

# The Medical Model

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The medical model of mental illness treats mental disorders in the same way as a broken arm, i.e. there is thought to be a physical cause. This model has been adopted by psychiatrists rather than psychologists.

Supporters of the medical model consequently consider symptoms to be outward signs of the inner physical disorder and believe that if symptoms are grouped together and classified into a 'syndrome' the true cause can eventually be discovered and appropriate physical treatment administered.

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## Assumptions

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- The biological approach to psychopathology believes that disorders have an organic or physical cause. The focus of this approach is on genetics, neurotransmitters, neurophysiology, neuroanatomy etc. The approach argues that mental disorders are related to the physical structure and functioning of the brain.
- Behaviors such as hallucinations are 'symptoms' of mental illness as are suicidal ideas or extreme fears such as phobias about snakes and so on. Different illnesses can be identified as 'syndromes', clusters of symptoms that go together and are caused by the illness.
- These symptoms lead the psychiatrist to make a 'diagnosis' for example 'this patient is suffering from a severe psychosis, he is suffering from the medical condition we call schizophrenia'.

What is happening here? The doctor makes a judgement of the patient's behavior, usually in a clinical interview after a relative or general practitioner has asked for an assessment. The doctor will judge that the 'patient' is exhibiting abnormal behavior by asking questions and observing the patient.

Judgement will also be influenced heavily by what the relatives and others near to the patient say and the context – is mental illness more likely to be diagnosed in a mental hospital.

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## Diagnostic Criteria

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In psychiatry the psychiatrist must be able to validly and reliably diagnose different mental illnesses.

The first systematic attempt to do this was by Emil Kraepelin who published the first

recognized textbook on psychiatry in 1883. Kraepelin claimed that certain groups of symptoms occur together sufficiently frequently for them to be called a disease. He regarded each mental illness as a distinct type and set out to describe its origins, symptoms, course and outcomes.

Kraepelin's work is the basis of modern classification systems. The two most important are:

1. **The Diagnostic and Statistical Manual of Mental Disorders (DSM).** This is the classification system used by the American Psychiatric Association. The first version (DSM 1) was published in 1952. The latest version is DSM V published in 2013.
2. **The International Classification of Diseases (ICD).** This is published by The World Health Organisation. Mental disorders were included for the first time in 1948 (ICD 6). The current version is ICD 10 published in 1992.

In order to diagnose someone you would usually need some/all of the following:

- Clinical interview
- Careful observation of behavior, mood states, etc.
- Medical records
- Psychometric tests

On the basis of the diagnosis, the psychiatrist will prescribe treatment such as drugs, psychosurgery or electroconvulsive therapy. However, since the 1970s psychiatrists have predominantly treated mental illnesses using drugs.

However, studies have shown that diagnosis is not a reliable tool. Rosenhan (1973) conducted an experiment where the aim was to see whether psychiatrists could reliably distinguish between people who were mentally ill and those who were not.

The study consists of two conditions from which in one the hospital were informed that patients will be coming that are not actually mentally ill when in fact no patients were sent at all. In this condition the psychiatrists only diagnosed 41 out of 193 patients as being mentally ill when in reality all patients were mentally ill.

In the other conditions, 8 people were told to report at the hospital that they hear noises in their head. As soon as they were administered, they behaved normally. The doctors in this condition still classified these patients as insane, with a case of dormant schizophrenia.

Rosenhan concluded that no psychiatrist can easily diagnose the sane from insane. Though Rosenhan delivered a very accurate report on diagnoses of patients, Rosenhan was criticised for deceiving the hospital for claiming that sane patients were being sent over, though none were actually sent.

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## Schizophrenia

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The main biological explanations of schizophrenia are as follows:

- Genetics – there is considerable evidence of a genetic predisposition to develop schizophrenia.
  - Biochemistry – the dopamine hypothesis argues that elevated levels of dopamine are related to symptoms of schizophrenia.
  - Neuroanatomy – differences in brain structure (abnormalities in the frontal and pre-frontal cortex, enlarged ventricles) have been identified in people with schizophrenia.
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## Depression

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The main biological explanations of depression are as follows:

- Genetic – there is considerable evidence that the predisposition to develop depression is inherited.
  - Biochemistry, e.g. Amine hypothesis – low levels of mono amines predominantly noradrenaline and serotonin.
  - Neuroanatomy – damage to amine pathways in post-stroke patients.
  - Neuroendocrine (hormonal) factors – the importance of stress hormones (e.g. cortisol) and over activity of the HPA axis which is responsible for the stress response.
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## OCD

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The main biological explanations of OCD are as follows:

- Genetic – there is some evidence of a tendency to inherit OCD, with a gene (Sapap3) recently identified.
  - Biochemistry – serotonin deficiency has been implicated.
  - Neuroanatomy – dysfunctions of the orbital frontal cortex ( OFC ) over-activity in basal ganglia and caudate-nucleus thalamus have been proposed .
  - Evolutionary – adaptive advantages of hoarding, grooming, etc.
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## Drug Treatment

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The film *one flew over the cuckoos nest* demonstrates the way in which drugs are handed out like smarties merely to keep the patients subdued.

