

# MooDFOOD

PREVENTING DEPRESSION THROUGH FOOD

## Summary MooDFOOD

Bot M, Milaneschi Y, Penninx BW, Drent ML. Plasma insulin-like growth factor I levels are higher in depressive and anxiety disorders, but lower in antidepressant medication users. *Psychoneuroendocrinology*. 2016;68:148-155. doi: 10.1016/j.psyneuen.2016.02.028.

## Abstract

Depression and anxiety are common psychiatric disorders that often co-occur. These psychiatric disorders are considered to have several biological components involved. For example, depression is thought to be related to lower number of neurons (nerve cells) in the brain. One biological marker that may be relevant for depression and anxiety is insulin-like growth factor I (IGF-I). IGF-I is a hormone that can be measured in the blood, and has many functions in the body. Interestingly, IGF-I can stimulate the growth of neurons in the brain. This makes IGF-I a potentially relevant hormone for depression. At the moment, it is not fully clear to what extent depression and anxiety are related to blood levels of the hormone IGF-I. To get more insight into the role of IGF-I in depression and anxiety, we investigated the relationship of depression, anxiety, and antidepressant medication use with blood levels of IGF-I in humans.

We used data of a large study that was conducted in the Netherlands: the Netherlands Study of Depression and Anxiety. All participants were adults between 18-65 years. For all participants, we determined whether they had depression, anxiety, and whether they used antidepressant medication. IGF-I was measured in the blood. We had data for 2714 participants.

Compared to healthy persons, we found that persons with depression or anxiety had higher IGF-I. In contrast, depressed or anxious persons that used antidepressant medications had lower IGF-I.

This suggests that the relationship between depression and anxiety might depend on antidepressant medication use: depressed/anxious persons without antidepressant medication had higher IGF-I, whereas depressed anxious persons using antidepressant medication had lower IGF-I in the blood. These results can be interpreted in several ways. It could be that IGF-I is higher in depression/anxiety to be able to stimulate the neuronal growth, which is often impaired in depression. However, future studies are needed to support this idea, and to help us better understand the potential role that IGF-I might have in depression and anxiety.