Schizophrenia is the most common psychotic illness, affecting 7 out of 1,000 people in their lifetime. Patients with schizophrenia have high rates of comorbid medical conditions, which are frequently managed in the primary care setting. While diagnosis and treatment of schizophrenia is best done by or in collaboration with a psychiatrist, a working knowledge of schizophrenia is beneficial for primary care providers. This resource provides helpful information about the management of schizophrenia within the primary care setting.

Schizophrenia is characterized by symptoms including delusions, hallucinations, disorganized speech and behavior, and other symptoms that cause social or occupational dysfunction which are present for six months and active for least one month (American Psychiatric Association. 2013. Diagnostic and statistical manual of mental disorders, 5th ed.).

Schizophrenia has 6 common symptom clusters:
- **Negative symptoms:** amotivation, decreased emotional expression, limited social interaction and poor speech
- **Cognitive dysfunction:** may affect memory, processing speed and executive function
- **Disorganization of speech**
- **Delusions and hallucinations**
- **Motor system abnormalities:** tremor, bradykinesia, catatonia, akathisia, abnormal involuntary movements
- **Affective symptoms:** demoralization, major depression, manic behaviors (increased energy, excitement, irritability, disinhibition)

**Schizophrenia in the Primary Care Setting**

Primary care providers may encounter patients with an initial presentation of psychosis or patients with long-standing schizophrenia who lack active psychiatric follow-up care. If a patient presents to primary care with an episode of psychosis, the following steps are recommended:

1. Perform an appropriate medical evaluation of the patient
2. Obtain psychiatric guidance by calling the Virtual Guidance Service. Referral to psychiatry may be necessary depending on symptom severity and emergency psychiatric evaluation may be necessary if the patient is actively psychotic, suicidal, or exhibiting violent symptoms.
3. Upon referral to psychiatry, request access to patient records to allow for information sharing between psychiatry and primary care.

While treatment of schizophrenia is best carried out in the psychiatric setting, primary care providers play a crucial role in monitoring patients for medical conditions due to lifestyle factors or side effects caused by antipsychotic medications. Collaborative care, which includes information sharing processes and communication between psychiatrists and primary care providers, should be prioritized in the process of treating schizophrenic patients.

**Medical comorbidity in Schizophrenia**

The rate of mortality among schizophrenic patients is 2-3 times higher than the general population, which is attributed to higher rates of suicidality and injuries as well as a higher prevalence of medical illness among patients with schizophrenia. The high incidence of medical comorbidity among individuals with schizophrenia may be attributed to the use of antipsychotic medications or to lifestyle factors such as smoking, substance abuse, lack of exercise, and poor diet.

The following is a summary of common medical conditions among patients with schizophrenia:

- **Diabetes:** Patients with schizophrenia have an increased risk of developing abnormal glucose regulation, insulin resistance and type-2 diabetes mellitus. Atypical antipsychotics, especially Olanzapine, as well as lifestyle factors, such as poor diet and sedentary behavior, contribute to this risk. Patients with a previous diagnosis of diabetes or those with a family history of the disease should undergo regular monitoring of blood sugar testing during the course of treatment.
- **Hyperlipidemia:** Some atypical antipsychotics contribute to hyperlipidemia. Patients with schizophrenia may have increased triglyceride levels and decreased HDL levels, which can be attributed to phenothiazine use. Patients may also have increased fasting glucose and lipid levels due to dibenzodiazepine-derived antipsychotic use.
- **Cardiovascular disease:** Antipsychotic medications contribute to the development of metabolic syndrome X and lifestyle factors contribute to the risk for cardiovascular problems.
- **Obesity:** both typical and atypical antipsychotic medications contribute to the development of overweight and obesity among schizophrenic patients. Clozapine and olanzapine cause particularly rapid weight gain, while there is minimal weight gain with aripiprazole and ziprasidone.
- **Osteoporosis:** Antipsychotic medications contribute to decreased estrogen and testosterone levels; lifestyle factors such as smoking, alcoholism and polydipsia contribute to a reduction in calcium levels.
- **Anticholinergic effects:** typical antipsychotics and clozapine contribute to the development of symptoms including constipation, urinary retention, dry mouth, blurred vision and cognitive impairment.
- **Extrapyramidal symptoms:** all antipsychotics, particularly high-dose typical antipsychotics, can cause pseudoparkinsonism, akathisia, acute dystonia, and tardive dyskinesia.
- **Hyperprolactinemia:** high doses of typical antipsychotics and atypical antipsychotics risperidone and amisulpride increase prolactin levels and may lead to gynecomastia, galactorrhea, oligo- or amenorrhea, sexual dysfunction, acne, hirsutism, infertility, and loss of bone mineral density. Patients exhibiting symptoms of hyperprolactinemia may need to be switched to aripiprazole or quetiapine which do not raise prolactin levels.

