Schizophrenia

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Definition:

- Schizophrenia is a brain disorder that affects the way a person acts, thinks, and sees the world. People with schizophrenia have an altered perception of reality, often a significant *loss* of contact with reality. They may see or hear things that don't exist (hallucinations), speak in strange or confusing ways, believe that others are trying to harm them, or feel like they're being constantly watched. With such a blurred line between the real and the imaginary, schizophrenia makes it difficult—even frightening—to negotiate the activities of daily life. In response, people with schizophrenia may withdraw from the outside world or act out in confusion and fear.

- Schizophrenia is a challenging disorder that makes it difficult to distinguish between what is real and unreal, think clearly, manage emotions, relate to others, and function normally. But that doesn't mean there isn't hope. Schizophrenia can be successfully managed.

In children (much less common):

- While schizophrenia sometimes begins as an acute psychotic episode in young adults, it emerges gradually in children, often preceded by developmental disturbances, such as lags in motor and speech/language development. Such problems tend to be associated with more pronounced brain abnormalities. The diagnostic criteria are the same as for adults, except that symptoms appear prior to age 12, instead of in the late teens or early 20s. Children with schizophrenia often see or hear things that don't really exist, and harbor paranoid and bizarre beliefs. For example, they may think people are plotting against them or can read their minds. Other symptoms of the disorder include problems paying attention, impaired memory and reasoning, speech impairments, inappropriate, or flattened, expression of emotion, poor social skills, and depressed mood. Such children may laugh at a sad event, make poor eye contact, and show little body language or facial expression.

- Misdiagnosis of schizophrenia in children is all too common. It is distinguished from autism by the persistence of hallucinations and delusions for at least 6 months, and a later age of onset—7 years or older. Autism is usually diagnosed by age 3. Schizophrenia is also distinguished from a type of brief psychosis sometimes seen in affective, personality and dissociative disorders in

children. Adolescents with bipolar disorder sometimes have acute onset of manic episodes that may be mistaken for schizophrenia. Children who have been victims of abuse may sometimes claim to hear voices of—or see visions of—the abuser. Symptoms characteristically pervade the child's life, and are not limited to just certain situations, such as at school. If children show any interest in friendships, even if they fail at maintaining them, it's unlikely that they have schizophrenia.

In men vs. women:

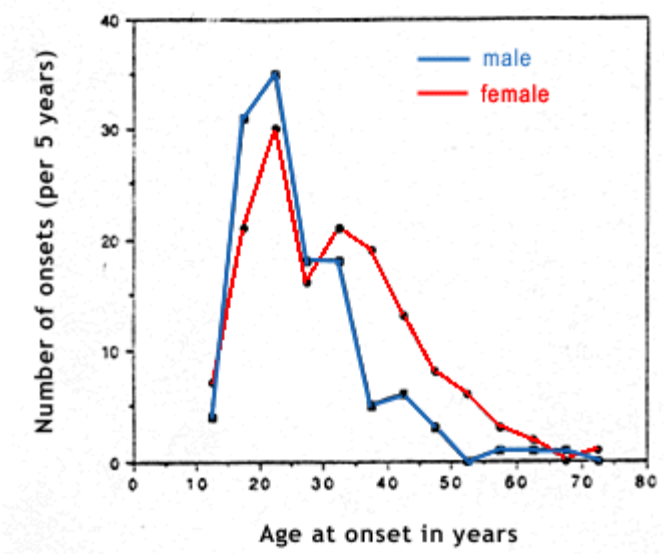
- Age of onset
  - Earlier in males
  - Later in females

•Schizophrenia tends to begin in men/boys at an earlier age than women/girls; men who have schizophrenia generally begin showing signs of the illness between ages 15 and 20, compared to ages 20 to 25 for women.

•Men overall are less responsive to medication and schizophrenia also tends to have a larger impact on men than on women - the long term outcome tends to be worse for men than women. Researchers have hypothesized that estrogen may play a protective role in women against schizophrenia.

