

Biological Treatments

by Sophia Tutorial



WHAT'S COVERED

In this lesson, we'll discuss the biological therapies that might coincide with psychotherapies when treating patients with various mental problems.

The specific areas of focus include:

1. Biological Therapy and Psychotherapy
2. Pharmacotherapy
 - a. Psychotropic Drugs
3. Electroconvulsive Therapy
4. Psychosurgery

1. Biological Therapy and Psychotherapy

When discussing therapeutic treatment, it's important to consider both biological therapy and psychotherapy because there are limitations on both types.

Biological therapies can only affect people physically. They can't actually change people's accompanying mental states. Likewise, psychotherapy can only really affect people's thoughts, feelings, or behaviors.

The important takeaway from this is that these two methods should be used in conjunction in order to provide the most effective type of therapy for certain patients. Particularly for patients with severe problems, psychotherapy should be used along with biological therapy.

2. Pharmacotherapy

The first biological treatment we'll discuss is **pharmacotherapy**, meaning the use of drugs to treat psychological problems.

This is something that's been in the news and media quite a bit recently because pharmacotherapy has become much more popular, particularly in America, as a treatment for different types of psychological problems.



TERM TO KNOW

Pharmacotherapy

The use of drugs to treat psychological problems

2a. Psychotropic Drugs

Drugs used to treat any psychological problem are called psychotropic drugs, or drugs that affect the brain. This means that these drugs are very powerful, and they can have massive side effects on the people who take them.

At the same time, it's important to note that these drugs can have unintended and far-reaching effects, which are much broader and more extensive than the problems the drugs are being used to treat.

➦ **EXAMPLE** Some anti-anxiety drugs can cause facial tics. Anti-psychotics can cause mood shifts, weight gain, and even death in some cases.

Thus, the use of drugs should be weighed in terms of the risks involved and the specific benefits that they might have for a person.

When determining whether and what kind of drugs should be used, it really depends on the case and the severity of the issue that's being treated.

When discussing drugs, there are two different kinds of names that are used. There's the brand name, which is generally the more popular and most recognizable name, as well as the generic name, which is the scientific name that can be used by anyone, not just the company. The generic name is often used by the FDA to recognize the drug. For the sake of this lesson, we'll refer to the drugs by their popular or brand names.

There are three basic types of psychotropic drugs:

- Anxiolytics
- Antidepressants
- Antipsychotics

Anxiolytics, which are sometimes referred to as minor tranquilizers, are drugs that reduce anxiety or help to relax people. Valium and Xanax are two types of anxiolytics.

Antidepressants are drugs that counteract depression and help to elevate people's moods. Prozac and Zoloft are two types of antidepressants.

Antipsychotics, or major tranquilizers, are meant to help calm and reduce agitation in people. They're also meant to help reduce hallucinations and delusions that people have, making these drugs very powerful. Two types of antipsychotics are Zyprexa and Clozapine.



TERMS TO KNOW

Anxiolytics

Anti-anxiety medication that reduces tension and fear

Antidepressants

Drugs that help elevate mood and other symptoms of depression

Antipsychotics

Drugs that help relieve some of the positive symptoms (agitation, hallucinations, and delusions) of a psychotic disorder, such as schizophrenia

3. Electroconvulsive Therapy

The other two biological treatments we'll discuss are more physical treatments of psychological problems.

Psychology has a history of controversial treatments, and many of these treatments are still used today. However, it's interesting to go back and take a look at some of the history behind them.

Electroconvulsive therapy (ECT) was a therapy that was made popular in the 1940s. The process involves passing an electrical current through the brain for a brief period, often making a person lose consciousness.

You might have seen this being used in older movies, and it's something that you may think is a bit archaic. Yet this type of therapy is still used today, as the idea is that the brain operates on electrical impulses.

A shock of electricity through the brain acts as a bit of a reboot. If you imagine the brain as a computer, the shock helps to reset any specific problems the person is having.



TERM TO KNOW

Electroconvulsive Therapy (ECT)

The use of electrical currents to stimulate the brain

4. Psychosurgery

The other form of more physical psychotherapeutic treatment is **psychosurgery**. As you can expect from the name, this involves surgically altering the brain in some way.

The earliest instance of psychotherapy that can be ascertained is in ancient times when people used something called trepanning, which involved drilling holes in the skull. The idea was that this would release any evil spirits that were causing the psychological problems. As you can imagine, this is not widely used today at all.

Another instance of psychotherapy in history is the frontal lobotomy, which became popular in the 1940s. The idea was to go in and disconnect or remove parts of the frontal lobe to affect some personality change, or to try to stop some kinds of behaviors in severe patients.



DID YOU KNOW

Generally, a frontal lobotomy would not involve actually opening the brain or the skull, but rather going in through some other means, such as the eye or the nose.

While some patients with lobotomies did actually change for the better, the vast majority of people either

didn't change as a result of the surgery or suffered some form of major negative psychological change. Some people became completely comatose and didn't respond anymore, or they developed personality changes that were very severe. Again, this is a type of psychosurgery that isn't used today.

A form of psychosurgery that is still used is the corpus callosotomy, which involves cutting the corpus callosum, the part of the brain that joins the two hemispheres.

The idea is that when you do this, people are less likely to send impulses from one side or the other. This is an extreme type of surgery that's used in certain cases.

➦ **EXAMPLE** In the case of someone suffering from severe epileptic seizures, the aim of the surgery would be to make the person less likely to go into an epileptic seizure that might affect him or her in negative physical ways.

Because surgery is irreversible, it's important to use it as a last resort when all other kinds of therapies have been tried and proved ineffective.



TERM TO KNOW

Psychosurgery

Any surgery used to change the brain and thereby behavioral or emotional responses



SUMMARY

In this lesson, you learned that **biological therapy and psychotherapy** should be used together in order to provide the most complete and effective treatment. There are several forms of biological therapy: **pharmacotherapy**, **electroconvulsive therapy**, and **psychosurgery**.

You now understand that pharmacotherapy involves the use of **psychotropic drugs**--the three types of which are anxiolytics, antidepressants, and antipsychotics. While **electroconvulsive therapy** has long been considered a controversial treatment, it is still used at times today. Likewise, there are certain forms of **psychosurgery** that are still used, though a majority of them have stopped being performed after they proved to have predominantly negative results.

Good luck!

Source: Adapted from Sophia tutorial by Erick Taggart.



TERMS TO KNOW

Antidepressants

Drugs that help elevate mood and other symptoms of depression.

Antipsychotics

Drugs that help relieve some of the positive symptoms (agitation, hallucinations and delusions) of psychotic disorder such as schizophrenia.

Anxiolytics

Anti-anxiety medication that reduces tension and fear.

Electroconvulsive Therapy (ECT)

The use of electrical currents to stimulate the brain.

Pharmacotherapy

The use of drugs to treat psychological problems.

Psychosurgery

Any surgery used to change the brain and thereby behavioral or emotional responses.