

# Abnormal Psychology

PSYCH 40111

## Schizophrenia

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## Nature of Schizophrenia and Psychosis: An Overview

- Schizophrenia vs. Psychosis
  - Psychosis – Broad term referring to hallucinations and/or delusions
  - Schizophrenia – A type of psychosis with disturbed thought, language, and behavior
  - Psychosis and Schizophrenia are heterogeneous
- Historical Background
  - Benedict Morel – Dementia (loss of mind) praecox (early, premature)
  - Emil Kraepelin – Used the term dementia praecox, focused on onset and outcomes
  - Eugen Bleuler – Introduced the term "schizophrenia" or "splitting of the mind"
  - Many of Kraepelin and Bleuler's ideas are still important today

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Table 14-1 DSM-IV Checklist	
<b>SCHIZOPHRENIA</b>	
1.	At least two of the following symptoms, each present for a significant portion of time during a one-month period: <ol style="list-style-type: none"> <li>Delusions.</li> <li>Hallucinations.</li> <li>Disorganized speech.</li> <li>Grossly disorganized or catatonic behavior.</li> <li>Negative symptoms.</li> </ol>
2.	Functioning markedly below the level achieved prior to onset.
3.	Continuous signs of the disturbance for at least six months, at least one month of which includes symptoms in full and active form (as opposed to attenuated form).
Based on APA, 2000, 1994.	

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## Schizophrenia: The “Positive” Symptom Cluster

- The Positive Symptoms
  - Active manifestations of abnormal behavior, distortions of normal behavior
  - Examples include delusions, hallucinations, and disorganized speech
- Delusions: The Basic Feature of Madness
  - Gross misrepresentations of reality
  - Examples include delusions of grandeur or persecution
- Hallucinations: Auditory and/or Visual
  - Experience of sensory events without environmental input
  - Can involve all senses
  - The nature of auditory and visual hallucinations – Findings from SPECT studies

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## Schizophrenia: Formal Thought Disorder

- Loosening of Associations
  - Ideas jump from one to another, with the result that the person wanders further and further away from the topic
- Poverty of content
  - Poor communication despite correct grammar and adequate vocabulary
- Neologisms
  - The use of new words and phrases, often by formed by combining parts of two or more regular words
- Clanging
  - The pairing of words that have no relation to one another beyond the fact that they rhyme or sounds alike
- Word salad
  - Words and phrases are combined in what appears to be a completely disorganized fashion

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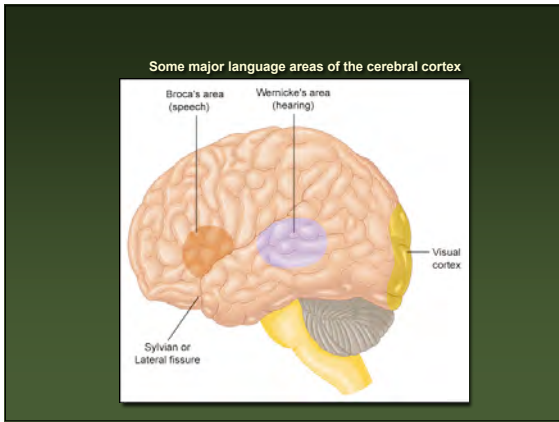
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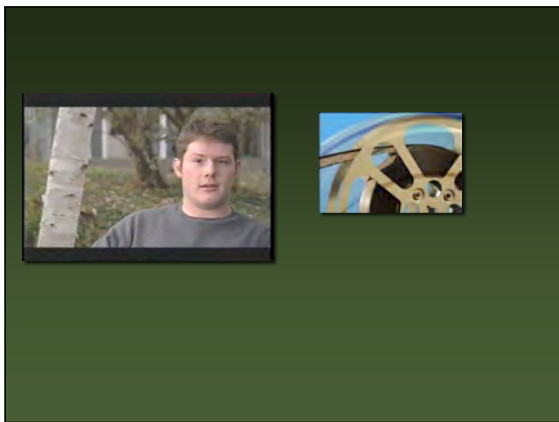
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## Schizophrenia: The “Negative” Symptom Cluster

