



ECT Information Booklet





Introduction

Electroconvulsive therapy (ECT) is an evidence based treatment for some severe and persistent mental illnesses that is used in St Patrick's Mental Health Services in line with guidance from the Mental Health Commission.

The following organisations support the use of ECT:

- The Mental Health Commission
- The College of Psychiatry of Ireland
- The Royal College of Psychiatrists (UK)
- The National Institute for Health and Care Excellence (UK)
- The World Health Organisation



Electroconvulsive therapy (ECT) information booklet

What's inside?

GREEN PAGES

If you are unwell you may have difficulty concentrating. The pages in this booklet with the green colouring on the side are easy to read. Please ask your doctor or nurse to explain anything you need.

BLUE PAGES

When you feel a little better, you may be able to take in more information. The pages with the blue colouring on the side give more detailed information but require a little more effort.

RED PAGES

Often family, carers and people offered ECT treatment want more information. The pages with the red colouring on the side give detailed information about ECT in St Patrick's University Hospital and what we know from all the latest research on ECT (including our own). They have sources you can read if you want more information.

Inside this booklet you will find information on ECT in St Patrick's Mental Health Services. This is an addition to the discussion you have with your treating team, not a replacement. We can get an interpreter in most languages or sign language if you prefer, or you can speak to an advocate.



Our ECT Department

First, we want to show you our ECT department. It is bright, clean and staffed with friendly people.



Our waiting room is where people come just before they have ECT.

Private Treatment Room

ECT is carried out in our small, private treatment room.



Recovery Room

After ECT, you will be brought to the recovery room.



It is staffed by the same nurses each time, so they know you and care for you as you wake up.

Why has ECT been recommended for me?

Your doctor recommends ECT when:

You are suffering from depression or mania

AND

Many medications and therapies have not helped

OR

The side-effects of medications are too severe

OR

You have suicidal thoughts

OR

You are not eating or drinking properly

OR

You found ECT helpful in the past



What if I don't have ECT?

You might be in hospital for longer

OR

You might be unwell for longer

AND

If you are not eating you might develop medical problems

OR

If you have suicidal thoughts you could harm yourself

BUT

You will still get the same quality of care

AND

Your doctor will talk to you about other options

Is ECT Safe?

ECT is very medically safe and is not usually an unpleasant treatment. We check everyone before their first treatment.

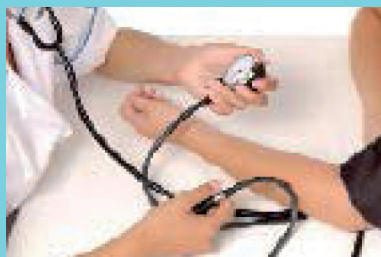


Blood tests



Heart monitoring

It is as safe to have ECT as it is to have a general anaesthetic for any other medical procedure.



Blood pressure

ECT is very safe because we check everybody is well enough to have their treatment.



Do I have to have ECT if my doctor tells me to?

NO. You can disagree with your doctor. It will not affect the care you receive. We will only give you ECT if we are sure you consent. If you wish to have treatment, you will be asked to sign a form like the one below.

This consent form is to make sure you understand the risks and benefits of treatment. The form is not a contract. Even after you sign the form you can stop treatment at any time.

