**COGNITIVE PERFORMANCE - memory**

- Can affect cognitive performance.
- Reduced recall of words, particularly negative words.
- "Lost focus" exams.

**EFFECTS ON HEALTH**

- Cortisol is released during stressful situations.
- Cortisol acts by reducing inflammation in the body.
- Can reduce infections, gastrointestinal problems.

**MECHANISM OF ACTION**

- Stress activates the sympathetic nervous system.
- Adrenal gland secretes cortisol.
- Cortisol acts on target tissues.

**Biological Explanations of Stress: Cortisol and Chronic Stress**

- **CORTISOL**
  - Steroid hormone in the family glucocorticoids.
  - Role in the central nervous system = learning and memory.
  - When released in response to stress, it lowers sensitivity to pain and releases glucose for energy over a sustained period of time.

**Stress Response**

- Stress may enhance the activity of the immune system.
- cortisol is released from the adrenal gland.
- cortisol has various effects on the body.

**EVALUATION**

- Low levels of cortisol may cause health problems.
- Stressors are encountered in SAV response is triggered.

**Issues in Research Studies**

- Activation of the hypothalamic-pituitary-adrenal (HPA) system.
- The hypothalamus produces corticotropin releasing hormone (CRH) into the bloodstream.

**Role of the Immune System**

- Stressors can affect the immune system.
- Stress may have 3 effects on the immune system: up-regulation (increased efficiency), down-regulation (decreased efficiency), or no change.

**Consequences of Stress**

- Stress may lead to long-term effects such as health conditions (chronic fatigue syndrome).
- Stress may be caused by alcohol, caffeine, or smoking.

**Research Evidence**

- Stress has shown to down-regulate the immune system.