SCHIZOPHRENIA (p.1)

A fairly common example of neurological impairment
   About 1 to 1 ½ % of the population (across all cultures, ages, races)
   Symptoms usually appear in adolescence to early adult years
       Although the neurological damage may have occurred much earlier

Symptoms of schizophrenia:
   **Bizarre delusions of being controlled, of persecution, of grandeur**
   **Inappropriate affect or blunting** of affect
   **Hallucinations, esp. auditory** (always very critical, negative)
       Note: Most psychedelics produce visual hallucinations
   **Incoherent thinking**, incl. illogical thought, illogical associations or causal attributions, beliefs in supernatural forces, etc.
   **Odd behaviors**, incl. catatonia, poor personal hygiene, talking in rhymes, avoiding others, echolalia

Causal Factors:
   Has a strong **genetic** component:
       1% risk in general population vs. 10% if have close relative w/ diagnosis
       Concordance for MZ twins is 45% vs. 10% for DZ twins
       Note: offspring of discordant (non-schizophrenic) twin also had same risk of schizophrenia as did offspring of schizophrenic twin (implies that discordant twin still carried – unexpressed – gene for schizophrenia)

Environmental factors:
   Infections (especially viral), autoimmune reactions, toxins, traumatic injury, stress

Drug Treatments:
   chlorpromazine (Thorazine), olanzapine (Zyprexa), clozapine (Clozaril)
   earlier antipsychotics were also called “major tranquilizers” & were very sedating; later ones not so sedating
   many of the earlier drugs blocked DA2 RSs (esp. butyrophenones, e.g. haloperidol/Haldol)
**SCHIZOPHRENIA** (p.2)

**Drug Treatments** (cont.):

Many of the newer antipsychotics block DA2 RSs, but also block DA1, DA4, and some 5HT RSs as well…

Older antipsychotics (that worked mostly on DA2 RSs) are most effective in reducing the “positive” symptoms of schizophrenia (e.g. hallucinations). Newer antipsychotics are effective in reducing both the “positive” and the “negative” symptoms (e.g. lack of affect, social withdrawal, lack of spontaneous speech, apathy)

As with the antidepressants, it takes some time (several weeks) for the antipsychotic effects of the medications to occur…why? There may be a slow compensatory change that occurs to blocking these RSs… “up-regulation”?

**Neural Structures** involved in schizophrenia:

Often exhibit **wide-spread abnormalities in brain**, incl. an abnormally small cerebral cortex & abnormally large ventricles

Cortical damage is most noticeable in prefrontal area, cingulated ctx, and medial temporal cortex

Most lines of research indicate that **brain develops abnormally**, and that as (damaged) brain structures mature and begin to assert their pathological influence, behavior deteriorates