SECTION 3 - ECT CONSENT FORM

1. I agree to undergo a course of ECT treatment and I have discussed the following with my Consultant / Registrar ☐ **(You Must Tick the Boxes as Appropriate)**
 - i) The nature of ECT treatment and description of the process of ECT treatment (including anaesthesia and muscle relaxation) ☐
 - ii) The risks, benefit and side-effects of treatment ☐
 - iii) The availability of other treatments and the risk / benefit of those ☐
 - iv) I have had an opportunity to ask questions about the treatment and these have been answered ☐
 - v) I understand and believe the broad consequences of not receiving ECT ☐
 - vi) I am aware that ECT has been prescribed within ☐ outside ☐ NICE guidelines
2. I confirm:
 - i) I have read the **PATIENT INFORMATION BOOKLET** and understand the risks, including dental risks, involved in having ECT treatment ☐
 - ii) I have had 24 hours, subject to the urgency of the clinical circumstances, to make a decision regarding treatment and have had time to discuss treatment with family and/or a representative should I so wish ☐
3. I understand that:
 - i) I may withdraw my consent at any time during the treatment duration ☐
 - ii) confidential data relating to this treatment may be reviewed as part of a routine clinical audit or Research Ethics Committee Approved Research ☐
4. I understand that the maximum number of treatments in this course of ECT is **12** and that my consent will be checked for each treatment. ☐
5. I have discussed whether the treatment will be unilateral or bilateral with my Consultant Psychiatrist and the treatment will be: **Unilateral** ☐ **Bilateral** ☐
6. Patient's signature: _____ Date: _____
7. Witness name: _____; Witness signature: _____; Date: _____
8. I have examined this patient and established that he/she is competent to give consent for ECT. ☐
 Consultants Signature: _____ Date: _____
9. **STATEMENT FOR INTERPRETOR (DOCTOR PLEASE TICK):**
1. N/A (NOT APPLICABLE): _____ **2. ATTACHED:** _____

The Consent Form

You will be asked to sign a form like the one pictured here every time you have ECT so we can be sure you want to have the next treatment.

Each time you come into the ECT department we ask you again whether you want to have this treatment, just to make sure.

Capacity to consent

Rarely, mental illnesses can be so severe that people are unable to make healthcare decisions for themselves. People who have done well with ECT in the past or who have a life-threatening illness might be treated with ECT even if they can't sign the consent forms.

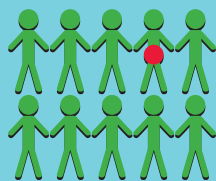
These people are in hospital under the Mental Health Act and must be assessed by two separate consultant psychiatrists before they have ECT.

While in hospital they are also assessed by the Mental Health Commission. People who enter hospital willingly and who can make their own decisions are never treated against their will.

We advocate for new and better laws to protect people who cannot consent to treatment and make sure those who need treatment the most cannot be denied help.

What are the possible side-effects?

Some people have physical side effects after ECT. The most common ones are:



Occasionally, people become nauseated after ECT. We treat this by giving anti-sickness drugs right away, and before the next treatment.



Occasionally, people develop a headache after ECT. We treat headache with paracetamol and it usually goes away quickly.



Muscle soreness usually only happens after the first treatment. It is due to the muscle relaxing medicines we use. Some people have a little bruising at the site of their anaesthetic injection. If you have caps or crowns on your teeth these can be damaged or loosened - please tell us about these before your treatment.

This happens rarely, we take good care!

On the day of ECT (Tuesday & Friday):

Nearly everybody is sleepy and confused when they wake up after ECT. You may not know where you are at first, but you wake up properly after about 15 minutes. Some people don't remember the day of the ECT treatment, or that morning.

Days between ECT treatments:

You may find it hard to learn new facts or remember new events that occur during your course of ECT. This ability usually returns to normal about 2 weeks after the end of ECT. In fact, your memory may actually be better once your mental health is better.

After ECT:

Some people also have trouble remembering things that happened long before they had ECT, and for a minority of people this persists after finishing treatment.

A general anaesthetic means you are asleep and you do not remember anything. Very rarely (1 in 10,000), some people have an allergy to an anaesthetic. It is important you tell us if you or anyone in your family has had difficulties with anaesthetics.

Very rarely, people develop a very high temperature during anaesthesia. This is serious but treatable. Anaesthesia is now very safe and death is very rare (five deaths per million anaesthetics). You can find more information here: <http://www.rcoa.ac.uk/node/1847>

Before ECT:

You must fast from midnight the night before, just like before any general anaesthetic. The nurse may give you some of your regular medications before you come to the ECT suite. Please try not to smoke on the morning of ECT.

After ECT:

You will have to stay in hospital overnight. For 24 hours after ECT:

- **Make sure someone is with you**
- **Do not drive**
- **Do not operate machinery**
- **Do not drink alcohol**

After you decide to go ahead with treatment, you can decide which type of ECT to have. Some people have bilateral ECT (2-sided). Some people have unilateral ECT (1-sided).

