Reducing your Risk of Schizophrenia – A Guide to Possible Risk Factors and Helpful Actions for Children and Adults

Source: http://www.schizophrenia.com

Before you read this:

Although our understanding of schizophrenia has increased dramatically in the last fifty years, we still do not know exactly what causes it. Many researchers are coming to believe that schizophrenia results as a complex interaction between certain unknown susceptibility genes (which are inherited from blood relatives) and environmental factors that one may come into contact with before birth or during a lifetime.

Nothing can guarantee that an individual will or will not develop schizophrenia. However, researchers have identified certain factors that seem to be correlated with schizophrenia. Although it is very difficult to determine whether these factors contribute to the disease, or are caused as a result of the disease, it may be prudent to take some precautions if you know you have a history of psychiatric disease in your family. None of the suggested actions below will harm you, and at the very least they will contribute to a generally more healthy life.

All of the identified factors below have supporting research studies associated with them (although nothing has been definitively proven with regards to the cause of schizophrenia). To access the research abstracts and news articles for each topic, please visit http://www.schizophrenia.com/hypo.html, and click on the hyperlink of the risk factor you are interested in.

Risk Factor: Use of Street Drugs (especially marijuana) is Linked With Significantly Increased Risk of Psychosis

Use of street drugs (marijuana/hash - cannabis, etc.) have been linked with significantly increased probability of developing schizophrenia. Today, there are over 30 published scientific research papers linking marijuana to schizophrenia or other mental disorders. The increase in evidence during the past decade could be tied to the increased potency of marijuana. A review by the British Lung Association says that the cannabis available on the streets today is 15 times more powerful than the joints being smoked three decades ago.

Melbourne University's Professor David Castle stated in a February, 2005 interview that heavy drug use during formative times of life, such as the years at school, could affect the way a teenager or young adult thought, impairing cognitive ability and having a long-term impact on job prospects. Victorian studies had revealed that regular use of cannabis by adolescent girls could trigger long-term depression. And for those vulnerable to a psychotic disorder, even a small amount of cannabis could pose a threat.
Professor Castle, author of the book *Marijuana and Madness*, said those with this "psychotic proneness" were those who had a family history of mental illness or who had had a bad response on their first use of cannabis or to a tiny amount. Others at risk included those who had experienced a psychotic episode where they had paranoid thinking or heard a voice calling their name. Professor Castle said experiencing such a one-off episode was far more common than people thought.

"People with such a vulnerability should avoid cannabis like the plague," he said.

Essential Statistics Linking Marijuana Use to Schizophrenia Risk (for the supporting research abstracts, please visit http://www.schizophrenia.com/prevention/street.html):

- Researchers in New Zealand found that those who used cannabis by the age of 15 were more than three times (300%) more likely to develop illnesses such as schizophrenia. Other research has backed this up, showing that cannabis use increases the risk of psychosis by up to 700% for heavy users, and that the risk increases in proportion to the amount of cannabis used (smoked or consumed).
- The younger a person smokes/uses cannabis, the higher the risk for schizophrenia, and the worse the schizophrenia is when the person does develop it.
- People were 4.5 times more likely to be schizophrenic at 26 if they were regular cannabis smokers at 15, compared to 1.65 times for those who did not report regular use until 18 (from a study of 750 adolescents).
- People with a certain genetic makeup (susceptible genes) who use the drug face a ten times (1000%) higher risk of schizophrenia (Prof. John Henry, clinical toxicologist at Imperial College London)
- Teenagers who indulge in cannabis as few as five times in their life significantly increase their risk of psychotic symptoms (Dutch study).
- It has been estimated that one in 20 people that have schizophrenia today would never have developed the illness without exposure to cannabis.

**What can you do?**

If you want to avoid getting schizophrenia (and a host of other health problems), research suggests that the number one thing you should avoid are street drugs. Marijuana is especially implicated, but it is impossible to know what is in any drug that one gets off the streets. By avoiding use of all street drugs research suggests that you can greatly reduce the chance (by as much as 50% to 80%) that you'll develop schizophrenia. Avoiding marijuana after developing schizophrenia also helps reduce relapse rates. Some people with schizophrenia suggest that it makes them feel better, but if depression is an issue, we recommend these people talk to their Psych-Doc about possible anti-depressant use rather than street drugs.

Do not use even small amounts of cannabis if you have a family history of mental illness, have had an episode of paranoid thinking or hearing voices or had a bad response when first using cannabis or when using a small amount.
**Risk Factor: Essential fatty acid (EFA) deficiency and resulting lipid membrane abnormalities may increase risk of schizophrenia**

Recently gathered epidemiological data suggest an association between high fish consumption (suggesting high Essential Fatty Acids and Omega 3 oils) and positive outcomes in patients with schizophrenia. Schizophrenia patients often show reduced levels of Omega-3 and Omega-6 Essential Fatty Acids (EFA) in their red blood cell membranes. These EFAs (also known as poly-unsaturated fatty acids) normally contribute to brain cognitive and behavioral function, development, and growth.

