

# What Causes Psychosis

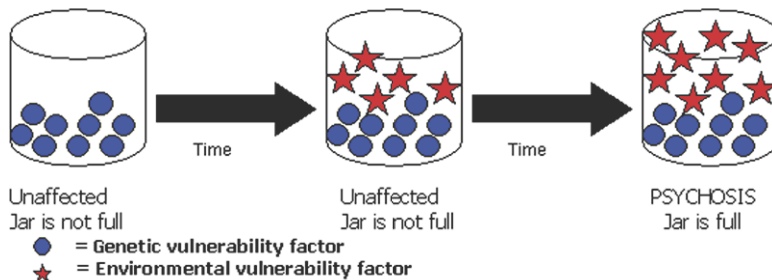


Early Psychosis Intervention Program

## What Causes Psychosis

There are many different kinds of psychosis, including organic psychosis, drug-induced psychosis, depressive

these vulnerability factors can combine to cause psychosis. A full jar represents a person with psychosis.



psychosis, schizophreniform disorder, schizoaffective disorder, schizophrenia and bipolar disorder. Although most of these different types of psychosis are caused in much the same way, we will be using schizophrenia and bipolar disorder in the examples below, as we understand these kinds of psychosis better than others.

It is a chemical imbalance in the brain that is thought to cause psychosis. In the last few decades, research has helped us in understanding that this imbalance is most often caused by a **combination** of genetic vulnerability and environmental vulnerability.

Each person will have different levels of these vulnerabilities, but it is important to understand that a combination of **several vulnerability factors**, both genetic and environmental, is needed in order for a person to develop psychosis. The diagram above shows how

## Genetic Vulnerability

Our DNA contains genes, which give our bodies the instructions on how to make proteins. Proteins are the building blocks of all the different cells in our bodies, including neurotransmitters, receptors and transporters in the brain.

When there is a mistake in a gene, it is called a mutation. Mutations are common and everyone has some. Because genes contain the instructions on how to make proteins, the ones with mistakes can produce proteins that may not perform their functions as well as they should. When a mutation occurs in a gene that contains the instructions for a brain protein, like a neurotransmitter, it may contribute to a chemical imbalance in the brain, which is one of the factors in the development of psychosis.

Recent research has found mutations in several genes, which scientists think might contribute to schizophrenia and bipolar disorder. Being able to find and identify these genes may lead to better diagnosis and treatment of psychosis.

## Environmental Vulnerability

There are many different environmental factors that have each been shown to lead to a small increase in the likelihood of someone developing psychosis. For example, research has shown that it is two times more common for individuals with schizophrenia to have had a difficult delivery at birth. Other environmental vulnerability factors include being born in the winter months, being brought up in a big city, immigration, childhood head injury, stressful life events and use of street drugs.

## Chances for people to develop psychosis

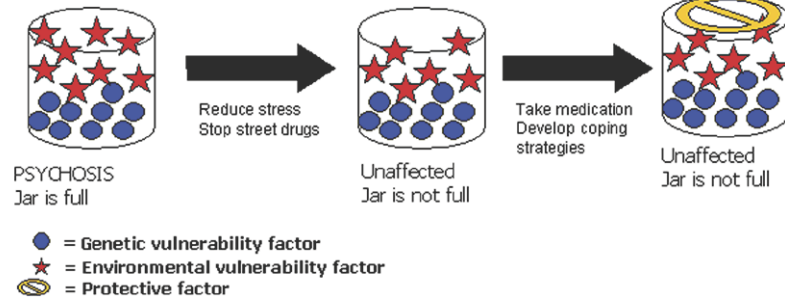
Psychosis is common, affecting about 3% of the population. Schizophrenia affects about 1% of the population, bipolar disorder affects about 1-2% of the population and major depression affects about 5-10% of the population.

The chance for developing these illnesses are higher for people who have a family member who is affected. For example, a person with a brother, sister or parent with schizophrenia or bipolar disorder has a 10 to 15% chance of developing the same disorders themselves (which is

also an 85 to 90% probability of not developing schizophrenia or bipolar disorder!).

For hundreds of years, people have known that some kinds of psychosis seem to ‘run in families’, but the reasons for this were unclear. In the last few decades, research has been helping us to better understand why this seems to happen.

**IMPORTANT:** If you have a family member with psychosis and you are concerned about the chances of yourself or other family members developing a similar illness, ask your family doctor or psychiatrist to refer you to the local Medical Genetics department for a genetic counseling appointment. A genetic counselor will take a detailed family history and help you to understand the illness in your family, appreciate the way genes contribute to the disorder and educate you about the risk of recurrence.



### Reducing the chance of relapse

Stressful life events often precede an episode of psychosis, acting as a trigger. Stressors can range from everyday hassles, to accidents or bereavements. Developing effective methods of managing and coping with stress can help to reduce the chance of relapse. If the person is able to have a supportive, calm and relaxed home life, the problems are less likely to return.

Some types of street drugs can trigger an episode of psychosis in people who have a genetic vulnerability. Some drugs, like amphetamines and cocaine, can cause drug-induced psychosis. Stopping the use of these street drugs can reduce the chance of relapse.

Medications prescribed by your psychiatrist not only reduce the chance of relapse, they also work to reduce symptoms of psychosis. The diagram above shows how medications can reduce the chance of relapse.