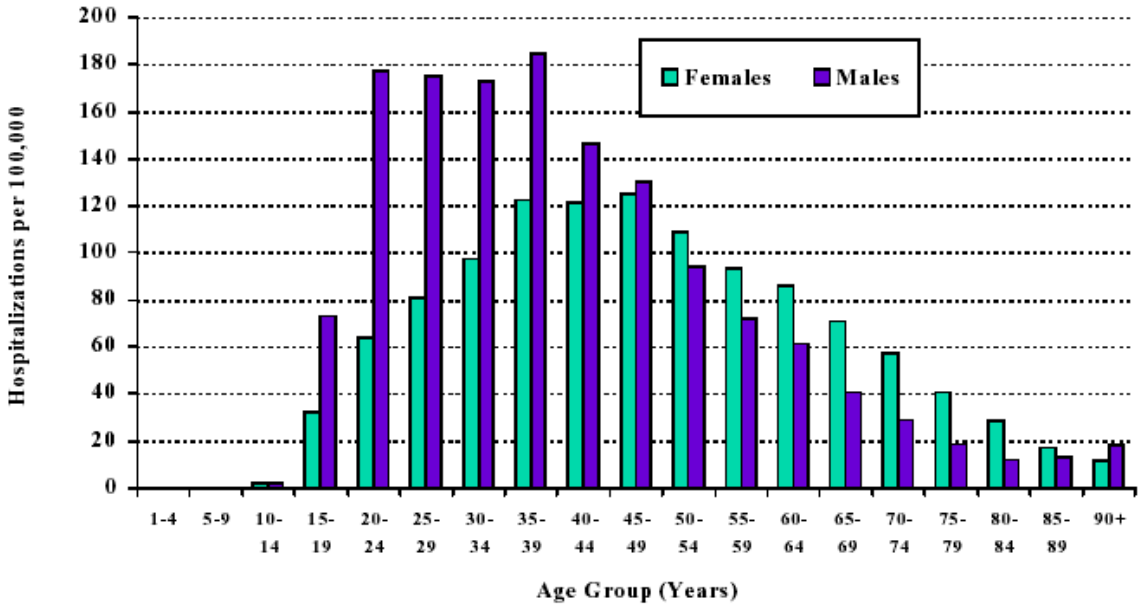
•Schizophrenia is more prevalent in men than women - with women developing schizophrenia at a rate of approximately 50% to 75% that of men, overall.

•Women, however, have a rate of developing schizophrenia at a rate almost twice that of men for people over the age of 45 years.



Age at onset in schizophrenia

Figure 3-1 Hospitalizations for schizophrenia* in general hospitals per 100,000 by age group, Canada, 1999/2000



* Using most responsible diagnosis only

Prevalence

- Schizophrenia is a devastating disorder for most people who are afflicted, and very costly for families and society. The overall U.S. 2002 cost of schizophrenia was estimated to be $62.7 billion, with $22.7 billion excess direct health care cost ($7.0 billion outpatient, $5.0 billion drugs, $2.8 billion inpatient, $8.0 billion long-term care). (source: Analysis Group, Inc.)
- Four in ten people who suffer from schizophrenia attempt suicide.

Diagnosis

There is no test that can make a schizophrenia diagnosis. People with schizophrenia usually come to the attention of a mental health professional after others see them acting strangely.

Doctors make a diagnosis through interviews with the patient as well as with friends and family members.

Psychiatrists have the most experience with diagnosing schizophrenia. A psychiatrist or other licensed mental health professional should be involved in making a schizophrenia diagnosis whenever possible.

A schizophrenia diagnosis can be made when all of the following are true about a patient:

- Schizophrenia symptoms have been present for at least six months.
- Patient is significantly impaired by the symptoms. For example, has serious difficulty working or with social relationships, compared to the period before symptoms began.
- Symptoms can't be explained by another diagnosis, such as drug use or another mental illness.

Some people with schizophrenia are afraid of their symptoms. Or they may be suspicious of others (paranoid). They may conceal their symptoms from doctors or loved ones. This can make it more difficult to confirm a schizophrenia diagnosis.

Diagnosing Schizophrenia by Symptoms

People with schizophrenia have at least some of its main symptoms. For a psychiatrist to make a confident schizophrenia diagnosis, some of these symptoms must be present:

- Hallucinations. This means hearing voices or other sounds that aren't there or seeing things that don't exist.
- Delusions (unshakeable beliefs that aren't true).
- Disorganized speech and behavior (talking and acting strangely).
- Lack of motivation and emotional expression.
- Lack of energy.
- Poor grooming habits.

Specific types of psychotic symptoms (called first-rank symptoms), when present, make a schizophrenia diagnosis more likely:

- Hearing your own thoughts spoken aloud.
- Feeling that thoughts are being inserted into your mind, or removed from it, by an outside force.
- Feeling like other people can read your mind.
- Feeling that an outside force is making you feel something, want something, or act in a certain way.
- Hearing voices discuss you or argue about you.
- Hearing voices narrate your actions as you perform them.

A person with schizophrenia may describe these symptoms openly. Or a psychiatrist may deduce they are likely present based on observations of a person's speech and behavior.

Specific characteristics and symptoms

Usually with schizophrenia, the person's inner world and behavior change notably. Behavior changes might include the following:

- Social withdrawal
- Depersonalization (a sense of being unreal, hazy and in a dreamlike state), sometimes accompanied by intense anxiety
- Loss of appetite
- Loss of hygiene
- Delusions
- Hallucinations (hearing or seeing things that aren't there)
- The sense of being controlled by outside forces
- Disorganized speech

A person with schizophrenia may not have any outward appearance of being ill. In other cases, the illness may be more apparent, causing bizarre behaviors. For example, a person with schizophrenia may wear aluminum foil in the belief that it will stop one's thoughts from being broadcast and protect against malicious waves entering the brain.

People with schizophrenia vary widely in their behavior as they struggle with an illness beyond their control. In active stages, those affected may ramble in illogical sentences or react with uncontrolled anger or violence to a perceived threat. People with schizophrenia may also experience relatively passive phases of the illness in which they seem to lack personality, movement, and emotion (also called a flat affect). People with schizophrenia may alternate in these extremes. Their behavior may or may not be predictable.

