

Patient information from BMJ

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Psychosis

Psychosis happens when part of the brain isn't working as it should. This can cause disturbing and frightening symptoms, including hallucinations.

Psychosis is not a condition, but a symptom that can be caused by many things, including physical and mental illnesses, medications, and recreational drugs. Treatment for psychosis depends on what has caused it.

What is psychosis?

Psychosis is caused by problems in the front part of the brain. When this part of your brain stops working as it should, the way you see and think about the world changes, sometimes in extreme ways. Psychosis can involve:

- hallucinations - seeing, hearing, and even thinking you can touch things that aren't real
- delusions - believing things about yourself, other people, and the world, that aren't true
- catatonic' behaviour - hardly speaking, moving, or reacting at all to the world around you.
- confused thoughts and actions, and
- personality changes.

Psychosis can be frightening for you and the people around you, and it's important to get help as soon as possible. Some people with psychosis can be a danger to themselves and to others.

What can cause psychosis?

It's important to remember that having an episode of psychosis is not always a sign of a mental-health condition. Many things can cause spells of psychosis.

To get an organised and helpful picture of these many possible causes of psychosis, doctors divide them into primary and secondary causes.

A **primary** cause of psychosis is a mental illness that has psychosis as a symptom, either all the time, or for short periods. For example, schizophrenia has psychosis as a main symptom.

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A **secondary** cause of psychosis is something that can sometimes cause psychosis, perhaps as a side effect or by accident, but where psychosis isn't a main (or primary) part of that problem. For example, some types of poisoning can cause temporary psychosis: but the real problem is the poisoning, not the psychosis.

The **primary** causes of psychosis include conditions such as:

- schizophrenia
- delusional disorder
- brief psychotic disorder
- depression, and
- bipolar disorder.

The **secondary** causes of psychosis include:

- recreational drugs, including cocaine, cannabis, and alcohol
- some prescription medications
- some over-the-counter medications
- some neurological (nervous-system) illnesses, including epilepsy
- some physical illnesses, including thyroid problems, Cushing's syndrome, some sexually transmitted infections (STIs), and a virus called Epstein-Barr
- injuries to the front part of the brain
- delirium
- some types of vitamin deficiency
- some rare genetic conditions
- contact with some toxic chemicals such as some weed killers and fertilisers
- exposure to some heavy metals, such as mercury and lead.

Below, we look at some of these secondary causes of psychosis in a little more detail.

Psychosis caused by medicines or recreational drugs

Drugs, both medical and recreational, are a common cause of psychosis.

Recreational drugs that can sometimes cause psychosis include cocaine, cannabis, amphetamines, phencyclidine (PCP), alcohol, inhalants (solvents such as glue, aerosols, gases, and nitrites).

These drugs usually only cause psychosis in high doses. Sometimes the psychosis happens from taking a drug once, and is short lived, and sometimes it is caused by withdrawal from the drug. This often happens with alcohol.

Psychosis can also be caused by long-term use of some drugs, such as cannabis.

Prescription drugs that can trigger psychosis include:

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- anticholinergics. These drugs are used to treat a variety of problems that involve muscle spasms, including overactive bladder, Parkinson's, and chronic obstructive pulmonary disease (COPD)
- dopamine agonists, which are used to treat conditions including Parkinson's and ADHD
- corticosteroids, which are strong anti-inflammatories, and
- thyroid hormones, which are used to treat an underactive thyroid.

Some **over-the-counter drugs** and herbal supplements can also sometimes cause psychosis. These include:

- dextromethorphan, which is in some cough medicines
- antihistamines, which are used to treat allergies, and
- herbal remedies that contain the traditional ingredient ephedra. Ephedra is banned in some countries, including the US, and is only available in small doses in some other countries.

Rarely, some other medications can cause psychosis as a side effect. They include some antibiotics and antivirals, and a medicine called isotretinoin, which is used to treat severe acne.

Psychosis linked to problems with the nervous system

Conditions that affect the body's nervous system (called neurological conditions) can sometimes cause psychosis. These include:

- epilepsy
- head injuries that affect the brain
- multiple sclerosis
- brain tumours
- dementia, and
- Fahr's disease, a condition where there is too much calcium in parts of the brain.

Psychosis caused by infections

Some infections can cause swelling in the brain. This swelling can sometimes cause psychosis. These infections include:

- some STIs, including herpes, HIV, and chlamydia
- measles
- mumps
- the Epstein-Barr virus, which causes most cases of glandular fever, and
- rabies.

Other things that can cause swelling in the brain that can lead to psychosis include infection with some parasites, including malaria, and some fungal infections.

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Psychosis caused by delirium

Delirium can be caused by many things, including low blood sugar, alcohol withdrawal, lack of oxygen, and some infections. It is more likely to affect people who are seriously ill and older people.

Psychosis linked to auto-immune diseases

The immune system is supposed to protect us against infection. But sometimes it attacks some of the body's own tissues. This is called an auto-immune condition.

Some auto-immune conditions appear to be linked to psychosis in some people. They include coeliac disease and intestinal malabsorption, where the intestine doesn't absorb nutrients from food properly.

What treatments work?

Psychosis is a symptom, not an illness in itself. So the best way to treat it is to treat the problem that is causing it.

For example, if you have a medical condition that is causing psychotic episodes, then you will need treatment for that condition.

And if you are taking medication that is causing psychosis, then you and your doctor will need to discuss what other treatments that you can try that won't give you problems.

If your psychosis has been caused by drug use, you might need help to stop using drugs.

Psychosis from many causes can be treated successfully. But psychosis caused by psychological problems, such as schizophrenia, can be harder to treat.

For conditions like schizophrenia, your treatment will probably involve medications called antipsychotics. You can talk with your doctor about these drugs, how they might help you, and which one might be best for you.

What will happen?

If you see a doctor and you have symptoms of psychosis, the doctor will want to find out what is causing your symptoms.

So he or she will examine you physically, check through your medical history, and ask you (and if possible, someone who has come with you) questions about what might be causing your problems.

Your doctor will want to know about things like:

- any medical conditions you suffer from
- whether you have a history of mental-health problems
- what medications you take
- whether you have taken any recreational drugs, either recently over the long term

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- any recent head injuries, and
- whether you have had contact with any toxic chemicals.

You might have blood and urine tests, to check for drugs, medicines, and other toxic substances.

Your doctor's first concern will be to keep you safe. This might mean identifying any toxic substance you have taken, either deliberately or by accident, and getting a clear picture of your medical history.

But it might also mean that you need to be kept in hospital for a while, even if you don't want to. Your doctor can make this decision against your will if you are thought to be a danger to yourself or others.

This might be for several reasons. For example, you might be:

- unable to look after yourself
- aggressive
- having severe delusions or hallucinations: for example, if you are hearing voices telling you to do things
- behaving very strangely
- behaving in a way that suggests that you might try to kill yourself or someone else.

If you are hospitalised in this way for a while, you might need to be given medication to keep you calm and safe. Again, you might not want this medication. But your doctor can override your wishes to keep you and others safe until you are feeling better.

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