Note also in the film that the same type of drug is given to every patient with no regard for the individual's case history or symptoms; the aim is merely to drug them up to the eye balls to shut them up!

The main drugs used in the treatment of **depression**, anxiety and OCD are mono-amine oxidase inhibitors (MAOIs), tricyclic antidepressants and selective serotonin reuptake inhibitors (SSRIs).



Antipsychotic drugs can be used to treat **schizophrenia** by blocking d2 (dopamine) receptors. There are different generations of antipsychotics:

1. Typical antipsychotics – eg chlorpromazine, block d2 receptors in several brain areas.
2. Less typical antipsychotics – eg pimozide, often used as a last resort when other drugs have failed.
3. Atypical antipsychotics – eg risperidone. Some atypicals also block serotonin receptors.

## Effectiveness

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- Anti psychotics have long been established as a relatively cheap, effective treatment, which rapidly reduce symptoms and enable many people to live relatively normal lives (Van Putten, 1981).
- Relapse is likely when drugs are discontinued.
- Drug treatment is usually superior to no treatment.
- Between 50 – 65% of patients benefit from drug treatments.

## Appropriateness

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- Drugs do not deal with the cause of the problem, they only reduce the symptoms.
- Anti psychotics produce a range of side effects including motor tremors and weight gain. These lead a proportion of patients to discontinue treatment.

- Patients often welcome drug therapy, as it is quicker, easier and less threatening than talk therapy.
- Some drugs cause dependency.
- Ethical issues including informed consent, and the dehumanizing effects of some treatments.

Type of Drug	Treats	Side Effects
Anti Depressants	Obsessions, social phobias.	Kidney poisoning, brain haemorrhage.
Major Tranquillizers	Revolutionalised psychiatry in the 1950's, allowed schizophrenia sufferers to live independently.	Dry mouth, blurred vision, low blood pressure, muscle trembling.
Minor Tranquillizers	Anxiety (depress the nervous system. Valium is most famous.	G.P's can prescribe minor tranquilisers and can simply keep making repeat prescriptions which leads patients to become reliant on the drug and prevents them from facing up to their probs.

## Electro Convulsive Therapy (ECT)

Electro Convulsive Therapy (ECT) began in the 1930's after it was noticed that when cows are executed by electric shocks they appear to convulse as if they are having an epileptic shock.

The idea was extrapolated to humans as a treatment for schizophrenia on the theoretical basis that nobody can have schizophrenia and epilepsy together, so if epilepsy is induced by electric shock the schizophrenic symptoms will be forced into submission!

ECT was used historically but was largely abandoned as a treatment for schizophrenia after the discovery of the antipsychotic drugs in the 1950s but has recently been re-introduced in the USA. In the UK, the use of ECT is not recommended by NICE except in very particular cases (mainly for catatonic schizophrenia). However, it is sometimes used as a last resort for treating severe depression.

ECT can be either unilateral (electrode on one temple) or bilateral (electrodes on both temples).

The **procedure for administering ECT** involves the patient receiving a short acting anaesthetic and muscle relaxant before the shock is administered. Oxygen is also administered. Small amount of current (about 0.6 amps)

passed through the brain lasting for about half a second. The resulting seizure lasts for about a minute. ECT is usually given three times a week for up to 5 weeks.

ECT should only be used when all else fails! Many argue that this is sufficient justification for its use, especially if it prevents suicide. ECT is generally used in severely depressed patients for whom psychotherapy and medication have proven to be ineffective. It can also be used for those who suffer from schizophrenia and manic depression. However, Sackheim et al. (1993) found that there was a high relapse rate within a year suggesting that relief was temporary and not a cure.

There are many critics of this extreme form of treatment, especially of its uncontrolled and unwarranted use in many large, under staffed mental institutions where it may be used simply to make patients docile and manageable or as a punishment (Breggin 1979).

ECT side effects include impaired language and memory as well as loss of self esteem due to not being able to remember important personal facts or perform routine tasks.

ECT is a controversial treatment, not least because the people who use it are still unsure of how it works - a comparison has been drawn with kicking the side of the television set to make it work.

There is a debate on the ethics of using ECT, primarily because it often takes place without the consent of the individual and we don't know how it works!

**There are three theories as to how ECT may work:**

1. The shock literally shocks the person out of their illness as it is regarded as a punishment for the inappropriate behavior.
2. Biochemical changes take place in the brain following the shocks which stimulate particular neurotransmitters.
3. The associated memory loss following shock allows the person to start afresh. They literally forget they were depressed or suffering from schizophrenia.