In bilateral ECT, electricity is passed from one side of the brain to the other. In unilateral ECT, electricity is passed through just one side of the brain. Both forms of ECT are just as effective. Unilateral ECT causes less memory side-effects. You may need your doctor's help in deciding.

We recommend unilateral ECT for most people. You can switch from unilateral to bilateral ECT if needed.

How often will I have ECT?

We give ECT on Tuesday and Friday mornings. We recommend people have treatments until they are completely better or stop seeing an improvement. On average people have 8 treatments but may need 12.

It may take up to 4 to 6 treatments before you begin to see an improvement.



You can keep track of your treatments by ticking off the boxes below:

Monday	Tuesday	<input type="checkbox"/>	Wednesday	Thursday	Friday	<input type="checkbox"/>
Monday	Tuesday	<input type="checkbox"/>	Wednesday	Thursday	Friday	<input type="checkbox"/>
Monday	Tuesday	<input type="checkbox"/>	Wednesday	Thursday	Friday	<input type="checkbox"/>
Monday	Tuesday	<input type="checkbox"/>	Wednesday	Thursday	Friday	<input type="checkbox"/>
Monday	Tuesday	<input type="checkbox"/>	Wednesday	Thursday	Friday	<input type="checkbox"/>
Monday	Tuesday	<input type="checkbox"/>	Wednesday	Thursday	Friday	<input type="checkbox"/>

What will happen during ECT?

1. Please wear loose comfortable clothes and remove nail varnish from at least one hand.
2. You walk to ECT with a nurse and lie on a hospital trolley.
3. The Anaesthetist places a drip in the back of the hand - this involves a needle.
4. The nurse places stickers on your chest to monitor your heart and may take off your glasses to mind them.
5. The nurse places stickers on your forehead and behind your ear to monitor brain waves.
6. You have a blood pressure reading taken.
7. The Anaesthetist gives you an anaesthetic and you go off to sleep.
8. The Anaesthetist gives you a medication to relax your muscles: you are asleep for this.
9. A small amount of electricity is passed through your brain: you are asleep for this.
10. You have a controlled "seizure" or "fit" but...
11. You actually move very little.
12. The seizure lasts about 30- 40 seconds.
13. You wake up after a few minutes.
14. When you are fully awake you can go back to the ward with a nurse and have a light breakfast.

How do I know ECT is done properly in St Patrick's?

Our ECT department undergoes an annual inspection by the Mental Health Commission and regular external review by the Royal College of Psychiatrists' ECT Accreditation Service (ECTAS). St Patrick's performs more ECT than any other centre in the Republic of Ireland. This is because we are the largest treating centre in Ireland. We are also involved in teaching other psychiatrists and centres.

The team in St Patrick's is involved in research and development of ECT so that all patients can receive better treatment with less side effects. You can read the Research section of this book for more details.

When unwell it can be difficult to remember questions you want to ask. Use these pages to write down any questions you have for your team.



Why has ECT been recommended for me?

In depression or mania, ECT is recommended for people who do not respond to antidepressant or antimanic medications or possibly psychotherapy. ECT works faster than antidepressant medications and may be used where a very rapid response is needed if a person is suicidal or not eating.

ECT also works where medications have been unsuccessful. After several failed trials of medication, ECT can still be successful in 45-65% of people, causing complete or nearly complete relief from symptoms of depression.

In catatonia, ECT brings rapid recovery when people are very severely unwell, not eating or drinking, perhaps unable to take medications and on the brink of death. After several antidepressant medications have been tried, the chances of responding to the next drug is only 20-30% at best. The chances of responding to ECT are 45-65%.

Is ECT Safe?

ECT is very medically safe. People referred for ECT have a thorough medical assessment including ECG, several blood tests (kidney profile, full blood count) and often a chest x-ray.

If people have a serious underlying medical condition they will also have an additional medical review. The main physical impact of ECT is the anaesthetic, so we take great care to make sure patients are fit. If you have ever had a reaction to an anaesthetic medicine it is very important for you to let us know.

