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Chapter 13

Schizophrenia Spectrum and
Other Psychotic Disorders

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Outline

- Perspectives on Schizophrenia
- Clinical Description, Symptoms, and Subtypes
- Prevalence and Causes of Schizophrenia
- Treatment of Schizophrenia

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Focus Questions

- *How is schizophrenia defined?*
- *What are the clinical features of schizophrenia and related disorders?*
- *What are positive, negative and disorganized symptoms?*
- *What factors contribute to the development of schizophrenia?*
- *What treatments exist for schizophrenia?*

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Definition of Schizophrenia

- Schizophrenia: characterized by a broad spectrum of cognitive and emotional dysfunctions including delusions and hallucinations, disorganized speech and behavior, and inappropriate emotions

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Nature of Schizophrenia and Psychosis: History

- Historical background
 - Emil Kraepelin – used the term dementia praecox to describe schizophrenic syndrome
 - Early subtypes of schizophrenia – Catatonia, hebephrenia, and paranoia
 - Eugen Bleuler – introduced the term “schizophrenia”
 - Identified the different variants that were all included within a spectrum

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Nature of Schizophrenia and Psychosis: Current Thinking

- Impact of early ideas on current thinking
 - Many of Kraepelin and Bleuler's ideas are still with us
 - Understanding onset and course considered important
- Psychotic behavior
 - May refer only to hallucinations or delusions or to the unusual behavior (e.g. inappropriate emotionality, strange actions) accompanying them

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Symptoms of Schizophrenia

- “Positive” symptoms:
 - Delusions
 - Hallucinations
- “Negative” symptoms:
 - Avolition—inability to initiate and persist in activities
 - Alogia—absence of speech
 - Anhedonia—presumed lack of pleasure
 - Asociality—lack of interest in social interactions
 - Affective Flattening—do not show emotions when you would normally expect them to

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Symptoms of Schizophrenia, Continued

- “Disorganized” symptoms:
 - Erratic speech & emotions
 - Inappropriate affect and disorganized behavior

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Schizophrenia: The “Positive” Symptom Cluster

- Include delusions and hallucinations
- Delusions: “The basic feature of madness”
 - Gross misrepresentations of reality
 - Most common:
 - Delusions of grandeur
 - Delusions of persecution

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Schizophrenia: Hallucinations

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- Hallucinations
 - Experience of sensory events without environmental input
 - Can involve all senses (e.g., tasting something when not eating, having skin sensations when not being touched)
 - Most common: Auditory

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Schizophrenia: Findings from SPECT Studies