In order to better understand schizophrenia, the concept of clusters of symptoms is often used. Thus, people with schizophrenia can experience symptoms that may be grouped under the following categories:

- **Positive symptoms:** Hearing voices, suspiciousness, feeling as though they are under constant surveillance, delusions, or making up words without a meaning (neologisms).
- **Negative (or deficit) symptoms:** Social withdrawal, difficulty in expressing emotions (in extreme cases called blunted affect), difficulty in taking care of themselves, inability to feel pleasure. These symptoms cause severe impairment and are often mistaken for laziness.
- **Cognitive symptoms:** Difficulties attending to and processing of information, understanding the environment, and remembering simple tasks.
- **Affective (or mood) symptoms:** Most notably depression, accounting for a very high rate of attempted suicide in people suffering from schizophrenia. Anxiety can also be present and may be a direct result of the psychosis or come and go during a psychotic episode.

Helpful definitions in understanding schizophrenia include the following:

- **Psychosis:** Psychosis is defined as being out of touch with reality. During this phase, one can experience delusions or prominent hallucinations. People with psychoses are not aware that what they are experiencing or some of the things that they believe are not real. Psychosis is a prominent feature of schizophrenia but is not unique to this illness.
- **Schizoid:** This term is often used to describe a personality disorder characterized by almost complete lack of interest in social relationships and a restricted range of expression of emotions in interpersonal settings, making a person with this disorder appear cold and aloof.
- **Schizotypal:** This term defines a personality disorder characterized by acute discomfort with close relationships as well as disturbances of perception, odd beliefs, and bizarre behaviors. Often individuals with schizotypal personality disorder are seen as odd and eccentric because of unusual mannerisms and beliefs.

- **Hallucinations:** A person with schizophrenia may have strong sensations of objects or events that are real only to him or her. These may be in the form of things that they believe strongly that they see, hear, smell, taste, or touch. Hallucinations have no outside source, and are sometimes described as "the person's mind playing tricks" on him or her.

- **Illusion:** An illusion is a mistaken perception for which there is an actual external stimulus. For example, a visual illusion might be seeing a shadow and misinterpreting it as a person. The words "illusion" and "hallucination" are sometimes confused with each other.

- **Delusion:** A person with a delusion has a strong belief about something despite evidence that the belief is completely false. For instance, a person may listen to a radio and believe the radio is giving a coded message about an impending alien invasion. All of the other people who listen to the same radio program would hear, for example, a feature story about road repair work taking place in the area.

Types of schizophrenia include the following:

- **Paranoid-type schizophrenia** is characterized by delusions and auditory hallucinations but relatively normal intellectual functioning and expression of affect. The delusions can often be about being persecuted unfairly or being some other person who is famous. People with paranoid-type schizophrenia can exhibit anger, aloofness, anxiety, and argumentativeness.

- **Disorganized-type schizophrenia** is characterized by speech and behavior that are disorganized or difficult to understand and flattening, inappropriate, or exaggerated emotions. People with disorganized-type schizophrenia may laugh at the changing color of a traffic light or at something not closely related to what they are saying or doing. Their disorganized behavior may disrupt normal activities such as showering, dressing, and preparing meals.

- **Catatonic-type schizophrenia** is characterized by disturbances of movement. People with catatonic-type schizophrenia may keep themselves completely immobile or move all over the place. They may not say anything for hours, or they may repeat anything you say or do senselessly. Either way, the behavior is putting these people at high risk because it impairs their ability to take care of themselves.

- **Undifferentiated-type schizophrenia** is characterized by some symptoms seen in all of the above types but not enough of any one of them to define it as a particular type of schizophrenia.
- **Residual-type schizophrenia** is characterized by a past history of at least one episode of schizophrenia, but the person currently has no prominent positive symptoms (delusions, hallucinations, disorganized speech or behavior). The individual still exhibits some negative symptoms such as lack of desire to develop relationships, flat emotional expression, limited speech, lack of motivation, and difficulty experiencing pleasure. It may represent a transition between a full-blown episode and complete remission. Or it may continue for years without any further psychotic episodes.

Specific needs

- **Personal Therapy and CBT (Cognitive Behavioral Therapy) -** Personal Therapy is a psychosocial intervention designed to help patients with schizophrenia recognize and respond appropriately to arousing stimuli improves function and reduces relapse. Personal therapy, as it is called, aims to create a therapeutic umbrella to protect the patients from undue personal stress. Recent studies have suggested that over the long haul, individual psychotherapy tailored to strengthen interpersonal skills and control social stress markedly helps many people suffering from the disorder.
- This new form of schizophrenia treatment has resulted in lower relapse rates and progressively better social functioning over 3 years, at least for people able to live with family members and meet basic survival needs, contend social worker Gerard E. Hogarty of the University of Pittsburgh School of Medicine and his colleagues.
- Cognitive Behavioral Therapy (CBT) has been judged by the Cochrane review as potentially positive for people with schizophrenia, stating that evidence suggests " that it [CBT] may well be of value, at least in the short term. Cognitive behavioural therapy should be further evaluated in various clinical settings and comparing effects for both expert and less skilled practitioners." Source; Cochrane Review

- Family therapy and assertive community treatment have clear effects on the prevention of psychotic relapse and rehospitalization. However, these treatments have no consistent effects on other outcome measures (e.g., pervasive positive and negative symptoms, overall social functioning, and ability to obtain competitive employment). Social skills training improves social skills but has no clear effects on relapse prevention, psychopathology, or employment status. Supportive employment programs that use the place-and-train vocational model have important effects on obtaining competitive employment. Some studies have shown improvements in delusions and hallucinations following cognitive behavior therapy. Preliminary research indicates that personal therapy may improve social functioning.

