

Electroconvulsive therapy (ECT)

This information is for anyone who is considering whether to have electroconvulsive therapy and their families or friends.

You and your doctors need to be sure that you are fully informed when making a decision about whether to have ECT or not. Your doctor will talk to you about this. We hope that this information can support you in making this decision by providing information on:

- what ECT is and why it is used
- what is involved in having ECT
- the benefits of ECT
- the risks and potential side effects of ECT
- what might happen if you do not have ECT
- making decisions about having ECT
- where to find further information.

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This resource provides information, not advice.

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You must therefore obtain the relevant professional or specialist advice before taking, or refraining from, any action based on the information in this resource.

If you have questions about any medical matter, you should consult your doctor or other professional healthcare provider without delay.

If you think you are experiencing any medical condition, you should seek immediate medical attention from a doctor or other professional healthcare provider.

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What is ECT and why is it used?

ECT is an effective treatment for some types of severe mental illness. It is usually considered when other treatment options, such as psychotherapy or medication, have not been successful or when someone is very unwell and needs urgent treatment.

ECT is given as a course of treatments, typically twice a week for 3–8 weeks. If you have ECT, it will take place under general anaesthetic. This means that you will be asleep while it happens.

While you are asleep, your brain will be stimulated with short electric pulses. This causes a fit which lasts for less than two minutes. As well as an anaesthetic, you will be given a muscle relaxant which reduces how much your body moves during the fit.

What conditions can ECT be used for?

ECT is most commonly used for severe depression that hasn't responded to other treatments. It is also used to treat catatonia, an uncommon condition in which a patient may stop talking, eating or moving. Occasionally, it is used to treat people in the manic phase of bipolar disorder or when people have mixed symptoms of both mania and depression.

ECT is not advised for the treatment of anxiety disorders or most other psychiatric conditions. In the medium term, ECT can help the symptoms of schizophrenia that have not improved with medication. However, the long-term benefits, which require continued ECT, are less clear. For this reason, it is not often used in the UK.

When might your doctor suggest ECT?

ECT will usually be suggested if your condition:

- is life-threatening and you need to get better quickly to save your life
- is causing you immense suffering
- has not responded to other treatments, such as medication and psychological therapy or
- has responded well to ECT in the past

How effective is ECT?

Doctors treating people with ECT report that most people see an improvement in their symptoms. In 2018-2019, 68% of people who had been treated with ECT were "much-improved" or "very much improved" at the end of treatment (1,361 courses out of a total of 2,004). Some of these people were reported as showing no change in their condition and for a very small number of people (1%) it was reported that their condition was worse.

Treating depression

A large body of evidence shows that ECT is more successful in treating the most severe cases of depression than any other treatments that it has been compared to. These include:

- antidepressants
- placebos - where someone is given a substance or procedure that has no physical effect to test the effectiveness of new treatments
- [neuromodulation treatments](#) such as Transcranial Magnetic Stimulation (rTMS).

The risk of suicide is lower in people who have ECT than in comparable people who do not.

Staying well

ECT can help people who are very unwell to get better enough to have other kinds of treatments. This can help them stay well for longer.

Research suggests that people who have severe depression that hasn't got better with medication are much more likely to get better and stay well for longer if they have ECT.

Of people who get better after having ECT, half of them will stay well for at least a year. This is more likely if they are given a treatment after they finish ECT, like antidepressants or lithium.

In comparison, people with severe depression that hasn't got better after they have tried two different antidepressants have only a 5% chance of getting better and staying well for at least a year if they are given a third antidepressant.

How does ECT work?

The effects of ECT gradually build with each treatment. ECT causes the release of certain brain chemicals, which seem to stimulate the growth of some areas in the brain that tend to shrink with depression.

ECT also appears to change how parts of the brain which are involved in emotions interact with each other. There is ongoing research in this area to help us to understand more about how ECT works.

Are there different types of ECT?

ECT has changed and developed over the years. For example, the amount and form of electricity used has changed. This has reduced the chance of side-effects.

