

# Electroconvulsive therapy (ECT)

This information is for anyone who is considering whether to have electroconvulsive therapy (ECT) – 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 the treatment
- deciding about having ECT treatment
- where to find further information.

## Disclaimer

This resource provides information, not advice.

The content in this resource is provided for general information only. It is not intended to, and does not, amount to advice which you should rely on. It is not in any way an alternative to specific advice. You must therefore obtain the relevant professional or specialist advice before taking, or refraining from, any action based on the information in this resource.

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## What is ECT and why is it used?

ECT is a treatment for some types of severe mental illness that have not responded to other treatments. An anaesthetic and muscle relaxant are given, and then an electric current is passed across your head. This causes a controlled fit, which typically lasts less than 90 seconds.

The anaesthetic means that you are asleep while this happens. The muscle relaxant reduces the movement of the fit. It is given as a course of treatments twice a week, typically for 3-8 weeks.

## What conditions can ECT be used for?

ECT is most commonly used for depression. 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.

ECT is not advised for the treatment of anxiety or most other psychiatric conditions. ECT can help symptoms of schizophrenia which has not improved with medication, but the long-term benefits are not known so it is not often used.

## When might your doctor suggest ECT?

It will usually be suggested if your condition:

- is life-threatening and you need a rapid improvement to save your life
- is either causing you immense suffering or is likely to get worse, so that a rapid improvement is needed
- has not responded to other treatments, such as medication and psychological therapy
- has responded well to ECT in the past.

## How effective is ECT?

Most people who have ECT see an improvement in their symptoms. In 2018-2019, around 68% of patients were “much-improved” or “very much improved” (1,361 courses out of a total of 2,004). Some patients saw no change in their condition and a small number (1%) felt worse.

## How does ECT work?

The effects of ECT gradually build with each treatment. It causes the release of certain brain chemicals. These 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. As with many medical treatments, we need more research to help us better understand 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.

There are two ways in which ECT is given: ‘bilateral’ and ‘unilateral’.

- In bilateral ECT, the current passes across your head, between your temples.

- In unilateral ECT, it passes between your right temple and the top of your head.

Bilateral ECT may work faster. Depending on the dose, unilateral ECT has less effect on memory.

You may wish to ask your doctor about which type of ECT would suit you better.

'Maintenance' ECT is occasionally used to help stop you becoming unwell again after a successful course of treatment. It is given less often but over a longer period of time than the first course.

## Can ECT be used for children or young people?

ECT is not used for children under the age of 11. It should only be used in a young person aged 11 to 18 as a treatment of last resort – if their illness is life-threatening or is severe and has not responded to other treatments. A formal, independent second opinion is always required before this can happen.

## What happens when you have ECT?

ECT is given in hospital. You will probably already be an inpatient in hospital, although some people do have ECT as day patients. As a day patient, a named, responsible, adult will have to accompany you to and from the ECT clinic.

The treatment will usually be done in a set of rooms called the "ECT suite", although some ECT services are based in an operating theatre. There should be 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 you with the process of waking up from the anaesthetic and during the time straight after the treatment.

If you have significant medical problems you may need to be treated in another hospital with more medical support.

## 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)
- blood tests
- a chest X-ray.

You must not eat or drink anything for 6 hours before the 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.

## What happens on the day of your ECT treatment?

- If you are an in-patient, 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). They will check that you are still willing to have ECT and will ask if you have any further questions.
- When ready, the ECT staff will take you into the treatment area.
- The anaesthetic staff will connect monitoring equipment to check your heart rate, blood pressure and oxygen levels. Staff will also connect you to an electroencephalogram (EEG) machine. This will monitor your brain waves as the treatment happens, so staff can measure the length of the ECT fit.
- You may be given oxygen to breathe through a mask. The anaesthetist will give your anaesthetic through an injection into the back of your hand. Once you are asleep, they will add a muscle relaxant. When you are asleep, a mouth guard is put in your mouth to protect your teeth.
- While you are asleep, two electrical pads about the size of a 50 pence piece are placed on your head. One goes on each side in bilateral ECT and both go on the same side in unilateral ECT. These are connected by wires to the ECT machine.
- The ECT machine delivers a series of brief electrical pulses, for three to eight seconds. This will make you have a controlled fit. Your body will stiffen and then there will be twitching, usually seen in your hands, feet, and face. The muscle relaxant reduces the amount of movement involved. This controlled fit usually lasts from less than 90 seconds
- The muscle relaxant wears off within a couple of minutes. The mouth guard will then be removed. As soon as the anaesthetist is happy that you are waking up, staff will take you through to the recovery area. Here, an experienced nurse will look after you until you are fully awake.
- When you wake up, you will be in the recovery room with a nurse. They 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 may not know quite where you are. After half an hour or so, these effects should have worn off.
- Most ECT units 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 around an hour.

