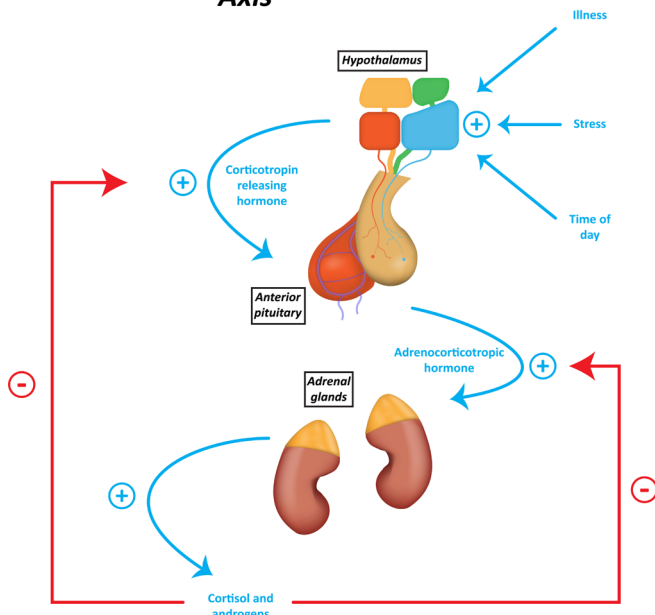


Hypothalamic - Pituitary - Adrenal Axis



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BIPOLAR DISORDERS Factsheet

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What is the hypothalamic-pituitary-adrenal (HPA) axis?

Stress is defined as a threat to the body's ability to regulate internal processes following exposure to an adverse event. People adapt physiologically and behaviourally in response to stress in order to re-establish internal balance. The biological response to stress is mediated through the HPA axis and the sympathetic nervous system. This is achieved through the release of cortisol and adrenocorticotropin hormone (ACTH). Altered HPA axis activity can result in prolonged exposure to cortisol or ACTH which can be detrimental to physical and psychological health.

What is the evidence for HPA axis anomalies?

High quality evidence suggests a small to medium-sized increase in awakening and post-dexamethasone cortisol levels in people with bipolar disorders compared to controls. Moderate to high quality evidence suggests morning, nighttime, and 12-24hour cortisol levels may also be increased. The manic phase of the illness was associated with the largest effect sizes, while the use of antipsychotics was associated smaller effect sizes. Radioimmunoassay method of measurement and older age were associated with trend effects for larger effect sizes.

Moderate quality evidence suggests ACTH, but not corticotropin-releasing hormone, is also increased in people with bipolar disorder.

There were no differences in morning cortisol levels between people with bipolar disorder or schizophrenia.

For more information see the technical table



NeuRA (Neuroscience Research Australia) is one of the largest independent medical and clinical research institutes in Australia and an international leader in neurological research.

Diseases of the brain and nervous system pose the greatest health, economic and social burden of any disease group because they are chronic, debilitating and have no known cures.

Medical research is the cornerstone of efforts to advance the health and wellbeing of families and the community. Our dedicated scientists are focussed on transforming their research into significant and practical benefits for all patients.

While we hope you find this information useful, it is always important to discuss any questions about bipolar disorder or its treatment with your doctor or other health care provider.

HOW YOUR SUPPORT HELPS

We are able to make significant advances due to the generosity of countless people. Your donation allows us to continue to work towards transforming lives. For information on how you can support our research, phone **1300 888 019** or make a secure donation at www.neura.edu.au