Because of the care we take, people of all ages (19-94) have treatment with ECT very safely in St Patrick's.



What if I don't have ECT?

If your team recommend ECT for illness that is not responding to other treatment it may take several more trials of medication or talking therapy in order to get you well.

This may mean you stay unwell for longer than necessary or that you are more unwell than you might have been if you had had ECT. Treatment may take months rather than weeks.

If your team is so concerned about your mental state that they have recommended ECT for a rapid response, then you may be at risk of medical complications or even harming yourself.

Your team weighs the risks against the benefits of ECT before discussing ECT with you or recommending treatment. If you really don't want to have ECT, it will not affect your relationship with your doctor or any other hospital staff. It's your health and your decision.

However, we would like you to make an informed choice about ECT after discussing the best medical evidence with your team.

Which type of ECT?

- **Some people have bilateral ECT (2-sided)**
- **Some people have unilateral ECT (1-sided)**

Unilateral ECT was developed to reduce the memory side effects of ECT. Unilateral ECT as used here is just as effective as bilateral ECT, and causes less memory side effects.

We recommend unilateral ECT for most patients. You may need your doctor's help in deciding which type of treatment to have.

Some people choose to have bilateral ECT. If people have memory side-effects they can switch to unilateral ECT.

How many treatments should I have?

We advise teams and patients that the aim of ECT is to get rid of all possible signs of depression or mania. So, people should continue to have treatment until they stop improving, or until they are completely symptom free.

In St Patrick's, ECT is given on Tuesday and Friday mornings. To get completely well: Half of all people need 6-8 treatments. Half of all people need 8-12 treatments. Very few people see any improvement in their mood until they have had 4-6 treatments.



What happens during ECT?

1. Please wear loose comfortable clothes to come to ECT and remove nail varnish from at least one hand.
2. You walk to ECT with a nurse and lie on a hospital trolley.
3. The Anaesthetist places a drip in the back of the hand - this involves a needle.
4. The nurse places stickers on your chest to monitor your heart - the ECG.
5. The nurse places stickers on your forehead and behind your ear to monitor your brain waves - the EEG.
6. You have a blood pressure reading taken.
7. The Anaesthetist gives you an anaesthetic and you go off to sleep.
8. The Anaesthetist gives you a medication to relax your muscles: you are asleep.
9. A small amount of electricity is passed through your brain: you are asleep.
10. You have a controlled "seizure" or "fit" but...
11. You actually move very little.
12. The seizure lasts 30-40 seconds.
13. You have another blood pressure reading.
14. You wake up after a few minutes.

What happens in the recovery room?

Once in the Recovery Room you come under the care of the Recovery Nurses. When you wake up you may have a plastic airway in your mouth that you will be asked to spit out. You will have an oxygen mask on and be receiving oxygen. You will still be attached to a blood pressure, pulse and oxygen monitor.

You may feel disorientated and confused initially, but this will pass. The nurses will be with you and assist you as necessary, making sure you are as comfortable as possible.

As you recover you will be asked various questions to check how awake you are and that you are recovering satisfactorily from the treatment. Once the Anaesthetist is happy that you are recovered you will be accompanied back to your ward.

It is important that you rest following your treatment. Remember, you have had a General Anaesthetic. You will be given a light breakfast on returning to your ward. The whole process usually takes around an hour.



What are the possible side effects?

Some people have physical side-effects. The most common are nausea (10%), headache (30%) and muscle stiffness (5%). Muscle stiffness occurs after the first ECT due to the muscle-relaxing agents we use. Nausea and headache can be treated with the right medications (ondansetron, paracetamol) the first time they happen, and we give preventative treatment before the next ECT.

We check with you immediately after ECT whether you are suffering any side-effects. If you have a history of migraine, please tell us. We can give you medicine before treatment to prevent any prolonged headache.

Some people have very high blood pressure and a fast heartbeat during ECT. Usually they require no intervention. However, sometimes they require a medication to lower the blood pressure. Anyone who already has high blood pressure needs to have it well controlled before ECT. Anyone who has had a recent heart attack or a stroke will be very closely monitored before and during ECT.