**Before you leave the ECT suite, staff will advise you:**

- not to drink alcohol for 24 hours after each treatment
- to have a responsible adult with you all the time for the 24 hours following each ECT treatment
- to not sign any legal documents for at least 24 hours following each ECT treatment.

## How often and how many times is ECT given?

Usually, twice per 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, the total number of treatments you might have in a course is between 9 and 10, although it is common to have 12 treatments and more may sometimes be needed.

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

Your medical team will regularly review how you are responding to the ECT. They will discuss your progress – and any side effects or concerns – usually every week. ECT should 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 use (or start again with) 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.

Talking therapies – such as Psychotherapy, 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: taking regular exercise, eating better, a regular sleep pattern and using techniques like mindfulness and meditation.

The clinic will usually contact you to ask about your memory 2 months after your last treatment.

## How is the quality of ECT in my local hospital assessed?

The Royal College of Psychiatrists has set up the ECT Accreditation Service (ECTAS). This provides an independent assessment of the quality of ECT services. ECTAS sets standards for ECT and visits all the ECT units who are members. The visiting team involves a psychiatrist, anaesthetist, nurse, ECTAS patient representative, and a member of the ECTAS project team. Membership of ECTAS is not compulsory but almost all active ECT units are accredited. Your unit can tell you if they are accredited by ECTAS.

## What are the side effects of ECT?

As with any treatment, ECT can have side effects. These are affected by factors such as the level of the current being passed through the brain and your age.

Side effects are usually mild and short term but can sometimes be more severe and potentially long-lasting. If you experience side effects during the course, the treatment can be adjusted.

### Short-term side effects

Immediately after an ECT treatment, you may feel:

- Headache.
- 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.

About a fifth (17%) of people say that their memory was already causing them problems before they have ECT. This is often because of their depression. Directly after treatment, this figure increases to 23%; however, in most people, memory difficulties clear within two months of the last treatment and it do not cause problems or distress.

Nevertheless, about 2% of people complain of severe memory problems directly after ECT.

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.

All medical procedures carry risk; however, death caused by ECT is extremely rare. If the anaesthetist considers it unsafe to give you an anaesthetic, you will not be able to have ECT. The death rate following ECT is less than that for other minor surgical procedures.

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

### Long-term side effects

The extent of long-term side effects is controversial. Reports of these problems vary widely between studies, depending on how they are done.

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

Some patients do say that they have suffered brain damage and that they do have long-term side effects that have changed their lives. Testimony from user groups and observational studies have suggested that, after ECT, some people also experience a change in their personality, a loss of creativity, energy and/or drive, or lack of emotions.

However, ECT is only used when people are severely ill or other treatments have not worked, so it is difficult to separate out the effects of ECT from the effects of the illnesses it is treating. What is clear is that most people benefit from ECT treatment and a small number report some long-lasting side effects. We need more research to understand what is happening for those patients who are reporting distressing symptoms – and to find ways to help them.

## What can happen if you don't have ECT?

You and your doctor will need to look at the risks of side effects from the treatment with the risks, for you, of not having ECT. Not having the treatment 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.
- ECT can work when other treatments have failed. Some patients who have previously been successfully treated with ECT have found it so helpful that they have asked to have ECT if they become ill again.

## Driving and ECT

If you are severely ill enough to need ECT you should probably not be driving. The DVLA advise that you should not drive during a course of ECT and you (or your carer) may be asked to sign a form saying that you will not drive during a course of acute 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.

The situation is different if you have maintenance ECT. You can normally continue to drive but should not do so (or ride a bike or operate heavy machinery) for at least 48 hours after an ECT treatment.

## Deciding about ECT

### Giving consent 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 should be explained in a way that you can understand. If you decide to go ahead, you then sign the consent form. 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 it. However, you can withdraw your consent at any point, even before the first treatment. You should be given a leaflet explaining your rights about consenting to treatment.

### Can I make my wishes about having ECT known in advance?

If you have feelings about ECT (for or against), you should tell the doctors and nurses caring for you, as well as 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 become ill 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 area and beyond the scope of this leaflet.

### Can ECT be given to me without my permission?

Some people become so unwell they are said to 'lack capacity' to decide about ECT. This means they cannot properly understand the nature, purpose, or effects of the treatment. There are laws in the UK that allow doctors to decide about giving ECT treatment for people in this situation. These come with legal safeguards to ensure treatment is only given if it is really necessary.

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

## Where can I get more information?

[healthtalk.org](https://www.healthtalk.org) resource on ECT | [MIND](https://www.mind.org.uk) information on ECT | [Rethink Mental Illness](https://www.rethinkmentalillness.org) 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)

A site designed to complement the work of SEAN, by enabling communication of the latest information on ECT in Scotland.

### Electroconvulsive Therapy Accreditation Services (ECTAS)

Launched in May 2003, ECTAS aims to assure and improve the quality of the administration of ECT. It accredits clinics that meet the defined threshold of compliance with ECTAS standards.

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