ECT is given in two ways: bilateral ECT and unilateral ECT. Your doctor will be able to explain more and help to advise you on which type of ECT would suit you better.

With bilateral ECT the stimulating electrical pulses pass across your head, between your temples. With unilateral ECT, they pass between your right temple and the top of your head. Bilateral ECT may work more quickly, while unilateral ECT has less of

an effect on memory. There is further information about side effects later on in this resource.

Can ECT be used in children or young people?

ECT is not used in children under the age of 11. Children between 11 and 18 rarely develop the kind of mental illnesses that respond well to ECT, but for a small number who do, ECT can be helpful. A formal, independent second opinion is required before it can be given.

What happens when you have ECT?

ECT is given in hospital and usually takes place in a set of rooms called the 'ECT suite'. Occasionally, if this is unavailable or you have significant physical health problems, treatment might take place in another hospital with more medical support, or in an operating theatre.

Some people having ECT are inpatients in hospital, while others will have ECT as day patients. If you are a day patient, a named, responsible adult will have to accompany you to and from the ECT suite.

An ECT suite should have a room where you can wait, a room where you have your treatment, and a room where you can recover properly before leaving.

Qualified staff will look after you all the time you are there. They can help answer any questions or concerns you might have before you have the treatment. They will also help you with the process of waking up from the anaesthetic and during the time straight after the treatment.

Preparing for ECT

In the days before your course of ECT is started, your doctor will arrange for some tests to make sure it is safe for you to have a general anaesthetic. These may include a record of your heartbeat (ECG) and blood tests.

You must not eat or drink anything for at least 6 hours before ECT, although you may be allowed to drink sips of water up to 2 hours beforehand. This is so you can have the anaesthetic safely.

If you would usually take medication during this time, ask the ECT team for advice on whether you should still do this.

What happens on the day of your ECT treatment?

- If you are an inpatient, a member of staff will come with you to the ECT suite. They will know about your illness and can explain what is happening. Many ECT suites are happy for family members to stay in the waiting room while you have your treatment.
- You will be met by a member of the ECT staff, who will do routine physical checks (if they have not already been done).

- You will be asked before every treatment about your memory and how good it is.
- If you are having ECT voluntarily staff will check that you are still willing to have it, and will ask if you have any further questions.
- When you are ready, the ECT staff will take you into the treatment area.
- The staff will connect monitoring equipment to measure your heart rate, blood pressure, oxygen levels and brain waves.
- You will be given oxygen to breathe through a mask. The anaesthetist will give you an anaesthetic through an injection into the back of your hand.

What happens while you are asleep?

- While you are asleep, the anaesthetist will give you a muscle relaxant and a mouth guard will be put in your mouth to protect your teeth.
- Two metal discs will be placed on your head. In bilateral ECT, one goes on each side of your head, while in unilateral ECT both go on the same side of your head.
- The ECT machine will deliver a series of brief electrical pulses, for three to eight seconds. This will result in a controlled fit which lasts for an average of 40 seconds, and may last up to 120 seconds. Your body will stiffen and then there will be twitching, usually seen in your hands, feet and face. The muscle relaxant reduces how much your body moves.
- The dose of the electric pulses given is based on the amount needed to induce a fit. Your response will be monitored, and the dose adjusted as necessary.

What happens when you wake up?

- The muscle relaxant will wear off within a couple of minutes. As you are starting to wake up, staff will take you through to the recovery area. Here, an experienced nurse will look after you until you are fully awake.
- The nurse will take your blood pressure and ask you simple questions to check how awake you are. There will be a small monitor on your finger to measure the oxygen in your blood. You may wake up with an oxygen mask. It can take a while to wake up fully and, at first, you might not know where you are. After half an hour or so, these effects should have worn off and you will be asked some simple questions to check this.
- Most ECT suites have a second area where you can sit and have a cup of tea or some other light refreshment. You will leave the ECT suite when your physical state is stable, and you feel ready to do so.
- The whole process usually takes about an hour.

In the 24 hours after each treatment, you should not drink alcohol or sign any legal documents.