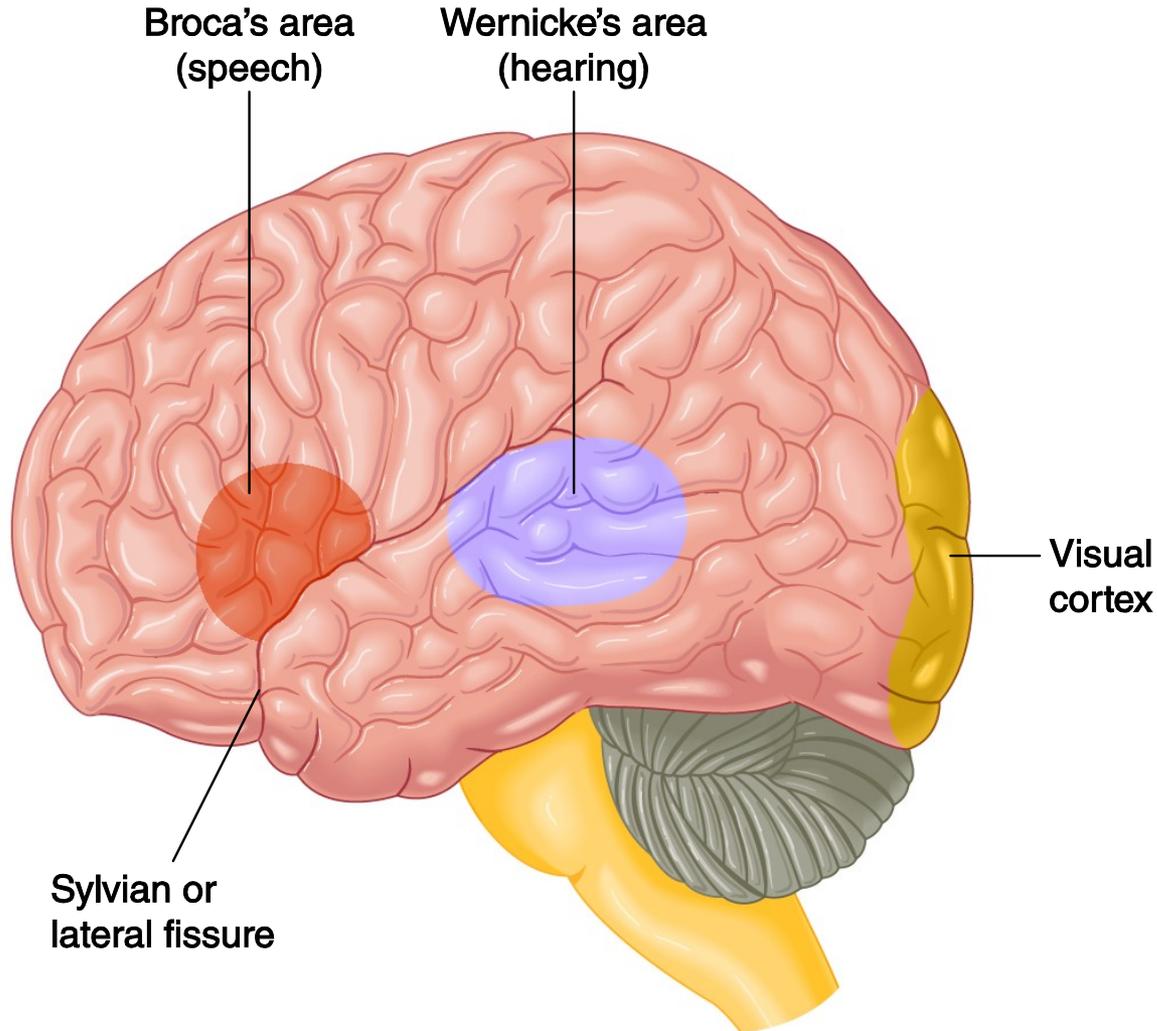
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- Findings from SPECT studies
 - Neuroimaging shows that the part of the brain most active during auditory hallucinations is Broca's area
 - Involved in speech *production* (not comprehension)

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Major Areas of Functioning in the Cerebral Cortex



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Schizophrenia: The “Negative” Symptom Cluster

- Absence or insufficiency of normal behavior
- Spectrum of negative symptoms
 - Avolition (or apathy) – lack of initiation and persistence
 - Alogia – relative absence of speech
 - Anhedonia – lack of pleasure, or indifference
 - Affective flattening – little expressed emotion

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Schizophrenia: The “Disorganized” Symptom Cluster

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- Confused or abnormal speech, behavior, and emotion
- Nature of disorganized speech
 - Cognitive slippage – illogical and incoherent speech
 - Tangentiality – “going off on a tangent”
 - Loose associations – conversation in unrelated directions

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Schizophrenia: The Nature of Disorganization

- Nature of disorganized affect
 - Inappropriate emotional behavior
- Nature of disorganized behavior
 - Includes a variety of unusual behaviors
 - Catatonia
 - May be considered a psychotic spectrum disorder in its own right or, when occurring in the presence of schizophrenia, a symptom of schizophrenia

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Subtypes of Schizophrenia: A Thing of the Past

- Schizophrenia was previously divided into subtypes based on content of psychosis
- This is no longer the case in DSM-5, but outdated terms are still in partial use
- Included paranoid, catatonic, residual (minor symptoms persist after past episode), disorganized (many disorganized symptoms) and undifferentiated

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Other Psychotic Disorders: Schizophreniform Disorders

- Schizophreniform disorder
 - Psychotic symptoms lasting between 1 to 6 months (>6 months = schizophrenia)
 - Associated with relatively good functioning
 - Most patients resume normal lives
 - Lifetime prevalence: approximately 0.2%

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Other Psychotic Disorders: Schizoaffective Disorder

- Schizoaffective disorder
 - Symptoms of schizophrenia + additional experience of a major mood episode (depressive or manic)
 - Psychotic symptoms must also occur outside the mood disturbance
 - Prognosis is similar for people with schizophrenia
 - Such persons do not tend to get better on their own

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Other Psychotic Disorders: Delusional Disorder

- Key feature: Delusions that are contrary to reality
 - Lack other positive and negative symptoms
 - Types of delusions include
 - Erotomantic
 - Grandiose
 - Jealous
 - Persecutory
 - Somatic
 - Better prognosis than schizophrenia

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Other Psychotic Disorders: Delusional Disorder Prevalence