- Research suggests that relatively simple, long-term psychoeducational family therapy should be available to the majority of persons suffering from schizophrenia. Assertive community training programs ought to be offered to patients with frequent relapses and hospitalizations, especially if they have limited family support. Patients with schizophrenia can clearly improve their social competence with social skills training, which may translate into a more adaptive functioning in the community. For patients interested in working, rapid placement with ongoing support offers the best opportunity for maintaining a regular job in the community. Cognitive behavior therapy may benefit the large number of patients who continue to experience disabling psychotic symptoms despite optimal pharmacological treatment. (Source - psychosocial treatment, 2001 - see below)

Glycine Therapy

- Glycine (an amino acid sold as a dietary supplement) has been a subject of research for over 15 years as a potential treatment for the negative symptoms of schizophrenia. Only a handful of human clinical trials with fewer than 50 people in each trial, have been completed (though one trial with 150 people has recently completed and has not yet been published). The trials published to date are reporting that the results have been quite positive, showing a significant reduction (averaging around 24%) in negative and cognitive symptoms based on the PANSS (Positive and Negative Schizophrenia Symptoms) scale. The clinical trials have shown that Glycine did not help people who are taking Clozapine, but it did help (in reducing negative

symptoms) in people who were taking risperidone (Risperdal), and olanzapine (Zyprexa). The clinical trials suggest that the optimal dosage may be in the range of 30 grams to 60 grams a day. The biggest downside to taking glycine seems to be upset stomach and nausea which, researchers tell us, is quite common in people who take 60 grams of glycine a day for a month or two. Approaches used by the researchers to minimize this problem have been to start at lower doses (e.g. 5 to 10 grams split into two doses per day) and then to slowly phase up to higher doses over a period of weeks. Also - taking it after meals may assist in reducing side effects.

- One hypothesis of schizophrenia pathology suggests that NMDA-receptor disfunction (a special kind of glutamate receptor in the brain) may contribute to disordered synapses and brain atrophy, which ultimately result in the visible symptoms. Glycine may turn out to be a very beneficial supplemental treatment (when added to standard antipsychotic medications) for some people with schizophrenia. We hope to see longer and larger trials for glycine supplemental treatments. Talk with your doctor if you think you may benefit (review the report below for information on what glycine does and who it might help). See special report below for more information:

- **Antioxidant Vitamins** - Researchers have found a positive correlation between superoxide generation and the negative symptoms of schizophrenia, indicating a possible role for oxidative stress in the development of the disease (and the potential for antioxidants to help in decreasing the risk or severity of the disease). "There are several lines of evidence to support the contribution of oxygen free radicals in schizophrenia, including increased lipid peroxidation, fatty acids, and alterations in blood levels of antioxidant enzymes," note Pinkhas Sirota (Tel Aviv University, Israel) and colleagues, in a recent research paper.

- Higher than normal intake of foods known to have a high content of antioxidants, as well as supplements of high antioxidant vitamins (Alpha Lipoic Acid, Vitamin E, Vitamin C) may have some beneficial impact on the incidence and progression of the disease - anecdotal evidence suggests as much as 5% to 10% improvement for some individuals. Foods high in antioxidants include blue berries (frozen or fresh), dried plums, spinach and strawberries.

  Vitamin E and other Antioxidants (for Tardive Dyskinesia) - Tardive dyskinesia is a neurological syndrome caused by the long-term use of neuroleptic drugs - especially the older "typical" medications. Tardive dyskinesia is characterized by repetitive, involuntary, purposeless

movements. Features of the disorder may include grimacing, tongue protrusion, lip smacking, puckering and pursing, and rapid eye blinking. Rapid movements of the arms, legs, and body may also occur. Impaired movements of the fingers may appear as though the patient is playing an invisible guitar or piano. There is no standard treatment for tardive dyskinesia. Treatment is highly individualized. The first step is generally to stop or minimize the use of the neuroleptic drug. However, for patients with a severe underlying condition this may not be a feasible option. Replacing the neuroleptic drug with substitute drugs may help some patients. Other drugs such as benzodiazepines, adrenergic antagonists, and dopamine agonists may also be beneficial.

In the last 10 years, preclinical studies of the administration of antipsychotics to animals, as well as clinical studies of oxidative processes in patients given antipsychotic medications, with and without tardive dyskinesia, have continued to support the possibility that neurotoxic free radical production may be an important consequence of antipsychotic treatment, and that such production may relate to the development of dyskinetic phenomena. In line with this hypothesis, evidence has accumulated for the efficacy of antioxidants, primarily vitamin E (mixed-tocopherols), in the treatment and prevention of tardive dyskinesia. Early studies suggested a modest effect of vitamin E treatment on existing tardive dyskinesia, but later studies did not demonstrate a significant effect.