For further information and guidance regarding Schizophrenia, please contact the Virtual Guidance Service at 1-855-336-8790.

**About the Virtual Guidance Program**

JPS Health Network is proud to offer a new behavioral health clinical guidance resource to all primary care providers in our region. The JPS Behavioral Health Virtual Resource service offers:

- Telephone consultation with a behavioral health clinical team member
- Referral to community resources benefitting behavioral health patients
- Online reference library of behavioral health education materials
- Educational opportunities to increase provider understanding and comfort level in treating behavioral health conditions.

Call 1-855-336-8790 or visit www.JPSBehavioralHealth.org for more information and to access a free virtual consultation for your patient.
The Following Pages are Patient Education Material
Schizophrenia (JPS Health Conditions and Procedures)

The Basics

Written by the doctors and editors at UpToDate

What is schizophrenia? — Schizophrenia is a brain disorder that keeps you from thinking clearly. It can cause you to see or hear things that aren’t there, or to believe things that aren’t true.

What are the symptoms of schizophrenia? — Schizophrenia can cause:

- **Positive symptoms** — In this case, “positive” does not mean “good.” Positive symptoms are abnormal behaviors that start because of schizophrenia. Examples of positive symptoms include:
  1. Hallucinations — Hallucinations are when you hear, see, feel, smell, or taste things that aren’t there. For example, people with schizophrenia often hear voices in their head telling them to do things when there isn’t really anyone talking.
  2. Delusions — Delusions are when you believe things that are not true. For example, people with schizophrenia sometimes believe they are a famous person who is dead.
  3. Disorganized thinking or speech — People with schizophrenia have trouble thinking in an organized way. They can talk and talk about a lot of things before getting to the point. Sometimes they make up words or say things that do not make any sense.

- **Negative symptoms** — In this case, “negative” does not mean “bad.” Negative symptoms are normal behaviors that stop because of schizophrenia. Examples of negative symptoms include:
  1. Not showing much emotion and not changing your facial expression
  2. Not moving or talking much
  3. Not taking showers or keeping clean
  4. Not having much interest in spending time with people or having fun

- **Cognitive symptoms** — Cognitive symptoms are symptoms that affect your ability to think clearly. People with schizophrenia have trouble:
  1. Learning and remembering
  2. Understanding speech or other forms of communication
  3. Making sense of new information
4. Solving problems

- **Emotional symptoms** — People with schizophrenia often also have symptoms of anxiety or depression.

*Is there a test for schizophrenia?* — No. There is no test. But your doctor or nurse should be able to tell if you have it by learning about your symptoms and doing an exam. Your doctor might need to do tests to make sure your symptoms are not caused by a different medical problem.

*How is schizophrenia treated?* — Schizophrenia is treated with medicines that help control symptoms and with different types of counseling and support.

The medicines for schizophrenia often reduce symptoms, but they take some getting used to. Sometimes people need to try a few different medicines before finding the ones that work best and cause the fewest problems.

The medicines used to treat schizophrenia can cause uncomfortable side effects. If your medicines cause side effects, talk to your doctor about them. He or she might be able to lower your dose, switch you to a different medicine, or help manage the side effects in other ways.

To keep schizophrenia under control, you usually must take medicines for the rest of your life. It’s important to take them exactly as directed. Otherwise, your symptoms could get worse.

It can also be useful for you and your family to take part in a type of therapy called “family psychoeducation.” This program can teach you and your loved ones some important concepts and skills, such as:

- That schizophrenia is a biological illness and not anyone’s fault
- Ways to keep your condition from getting worse
- Ways to deal with your symptoms so that they are less stressful

*What if I want to get pregnant?* — If you want to get pregnant, talk to your doctor before you start trying to get pregnant. Most women with schizophrenia need to keep taking medicines before and during pregnancy. But some women need to switch to medicines that are less likely to cause problems for the baby.

You might be tempted to go off medicines to protect your baby. But be aware that doing that could actually do more harm than good. Women who stop their medicines before or during pregnancy often get severe schizophrenia symptoms and end up needing more medicines than they would have if they had stayed on medicines in the first place.