**The endocrine system**

**What’s in a name? -** The word endocrine derives from the Greek words "endo," meaning within, and "crinis," meaning to secrete,

**Introduction to the endocrine system: Core knowledge 1**

<https://www.youtube.com/watch?v=gjmS4_7kvDM>

watch the video above and answer these questions – you’ll need to pause quite a bit

1. The endocrine system co-ordinates homeostasis. What does this mean in the context of our bodies?
2. What role does the endocrine system perform?
3. What does the endocrine system primary consist of?
4. What do these constituents do?
5. What are hormones?
6. Where do they travel and to where?
7. Give examples of the actions that hormones help regulate or control
8. How do hormones work?

**Introduction to the endocrine system: core knowledge 2**

Read the information from the link below and make five bullet points that you think are important to your understanding of what the endocrine system is and what it consists of.

<http://www.britannica.com/science/adrenal-gland/images-videos/Major-glands-of-the-human-endocrine-system/66046>

1)

2)

3)

4)

5)

**Core knowledge 3**: label the diagram with the eight glands in the endocrine system. Use the link above



**The endocrine system: Fight or flight**

**Outline the key processes involved with the fight or flight response, make reference to the role of adrenalin in your answer (6 marks)**

**Task 2** fill in the gaps in this passage.

**Core knowledge 1**: up for the fight (or flight)

A person will change from their normal resting state (the parasympathetic state) to the physiologically aroused \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ state when faced with a perceived \_\_\_\_\_\_\_\_\_\_\_\_. This causes the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ to release \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (ACTH). This has the effect on the cells of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ causing them to release \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. This triggers physiological changes in the body which creates the physiological arousal necessary for the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ response

**adrenaline threat sympathetic adrenocorticotrophic hormone**

**adrenal gland fight pituitary gland flight**

**Core knowledge 2**:

The physiological changes initiated by the secretion of adrenalin include increased heart rate, increased breathing rate, dilated pupils, inhibits digestion and inhibits saliva production

*Why would each of the above physical changes help you fight? Or Flee?*

*Feeling anxious? This often leads to the sensation of butterflies in the stomach, can you guess using a physiological reason why these may occur?*

**Core knowledge 3**: - calming down again

Once the threat has passed, the parasympathetic nervous system is activated to \_\_\_\_\_\_\_\_ the person down and return them to a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is no longer secreted from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_. Heart and breathing rates return to normal, and the person establishes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The parasympathetic nervous system works in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the sympathetic nervous system and act like a \_\_\_\_\_\_\_\_\_ so we do not use up all our vital resources by staying in a constant state of heightened physiological arousal

**adrenal gland calm homeostasis adrenaline**

**resting state brake opposition**

**TASK : Label the diagram using the words and phrases below**

threat heart rate increases to pump blood to vital organs pituitary gland

Releases adrenocorticotrophic hormone (ACTH) Lungs to increase breathing rate for more oxygen

Detected by cells in the adrenal glands (adrenal medulla) adrenaline

 pupils dilate for increased vision detected by sensors (eye) and passed to…

 stomach to divert blood to the muscles to increase strength













**Don’t forget the parasympathetic response: After a few minutes, the parasympathetic branch of the ANS is activated, and the body returns to normal by establishing homeostasis. Heart rate and respiratory rates decrease, adrenaline secretion slows down, the feeling of butterflies subside and sweating stops.**