Because evidence has continued to accumulate for increased oxidative damage from antipsychotic medications, but less so for the effectiveness of vitamin E, especially in cases of long-standing tardive dyskinesia, alternative antioxidant approaches to the condition may be warranted. These approaches may include the use of antioxidants as a preventive measure for tardive dyskinesia or the use of other antioxidants (for example Alpha Lipoic Acid) or neuroprotective drugs, such as melatonin, for established tardive dyskinesia.

In schizophrenia.com's discussions with NIMH researchers it has been suggested that up to 1,600 mg/day of vitamin E is safe for most people, and up to 600 to 1200 mg/day of Alpha Lipoic Acid is also a safe maximum dosage. We recommend you discuss these antioxidant plans with your physician and psychiatrists before beginning any vitamin program because of the potential for

there to be negative interactions between different drugs and vitamins (though the chances of this in general appear low).

EPA Omega-3 Fish Oils - While the research is somewhat conflicting (some positive studies, some negative studies) there is some early scientific research that suggests that people that have schizophrenia may benefit by a reduction in symptoms when they take fish oil capsules that are high in the EPA (a type of Omega-3 fatty acid) form of oil. If you do try fish oil, it is important to be careful about the type of fish oil you are using - because not all fish oils are effective. The researchers at the University of Scheffield tell us that "What people really need to be looking at is the amount of EPA in the fish oil they are buying. Our data from previous studies suggests that DHA is of little use in the treatment of schizophrenia but EPA is the substance that yield the best results. Dosage wise it is suggested that about 2,000 mg/day to 4,000 mg/day (2 to 4 grams/day) should help."

A research review article from Cochrane Review suggested that "The use of omega-3 polyunsaturated fatty acids for schizophrenia remains experimental and large well designed, conducted and reported studies are indicated and needed."

Animal-Assisted Therapy

- Research has shown that pets (dogs and cats) may offer a low cost, yet helpful type of therapy for people with schizophrenia. What the researchers call "Animal-assisted Therapy" has been shown to encourage mobility, interpersonal contact, and communication and reinforced activities of daily living, including personal hygiene and independent self-care.
- We could only find a single study on this topic - so it remains to be seen if this approach to therapy proves effective in larger, more rigorous studies. It seems that a calm and friendly dog (not a puppy that requires a lot of attention) could provide good companionship for people who have schizophrenia and don't socialize much.

Medications

Medications work successfully to control symptoms in the majority of patients (approximately 70% of patients will improve to some degree, according to research - but we've also seen research that suggests the chances of any one drug working for a person may be only 50% or so. People frequently have to try more than one drug to partially or completely control the positive symptoms - hallucinations, delusions, paranoia, racing thoughts, etc). They are not as effective in controlling negative symptoms, and may cause side-effects of their own. However, second-generation antipsychotics (also called atypical antipsychotics) have shown more success with some patient population in treating negative and cognitive symptoms. There are also a wealth of new, and hopefully better, schizophrenia medications currently in development.

See our Medications area for information on commonly prescribed antipsychotic medications - how they work, how effective they are, what side-effects they cause - as well as additional info on research studies and medications in clinical trials.

Although an important element, medication is far from the only treatment used for schizophrenia patients. Many patients and their families choose **supplemental therapies**(these can include psychosocial or cognitive therapy, rehabilitation day programs, peer support groups, nutritional supplements, etc) to use in conjunction with their medications. In certain severe cases, some patients also respond to electroconvulsive therapy (which has been shown to be safe and effective) or transcranial magnetic stimulation (TMS). These additional treatments can be essential for a full recovery - although medications are the best tool right now for controlling symptoms (particularly positive ones), other treatments and therapies are what can help a person manage depression, social interactions, school, work, and the components for a full life. The most promising complementary treatments to try in conjunction with medication that we have seen thus far, based on scientific literature and patient experiences, include personal therapy (there are many types), certain amino acids and antioxidant vitamins such as glycine or sarcosine supplements, and a healthy diet. Information on all these and other treatments can be found on our Complementary Treatments page.

In the case of therapy, some research has shown that psychotherapy and medication can be more effective than medication alone (however, the same study noted that psycotherapy alone was NOT a substitute for medication). The three main types of psychosocial therapy are: behavioral therapy (focuses on current behaviors) cognitive therapy (focuses on thoughts and thinking

patterns) and interpersonal therapy (focuses on current relationships). For schizophrenia, cognitive-behavioral therapy has shown the most promise in conjunction with medication.

Schizophrenia medications have many side effects, which can make it difficult to stay on a treatment plan.

Antipsychotic medications for schizophrenia are getting better, but there is still room for improvement.

"Treatment is suboptimal and convincing people to take their medications is a big struggle," says Dost Ongur, MD, PhD, clinical director of the schizophrenia and bipolar disorder program at McLean Hospital in Belmont, Mass.

