

Increased Cortisol Levels

[Up-arrow Court-of-Sol](#)

In expected physiology, cortisol is regulated by a feedback loop involving the hypothalamus (brain), pituitary gland (brain) and adrenal glands (kidneys). ACTH, or adrenocorticotropic hormone, is released by the pituitary gland into the bloodstream to act upon the adrenal glands to release cortisol. Excessive cortisol in this normal patient is downregulated by the sensitive hypothalamus, thus completing the feedback loop. In Cushing's syndrome, the feedback loop is altered by either the presence of uncontrolled ACTH or from a problem with the adrenal glands themselves, where the adrenal glands cannot stop making cortisol.

Hyperglycemia

[Hiker-Glue-bottle](#)

Hyperglycemia occurs due to the excessive levels of cortisol, which raise blood glucose levels in response to cortisol-induced insulin resistance and glucose intolerance, as well as increased gluconeogenesis by the liver.

Further Considerations

Long Term Glucocorticoid Use

[Glue-quarter-on-steroids](#)

The most common cause of Cushing's syndrome is the long-term use of corticosteroids, particularly glucocorticoids like prednisone, dexamethasone, and prednisolone. They are often used to treat chronic conditions like asthma, rheumatoid arthritis, or multiple sclerosis.

Immunosuppression

[Moon-suppressed](#)

It is important to be aware that patients with Cushing's syndrome/disease are often immunosuppressed. This places them at increased risk for infection related to their lowered resistance to stress and suppression of the immune system.