If schizophrenia risk is also increased, as some scientific evidence has suggested, by prenatal viral infections (thus raising inflammatory immune reactions in the body), EFA supplementation could play a protective role here by helping to control this inflammatory response.

**What can you do?**

Omega 3 fatty acid supplements may reduce the probability that one will develop schizophrenia (especially if your family has a history of psychiatric disease). Similarly, it may help alleviate symptoms if one already has schizophrenia. (Please note that researchers tell us that there is no good, validated research that supports the idea that any type of vitamin or fatty acid (EFA) will cure schizophrenia).

It is important to maintain a balance between omega-3 and omega-6 fatty acids (the former reduces inflammation, while the latter promotes it). A healthy diet consists of roughly one to four times more omega-6 fatty acids than omega-3 fatty acids.

**Sources for Omega-3s** include fish (i.e. salmon, mackerel, halibut, sardines, and herring) and plant oils (i.e. flaxseeds, flaxseed oil, canola (rapeseed) oil, soybeans, soybean oil, pumpkin seeds, pumpkin seed oil, purslane, perilla seed oil, walnuts, and walnut oil). You can also buy fish oil capsules or flaxseed oil in health food stores.

**Risk Factor: Childhood exposure to cats with the T. Gondi virus may increase risk of schizophrenia**

Recent epidemiologic studies indicate that infectious agents may contribute to some cases of schizophrenia. In animals, infections with Toxoplasma gondii (T. gondii) can alter behavior and neurotransmitter function. In humans, acute infection with the cat virus "T. gondii" can produce psychotic symptoms similar to those displayed by persons with schizophrenia. Two other studies found that exposure to cats in childhood was a risk factor for the development of schizophrenia.
Note: It seems from the research that this is a relatively low risk factor in schizophrenia, compared to other risk factors (such as street drug use).

What can you do?

Although the risk of transmission from a cat to a person is low, preventing exposure of young children to cats may be a good idea if you know that schizophrenia is in your family background. Alternatively, you can observe the following prevention tips if you do have cats (source: [http://www.fabcats.org/toxo.html](http://www.fabcats.org/toxo.html)):

1. People in 'high risk' groups should not have contact with the cat's litter tray. Where possible, only non-pregnant and immunocompetent people (i.e. not those people with diseases or drug therapy suppressing their immune system) should handle cat litter trays (following all of the guidelines below).
2. Empty litter trays daily so that oocysts do not have sufficient time to sporulate (become infective) whilst in the litter tray.
3. Wear gloves when handling cat litter and wash hands thoroughly after cleaning the litter tray.
4. Use litter tray liners if possible and periodically clean the litter tray with detergent and scalding water (which kills oocysts) eg fill the litter tray with boiling water and leave for 5 - 10 minutes before emptying.
5. Dispose of cat litter safely. For example, seal it in a plastic bag before putting it with other household waste.
6. Cover children's sandpits when not in use to prevent cats using them as litter trays.
7. Feed only properly cooked food or commercial cat food to your cat to avoid infection.
8. Washing hands after contact with a cat (especially before eating) is a sensible hygiene precaution.
9. If very concerned, ask your vet to check your cat's Toxoplasma titre (antibody test for exposure to *T. gondii*):
   a. Cats with a positive titre have been infected in the past and will not be a source of infection in the future as they have completed their period of oocyst shedding.
   b. Cats with a negative titre have not been infected with *T. gondii* in the past and are likely to shed oocysts in their faeces for a short time if they become infected in the future. The risk of acquiring infection can be minimised by:
      o Avoiding feeding raw meat to the cat to reduce the risk of *T. gondii* infection (see point 7 above).
      o Keeping the cat indoors to prevent hunting and access to intermediate hosts such as voles and mice

The measures below will hopefully reduce risk of *T. gondii* transmission from sources other than animals. They are also sensible routine hygiene precautions:

1. Gloves should be worn when gardening and hands thoroughly washed after contact with soil which may contain sporulated (infectious) oocysts.
2. Gloves should be worn when handling food to prevent exposure to oocysts and tissue cysts. Hands should always be washed thoroughly afterwards.
3. Fruit and vegetables should be thoroughly washed before eating to remove any oocysts present on their surface.
4. All food preparation surfaces and utensils should be cleaned with detergent in warm water before and after use to inactivate any tissue cysts.
5. Meat should be cooked to a minimum of 58oC for 10 minutes or 61oC for 4 minutes to kill the tissue cysts (Dubey et al 1990). Microwaving is not a safe way to kill tissue cysts as the heating is uneven. *T gondii* oocysts can remain infectious when stored in a refrigerator (4oC) for up to 54 months (Dubey 1998).
6. Freezing meat at -12oC to -20oC for three days kills tissue cysts as does curing or smoking (Dubey 1988, Lunden and Ugglia 1992).
7. Gamma irradiated food is free from any risk of infection.
8. If drinking a non-mains water supply, boil or filter before drinking to remove oocysts.