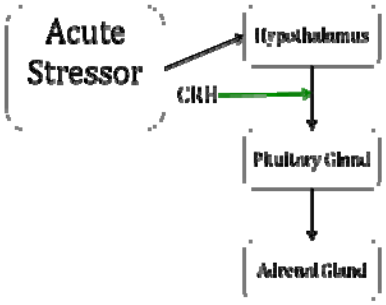
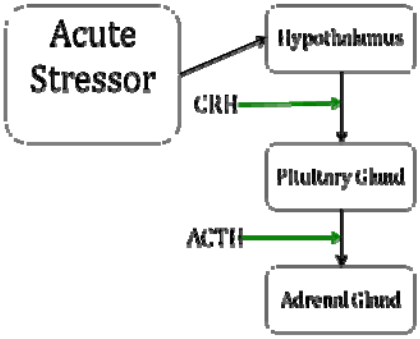
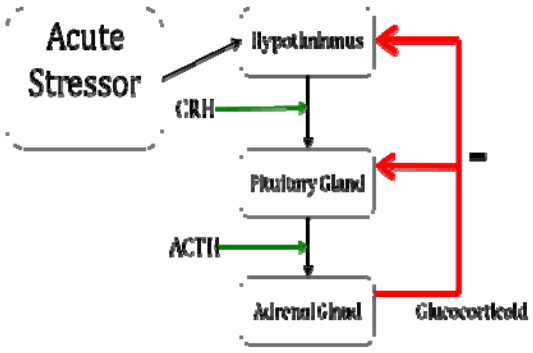
Normal release of stress hormone (glucocorticoid) leads to a negative feedback loop, inhibiting further release of glucocorticoid.



Acute stress causes a release of corticotropin-releasing factor from the hypothalamus



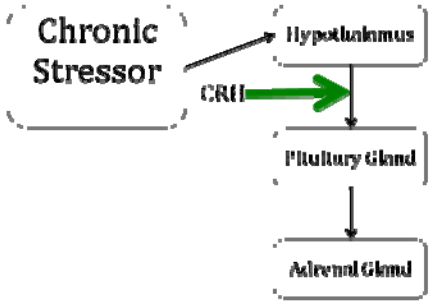
The release of CRH causes the pituitary gland to release of adrenocorticotropic hormone into the blood stream



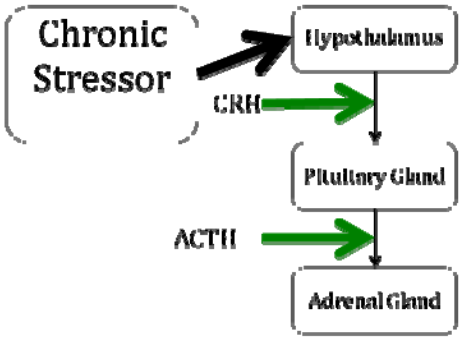
Once the ACTH reaches the adrenal gland, glucocorticoid (the body's stress hormone) is released into the blood system.

This causes a negative feedback to both the hypothalamus and pituitary, halting the release of further glucocorticoid

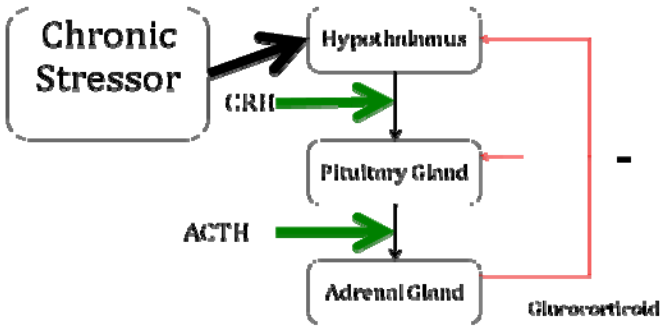
Chronic stress leads to excess glucocorticoid release, causing a deficiency in the negative feedback system leading to excess release of glucocorticoid. Excess hormone is known to cause problems with all three neurotransmitter systems involved in depression (dopamine, serotonin, and norepinephrine).



In situations of chronic stressors, the HPA axis becomes hyperactive, first releasing excess CRH...



...followed by excess ACTH...



...leading to excess glucocorticoid release. This leads to a deficiency in the negative feedback loop, decreasing the inhibition on both the hypothalamus, resulting in more and more glucocorticoid release