

## Infections increase risk of mood disorders

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New research shows that every third person who is diagnosed for the first time with a mood disorder has been admitted to hospital with an infection prior to the diagnosis. The study is the largest of its kind to date to show a clear correlation between infection levels and the risk of developing mood disorders.

Anyone can suffer from an infection, for example in their stomach, urinary tract or skin. It would now appear that their distress does not necessarily end once the infection has been treated. A new PhD project shows that many people subsequently suffer from a mood disorder:

"Our study shows that the risk of developing a mood disorder increases by 62% for patients who have been admitted to hospital with an infection. In other words, it looks as though the immune system is somehow involved in the development of mood disorders," says Michael Eriksen Benrós, MD and PhD from Aarhus University and Psychiatric Centre Copenhagen.

He is behind the study together with researchers from Aarhus University and the University of Copenhagen as well as The Johns Hopkins University in the USA.

## Three million Danes included

The study is a register study, which has involved following more than 3 million Danes. Between 1977 and 2010, more than 91,000 of these people had hospital contact in connection with a mood disorder. It



transpired that 32% of the patients had previously been admitted with an infectious disease, while 5% had been admitted with an autoimmune disease.

According to Michael Eriksen Benrós, the increased risk of mood disorders can be explained by the fact that infections affect the brain:

"Normally, the brain is protected by the so-called blood-brain barrier (BBB), but in the case of infections and <u>inflammation</u>, new research has shown that the brain can be affected on account of a more permeable BBB."

"We can see that the brain is affected, whichever type of infection or autoimmune disease it is. Therefore, it is naturally important that more research is conducted into the mechanisms which lie behind the connection between the <a href="immune system">immune system</a> and mood disorders," says Michael Eriksen Benrós. He hopes that knowing more about this connection will help to prevent <a href="mood disorders">mood disorders</a> and improve future treatment.

## Provided by Aarhus University

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