- The Negative Symptoms
  - Absence or insufficiency of normal behavior
  - Examples are emotional/social withdrawal, apathy, and poverty of thought/speech
- Spectrum of Negative Symptoms
  - Avolition (or apathy) – Refers to the inability to initiate and persist in activities
  - Alogia – Refers to the relative absence of speech
  - Anhedonia – Lack of pleasure, or indifference to pleasurable activities
  - Affective flattening – Show little expressed emotion, but may still feel emotion

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## Schizophrenia: The “Disorganized” Symptom Cluster

- The Disorganized Symptoms
  - Include severe and excess disruptions in speech, behavior, and emotion
  - Examples include rambling speech, erratic behavior, and inappropriate affect
- Nature of Disorganized Speech
  - Cognitive slippage – Refers to illogical and incoherent speech
  - Tangentiality – “Going off on a tangent” and not answering a question directly
  - Loose associations or derailment – Taking conversation in unrelated directions

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## Schizophrenia: The “Disorganized” Symptom Cluster

- Nature of Disorganized Affect
  - Inappropriate emotional behavior (e.g., crying when one should be laughing)
- Nature of Disorganized Behavior
  - Includes a variety of unusual behaviors
  - Catatonia – Spectrum from wild agitation, waxy flexibility, to complete immobility

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## Subtypes of Schizophrenia

- Paranoid Type
  - Intact cognitive skills and affect, and do not show disorganized behavior
  - Hallucinations and delusions center around a theme (grandeur or persecution)
  - The best prognosis of all types of schizophrenia
- Disorganized Type
  - Marked disruptions in speech and behavior, flat or inappropriate affect
  - Hallucinations and delusions have a theme, but tend to be fragmented
  - This type develops early, tends to be chronic, lacks periods of remissions

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## Subtypes of Schizophrenia

- Catatonic Type
  - Show unusual motor responses and odd mannerisms (e.g., echolalia, echopraxia)
  - This subtype tends to be severe and quite rare
- Undifferentiated Type
  - Wastebasket category
  - Major symptoms of schizophrenia, but fail to meet criteria for another type
- Residual Type
  - One past episode of schizophrenia
  - Continue to display less extreme residual symptoms (e.g., odd beliefs)

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## Other Disorders with Psychotic Features

- Schizophreniform Disorder
  - Schizophrenic symptoms for a few months
  - Associated with good premorbid functioning; most resume normal lives
- Schizoaffective Disorder
  - Symptoms of schizophrenia and a mood disorder are independent of one another
  - Prognosis is similar for people with schizophrenia
  - Such persons do not tend to get better on their own

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## Other Disorders with Psychotic Features

- Delusional Disorder
  - Delusions that are contrary to reality without other major schizophrenia symptoms
  - Many show other negative symptoms of schizophrenia
  - Type of delusions include erotomanic, grandiose, jealous, persecutory, and somatic
  - This condition is extremely rare, with a better prognosis than schizophrenia

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## Additional Disorders with Psychotic Features

- Brief Psychotic Disorder
  - Experience one or more positive symptoms of schizophrenia
  - Usually precipitated by extreme stress or trauma
  - Tends to remit on its own
- Shared Psychotic Disorder
  - Delusions from one person manifest in another person
  - Little is known about this condition
- Schizotypal Personality Disorder
  - May reflect a less severe form of schizophrenia

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## Classification Systems and Their Relation to Schizophrenia

- Process vs. Reactive Distinction
  - Process – Insidious onset, biologically based, negative symptoms, poor prognosis
  - Reactive – Acute onset (extreme stress), notable behavioral activity, best prognosis
- Good vs. Poor Premorbid Functioning in Schizophrenia
  - Focus on person's level of function prior to developing schizophrenia
  - No longer widely used
- Type I vs. Type II Distinction and Schizophrenia
  - Type I – Positive symptoms, good response to medication, optimistic prognosis, and absence of intellectual impairment
  - Type II – Negative symptoms, poor response to medication, pessimistic prognosis, and intellectual impairments

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## Schizophrenia: Some Facts and Statistics

- Onset and Prevalence of Schizophrenia worldwide
  - About 0.2% to 1.5% (or about 1% population)
  - Usually develops in early adulthood, but can emerge at any time
- Schizophrenia Is Generally Chronic
  - Most suffer with moderate-to-severe impairment throughout their lives
  - Life expectancy in persons with schizophrenia is slightly less than average
- Schizophrenia Affects Males and Females About Equally
  - Females tend to have a better long-term prognosis
  - Onset of schizophrenia differs between males and females
- Schizophrenia Appears to Have a Strong Genetic Component

