

Schizophrenics are at greater risk of getting diseases

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Researchers have long known that people with autoimmune diseases, such as hepatitis, type 1 diabetes, multiple sclerosis and psoriasis, are at greater risk of developing schizophrenia.

But new research based on data sets covering the majority of the Danish population shows that the development goes both ways: People suffering from schizophrenia also have an increased risk of contracting [autoimmune diseases](#), especially if they have suffered from a severe infection.

Head of the new study is Michael Eriksen Benrós, MD and PhD, who is senior researcher at the National Centre for Register-Based Research at Aarhus University and the Psychiatric Centre Copenhagen. He has done the study in collaboration with researchers from Aarhus University and the University of Copenhagen as

well as Johns Hopkins University in the USA.

This month the results will be published in an article in the internationally renowned American journal *The American Journal of Psychiatry*.

Three times higher risk

Drawing on data from the Danish Civil Registration, Danish hospitals and the nation-wide Danish Psychiatric Central Research Register, the researchers behind the project have had the unique opportunity to examine an extraordinarily large group of people consisting of 3.83 million Danes. The registry data showed that from 1987 to 2010 39,364 people were diagnosed with schizophrenia, while 142,328 people were diagnosed with an autoimmune disease.

By linking the data sets, the researchers found that a person suffering from schizophrenia has a 53 per cent higher risk of contracting an autoimmune disease compared to people who are not suffering from schizophrenia. Moreover, if you have schizophrenia and have been hospitalised or received treatment for a severe infection, you have a 2.7 times higher risk of getting an autoimmune disease.

According to Michael E. Benrós, this is very useful knowledge for psychiatrists working with schizophrenics:

"Six per cent of the schizophrenic patients have an autoimmune disease that requires treatment in a hospital. But the actual occurrence is significantly higher, seeing as our study does not incorporate all the people who are being treated by general physicians or have not been diagnosed yet. This means that psychiatrists should be on the lookout for signs of physical illness among their patients with schizophrenia, including autoimmune diseases," explains Michael E. Benrós.

Infections play a determining role

With the aid of these large data sets, the researchers have been able to show certain correlations with great statistical certainty, but the study does not provide a definitive explanation for why schizophrenics have such an increased risk of contracting these diseases.

According to Michael E. Benrós, a lot seems to suggest that infections are a determining factor.

"It could be that people with schizophrenia are genetically vulnerable to infections, which increases the risk of getting schizophrenia but also autoimmune diseases," he says and proceeds to explain that the human immune system can react to an infection by producing antibodies that do not merely react to the infection; the antibodies also start breaking down the body's own tissue. This is how autoimmune diseases develop.

Another possible explanation could be that neuropsychiatric symptoms diagnosed as schizophrenia are the first signs that an autoimmune disease has developed but has not yet been detected.

Other explanations are related to lifestyle and genetics. But here the research does not bring any clear results. In the study the researchers also examined whether family members of people with schizophrenia also have an increased risk of getting an autoimmune disease.

"If you have a family member with schizophrenia, there is a six per cent higher chance that you yourself will develop an autoimmune disease. The genetic factor does not look to be so significant, even though genetic studies have shown a correlation between genes and schizophrenia," says Michael E. Benrós.

The next step is for the researchers from the National Centre for Register-Based Research – lead by Preben Bo Mortensen – to try and combine these registry data with biological data, such as blood samples, in order to further examine possible interactions between genes and environment.

By doing this they will hopefully get even closer to explaining the correlation between [schizophrenia](#) and autoimmune diseases.

Provided by Aarhus University

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