Schizophrenia Treatment: Typical and Atypical Drugs

So-called "typical antipsychotics" were developed in the 1950s and were the first drugs to have an effect on the psychotic symptoms of schizophrenia. They include:

- Chlorpromazine (Thorazine)
- Fluphenazine (Prolixin)
- Haloperidol (Haldol)
- Thiothixene (Navane)
- Trifluoperazine (Stelazine)
- Perphenazine (Trilafon)
- Thioridazine (Mellaril)

New types of medication, called "atypical antipsychotics," were developed in the 1990s and have a number of advantages over typical antipsychotic medication. They tend to be more

effective at controlling "positive" symptoms, such as hallucinations, with fewer side effects. In some people, atypical antipsychotic medication also improves cognitive symptoms of schizophrenia. They include:

- Risperidone (Risperdal)
- Olanzapine (Zyprexa)
- Quetiapine (Seroquel)
- Ziprasidone (Geodon)
- Clozapine (Clozaril)

Schizophrenia Treatment: Side Effects

"Side effects are a big problem," says Dr. Ongur. "People say they would almost rather be in their old situation than dealing with these side effects — gaining 100 pounds, dry mouth, type 2 diabetes."

Each drug has its own list of side effects, but side effects may include:

- Weight gain
- Dizziness
- Drowsiness
- Rash
- Decreased libido
- Changes to menstruation

Some side effects, like weight gain, can be mitigated, if not prevented, with attention to diet and exercise.

Schizophrenia Treatment: More Challenges

Clozapine (Clozaril) is extremely effective for many people who do not respond to other drugs. But, because clozapine can critically affect white blood cell count in a small number of people, weekly blood tests are required for everyone taking the medication. People who lack the time, resources, or capacity to get themselves to a clinic once a week may not get this potentially lifesaving drug.

Another challenge to treatment is the fact that it takes time to determine the right medication for a given person. It can take anywhere from several weeks to several months to find a medication that works. Each patient reacts differently to antipsychotics, and there is no way to predict what drug will work best.

"We don't know the key physiological problem in schizophrenia, which makes it hard to fine-tune the treatment to the patient," says Ongur. Until scientists understand more about how schizophrenia affects the brain, finding the right medication is a matter of luck, he says.

The lengthy trial-and-error process and the harsh side effects linked to the medications can make it difficult to motivate patients to stay on treatment.

Schizophrenia Treatment: Staying Safe

"People who are in real distress may be dangerous to themselves," says Ongur. He recommends that patients start treatment in a hospital. "Often, the hospital is a safe and therapeutic environment," he says. In the hospital, doctors can closely monitor patients for side effects caused by their new medications. Once the patient is stable, they can be released.

Although there is a great need for better schizophrenia treatment, it is important for families to encourage their loved one to stick with the treatments available, despite their side effects, says Ongur. Family counseling is available to give family members tips on how to encourage their loved one to comply with treatment.

TR implications

- Therapy to increase social skills. Often those with schizophrenia suffer severely in social settings. Recreational Therapy is an excellent modality for treating those who deal with issues involving appropriate interactions in social settings.

  Ex 1. Spectrum's Certified Recreation Therapy Specialists (CTRS) help our clients develop skills needed to enhance independence in the community while participating in recreational activities that improve and promote social interaction with others.

  Recreation Therapists work one on one with clients in the community and when possible, Spectrum arranges for group activities among age and skill appropriate clients to share in the recreational and social experiences.

  Recreation Therapy teaches more than recreation skills. Therapists also address skills of independence in the community teaching clients to take public transportation, eat out in a restaurant, and navigate the grocery store among many other daily living tasks.

  In addition to one on one Recreation Therapy, Spectrum offers Social and Recreation Outing Groups on occasional Saturdays throughout each session of Social Skills Instruction. For our most current Recreation Therapy service offerings contact

  What kind of activities can Recreation Therapy teach?

  Just about any recreation and leisure skill can be taught through Recreation Therapy! Our clients learn more than a skill set to complete an activity though – they learn to appreciate recreational activities for their own enjoyment. Our clients participate in many recreation activities including; hiking, geocaching, disc golf, miniature golf, swimming, biking, kayaking and many, many more.

Psychosocial and Physical Benefits of TR:

Pyschosocial Outcomes	**Physical Outcomes**
Enhance body image perceptions.	Increase immune system activity.
Change attitudes toward disability.	Reduce pain.
Improve sense of self.	Increase muscular strength.
Achieve control over stress.	Improve flexibility and balance.
Enhance self-efficacy.	Improve cardiovascular functioning.

Develop sense of mastery.	Develop consistent activity routine for diabetes maintenance. Reduce of decubiti and urinary tract complications. Increase endurance.

Cognitive and Community Reintegration Benefits of Recreational Therapy

Cognitive Outcomes	**Community Reintegration**
Increase mental alertness. Increase attention span. Enhance memory skills. Improve organizational skills. Improve problem-solving.	Prevent social isolation. Develop/maintain social skills. Develop self-adovacy skills. Build skills to minimize disability stigma. Master skills for managing environmental barriers (i.e. stairs). Increase knowledge of community resources. Increase overall activity level.