- Very rare; affects 26 to 60 individuals per 100,000
- Later age of onset, between ages 35 to 55
- Somewhat more common in females
 - 55% of patients with this disorder are female

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Catatonia

- Unusual motor responses, particularly immobility or agitation, and odd mannerisms
- Tends to be severe and quite rare
- May be present in psychotic disorders or diagnosed alone, and may include:
 - Stupor, mutism, maintaining the same pose for hours
 - Opposition or lack of response to instructions
 - Repetitive, meaningless motor behaviors
 - Mimicking others' speech or movement

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Psychotic Disorders Due to Other Causes

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- Psychosis may occur as the result of substance use, some medications, and some medical conditions
- Knowing these causes is important for treatment
 - Address underlying cause
- Include:
 - Substance/medication-induced psychotic disorder
 - Psychotic disorder associated with another medical condition

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Brief Psychotic Disorder

- Positive symptoms of schizophrenia (e.g., hallucinations or delusions) or disorganized symptoms
- Lasts less than 1 month
- Briefest duration of all psychotic disorders
- Typically precipitated by trauma or stress

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Attenuated Psychosis Syndrome

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- Identified as a condition in need of further study in DSM-5
- Refers to individuals who are at high risk for developing schizophrenia or beginning to show signs of schizophrenia
- Label designed to focus attention on these individuals who could benefit from early intervention
- Tend to have good insight into own symptoms

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Schizophrenia: Statistics

- Onset and prevalence of schizophrenia worldwide
 - About 0.2% to 1.5% (or about 1% population)
 - Often develops in early adulthood
 - Can emerge at any time; childhood cases are extremely rare but not unheard of

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Schizophrenia: Chronic

- Schizophrenia is generally chronic
 - Most suffer with moderate-to-severe lifetime impairment
 - Life expectancy is slightly less than average
 - Increased risk for suicide
 - Increased risk for accidents
 - Self care may be poorer

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Schizophrenia: Gender and Culture

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- Schizophrenia affects males and females about equally
 - Females tend to have a better long-term prognosis
 - Onset slightly earlier for males
- Cultural factors
 - Psychotic behaviors not always pathologized
 - Yet schizophrenia is found at similar rates in all cultures

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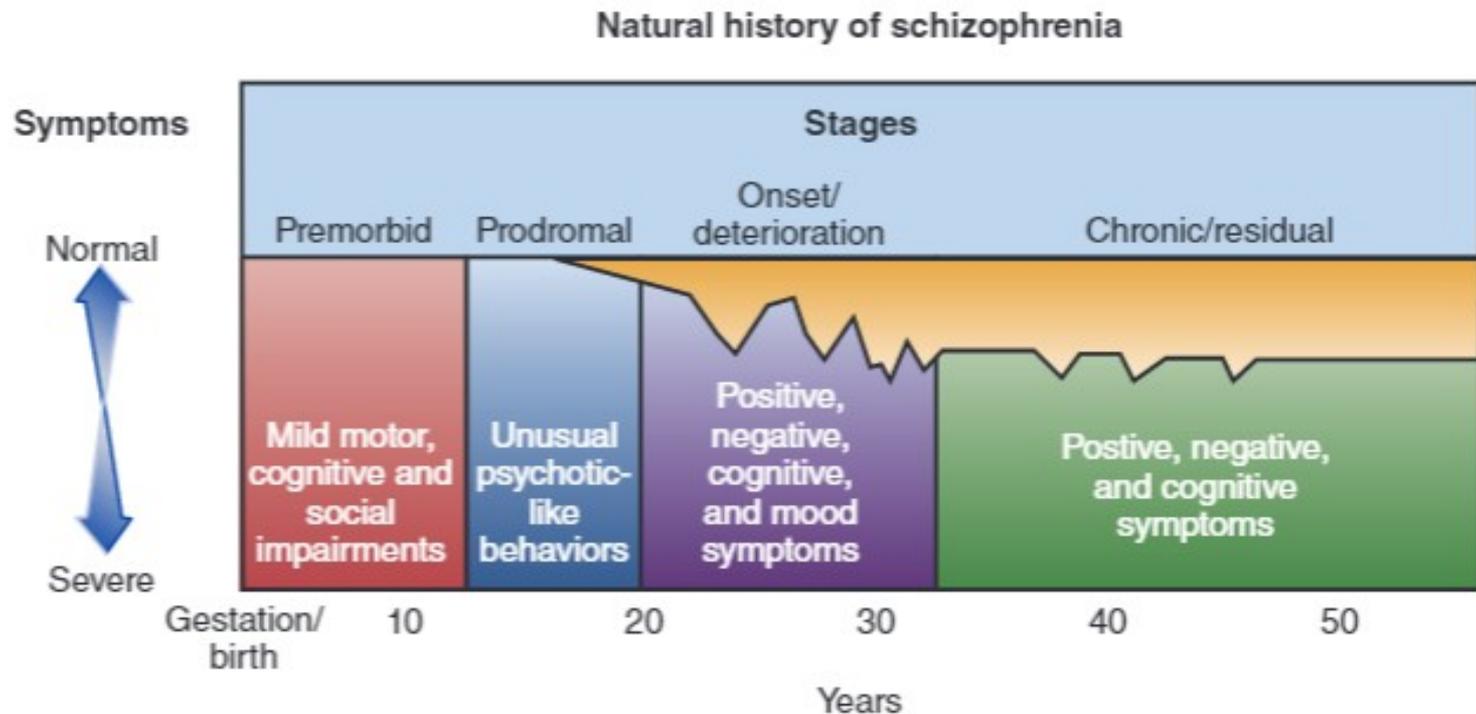
Course of Schizophrenia