On the day of ECT (Tuesday & Friday):

Nearly everybody is sleepy and confused when they wake up after ECT, but you wake up properly after about 15 minutes. Some people don't remember the day of the ECT treatment, or that morning.

Days between ECT treatments:

You may find it hard to learn new facts or remember new events that occur during your course of ECT. This ability usually returns to normal about 2 weeks after the end of ECT.

After the end of your ECT course:

Some people also have trouble remembering things that happened long before they had ECT, and for a minority of people this persists after finishing treatment. If you need to have ECT again in the future, there is no evidence you will have increasingly more memory problems.

What are the possible side effects?

There are common and uncommon side effects and complications of anaesthesia. Your risk depends on your general health:

Very common (1 in 10):

Nausea can be treated with medications before and after ECT. Muscle stiffness usually passes after the first treatment. Bruising at the site of an injection is common but passes quickly. Sore throat, dizziness and itching can also occur.

Common (1 in 100):

Damage to decayed, loose or capped or crowned teeth can sometimes happen. A soft tooth protector is always used to prevent any damage.

Uncommon (1 in 1000):

A chest infection is more likely in those who smoke but could occur in anyone. We would like people not to smoke for as long as possible before ECT. It is possible that medical conditions you have before ECT may be worsened by the anaesthetic.

Rare (1 in 10,000):

A serious allergy to the anaesthetics we use is exceedingly rare but can occur.

Very Rare:

Prolonged muscular weakness can be caused by a variation in blood chemistry which occurs in a small number of families. It is important to tell us if you or anyone else has had problems with anaesthetics. A very high temperature can occur and is very serious, but can be treated.

It is very rare for people to die during anaesthesia (five deaths per million anaesthetics). We prevent this by making sure everyone is fit for anaesthesia before they even enter the department.

After ECT

You will stay in hospital overnight after your ECT treatment.

For 24 hours following treatment:

- Make sure someone is with you
- Do not drive
- Do not operate machinery
- Do not drink alcohol

After the end of your ECT course:

You can expect your memory to be poor for a few weeks. For a minority of people this persists for longer. ECT may also affect your ability to make sensible judgements.

It may be difficult to remember new facts or events. For these reasons we would advise you to avoid making any major life decisions or signing legal papers in the couple of weeks after ECT. This is good advice while you are unwell anyway. For most people, the memory side-effects of ECT pass about 2 weeks after ECT, according to the best research.

Can I drive during ECT?

No - You should not drive during the course of ECT. This is because we know that ECT can affect decision making. If going on overnight or weekend leave you should make arrangements to be collected. Your car insurance may not pay out if you have an accident, so you should stick to this until ready to drive again.



Making your decision

You may have heard about ECT before you came to hospital. Some people have positive opinions and some people have negative opinions, just as with everything. However, the best treatment comes from decisions based on good quality scientific evidence after consulting with the multidisciplinary team rather than decisions based on opinion alone.

We decide with you which treatment to use after listening to you, explaining the best evidence available to you and discussing the options with you and the team.

There is very good evidence to support the use of ECT in depression, mania and catatonia. ECT has been found to be stronger than medications or “sham ECT” in clinical trials including hundreds of people. If people give opinions about ECT which make you uneasy or which contradict something you may have been told before, it is often useful to ask them on what evidence that opinion is based.

Previously many people had ECT who would not now be prescribed the treatment. This is because we know better now which conditions are best treated with ECT and which with medications or psychotherapy. ECT was developed in a time when there were no other treatments.

We are fortunate enough now that there are many effective treatments in psychiatry. ECT is used here for Depression, Mania and Catatonia. If it is used outside these guidelines you must have a second opinion, as in the hospital's policies.

I am not an inpatient - what's different?

Outpatient ECT is only provided to people who live in nursing homes. We do not otherwise routinely offer outpatient ECT.

I am having maintenance ECT - what's different?

Maintenance ECT refers to treatment with ECT that happens less often but goes on for longer. Most people having maintenance ECT have treatment once every few weeks. However, their treatment may continue for months or years. Usually this is suggested for people who have not been able to stay well and out of hospital on medications alone.

