

Schizophrenia: is it preventable



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Schizophrenia can be defined as the most severe psychiatric disorder which causes bizarre behavior, withdrawal from the reality, emotional instability and disorganized speech and thinking.

Schizophrenia is a widespread issue because it does not only affect the individual itself but rather the family taking care of the person as well. Due to the fact that the person tend to suffer from disordered thoughts with the disease, they become ineffective in communicating with others.

Schizophrenia is not dominant in any race or a particular sex in the population. It usually strikes the individual around the ages of fifteen and forty years which has a great impact on youth but never before fifteen or after the age of forty. Symptoms: Just like symptoms in other illnesses, there are also some in schizophrenia. The symptoms can vary among individuals.

One of the key factors to recognize the onset of schizophrenia is personality changes. At first, it may be unnoticed but the symptoms may get obvious after a period of time. Delusion may cause a person to believe that they are being controlled by external forces such as aliens, cops etc. Hallucination results in a person seeing, believing, smelling , talking and hearing things that do not really exist to others around them. Strange behavior may develop including laughing without a cause, talking to themselves repetitively.

Social withdrawal may include change of friends, avoiding eye contact with others, signs of lack of interest in certain activities. Thought disorder develops in the individual and can result in confused and hard to understand conversations. The intense internal feeling can cause the individual to have

suicidal thoughts, depression, and short attention span. The feelings around them can be a burden and the amplification of extreme emotional state may occur. Causes: The biological, psychological, environmental factors contribute to the causes of schizophrenia. Genetic factors account for 1% of the children in the population to develop this disease.

Twins with schizophrenic parents have a risk of 40-50% of developing the disease. Research shows that chemical imbalance of the neurotransmitters also has an effect to the development of schizophrenia. Dopamine, amphetamines, serotonin, and norepinephrine play an important role in controlling the brain activity of schizophrenic individuals. Stress can worsen the illness and trigger the relapses of the symptoms in an individual.

Brain imaging technique shows that brains of schizophrenic individuals tend to have large brain ventricles, low gray matter volume, low brain activity in some areas. Brain trauma after birth can also lead to further setbacks in a person. One theory that suggests the bizarre behavior in a person is that it tends to happen during puberty where the brain undergoes major changes which can cause psychotic symptoms. Underlying molecular / cellular defects: Schizophrenia is caused by environmental and genetic factors.

People with close relatives with schizophrenia have a higher risk of inheriting the disease than those who don't. Schizophrenic individuals have abnormal brain structure and function. Doctors have found out that large proportion of schizophrenia sufferers has defects on chromosome 22. Since identical twins have a 50% chance of getting schizophrenia if their parents have schizophrenia, study indicates that the disease is a hereditary factor.

Researchers are also encouraged to use RFLP (restriction fragment length polymorphisms) to identify the faulty genes. However, the schizophrenia is not straightforward.

The patterns are irregular and complex. Schizophrenia can be affected by a single gene, few genes up to many genes that can run from different families. All these genes then interact with the environmental factors and may or may not be susceptible on a person depending on the degree of the influence. The purpose of genetic studies of schizophrenia is to be able to determine the underlying molecular / cellular defects of the disease. If a responsible gene is detected then the normal functions of genes in the body can be easily explained. That is the optimistic side of it.

However, the genetic studies of schizophrenia show that there are no clear biological markers in individuals. Another factor contributing to schizophrenia is brain abnormalities. Complications during pregnancy may increase the chances of the baby to get schizophrenia. CT scans are used in brain scans to locate brain activities. In order for better understanding of the brain in individuals, two groups are obtained for the experiment, a healthy group and the affected group with schizophrenia. Repeated scanning may sometimes be needed to get reliable data however radiation can be harmful for the long-term effect basis.

Thus schizophrenia may require a few more years in order to get an improved understanding of the brain functions of schizophrenic individuals and the disease. How symptoms are derived from underlying defects: The underlying defect causes the individual to lose their mind, the ability to think

rationally and clearly, distinguish the true and the false, right and wrong, and sharing experiences with others. There is the perception from others as to whether the individual is normal or acting mad. One issue with schizophrenic patients is that their beliefs and perceptions are without constrained with the beliefs and perception of the general public. There is also a close relationship between schizophrenia and violence.

Through diagnosis of the disease, the violent acts committed by schizophrenic patients will reduce by 10%. Violence and drug abuse can also be resulted from the underlying defects where the person may feel paranoid. The flaw with drug abuse is that people with schizophrenia take medication at a greater rate than an average person thus may be prone to rash decisions and perceive violence as something safe to do. Neuropsychologists indicate that lesions of the frontal lobe in patients may develop delusions from evidence coming from a group of patients performing a series of tests. There are two types of symptoms for schizophrenia, positive and negative symptoms.

Positive symptoms are abnormal by the presence and comprises of delusions, hallucinations, disorganized behavior, and incoherent speech. Negative symptoms are abnormal by the absence (non-appearing) which include the lack of speech, action and emotions. Studies have grouped these positive and negative symptoms into three groups. The first group is labeled the “ reality distortion” and consists of hallucinations and delusions.

The second group is labeled “ disorganization” which includes lack of speech and dull emotional responses. The third group is labeled the “ psychomotor

poverty” consisting of the poverty of speech, action and emotion. Treatment: The use of antipsychotic drugs can reduce the symptoms by 80 to 90% and the effect usually takes place around 7-14 days. The diagnosis of schizophrenia usually requires a few weeks of hospitalization for stabilization and further assessment. Once an individual’s illness has stabilized, and a medication plan has been established, the individual can have their family members taking care of them. The majority of the money is spent on pharmaceutical companies in trying to develop new drugs for the illness and also alter the social interaction, memory network, attention and planning of those patients.

In order to not have a relapse of schizophrenia, the patient has to take medication for the rest of their lives. The benefit of taking antipsychotic drugs is that it reduces symptoms by 80 to 90%. After taking medication, social and psychological rehabilitation are necessary to assist those with the disease by letting them do certain tasks to achieve a goal. The patient however must be ready to face the challenger for the reintegration. The rate of recovery can sometimes take weeks or months.

Some common goals set for the patient include are they capable of living independently, buying certain things as requested etc. The earlier the reintegration, the better it is for the patient to get back into a normal life-style. Research shows that social and psychological rehabilitation help reduce the relapse rates by about 50% over two years when using medical treatment alongside. Due to the fact that patients with schizophrenia often find themselves in difficult situations obtaining jobs, they usually require some modifications / negotiations about their responsibilities, or working

part-time instead of full-time if possible. With proper care of schizophrenic patients, they can be stay away from some of the associated problems such as homelessness, substance abuse, violence, trauma, legal issues, anxiety etc.