- Prodromal phase
 - 85% experience
 - 1 to 2 years before serious symptoms
 - Less severe, yet unusual symptoms:
 - Ideas of reference
 - Magical thinking
 - Illusions
 - Isolation
 - Marked impairment in functioning
 - Lack of initiative, interests, or energy

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Diagram of the Course of Schizophrenia



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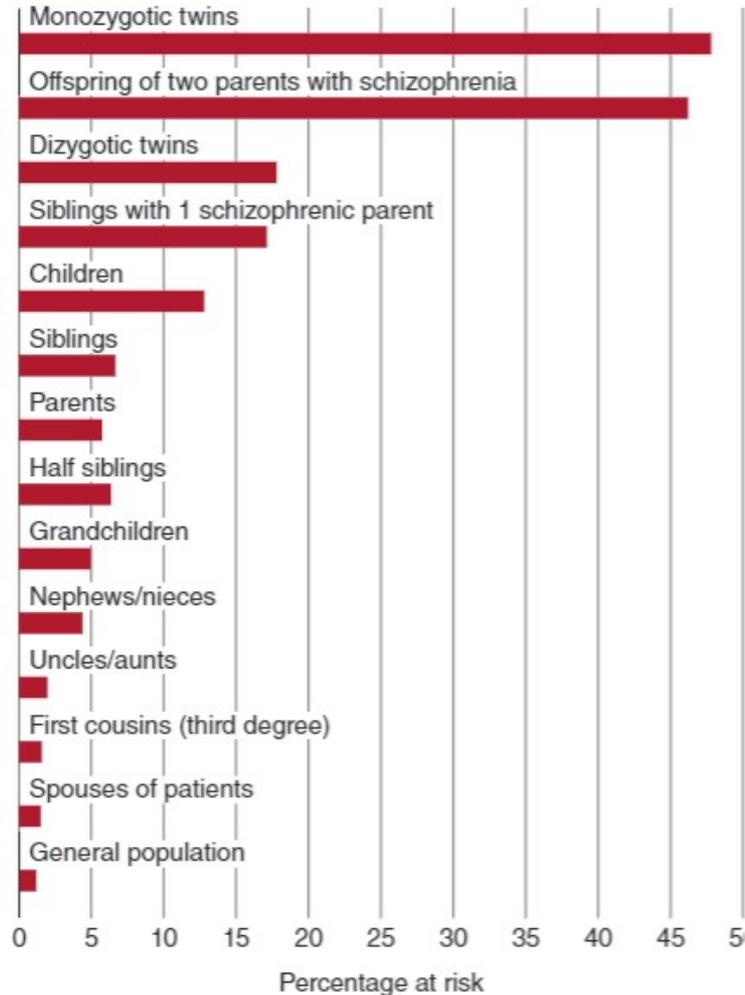
Causes of Schizophrenia: Findings From Genetic Research

- Family studies
 - Inherit a tendency for schizophrenia, not specific forms of schizophrenia
 - Risk increases with genetic relatedness
 - E.g., having a twin with schizophrenia incurs greater risk than having an uncle with schizophrenia

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Risk of Developing Schizophrenia



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Causes of Schizophrenia: Findings From Genetic Research, Continued

- Twin studies
 - Monozygotic twins vs fraternal (dizygotic) twins
 - At greater risk if your identical twin has schizophrenia
 - Supports role of genes

