive it.

Q. How do I know if ECT is carried out properly locally?

The Royal College of Psychiatrists has set up the ECT Accreditation Service (ECTAS) to provide an independent assessment of the quality of ECT services. ECTAS sets very high standards for how ECT is given, and visits all the ECT suites signed up to it. The visiting team involves psychiatrists, anaesthetists, nurses and lay people. It publishes the results of its findings and also provides a forum for sharing best clinical practice. Membership of ECTAS is not currently compulsory but your ECT suite will be able to tell you if they have signed up to ECTAS, what their most recent report was and who to speak to if you are concerned that your local suite has not been assessed.

2 : The Pros and Cons of ECT

Q. Who might benefit from ECT?

Recently, the National Institute of Clinical Excellence (NICE) have looked in detail at the use of ECT and have agreed it is an effective treatment for severe depression, severe mania and catatonia. In general ECT is mostly used for severe depression, though some research suggests it may be helpful in Parkinson’s disease and possibly other neurological conditions.

Q. Who would not benefit from ECT?

ECT is unlikely to help those with mild depression or most other psychiatric conditions including personality disorders. NICE have specifically stated that it has no role in the general treatment of schizophrenia.

Q. What are the side effects of ECT?

This is one of the areas of greatest disagreement.

ECT is a major procedure where, over a few weeks, someone has several seizures and several anaesthetics. It is used for people with severe illness/distress who are very unwell, sometimes life-threateningly. As may then be expected, ECT can cause a number of side effects, some mild and some more severe.
There are a number of less severe side effects that relate to each individual treatment. Many people complain of a headache immediately after ECT and of a general aching in their muscles. They may feel muzzy-headed and generally out of sorts, or even nauseous. Some are quite distressed after the treatment and may be tearful or frightened during recovery. For most people, however, these effects settle within a few hours, particularly with the help of paracetamol, some light refreshment and a supportive environment.

The greater concern is for the long-term side effects, like irreversible memory loss or personality change. Surveys conducted by scientists and members of the medical profession usually find a low level of severe side effects, maybe around 1 in 10. Those conducted by user groups have found much more, maybe half of those having them. Some surveys conducted by those strongly against ECT say there are severe side effects in everyone. Clearly, no one is certain.

Older people may be quite confused after a treatment and this can persist for two or three hours. It is possible to change the way the ECT is done (such as using unilateral ECT) to reduce this.

Many people complain of problems with memory – indeed some difficulties with memory are probably present in everyone with severe depression receiving ECT. This is usually a loss of memory for the treatment itself and maybe an hour or two before and after. Some people – some would say many – also have problems with memory for past events, even very significant ones such as the birth of a child. Most people find these memories return when the course of ECT has finished and a few weeks have passed. There are people who complain their memory has been permanently affected and the memories never come back. It is not clear how much of this is due to the ECT and how much is due to the depressive illness, or other factors – such as how the person feels about the treatment they have had, or even how they feel about themselves.

There are people who complain of even more distressing experiences, such as feeling their personalities have changed, they have lost skills or they are no longer the person they were before ECT. They say that they have never got over the experience and feel permanently harmed.

Q. **What may happen if ECT is not given?**

ECT is never the only alternative, although the doctor prescribing it may feel it represents the best chance of recovery. If someone with severe depression declines ECT there are a number of possibilities. The medication may be changed or new drugs added. A referral for counselling or psychotherapy may be appropriate. Alternatively, the doctors and nurses may look at ways of helping the person change aspects of their life that are causing the depression. Usually, a combination of all 3 of these will be used.

Q. **Does ECT really work?**

It has been suggested that ECT works not because of the fit, but because of all the other things – like the extra attention and support and the anaesthetic – that happen to someone having it.

There have been several research studies comparing standard ECT with "sham" ECT. In "sham" ECT, the patient has exactly the same things done to them – including going to the suite and the anaesthetic and muscle relaxant – but no electrical current is passed and
there is no fit. In these studies, those patients who had standard ECT were much more likely to recover and did so much quicker than those who had "sham" treatment. Also those who didn't have adequate fits did less well than those who did.

Interestingly, a number of the patients having "sham" treatment recovered too, even though they were very unwell; it's clear that the extra support has an important role too. However, when prescribed to the right people, ECT has been shown to be the most effective treatment for severe depression.

Q. How does ECT work?

No one is certain how ECT works. There is a lot of evidence that ECT causes changes in the way the brain works, but there is disagreement about the exact effects that lead to improvement.

Those who support ECT say that in very severe types of depression certain parts of the brain are not working normally, because of changes in the brain chemicals that allow nerves to "talk" to each other. ECT alters the way these chemicals are acting in the brain and so help a recovery.

People against ECT say it works by 'concussing' and damaging the brain, or even that it has no effect at all other than to make patients say they feel better in order to avoid having it.

3: Controversies in ECT

Q. How is ECT controversial?

There are many areas of disagreement about ECT, including whether it should even be used at all. The main areas of disagreement are over whether it works, how it works and what the side effects are. Some of the arguments about this are covered in "The Pros and Cons of ECT".

