



ANIMAL ANTICS

WHAT DO THE ADRENAL GLANDS DO?

The adrenal glands are paired organs sitting adjacent to the kidneys. They have two parts: the outer cortex and the inner medulla. Both parts produce chemicals, with the cortex producing steroids called mineralocorticoids and the glucocorticoids and the medulla producing adrenaline, which most people are familiar with.

Adrenaline prepares the animal for action and is excreted in quantity if the animal is frightened, needs to run away or fight. These are called the 3 F's:

1. Freeze (hope the threat goes away).
2. Flight (run, if fast enough).
3. Fight (fight because they can't do 1 or 2 above - this is always the last resort, even for a dominant animal).

Fear is a stress reaction to potential danger and is essential for survival. The main goal of any animal is to live as long as possible and to pass on genetic information.

The steroids from the cortex of the gland are responsible for controlling some of the kidney function to regulate how much urine is produced. They also help the body cope at times of stress, eg: when a predator is chasing a prey species. The adrenaline from the medulla increases heart and breathing rates, amongst other changes, to allow the body to cope in such times of stress.

The major abnormalities of the adrenal glands are Cushing's disease, where there is over production of the chemicals, and Addison's disease, where there is a lack of production. Both are treatable, but can be fatal.

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