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Causes of Schizophrenia: Findings From Genetic Research, Part 3

- Adoption studies
 - Adoptee risk for developing schizophrenia remains high if a biological parent has schizophrenia
 - But risk is lower than for children raised by their biological parent with schizophrenia – healthy environment is a protective factor

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What Schizophrenia “looks” Like



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Search for Genetic and Behavioral Markers of Schizophrenia

- Genetic markers: Linkage and association studies
 - Endophenotypes
 - Schizophrenia is likely to involve multiple genes
- Behavioral marker (endophenotype): Smooth-pursuit eye movement
 - Schizophrenia patients show reduced ability to track a moving object with their eyes
 - Relatives of schizophrenic patients also have deficits in this area

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Causes of Schizophrenia: Neurobiological Influences

- The dopamine hypothesis: schizophrenia is partially caused by overactive dopamine
- Evidence
 - Drugs that increase dopamine (agonists) result in schizophrenic-like behavior
 - Drugs that decrease dopamine (antagonists) reduce schizophrenic-like behavior
 - Examples – neuroleptics, L-Dopa for Parkinson's disease
- Problem: overly simplistic
 - Many neurotransmitters are likely involved

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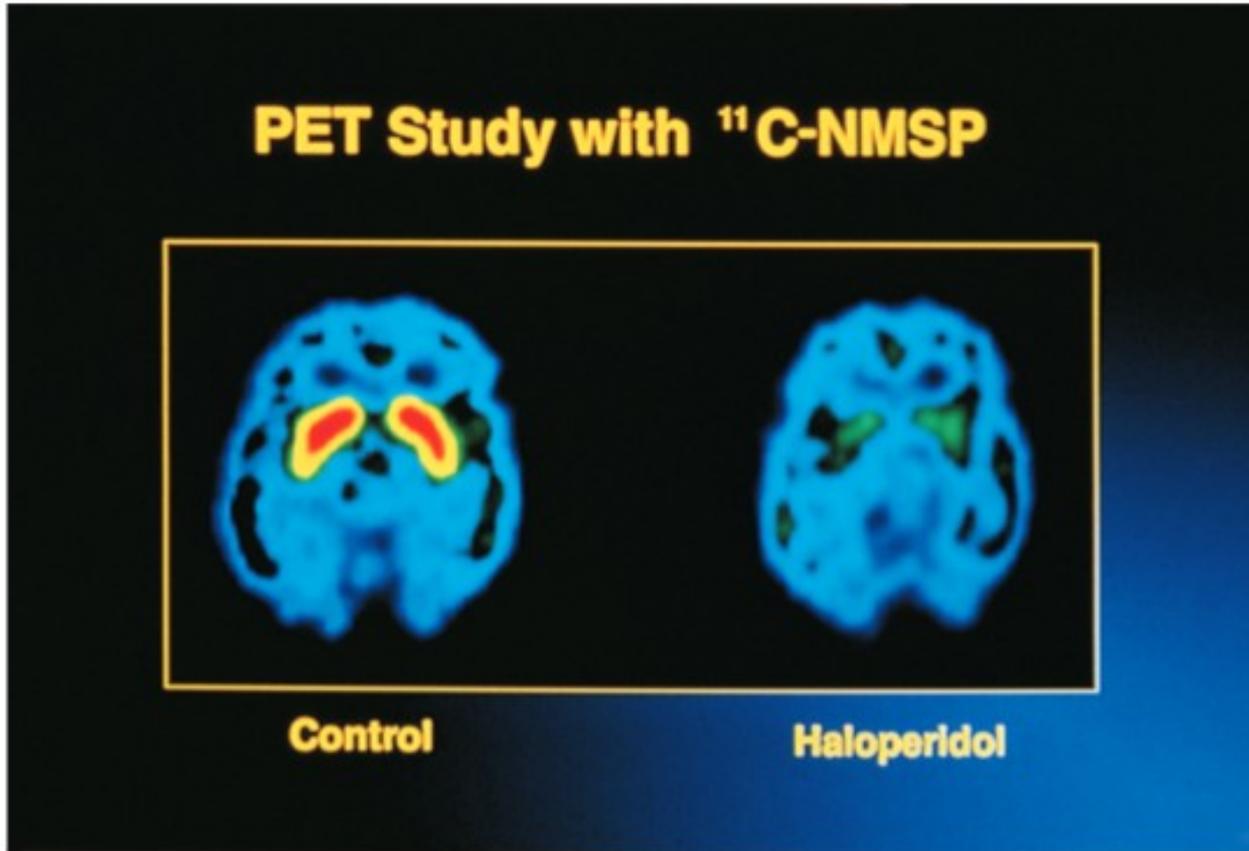
Causes of Schizophrenia: Other Neurobiological Influences