Most people who have maintenance ECT have a regular course of ECT first (twice-per-week). They may then go on to have treatment once per week. If this keeps them well they can come less frequently, sometimes as little as once a month. Usually individuals work it out with their doctors. We aim to be flexible and give you the best treatment possible.

We know that maintenance ECT works at least as well as medications and is very effective at keeping people well. We know that it doesn't cause as many memory difficulties as twice-per-week treatment and there is no evidence of more memory problems with long-term maintenance treatment.



How does ECT work?

As with many medical treatments, we don't know every chemical change that occurs during ECT, but we do know a lot about the things necessary for ECT to have a powerful effect. Our experience is that for the right patient ECT can be life-saving.

Certain things are very important. A seizure is necessary for the treatment to have any effect at all. However, a seizure is not enough. The brain must be stimulated with enough electrical energy and in the right areas to have a good effect on depression.

In what ways does this happen?

Studying human brains is very difficult, but we know that when depressed animals have ECT their brain makes new connections between existing nerve cells.

These connections may have been thinned by depression or mania. So ECT may work by reversing these losses.

How do I know ECT is done properly in St Patrick's?

Our ECT department undergoes an annual inspection by the Mental Health Commission and regular external review by the Royal College of Psychiatrists' ECT Accreditation Service (ECTAS). St Patrick's performs more ECT than any other centre in the Republic of Ireland. This is because we are the largest treating centre in Ireland. We are also involved in teaching other psychiatrists and centres.

The team in St Patrick's is involved in research and development of ECT so that all patients can receive better treatment with less side effects. You can read the Research section of this book for more details.

Research

In St Patrick's we are constantly trying to provide a better service which meets the needs of the people we treat. We believe every treatment should provide the maximum benefit with the minimum of risk. So we are involved in research on ECT.

Our aims are:

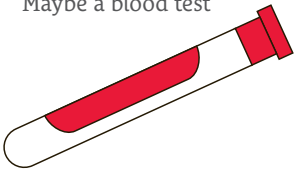
1. To increase the benefit people receive from ECT treatment
2. To reduce the side effects people experience
3. To develop blood markers for illnesses that will help us identify people at risk, or people who respond more quickly to certain treatments
4. To discover the underlying causes of mental illness

In order to make these discoveries we do many types of research. You may be asked to take part in our research while in hospital. If this happens you have not been singled out. Many people will be asked to take part.

You do not have to take part. It will not affect your care if you don't. However we value the efforts of everyone who tries to help other people with an illness, even though they themselves are unwell.

Maybe just answering a few questions.

Maybe a blood test



We will discuss individual research projects with individual patients.

Want to know more?

St Patrick's Mental Health Services treats people from all over the country with ECT. We are the largest single treating centre in Ireland.

We treat between 100 and 150 people per year. Some of these are referred from other hospitals, often in the HSE, where there is no facility for ECT. Consultants here do not "more easily" prescribe ECT than in other university hospitals.

Research on ECT has shown that several factors are important in recovery. However we are still unable to predict exactly who will benefit from ECT, except to say that up to 70% of people get very well with the treatment.

Getting well with ECT does not cure depression for life. People who have one episode of depression are at a high risk of having another. However, ECT is the most powerful treatment to get people well.



The way we think of ECT

In ancient Greece the myth of Sisyphus was told.

Sisyphus was punished by the gods for his evil deeds. They sentenced him to roll a huge rock up a hill. When he was finished each time the rock would roll down, condemning him to start again. Depression can be a lot like this. Every time we feel a little bit better, we have a setback, and it seems we will never get fully well again.

ECT is great at getting people well, but once they get well, they must do all the other health-promoting activities to stay well. Exercise, diet, sleep and social supports are all vital in the battle to stay well. Most people will need support from medication, at least in the short term.

ECT is great at getting the rock to the top of the hill, but we need other things to cement it in place!

Remember if you have had a severe episode of illness it may take you weeks or months to recover. Recovery is not just about feeling 'ok.' You must get back to your activities, regain your independence and repair your relationships in order to be fully well.