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## Psychosurgery

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As a last result when drugs and ECT have apparently failed psychosurgery is an option. This basically involves either cutting out brain nerve fibres or burning parts of the nerves that are thought to be involved in the disorder (when the patient is conscious).

The most common form of psychosurgery is a prefrontal lobotomy.



Unfortunately these operations have a nasty tendency to leave the patient vegetablized or 'numb' with a flat personality, shuffling movements etc. due to their inaccuracy. Moniz 'discovered' the lobotomy in 1935 after successfully snatching out bits of chimps' brains.



It didn't take long for him to get the message that his revolutionary treatment was not so perfect; in 1944 a rather dissatisfied patient called his name in the street and shot him in the spine, paralysing him for life! As a consolation he received the Nobel prize for his contribution to science in 1949.

Surgery is used only as a last resort, where the patient has failed to respond to other forms of treatment and their disorder is very severe. This is because all surgery is risky and the effects of neurosurgery can be unpredictable. Also, there may be no benefit to the patient and the effects are irreversible.

Psychosurgery has scarcely been used as a treatment for schizophrenia since the early 1970's when it was replaced by drug treatment.

### There are four major types of lobotomy:

Type	Treats	Side-Effects
Prefrontal lobotomy (severs nerve fibres connecting frontal lobes to diencephalon)	Schizophrenia. Particularly successful because present functioning areas are disconnected from memories and from future concerns.	Inability to plan ahead, indifference to the opinions of others, child-like actions, intellectual and emotional flatness.
Biomedial Leucotomy	Depression, Obsessive-Compulsive Disorder	Death, serious personality changes
Orbital Leucotomy	Depression, Obsessive-Compulsive Disorder, Extreme Anxiety.	Death, serious personality changes
Bilateral Leucotomy	Severe Depression	Epileptic Fits.
Limbic Leucotomy	Abnormal Aggression.	Controversial because patient isn't suffering, we just like their behaviour.

BBC Radio 4: [The Lobotomists](#). This programme tells the story of three key figures in the strange history of lobotomy - and for the first time explores the popularity of lobotomy in the UK in detail.

## Evaluation of The Medical Model

## Strengths:

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- It is viewed as objective, being based on mature biological science.
- It has given insight into the causes of some conditions, such as GPI and Alzheimer's disease, an organic condition causing confusion in the elderly.
- Treatment is quick and, relative to alternatives, cheap and easy to administer. It has proved to be effective in controlling serious mental illness like schizophrenia allowing patients who would otherwise have to remain in hospital to live at home.
- The sickness label has reduced the fear of those with mental disorders. Historically, they were thought to be possessed by evil spirits or the devil – especially women who were burned as witches!

## Weaknesses:

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- Myth of the chemical imbalance: Psychiatric drugs have often been prescribed to patients on the basis that they cure a 'chemical imbalance'. Although scientists have been testing the chemical imbalance theory's validity for over 40 years—and despite literally thousands of studies—there is still not one piece of direct evidence proving the theory correct.
- The treatments have serious side-effects, for example ECT can cause memory loss, and they are not always effective. Drugs may not 'cure' the condition, but simply act as a chemical straitjacket.
- The failure to find convincing physical causes for most mental illnesses must throw the validity of the medical model into question, for example affective disorders and neuroses. For this reason, many mental disorders are called 'functional'. The test case is schizophrenia but even here genetic or neurochemical explanations are inconclusive. The medical model is therefore focused on physical causes and largely ignores environmental or psychological causes.
- There are also ethical issues in labelling someone mentally ill – Szasz says that, apart from identified diseases of the brain, most so-called mental disorders are really problems of living. Labelling can lead to discrimination and loss of rights.
- The medical model has been the one that has been most influential in determining the way that mentally disturbed people are treated, but most psychologists would say that at best, it only provides a partial explanation, and may even be totally inappropriate.
- There are no known biological causes for any of the psychiatric disorders apart from dementia and some rare chromosomal disorders. Consequently, there are no biological tests such as blood tests or brain scans that can be used to provide independent objective data in support of any psychiatric diagnosis. [Click here](#) for more info.



- The reliability of diagnosing mental disorders has not improved in 30 years (Aboraya et al., 2006).
- Psychiatric diagnostic manuals such as the DSM and ICD (chapter 5) are not works of objective science, but rather works of culture since they have largely been developed through clinical consensus and voting. Their validity and clinical utility is therefore highly questionable, yet their influence has contributed to an expansive medicalisation of human experience. [Click here](#) for more info

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## How to reference this article:

McLeod, S. A. (2014). The medical model. Retrieved from <https://www.simplypsychology.org/medical-model.html>

## Further Information

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[Council for Evidence-based Psychiatry](#)

[Abnormal Psychology](#)