- Structural and functional abnormalities in the brain
 - Enlarged ventricles and reduced tissue volume
 - Hypofrontality – less active frontal lobes
 - A major dopamine pathway
- Viral infections during early prenatal development
 - Findings are inconclusive

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Treatment for Schizophrenia: A PET Study

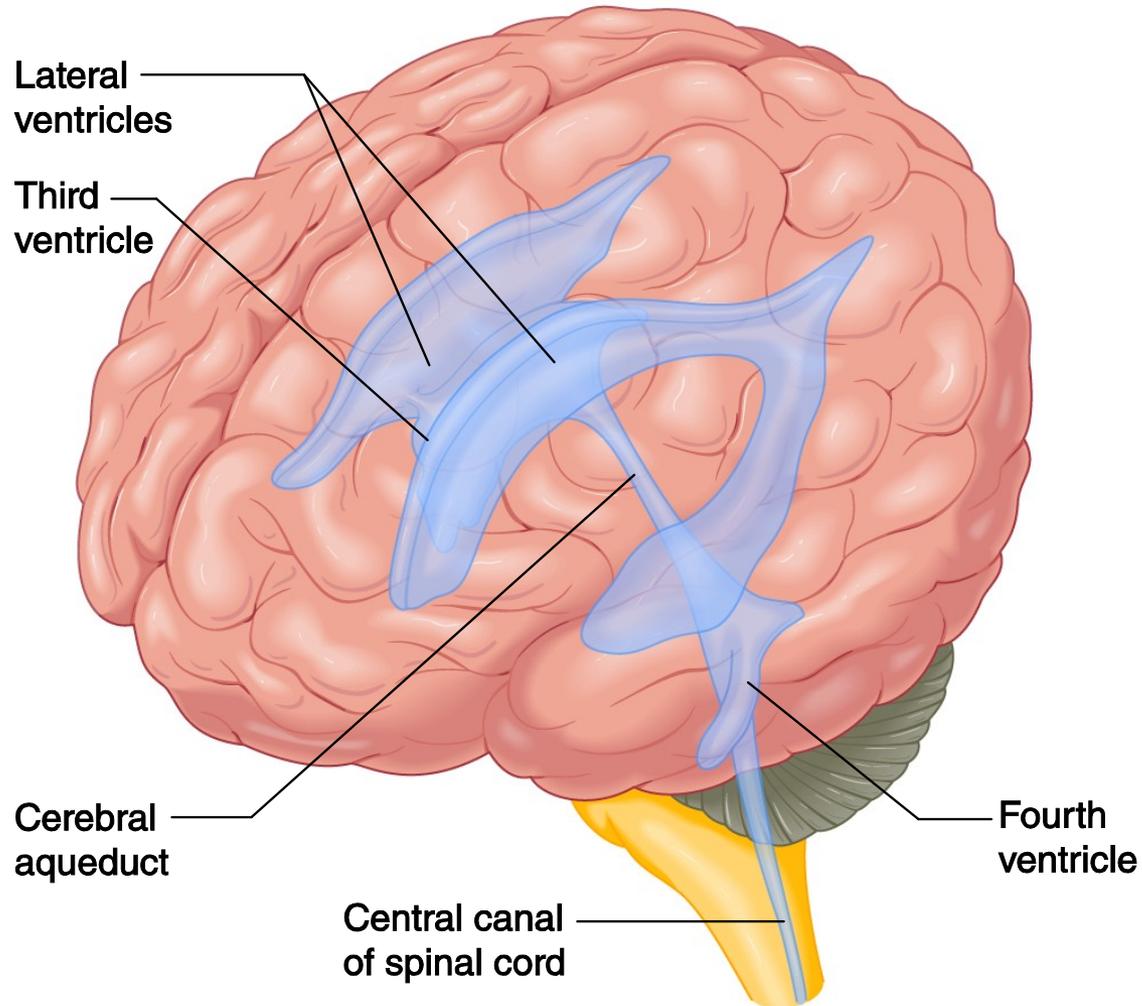


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Neural Ventricles in the Brain



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Other Neurobiological Influences

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- Marijuana use also increases the risk for developing schizophrenia in at-risk individuals
- Conclusions about neurobiology and schizophrenia
 - Schizophrenia reflects diffuse neurobiological dysregulation
 - Structural and functional brain abnormalities
 - Not unique to schizophrenia