Websites giving good quality information about ECT

The College of Psychiatrists of Ireland

http://www.irishpsychiatry.ie/Libraries/External_Affairs/Position_Statement_on_ECT_September_2011.sflb.ashx

The Royal College of Psychiatrists (UK)

<http://www.rcpsych.ac.uk/mentalhealthinfoforall/treatments/ect.aspx>

The Mayo Clinic (USA)

<http://www.mayoclinic.org/diseases-conditions/depression/multimedia/electroconvulsive-therapy/vid-20084705>

Up-to-Date (Patient Information)

<http://www.uptodate.com/contents/electroconvulsive-therapy-ectbeyond-the-basics#H1>

Sherwin Nuland speaks about his own treatment with ECT

http://www.ted.com/talks/sherwin_nuland_on_electroshock_therapy

MHC Code of Practice on the Use of Electro-Convulsive Therapy for Voluntary Patients

http://www.mhcirl.ie/for_H_Prof/codemha2001/Use_of_ECT_for_Voluntary_Patients/

The MHC Rules Governing the Use of Electro-Convulsive Therapy

http://www.mhcirl.ie/for_H_Prof/Mental_Health_Commission_Rules/Electro-Convulsive_Therapy/



Books mentioning or discussing ECT

“Unbroken”

by Beverly Callard, (2010) published by Hodder & Stoughton.

“Electroboy: A memoir of mania”

by Andy Behrman, (2002) published by Random House Inc.

“Shock: The healing power of electroconvulsive therapy”,

by Kitty Dukakis, (2006) published by Avery New York. (Also available as a DVD).

“Undercurrents: A life beneath the surface”,

by Martha Manning, (1996) published by Harper San Francisco.

“Shock therapy: a history of electroconvulsive treatment in mental illness”,

by Edward Shorter and David Healy (2010), published by Rutgers University Press.

“Struck by Living”,

by Julie K. Hersh, (2010) published by Green Leaf Book Group.

“Will I ever be the same again?”,

by Carol A. Kivler, (2010) published by Three Gem Publishing.

Our own research

Semkovska M, Landau S, Dunne R, Kolshus E, Kavanagh A, Jelovac A, Noone M, Carton M, Lambe S, McHugh C, McLoughlin DM (2016)

Bitemporal versus high-dose unilateral twice-weekly electroconvulsive therapy for depression (EFFECT-Dep): a pragmatic, randomised, non-inferiority trial. Am J Psychiatry Feb 19;appiajp201515030372. [Epub ahead of print].

Allen AP, Naughton M, Dowling J, Walsh A, Ismail F, Shorten G, Scott L, McLoughlin DM, Cryan JF, Dinan TG, Clarke G (2015)

Serum BDNF as a peripheral biomarker of treatment-resistant depression and the rapid antidepressant response: a comparison of ketamine and ECT. J Affect Disord Nov; 186: 306-311.

Jelovac A, O'Connor S, McCarron S, McLoughlin DM (2015)

Autobiographical memory specificity in major depression treated with electroconvulsive therapy. J ECT Aug 6. [Epub ahead of print]

O'Donovan SM, O'Mara S, Dunn MJ, McLoughlin DM (2014)

The persisting effects of electroconvulsive stimulation on the hippocampal proteome. Brain Research 1593C: 106-116.

Glaviano A, O'Donovan SM, Ryan KM, O'Mara S, Dunn MJ, McLoughlin DM (2014)

Acute phase plasma proteins are altered by electroconvulsive stimulation. J Psychopharmacol Dec;28(12):1125-34.

O'Donovan S, Dalton V, Harkin A, McLoughlin DM (2014)

Effects of brief pulse and ultrabrief pulse electroconvulsive stimulation on rodent brain and behaviour in the corticosterone model of depression. Int J Neuropsychopharmacol 17(9):1477-86.



Lambe S, Mogg A, Eranti A, Pluck G, Hastilow S, McLoughlin DM (2014)

Trends in use of electroconvulsive therapy in South London from 1949 to 2006. J ECT Dec;30(4):309-14

Jelovac A, Kolshus E, McLoughlin DM (2013)

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Notes



Notes



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