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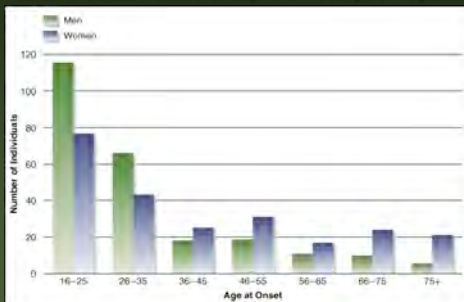
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Gender differences in onset of schizophrenia in a sample of 470 patients




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## Search for Genetic and Behavioral Markers of Schizophrenia

- The Search for Genetic Markers: Linkage and Association Studies
  - Search for genetic markers is still inconclusive
  - Schizophrenia is likely to involve multiple genes
- The Search for Behavioral Markers: Smooth-Pursuit Eye Movement
  - The procedure – Tracking a moving object visually with the head kept still
  - Tracking is deficit in persons with schizophrenia, including their relatives

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## Causes of Schizophrenia: Findings From Genetic Research

### Summary of Genetic Research

- Risk of schizophrenia increases as a function of genetic relatedness
- One need not show symptoms of schizophrenia to pass on relevant genes
- Schizophrenia has a strong genetic component, but genes alone are not enough

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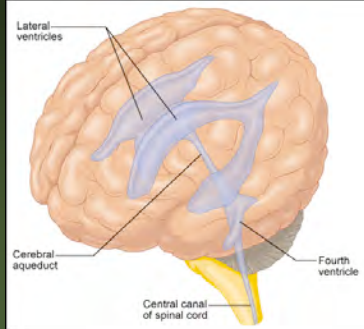
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Location of the cerebrospinal fluid in the human brain



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### Causes of Schizophrenia: Structural Brain Pathology

- Brains of schizophrenia patients show
  - Reduced volume of temporal and frontal cortex
  - Enlarged ventricles (reflecting loss of brain cells)
    - For 12 of 15 twins, the twin of a schizophrenia patient could be identified by enlarged ventricles
  - Reduced metabolic activity within prefrontal cortex (frontal hypoactivation)

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### Causes of Schizophrenia: Neurotransmitter Influences

- Neurobiology and Neurochemistry:  
The Dopamine Hypothesis
  - Drugs that increase dopamine (agonists), result in schizophrenic-like behavior
  - Drugs that decrease dopamine (antagonists), reduce schizophrenic-like behavior
  - Examples include neuroleptics and L-Dopa for Parkinson's disease

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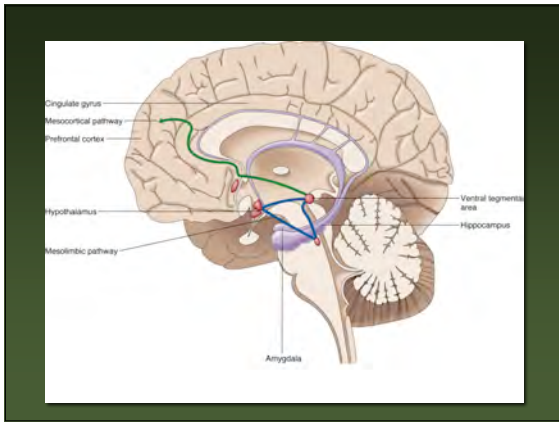
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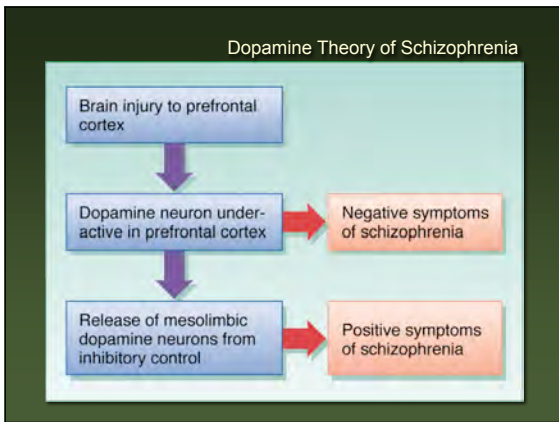
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## Causes of Schizophrenia: Neurotransmitter Influences