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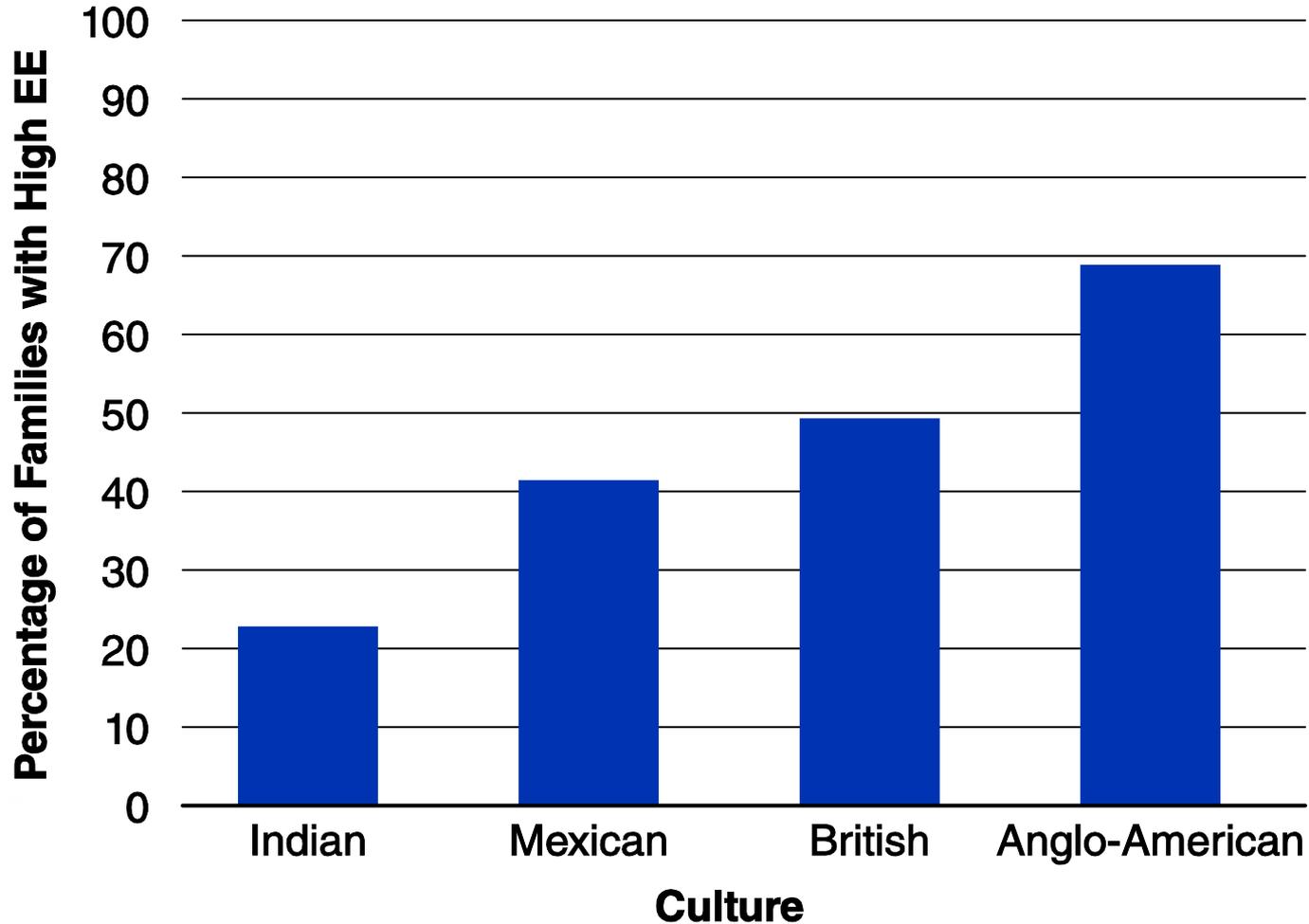
Causes of Schizophrenia: Psychological and Social Influences

- The role of stress
 - May activate underlying vulnerability
 - May also increase risk of relapse
- Family interactions
 - Unsupported theories
 - Schizophrenogenic mother
 - Double bind communication
 - High expressed emotion (EE) – associated with relapse

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Cultural Differences in Expressed Emotion



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Causes of Schizophrenia: Role of Psychological Factors

- The role of psychological factors
 - May function as the *diathesis* in a diathesis-stress model
 - Exert only a minimal effect in producing schizophrenia

