

Instructions for the Research Paper and the Informative Speech.

1. This project must be informative – that is, your paper/speech should explain or define, describe or narrate something. (No persuasion or attempts to convince someone of something.) Sample titles might include “How to Change a Tire,” “What to Wear to a Football Tailgate Party,” or “Deep Sea Vents Grow Abundant Life in an Arid Zone.”
2. You must use at least 5 sources, including an interview, as resources for your speech/paper. Only two of the sources may be from the same category – e.g. the internet, books, magazines, newspapers etc. These sources must be cited at appropriate places in your paper and speech, using MLA style.
3. The paper must be at least eight pages long, not including a work cited page, and must be typed, double-spaced. It must include an introduction, body and conclusion. Proof your paper for grammar and spelling.
4. The paper must include a work cited page in proper MLA form.
5. Topic – your choice. You must, however, write a thesis statement at least three sentences long and submit it to Mrs. Petrides for approval.
6. Due dates: Thesis statement _____ Paper and Speech _____

Additional Instructions for your Informative Speech:

1. Your speech must be based on your research paper.
2. You must cite sources at appropriate places in your speech.
3. You should use note cards to speak from, NOT your paper.
4. Your speech must be 5 –7 minutes long.
5. You may use visual aids.

We will discuss these requirements in class to assist you in preparing for and delivering your speech and in writing your paper.

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Schizophrenia: History, Symptoms, and Modern Treatments

Psychologists have invested years in studying schizophrenia. Many forms of medical treatments are utilized to mitigate the effects of the illness. A few psychiatrists have also noted positive effects from nutrients to quell symptoms. Schizophrenia is a mental disease that doctors around the world have yet to understand. The disease will not only affect the individual suffering from schizophrenia but the family as well.

Schizophrenia usually develops during the late teens through the twenties. Very few develop the illness during childhood. One out of every 100 people will be stricken with the disease and only 25% will recover. Twenty years ago schizophrenics were turned loose on the streets because community-based programs that treated them were subjected to apathy and budget cutting (Schizophrenia: Out of Mind). In medieval Europe schizophrenics were banished from their country and stranded on a boat called a "ship of fools" (Edelman 4). Today, schizophrenia has garnered more attention from all sorts of doctors and insurance companies (Siddiquis). Hollywood is also avowing the mental disease. In 2001, director Ron Howard made the film "A Beautiful Mind". The film starred Russell Crowe as schizophrenic mathematician John Forbes Nash, Jr. who can see hidden messages from Soviet spies in magazines and newspapers (Anthony). Nash was later contacted by a CIA agent who needs Nash's intelligence to decode these messages. However, it is all a hallucination.

The hallucinations depicted in “A Beautiful Mind” are dramatized and linear. Hallucinations experienced by a schizophrenic are “fragmented and disembodied, as are the delusions that sustain them” (Anthony). Visual hallucinations experienced include the inability to distinguish a person’s face because it is indistinct or the faces may appear identical. “A child may fail to recognize his own mother. An individual may be unable to discern where people’s eyes are focused, giving him the idea that everyone is watching him” (Edelman 9). Also, words appear to fade or appear to be bigger or smaller, or can cast shadows. Pictures of humans or animals may look as if they are staring at the person or breathing (Edelman 9).

Hallucinations are not limited to visual hallucinations. Auditory hallucinations are the most common hallucinations. Sounds can be too loud or too quiet and may sound distorted. Hearing voices is also ubiquitous to a schizophrenic. At first he or she may hear her own voice then when thinking, but the hallucinations can progress to voices that speak to each other or comment on the schizophrenic’s actions. Later on voices can become unfriendly, demanding, threatening, and even life endangering (Edelman 8).

The other senses (smell, touch, taste) are also affected by schizophrenia but are seldom experienced. The skin can feel as if it has a strange texture and limbs could become numb. Objects may feel hot or cold to the touch when they should not feel hot or cold. A person also may not be able to feel an object’s texture at all. When eating food, bland foods can taste sweet and sweet foods may taste bland. Foods can also smell rotten or taste metallic (Edelman 9). In addition to hallucinations schizophrenics can become reclusive and withdrawn from society, friends, and family (Gelman 1). Thoughts and speech is incoherent and becoming attentive is difficult.

