

Identifying Schizophrenia

Which client presentation describes untreated schizophrenia?

- ☒ Inability to connect with their surrounding reality due to hallucinations or delusions
- ☐ Significant complaints of anhedonia
- ☐ Intense fear that produces chest discomfort, shortness of breath, and elevated heart rates
- ☐ Excessive energy to the point of uncontrolled spending

Untreated schizophrenia presents the inability to connect with a client's surrounding environment, usually due to hallucinations or delusions.

Significant complaints of anhedonia are more likely with major depressive or bipolar disorder. Excessive energy describes a mania in someone with bipolar disorder. Intense fear that produces sympathetic nervous system symptoms is usually caused by a panic disorder.

⚠ Your response is incorrect!

Cate

Schizophrenia symptoms are divided into three different categories: positive symptoms, negative symptoms, and cognitive symptoms.

The other options are not correct.

Which of the

- ☐ Cognitive, affective, and behavioral symptoms
- ☐ Positive, negative, and emotional symptoms
- ☐ Positive, negative, and cognitive symptoms
- ☒ Sensory, motor, and cognitive symptoms

Neurotransmitters of Schizophrenia

Which neurotransmitters are known to contribute to the clinical manifestations of schizophrenia? Select all that apply.

- ☒ Glutamate
- ☐ Norepinephrine
- ☒ Dopamine
- ☐ Acetylcholine

Dysregulation of dopamine and glutamate are contributors to the clinical manifestations experienced by someone with schizophrenia.

Acetylcholine dysregulation is seen in conditions like dementia. Serotonin and norepinephrine dysregulation are seen in conditions like depression and other mood disorders.

Pathophysiology of Schizophrenia

Schizophrenia is a complex, chronic mental disorder characterized by an array of **symptoms, including delusions, hallucinations, disorganized speech, and impaired cognitive function.** The exact pathophysiology remains unclear but likely involves a **combination of genetic, chemical, and environmental factors.**

An **imbalance of the neurotransmitter dopamine** in different areas of the brain is believed to cause many of the symptoms of schizophrenia. **Structural brain abnormalities, including changes in the volume of certain brain regions** and altered neural connectivity, are also observed in studies.

Dopamine is an important neurotransmitter and plays a major role in the regulation of behavior, mood, motivation, and motor control. Of the five types of **dopamine receptors,** the D1 family (D1 and D5) are located in the frontal cortex, caudate, putamen, and nucleus accumbens. The D2 family (D2, D3, and D4) are primarily located in the basal ganglia, hippocampus, thalamus, cerebellum, and cerebral cortex.

Another neurotransmitter that plays a role in schizophrenia is **glutamate.** Studies have found **lower levels of glutamate** in the cerebral spinal fluid and other areas of the brain in people with schizophrenia. Drugs that block **glutamate activity, like ketamine,** can cause symptoms like schizophrenia in people who do not have the illness.

Schizophrenia Risk Factors

The **etiology** of schizophrenia is multifactorial and may involve both genetic and environmental influences. A **family history** of schizophrenia significantly increases the risk of symptom onset, indicating a **genetic component.** **Environmental factors** during pregnancy, such as maternal infections, malnutrition, or stress, also add additional risk. Other factors include **advanced paternal age at the time of conception, childhood trauma,** and **substance abuse** (e.g., **cannabis**), especially during adolescence.

Social determinants of health (SDOH) may play a role in the development of this condition. For example, clients of **lower socioeconomic status** or those forced to live in areas of **high chemical contamination** or **food deserts** are more likely to experience or have children who experience schizophrenia.

Schizophrenia Risk Factors

Which factors are implicated in the pathophysiology of schizophrenia? Select all that apply.

- ☒ Genetic predisposition
- ☐ Abnormalities in serotonin levels
- ☐ Degeneration of the substantia nigra
- ☒ Environmental influences
- ☒ Glutamate dysregulation
- ☒ Dopamine dysregulation

Schizophrenia involves a combination of genetic, neurochemical, and environmental factors. Dopamine and glutamate dysregulation in some areas of the brain cause symptoms of schizophrenia.

Abnormalities in serotonin levels are usually related to depressive disorders. Degeneration of nerve cells in the substantia nigra is the pathophysiology of Parkinson's disease.

Clinical Manifestations

Schizophrenia manifests through a spectrum of behaviors categorized into positive, negative, and cognitive symptoms. Positive symptoms are those that add to a behavior and include hallucinations (often auditory), delusions, and disorganized thinking or behavior. Negative symptoms are deficits of normal emotional responses or other thought processes and include flat affect, anhedonia, and social withdrawal. Cognitive symptoms are problems with thought processes that impair a client's ability to plan, perform tasks, be attentive, or communicate socially.

Positive Symptoms: Added Behaviors

Hallucinations - false experiences the client has

- While usually auditory or visual, a client can also experience touch, smell, or taste hallucinations as well.

Delusions - false beliefs the client has, including, but not limited to the following:

- persecutory - someone is trying to hurt them deliberately
- referential - an ordinary behavior or event has some hidden meaning or sign
- grandiose - they have a special mission, powers, wealth, or identity
- somatic - there is something wrong with their bodily function

Disorganized Thinking - often assessed during speech

- lack of connection between ideas (loose associations)
- excessive or irrelevant details that do not lead to a point (tangentiality)
- incoherent thought (word salad)
- repetitive words (echolalia)

Disorganized Behavior or Abnormal Motor Behavior

- hypervigilance
- hostility or agitation
- catatonia
- repetitive movements
- unusual mannerisms or postures

Negative Symptoms: Loss or Lack of Behaviors

- asociality – decreased interest in social interaction
- alogia – decreased verbal communication
- affective blunting – lack of emotional expression