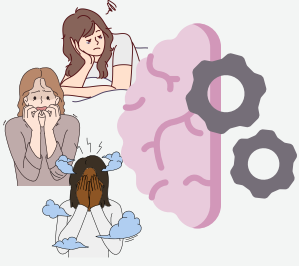


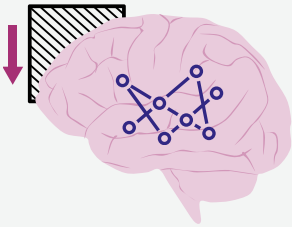
New research reveals brain circuits linking insomnia, anxiety and depression

Researchers at the *Netherlands Institute for Neuroscience* have mapped similarities and differences in brain circuit deviations of three most common mental disorders: **insomnia**, **anxiety**, and **depression**.



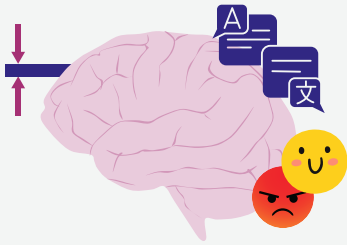
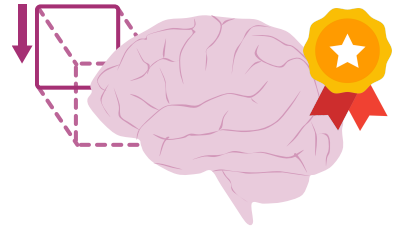
Treatments for insomnia, anxiety and depression are often only moderately effective. This is why it is crucial to find leads for new treatments. **For example, why do these disorders so often occur together or one after the other?**

To investigate a possible **shared brain mechanism**, researchers have investigated **brain scans** of more than 25.000 participants from the UK Biobank, looking at differences and similarities of people with these disorders.



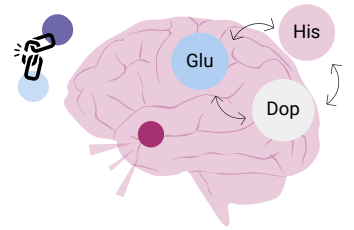
In **all three disorders**, they observed a **reduced surface area of the cerebral cortex**, a **smaller volume of the thalamus**, and **weaker connectivity** between different brain regions.

Some abnormalities are unique to each disorder. For example, the severity of **insomnia** specifically is more closely related to smaller volumes in the brain areas associated with **reward**.



The severity of **depression**, on the other hand, seems to be more strongly related to a thinner cerebral cortex in brain areas associated with **language and emotion**.

Instead, **anxiety** is more severe with weaker amygdala reactivity and functional connectivity between regions that communicate using **dopamine, glutamate, and histamine**.



So, these regions seem like distinct areas, but actually represent **different pieces** of vulnerability within the **same puzzle**.

This is the first time that all three disorders are investigated at the same time on such a big scale. There is still a lot of discussion about the underlying mechanisms. Further research into these mechanisms will create new leads for follow-up research and better treatments.



[Read more on nin.nl](https://www.nin.nl)



**NEDERLANDS
HERSENINSTITUUT**
Master the mind