- Refuting the Dopamine Hypothesis
  - Many do not respond to dopamine agonists, indicating role for other neurotransmitter systems
  - Symptoms do not abate for several days after drug produces neurochemical changes
  - Drugs are not helpful in reducing negative symptoms (e.g., flat affect, anhedonia)
  - One of the most effective new drugs for schizophrenia, clozapine, does not work by blocking the D2 receptors (appears to bind to a newly discovered type of dopamine receptor, D4)
  - 5-HT may play a role in interaction with dopamine

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## Causes of Schizophrenia: Biological Conclusions

- Large inherited factor
- Structural damage in some patients
- Schizophrenia is associated with diffuse neurobiological dysregulation (involving multiple systems)
- May be an interaction between structural and functional components through development
- May also involve Viral Infections During Early Prenatal Development
  - Circumstantial evidence (i.e., fingertip ridges) for prenatal virus

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## Causes of Schizophrenia: Psychological and Social Influences

- The Role of Psychological Factors
  - Psychological factors likely exert only a minimal effect in producing schizophrenia
- The Role of Stress
  - May activate underlying vulnerability and/or increase risk of relapse
- Family Interactions
  - Families of people with schizophrenia show ineffective communication patterns
  - High expressed emotion in the family is associated with relapse

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## Medical Treatment of Schizophrenia

- Historical Precursors
- Antipsychotic (Neuroleptic) Medications
  - Medication treatment is often the first line treatment for schizophrenia
  - Began in the 1950s
  - Most reduce or eliminate the positive symptoms of schizophrenia
  - Acute and permanent extrapyramidal and Parkinson-like side effects are common
  - Compliance with medication is often a problem
- Transcranial Magnetic Stimulation
  - Relatively untested procedure for treatment of hallucinations

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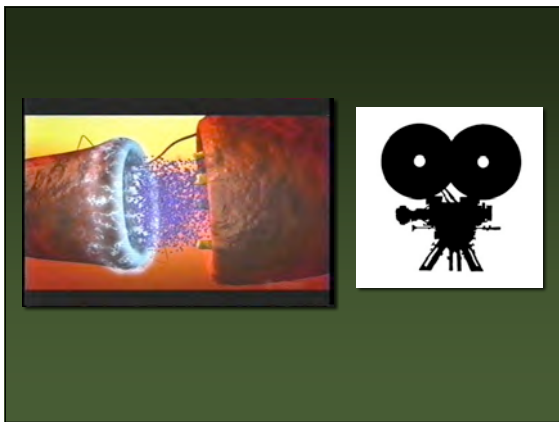
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## Summary of Schizophrenia and Psychotic Disorders

- Schizophrenia Includes a Spectrum of Cognitive, Emotional, and Behavioral Dysfunctions
  - Positive, negative, and disorganized symptom clusters
- DSM-IV and DSM-IV-TR Divides Schizophrenia Into Five Subtypes
- Other DSM-IV and DSM-IV-TR Disorders Include Psychotic Features
- Several Causative Factors Have Been Implicated for Schizophrenia
- Successful Treatment Rarely Includes Complete Recovery

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**TYPES OF SCHIZOPHRENIA**

<p><b>Paranoid</b></p> <ul style="list-style-type: none"> <li>• Delusions of grandeur or persecution</li> <li>• Hallucinations (especially auditory)</li> <li>• Higher level of functioning between episodes</li> </ul> 	<p><b>Residual</b></p> <ul style="list-style-type: none"> <li>• Person has had at least one schizophrenic episode but no longer shows major symptoms</li> <li>• Still shows "leftover" symptoms: social withdrawal, bizarre thoughts, inactivity, flat affect</li> </ul> 
<p><b>Disorganized</b></p> <ul style="list-style-type: none"> <li>• Disorganized speech and/or behavior</li> <li>• Irritable emotionality (inappropriate affect)</li> <li>• Chronic and lacking in remissions</li> </ul> 	<p><b>Catatonic</b></p> <ul style="list-style-type: none"> <li>• Abnormal immobility and excited agitation</li> <li>• Unusual motor responses (waxy flexibility, rigidity)</li> <li>• Odd facial or body manumans (often mimicking others)</li> <li>• Rare</li> </ul> 
<p><b>Undifferentiated</b></p> <ul style="list-style-type: none"> <li>• Symptoms of several types that taken together do not neatly fall into one specific category</li> </ul>	

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