Doctors have pondered over what causes hallucinations and other symptoms, the detrimental

ramifications schizophrenia has on the brain itself, and, of course, what causes schizophrenia and how it can be cured. Doctors have deduced that it may not be one factor in a patient's life, whether it is biological or chemical that causes the person to become schizophrenic. Rather, it could be a combination of chemical, biological, and environmental factors.

One theory that may help explain what leads to schizophrenia is the lack of dopamine, which is a catecholamine neurotransmitter in the central nervous system, retina, and sympathetic ganglia. Dopamine helps to regulate emotion and movement (Birchwood, Hallett, Preston 47).

Another theory is the possibility of adrenaline decomposition known as adrenochrome. Adrenochrome, which may cause hallucinations, is formed during the intermediate stage during adrenaline decomposition. During an investigation of adrenochrome doctors injected themselves with adrenochrome and experienced visual distortions. In volunteers large doses were injected and the volunteers experienced hallucinations and had trouble thinking (www.schizophrenia.org).

Other factors that may contribute to schizophrenia are biological. Genetically predisposed family members are at a higher risk than those who are not predisposed. Psychologists concluded that when compared to the general population schizophrenia clusters in families. "The risk of a family member suffering from schizophrenia increase as a function of a familial relatedness to that individual" (Birchwood, Hallett, Preston 30). The risk that first cousins of a schizophrenic will become schizophrenic is 2.4%. In the nephews and nieces of a schizophrenic, the risk increases by 3%. In the children of a schizophrenic the risk increases by 12.8% (Birchwood, Hallett, Preston 30).

The persons who have the highest risk are identical twins. If one of the twins is schizophrenic the other twin's risk of becoming schizophrenic increases by 50% (library.thinkquest.org), since

they have “developed from the same fertilized ovum and share 100% of their genetic material” (Birchwood, Hallett, Preston 31).

Environmental factors may also contribute to the development of schizophrenia. People who are born during winter months have an increased risk. Some mothers who may be schizophrenic-inducing are “thought to have arrested the development of the child’s ego (the sense of self and reality) and that upon encountering the “real world” in adolescence and early adulthood, the demands were such that the adult is forced to eschew reality and retreat into a form of thinking characteristic of early adulthood” (Birchwood, Hallett, Preston 158). Street drugs such as LSD and marijuana are also linked to the development of schizophrenia. Researchers in New Zealand found that cannabis users at the age of 15 years old are three times more likely to become schizophrenic. Heavy drug users are seven times more likely to become schizophrenic (www.schizophrenia.com).

Doctors now have the ability to locate possible sources and damage within the brain that is caused by schizophrenia. Schizophrenia possibly interferes with the frontal lobe (Schizophrenia: Out of Mind). The frontal lobe “governs abstract thought, planning, judgment and organization”. The left hemisphere of the brain may also shrink, particularly the frontal lobe. Thought disorder and frontal lobe shrinkage appear to be linked (Edelman 12). Some doctors have extracted post-mortem tissue from a brain to analyze dopamine levels to further their research on schizophrenia. However, “most research turns up negative or inconclusive” (Birchwood, Hallett, Preston 51).

Ironically, a schizophrenic may experience an increase in intellectual function but it may be transitory (Edelman 5). According to the Los Angeles Times a rare 7-year-old schizophrenic sufferer named Jani has an IQ of 146. Her parents “entertained her with information on the Roman Empire, evolution, and the periodic table” (Roan).

Although as remarkable as it may be that schizophrenics such as Jani have high IQs, it may not compensate for the anguish that is experienced throughout their lives. Modern medicine strives to stifle that anguish and fortunately modern medicine has come a long way since its more barbaric methods in the past. Early treatments of schizophrenics included lobotomy, which is a surgical procedure where connections between the frontal lobe and the rest of the brain are severed. Insulin coma therapy was also used to endeavor to treat patients. This method sent patients into comas by manipulating insulin levels. Also electroconvulsive therapy was used. This method sent electricity through the patient that produced powerful convulsions, which could break bones. These methods did not work (Gelman 1).

By the 1960's medication virtually wiped out the aforementioned treatments. "Schizophrenics only returned to the hospital briefly to have their medication regiment adjusted or reinstated" (Gelman 2). But problems persisted. One of the first prescribed medications to be introduced was chlorpromazine. Some psychiatrists described this medication as a "major tranquilizer", a "chemical lobotomy", and "insulin of the nervous system" (Gelman 6). Pierre Denker, a psychiatrist who helped develop the drug, said that some patients taking the drug experienced "purposeless mouth and jaw movements" (Gelman 6).