Communication, Social Skills and Behavior Reintegration Benefits of Recreational Therapy

Communication/Social Skill Outcomes	**Behavior Reintegration**
• Improve cooperation skills. • Increase self assertiveness. • Increase skills in conversation	• Decrease self-stimulating and self-abusive behaviors. • Increase participation in age-appropriate activities. • Increase age-appropriate behaviors.

Community Integration/Friendships Benefits of Recreational Therapy

Community Integration/Friendships
• Increase friendships with peers with and without disabilities. • Increase participation in community. • Increase peer acceptance. • Develop transferable skills for employment and independent living.

Social Skills Benefits of Recreational Therapy

Symptom reduction	Social skills
• Reduction in depression. • Reduction in anxiety. • Reduction in tension. • Reduction in sleep disturbances. • Reduction in negative thinking. • Reduction in hallucinatory speech and behavior. • Reduction in inappropriate laughter.	• Decreased social anxiety. • Improved social skill competence and retention of skills. • Increased socialization. • Improved cooperation. • Improved communication skills.

Community Skills and Self Management Skills Benefits of Recreational Therapy:

Community skills	Self management skills
• Increased tolerance for change. • Increased trust and cooperation. • Reduction of problem or delinquent behavior. • Increased parenting skills. • Improved family relations. • Increased activity skill competency. • Reduction of recidivism rate.	• Improved coping skills for anxiety. • Increased sense of personal responsibility. • Increased self mastery. • Increased self concept and self confidence. • Increased quality of discretionary time use.

Improved Cognitive Functioning and Social Support Benefits of Recreational Therapy (particularly in elderly):

Improved cognitive functioning	Improved social supports
• Reduced confusion. • Improved memory. • Increased attention span. • Increased awareness and alertness. • Reduced reliance on medication	• Decreased loneliness. • Increased verbal interaction and socialization. • Improved life satisfaction. • Enhanced sense of personal control.

http://www.ncrta.org/Professional/benefits.htm#pyschiatric%20diabilities

- Therapy is often effective in addition to medication treatment. Research has shown that group, art, music, and recreational therapy are helpful for people with schizophrenia. Therapists help patients understand and cope with their illnesses.
- Recreational Therapy helps patients to learn to cope with their symptoms through generalization.
  - Fortunately, proper treatment and management can reduce or eliminate some of the symptoms of schizophrenia. However, most people with schizophrenia will have to learn to cope with their symptoms over their lifetime. All hope is not lost, many people who have schizophrenia are able to live meaningful lives as a productive member of their community.
- CBT can be an incorporated aspect of our Recreational Therapy:
  - Cognitive-behavioral therapy (CBT) focuses upon the way we think and our behaviors. This therapy is used often for people who have schizophrenia whose symptoms do not dissipate with medication. A therapist will teach a schizophrenic person to test the reality of their perception and thoughts, how to ignore their voices, and overall symptom management. CBT works well to reduce symptom severity and reduce the rates of relapse.
- Strengths-based counseling can also be achieved through Recreational Therapy:
  - Strengths-based counseling can help a person with schizophrenia who has been stabilized on medications by allowing them to understand that they must take an active role in their treatment because they hold the key to their continued treatment success.

How TR helps people with Schizophrenia:
Therapeutic Recreation contributes to the recovery of individuals who experience developmental, cognitive, emotional, social, or physical difficulties. Recreation Therapists help patients figure out "what do you do for fun, and how can we help you get those things back into your life?"

Individuals with Schizophrenia need to develop appropriate behavior. People with Schizophrenia experience disruptions in social skills, work, hygiene, daily living skills, recreation, and leisure skills. Therapeutic Recreation is one that helps with people with Schizophrenia. TR Interventions have many benefits, such as, an outlet for hostility and other emotions such as depressed feelings and anxiety. TR also helps develop social skills, independence, new skills and interests, and individual and group decision-making. TR lessens symptoms and improves the physical, emotional , and mental health status of individuals.

Additionally, we should always bear in mind that another benefit of TR is, as opposed to many other long-term treatment plans and/or medications, we supplement those with schizophrenia with a cost-effect and physically enhancing mode of therapy:

***Cost benefits* of services provided by Therapeutic Recreation Specialists**

The bottom line shows -- Services by therapeutic recreation specialists and assistants are **COST-EFFECTIVE**! Here is a sampling of examples and reasons:

- Increasing activity level and involvement in community life reduces medical complications and costly secondary disabilities after onset of a disability. Interestingly, research does not show a similar correlation when simply improving physical abilities.

- Increasing social skills, expanding social networks, and improving community living skills reduces dependence on health and human service programs and decreases the need for costlier residential and behavioral supports.

- In many situations, therapeutic recreation specialists provide services in a group treatment versus a 1:1 treatment format thus, more treatment services can be delivered at the same salary expense.

- Active involvement in therapeutic recreation specialists' services improves community living skills, increases independence and reduces the need for extended inpatient hospitalization.

- Therapeutic recreation specialists assist in the reduction of secondary disabilities such as reducing the occurrence of decubitus ulcers and the costs incurred in their treatment.

- Therapeutic recreation specialists positively impact the emotional recovery from illness or injury and, in turn, enhance compliance with medical treatment.