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Medical Treatment of Schizophrenia

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- Historical precursors were generally ineffective and often barbaric
- Development of antipsychotic (neuroleptic) medications
 - Often the first line treatment for schizophrenia
 - Began in the 1950s
 - Most reduce or eliminate positive symptoms
 - Primarily affect dopamine system, but also affect serotonergic and glutamate system

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Medical Treatment of Schizophrenia, Continued

- Acute and permanent side effects are common with first-generation medications
 - Parkinson's-like side effects
 - Tardive dyskinesia
 - Compliance with medication is often a problem
 - Aversion to side effects
 - Financial cost
 - Poor relationship with doctors

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Psychosocial Treatment of Schizophrenia

- Historical precursors: Psychodynamic therapy was not effective
- Psychosocial approaches
 - Behavioral (i.e., token economies) on inpatient units: reward adaptive behavior
 - Community care programs
 - Social and living skills training
 - Behavioral family therapy
 - Vocational rehabilitation

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Psychosocial Treatment of Schizophrenia: Management and Recovery

- Illness management and recovery
 - Engages patient as an active participant in care
 - Continuous goal setting and tracking
 - Modules include: social skills training, stress management, substance use

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Psychosocial Treatment of Schizophrenia

- Cultural considerations
 - Take into account cultural factors that influence individuals' understanding of their own illness (e.g., supernatural beliefs)
 - Involve family and community if possible

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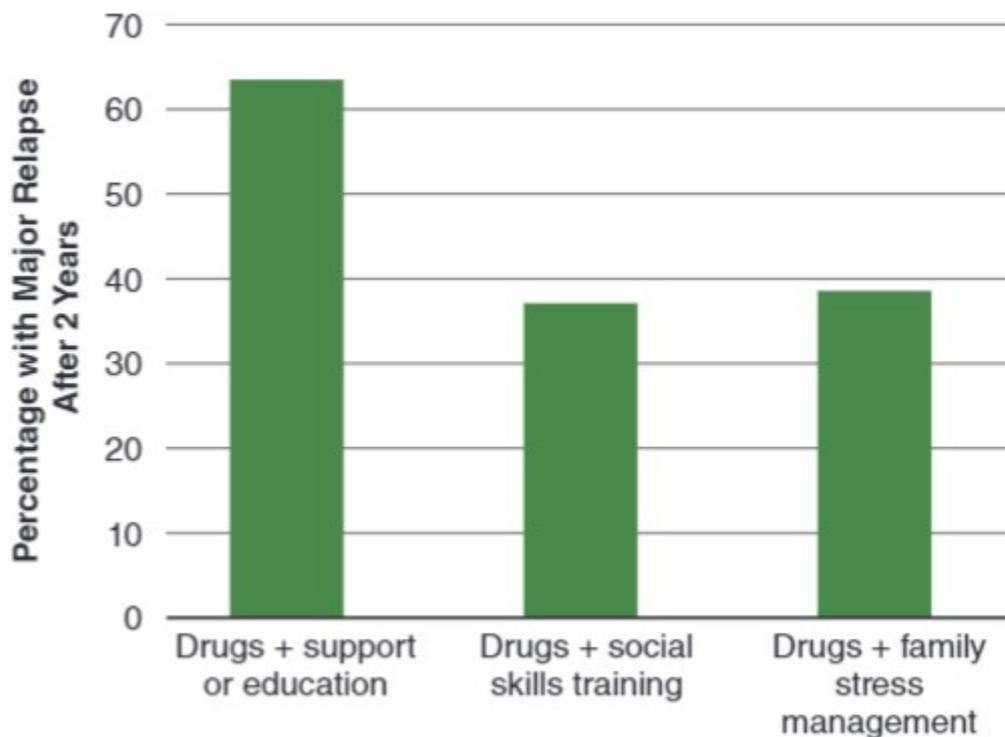
Preventing Schizophrenia

- Prevention
 - Identify at-risk children
 - Relatives of individuals with schizophrenia
 - Foster supportive, stable environments
 - Offer additional treatment at prodromal stages, including social skills training

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Treatment of Schizophrenia: Psychosocial Interventions



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Summary of Schizophrenia and Psychotic Disorders

- Psychotic disorders: Break from reality resulting in a spectrum of dysfunctions
 - Affecting cognitive, emotional, and behavioral domains
 - Schizophrenia involves positive, negative, and disorganized symptom clusters
 - Medication is somewhat effective for positive symptoms, but much room for improvement in treatment