In 1964 the National Institute of Mental Health Collaborative Study found that "medication produced more improvement than a placebo; drug actions truly anti-schizophrenic". Soon, many psychiatrists no longer viewed medications as major tranquilizers. Some psychiatrists hypothesized that schizophrenia may be caused by a chemical imbalance of neurotransmitters and that the medication helped to restore that balance (Gelman 5). However, as soon as psychiatrists began to stand by the medications, reports of drug-induced Tardive Dyskinesia were imparted. Tardive Dyskinesia is characterized by repetitive and purposeless movements of

the mouth and the tongue. Psychiatrists were concerned about this because this may have meant permanent neurological damage (Gelman 5). By 1980, psychiatrists concluded that Tardive Dyskinesia produced less significant side effects and medications continued to be prescribed.

Today, medications are prescribed in pill form and through injection. Some medications can be taken once every 2-4 weeks. One such medication is called Flupenthixol. It is an anti-psychotic drug that is injected once every 2-4 weeks, depending on the symptoms of the patient. It is administered by deep i.m. injection preferably in the gluteus maximus (www.schizophrenia.com). Patients will take between 5mg-20mg. This is not without side effects. Up to 30% of patients using this drug have experienced tremors, pseudoparkinsonism, and tardive dyskinesia. However, symptoms diminish after more injections are given (www.schizophrenia.com).

Another drug, which is available in a pill, is called Stelazine. It is an anti-anxiety, anti-emetic, and anti-psychotic medication. The drug “controls excessive anxiety, tension, and agitation” (www.schizophrenia.com). Patients start with 1-2mg twice daily and rarely take beyond 6mg a day. Patients with moderate to severe schizophrenia, but who are not hospitalized, start with 2-4mg twice a day and may need as much as 40mg per day. Hospitalized patients start with 5mg taken 2-3 times a day and may require as much as 40mg within 2-3 weeks. Some patients may need as much as 80mg a day. This medication is also not without side effects. In rare cases, patients who have been prescribed high doses have developed a blood dyscrasia, which is a disease of blood-forming organs such as bone marrow. Some patients have also experienced cholestatic jaundice, which is a yellowness of the skin and mucous membranes resulting from abnormal bile flow from the liver. Twitching, drowsiness, or dizziness is more common side effects of the drug (www.schizophrenia.com).

Although nutritional treatments are not practiced regularly (only about 1% of doctors practice with nutritional treatment) there have been reports of improvement with schizophrenic patients. In the early 1950's Dr. Abram Hoffer and Dr. Humphrey Osmond received a schizophrenic patient who, after 25 insulin comas, was rendered catatonic, unable to speak, and could not use the bathroom on his own. While under the care of Hoffer and Osmond the patient was comatose. Hoffer and Osmond gave the patient 10 grams of vitamin B3 and 5mg of Vitamin C via stomach tube. On the second day of treatment, the patient woke from his coma and was able to take the vitamins with a glass of water. Two weeks later he was discharged from their care and went on to live a normal life (Edelman 20). Hoffer and Osmond continued to experiment with vitamins, starting patients with .5-1 gram of vitamin B3 three times a day and the dosage gradually rose throughout the treatment. 5-10mg of vitamin C was also given per day in divided doses (Edelman 26).

Vitamin C is low in schizophrenics, which is similar to people who suffer from scurvy. Vitamin C has had positive affects on people who suffer from depression, tension, and paranoia. Vitamin C may also “increase socialization and well-being, improve mood, and general mental status in chronic schizophrenia” (Edelman 26). Vitamin B3 will help regulate dopamine levels and may be “critical in treatment of the histamine-deficient biotype histopenia (which may be involved in almost half of all cases of schizophrenia)” (Edelman 27).

Research and treatment of schizophrenia has made advances in leaps and bounds over the last half of the century. New medications continue to be produced and current medications are continually modified (Siddiquis). According to pharmacist Mohammad Siddiquis medications are best combined when combined rather than when only one drug is used to treat schizophrenia. Modern science may bring more hope to people who suffer from schizophrenia.

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