You should have a responsible adult with you for 24 hours.

How often and how many times is ECT given?

ECT is usually given twice a week, with a few days in between each treatment. It can take several sessions before you notice an improvement.

It is not possible to predict, in advance, how many treatments you will need. On average, you will receive 9 or 10 treatments in a course, although it is common to have more.

If you have had no improvement at all after 6 treatments, your treatment plan will be reviewed with your doctor to discuss whether to continue or change the form of ECT.

Your medical team will review your progress and any side effects, usually every week. You will be asked about your memory and it will be tested regularly.

ECT will usually be stopped soon after you have made a full recovery, or if you say you don't want to have it anymore and are well enough to understand this decision.

What happens after a course of ECT?

ECT is one part of getting better. It should also help you to begin or restart other treatments or types of support.

You will usually continue or start medication after ECT. This will help to maintain the improvements you have had from your ECT treatment.

ECT can sometimes be continued to help stop you from getting unwell again. This is especially the case if you have previously relapsed after a course of ECT. This is known as 'continuation' or 'maintenance' ECT, and is given less often, for example every 2-4 weeks.

Talking therapies such as CBT and counselling can help you to work on any reasons for your depression and to develop ways of staying well. Changes in your day-to-day lifestyle can also be helpful. These include taking regular exercise, eating well, developing a regular sleep pattern, and using techniques like mindfulness and meditation.

The ECT clinic or the psychiatrist who arranged the treatment will contact you to ask about your memory 2 months after your last treatment. If you are experiencing problems with your memory you can ask to be referred to a neuropsychologist or memory assessment service for detailed testing.

What are the side effects of ECT?

As with any treatment, ECT can have side effects.

Side effects are usually mild and short term but can sometimes be more severe and potentially long-lasting.

The risk of side effects is slightly increased if higher doses of stimulating pulses are needed, if you are a woman or if you are elderly.

If you experience side effects during a course of ECT, the treatment can be adjusted.

Short-term side effects

Immediately after ECT, you may experience:

- Headaches
- Aching in the muscles and/or jaw
- Tiredness while the effects of the anaesthetic wear off
- Confusion, particularly if you are elderly. This usually wears off after 30 minutes
- Sickness or nausea

A nurse will be with you while you wake up after ECT. They can also give you simple pain relief, like paracetamol.

Up to 40% of patients can have temporary memory problems while they are having ECT. For example, they may forget conversations with visitors during this time.

However, before having ECT about a fifth (17%) of people say that their memory was already bad enough to be causing them problems. It is difficult to separate out the effects ECT has on memory from the effects that the illnesses it is treating has on memory.

In most people, memory difficulties clear within two months of the last treatment and do not cause problems or distress.

All medical procedures carry risk. If the anaesthetist considers it unsafe to give you an anaesthetic, you will not be able to have ECT.

People who have been admitted to hospital because of depression are less likely to die after having ECT than if they do not have ECT. This could be because ECT helps people recover, or because people who are given ECT receive closer medical attention.

Very rarely, ECT can trigger a prolonged fit. This would be immediately treated by the medical staff present.

Long-term side effects

The extent of long-term side effects is controversial.

Rigorous scientific research has not found any evidence of physical brain damage in patients who have had ECT. There is no increased risk of epilepsy, stroke or dementia after ECT.

The most serious potential long-term side effect of ECT is that you might forget events from your past. A small number of patients report gaps in their memory about events in their life that happened before they had ECT. This tends to affect memories of events that occurred during, or shortly before, the depression started. Sometimes these memories return fully or partially, but sometimes these gaps can be permanent. Recent research suggests that 7% of people receiving unilateral ECT report some persistent memory loss 12 months after ECT.

What can happen if you don't have ECT?

You and your doctor will need to balance the risk of you experiencing side effects from ECT with the risk of you not having ECT. Not having ECT may mean that you are more likely to have:

- Prolonged and disabling mental illness
- Serious physical illness (and possibly death) from not eating or drinking
- An increased risk of death from suicide

Driving and ECT

If you are severely ill enough to need ECT you should not be driving. The DVLA advise that you should not drive during a course of ECT. After you have finished the course, it may be a little while before you can start driving again. The DVLA, with advice from your doctor, will make this decision.