- Hospitalized children who participated in structured games demonstrated improved mobility and range of motion, decreased loss of function, and **increased rates of healing**. Further, children recovering from surgery receiving play interventions demonstrated **increased rates of healing**, as well as improved appetite and strength.

- A primary reason that many job placements fail is not because of an individual lacks of the necessary job skills but, instead, because the individual is no able respond to the social demands of the job environment. Therapeutic recreation specialists promote the development of pertinent social skills that are transferable to many vocational and avocational settings.

- The costs of therapeutic recreation specialists' are reasonable. In order for North Carolinians to receive economical health care, therapeutic recreation specialists and assistants must continue to be included health and human service plans.

Psycho-social therapy

Four in ten people who suffer from schizophrenia attempt suicide.

- Although there is no cure (as of 2007) for schizophrenia, the treatment success rate with antipsychotic medications and psycho-social therapies can be high. If the appropriate level of investment is made in research, it has been estimated that a cure for schizophrenia could be found within 10 years (by the year 2013). Traditionally, however, schizophrenia has only

received a small fraction of the amount of medical research dollars that go into other serious diseases and disorders (see below - Schizophrenia Research - for more information).

- New Treatments: There are over 15 new medications for the treatment of schizophrenia currently in development by different biotech and pharmaceuticals companies (source: Special report on New Schizophrenia Medications). Additionally, there are many new and improving psycho-social treatments and cognitive therapies for schizophrenia that are being rolled out with significant success. Together these new treatments hold significant promise of a better life in the future for people who have schizophrenia. Check here for the latest news coverage of these new therapies.

Resources (local, state, national, & international)

Local:

In Utah County:

Wasatch Mental Health
750 North 200 West
Provo, UT 84601
Phone:(801) 373-4760, website: http://www.wasatch.org/

National Alliance on Mental Illness (NAMI)
Contacts: Nedra Bell (801-373-2688) and Robert and Brenda Chabot (801-224-0591; 801-885-6714)
Website: http://www.namiut.org/find-local-support/item/21-utah-county

Intermountain Healthcare Behavioral Health Services
Utah Valley Regional Medical Center
1034 North 500 West
Provo, Utah 84604-3337
Phone: (801) 373-7850

United Way of Central & Southern Utah
PO Box 135
Provo, UT 84603-0135
Phone: (801) 374-2588
http://www.unitedwayuc.org/

State:

Utah Department of Health
Cannon Health Building
288 North 1460 West
Salt Lake City, UT 84116
(mailing) P.O. Box 141010
Salt Lake City, UT 84114-1010
801-538-6003
http://health.utah.gov/data/

195 North 1950 West
Salt Lake City, Utah 84116
Phone: (801) 538-3939
Fax: (801) 538-9892
http://dsamh.utah.gov

For Utah Mental Health Agencies, here is a list of over 100 in Utah:
http://hope4utah.com/utah-mental-health-agencies/

National:

Suicide Prevention Resource Center (SPRC)
http://www.sprc.org/

National Suicide Prevention Lifeline

http://www.suicidepreventionlifeline.org/

Substance Abuse and mental health Services Association (SAMHSA)

http://www.samhsa.gov/

National Alliance of Mental Illness (NAMI)

http://www.nami.org/

Native Hawaii Youth Suicide Prevention Project

http://hawaii.gov/health/healthy-lifestyles/injury prevention/injuryinfo/gatekeeper.pdf

Maine Youth Suicide Prevention Program
http://www.maine.gov/suicide/

State of California Office of Suicide Prevention
http://www.dmh.ca.gov/peistatewideprojects/SuicidePrevention.asp

Utah Center for Disease and Control
http://health.utah.gov/cdc/

Utah State Government Agencies
http://www.utah.gov/government/agencylist.html

Utah Public Schools
http://www.schools.utah.gov

National Association of School Psychologists: Preventing Youth Suicide
http://www.nasponline.org/

American Foundation for Suicide Prevention
http://www.afsp.org/

The Parent Resource Program
http://www.jasonfoundation.com/community/

University of South Florida School-Based Youth Suicide Prevention
http://theguide.fmhi.usf.edu/

Suicide Awareness Voices of Education
http://www.save.org/

The American Academy of Experts in Traumatic Stress
http://www.aaets.org/

Works Cited:

http://www.schizophrenia.com/szfacts.htm#
http://www.helpguide.org/articles/schizophrenia/schizophrenia-signs-types-and-causes.htm
http://www.webmd.com/schizophrenia/guide/schizophrenia-symptoms
http://www.schizophrenia.com/family/childszsym.htm
http://www.suicide.org/schizophrenia-and-suicide.html
http://www.utahpsych.org/schizophrenia.htm
http://www.riverwoodsbehavioral.com/disorders/schizophrenia
http://prtm311.tripod.com/id6.html
http://www.spectrumsocial.net/recreation-therapy/
http://www.ncrta.org/Professional/benefits.htm#pyschiatric%20diabilities
http://www.ncrta.org/Professional/cost.html
http://www.schizophrenia.com/sztreat.html#
http://www.everydayhealth.com/schizophrenia/schizophrenia-medication-side-effects.aspx