Schizophrenia

- **Causes**
  - Genetic Causes:
    - Highly Heritable:
      - 6.5% if first degree relative has schizophrenia,
        40% if monozygotic twins are affected if twin has schizophrenia
    - Polygenetic:
      - Defects in NOTCH4 and zinc finger protein 804A have been implicated

- Environmental Causes:
  - Developmental Factors:
    - Hypoxia, infection, stress, and malnutrition during fetal development

- Morphological Changes
  - Reduction in brain volume and increase in ventricle size
  - Dopamine Hypothesis: excessive activation of D2 receptors
  - Reduced density of glutamate receptors (NMDA) has been found in postmortem brains

Source: http://www.nimh.nih.gov/health/topics/schizophrenia
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• Diagnosis and Symptoms
  – Positive Symptoms: delusions, hallucinations, disorganized speech, movement disorders
  – Negative Symptoms: Lack of pleasure in everyday life, speaking very little, refusal to take part in normal activities
  – Cognitive Symptoms: Poor executive functioning, working memory, and trouble focusing or paying attention.

• Treatments
  – Antipsychotics: Tend to block D2 receptors in the dopamine pathways in the brain by antagonizing 5-HT2A receptors. Typically nonspecific.
    • Chlorpromazine, Haloperidol, Perphenazine, Fluphenazine
    • Typical and atypical

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