If you have continuation or maintenance ECT to help keep you well you can normally continue to drive. However, you should not drive, ride a bike or operate heavy machinery for at least 48 hours after each ECT treatment.

Deciding about ECT

Consenting to having ECT

Like any significant treatment in medicine or surgery, you will be asked for your consent, or permission, to have ECT. The ECT treatment, the reasons for doing it and the possible benefits and side effects will be explained to you.

If you decide to go ahead, you will be given a consent form to sign. It is a record that ECT has been explained to you, that you understand what is going to happen, and that you give your consent to having it. Unless it is an emergency you will be given at least 24 hours to think about this and to discuss it with your relatives, friends or advisors.

You can withdraw your consent at any point, even just before the first treatment. You should be given information explaining your rights about consenting to treatment.

More information on giving consent to having ECT is available on the [Care Quality Commission \(CQC\) website](#).

Can you make your wishes about having ECT known in advance?

If you have feelings about ECT, either for or against, you should tell the doctors and nurses caring for you. You should also tell friends, family or anyone else you would like to support you or speak for you. Doctors must consider these views when they think about whether or not ECT is in your best interests.

If, when you are well, you are sure you would not want ECT if you were to become ill again, then you may want to write a statement of your wishes. This can be known

as an 'advance decision' in England, Northern Ireland and Wales, or an 'advance statement' in Scotland. These wishes should be followed except under very specific circumstances. This is a complicated topic and beyond the scope of this resource.

Some people who have previously been successfully treated with ECT have found it so helpful that they have recorded ahead of time that they want to have ECT if they become ill again, even if they say at the time that they do not want it.

Can ECT be given to you without your permission?

If someone has the 'capacity' to decide whether or not to have ECT, it cannot be given without their fully informed consent.

Some people become so unwell they are said to 'lack capacity' to make decisions about ECT. This means they cannot properly understand the nature, purpose or effects of the treatment, remember this information, or weigh up the pros and cons of having ECT.

There are laws in the UK that allow doctors to make decisions about giving ECT treatment to people in this situation. These come with legal safeguards to ensure treatment is only given if it is absolutely necessary.

This is the case for around half of people who receive ECT treatment. People who have ECT in this way do just as well as those who have been able to give consent.

When someone gets better and 'regains capacity' their consent must be sought again.

Further information about consent and ECT can be found on the [CQC website](#).

How is the quality of ECT in your hospital assessed?

The [ECT Accreditation Service \(ECTAS\)](#) is a voluntary network of mental health services in England, Wales and Northern Ireland that promotes best practice in ECT treatment. The network helps to improve quality of care by supporting ECT clinics to meet a set of agreed standards, such as on safety and legal issues.

The [Scottish ECT Accreditation Network \(SEAN\)](#) performs a similar function and covers every ECT service in Scotland.

ECTAS and SEAN are not the statutory regulators of ECT services. This is the responsibility of the Care Quality Commission in England, the Healthcare Inspectorate Wales in Wales, Healthcare Improvement Scotland in Scotland and the Regulation and Quality Improvement Authority in Northern Ireland.

Where can you get more information?

You can find out more information via the links below:

- [healthtalk.org resource on ECT](http://healthtalk.org/resource/on-ECT)
- [MIND information on ECT](#)
- [Rethink Mental Illness factsheet on ECT](#)

Further reading

National Institute for Health and Care Excellence (NICE)

- [Guidance on the use of electroconvulsive therapy. Technology appraisal guidance \[TA59\].](#)
- [Depression in adults: recognition and management. Clinical guideline \[CG90\].](#)
- [The use of electroconvulsive therapy: Understanding NICE guidance – information for service users, their advocates and carers, and the public \(PDF\).](#)
- [Scottish ECT Accreditation Network \(SEAN\)](#)
- [Electroconvulsive Therapy Accreditation Services \(ECTAS\)](#)

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