Q. Why is ECT still being given?

ECT is used much less than in the past and is mostly now a treatment for severe depression. This is almost certainly because modern treatments for depression like antidepressants, psychotherapy (talking treatments) and other psychological and social supports are much more effective than in the past. Even so depression can still be very severe indeed with extreme withdrawal and reluctance, or inability to eat, drink or communicate properly. Occasionally people may also develop strange ideas (delusions) about themselves or others. In these circumstances, where other treatments may not have worked, ECT may be considered a worthwhile alternative. The scientific evidence we have is that ECT is still the most powerful treatment for severe depression.

Some people who have had ECT before and found it helpful, request it if they become unwell again.

Q. When is ECT given without consent?

The majority of ECT treatments are given to people who have consented to it. This means that they have had a full discussion of what ECT involves, why it is being considered in their case and all the advantages and disadvantages, including a discussion of side effects. Sometimes, however, people become so unwell that they are unable to take
onboard all of the issues – perhaps because they are severely withdrawn or have ideas about themselves that stop them fully understanding their position (e.g. they believe what is happening to them is a punishment they deserve). In these circumstances it is impossible for them to give proper consent.

When this happens, if the clinical team think that ECT would still help, it is possible to give ECT – but only after the patient has first been assessed by their own GP and a social worker, and then has had a second opinion from an independent specialist. The clinical team should also speak to family and other advocates, to consider their views and any views the patient may have expressed before. This process almost always involves the use of the Mental Health Act, which means the patient, and their family, have a right of appeal against parts of their treatment. Giving ECT to someone who is actually refusing to have it, whilst possible in the above circumstances, is actually very rare.

Some people who have had ECT complain that they were not properly informed of the risks and benefits, and say that they wouldn't have had ECT if they had known more. It is the responsibility of the team looking after the patient to be sure that they are fully informed about all the relevant things to do with ECT.

Q. **Why do people disagree so strongly?**

People tend to have very strong feelings about ECT, often based on their own experiences. Many doctors will say they have seen patients successfully treated with it and have found very severe depressive illnesses completely lifted. Some will even say that it has saved people's lives. People who have had ECT will also express these views.

Some who have had ECT complain of severe side effects, or say it has been used inappropriately in their case, or not properly explained or even forced on them. Others (including a variety of mental health professionals) feel there is something basically wrong, cruel or inhumane about ECT and these widely ranging views means that obtaining agreement is often difficult.

Q. **Isn't ECT banned?**

ECT has never been banned in Britain or in the USA. Some countries in Europe and the rest of the world (and some states in America also) have restricted its use. The reasons behind these restrictions are complicated. At the moment, ECT is part of standard psychiatric practice in Britain and the majority of countries worldwide.

Q. **What do the people in favour of ECT say?**

Those in favour of ECT say it is an effective treatment, particularly for severe depression, which works when other treatments have not. They believe it causes a clinical improvement, which may be very significant indeed, and they say it can be life saving. They feel it is an important option in psychiatric practice and the overall benefits are greater than the risks. There is much research being done to improve ECT practice and reduce its side-effects.

Q. **What do the people against ECT say?**

There are many different views and many different reasons why people object to ECT and it is wrong to generalise. However, many say that ECT is an inhumane and degrading treatment, which belongs to the past. They say that the side effects are severe and that psychiatrists have either accidentally or deliberately ignored how severe they can be.
They say that ECT permanently damages both the brain and the mind, and if it does work at all, does so in a way that is ultimately harmful for the patient. Most would see it banned.

Q. Where can I get more information?

Many ECT suites provide their own information packs and they should be able to give written information to patients or their family/carers before a course starts. If the suite has been approved by ECTAS, then they will have ensured the information is balanced.

The Internet has many sites discussing ECT that are produced by professionals, organisations, people who have had ECT, or others with particular opinions. There are more negative than positive websites. You may wish to get information from several sources before making up your own mind.

Since people often express their views on ECT very forcefully (either against or for) it can be hard to be sure what to believe. Most do agree, however, that people who are considering ECT – and their families and others – should try to understand as much as possible about it so they can make a decision that is right for them.

Further Information

National Institute for Health and Clinical Excellence (NICE).

*Electroconvulsive therapy (ECT): the clinical effectiveness and cost effectiveness of electroconvulsive therapy (ECT) for depressive illness, schizophrenia, catatonia and mania.* [www.nice.org.uk/guidance/TA59](http://www.nice.org.uk/guidance/TA59)

Scottish ECT Accreditation Network (SEAN).

A site designed to complement the work of SEAN, by enabling communication of the latest information on ECT in Scotland. [www.sean.org.uk](http://www.sean.org.uk)

Electroconvulsive Therapy Accreditation Services (ECTAS).

Launched in May 2003, ECTAS aims to assure and improve the quality of the administration of ECT; awards an accreditation rating to clinics that meet essential standard. [www.rcpsych.ac.uk/crtu/centreforqualityimprovement/electroconvulsivetherapy.aspx](http://www.rcpsych.ac.uk/crtu/centreforqualityimprovement/electroconvulsivetherapy.aspx)

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With input from the Royal College of Psychiatrists' Special Committee on ECT and related treatments.

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