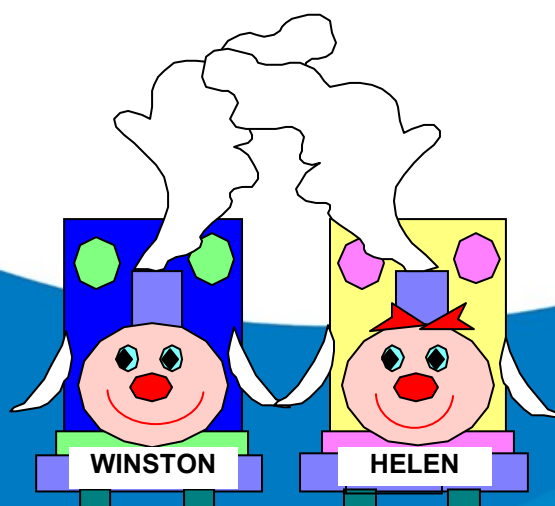


# Adrenal Suppression (Cortisol Deficiency)

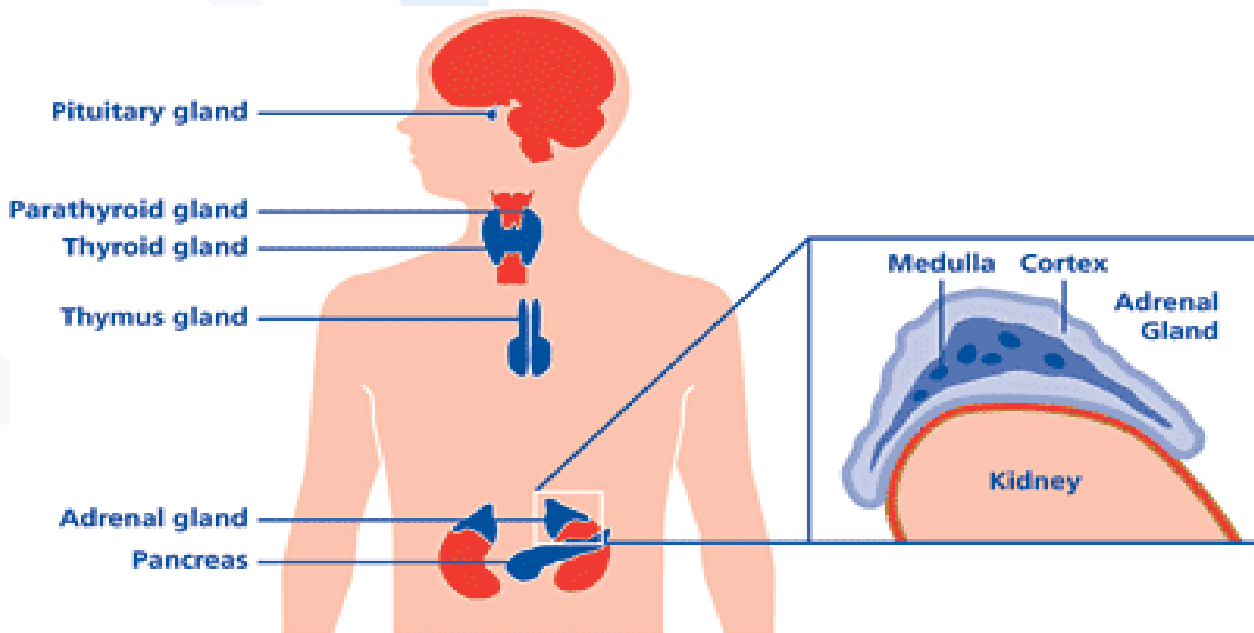
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## Where are the Adrenal Glands and what do they do?



The Adrenal Glands rest on top of the kidneys. They are part of the endocrine system, which organises the release of hormones within the body. Hormones are chemical messengers that switch on and off processes within the body.

The Adrenal Glands consist of two parts:

1. The medulla (inner section) which makes the hormone 'adrenaline' which is part of the 'flight or fight' response a person has when stressed.
2. The cortex (outer section) which releases several hormones. The two most important ones are:
  - Aldosterone – this helps regulate the blood pressure by controlling how much salt is retained in the body. If a person is unable to make aldosterone themselves, they will need to take a tablet called 'fludrocortisone'
  - Cortisol – this is the body's natural steroid and has three main functions:
    - ⇒ helping to control the blood sugar level
    - ⇒ helping to body to deal with stress
    - ⇒ helping to control blood pressure and blood circulation

## What is Cortisol Deficiency?

Cortisol deficiency occurs when the adrenal glands do not produce enough cortisol. This can happen for four main reasons:

1. When the pituitary gland is unable to produce the chemicals needed to tell the adrenal gland to 'switch on' their cortisol production. The pituitary gland is the 'master gland' which controls other glands in the body.
2. In a condition called congenital adrenal hyperplasia (CAH). CAH causes a blockage within the glands so they do not allow cortisol to be produced.
3. If the adrenal gland itself fails (for example, in Addison's Disease) or is removed.
4. The adrenal glands can stop producing cortisol because there are enough steroids in the body. This type of deficiency may occur in children who take high doses of inhaled steroids to control asthma. These steroids should be reduced slowly to give the adrenal glands chance to 'wake up' and start producing cortisol again.

The reason your child has Cortisol Deficiency is related to the information starred above. If you want more information specifically about your child's condition, please ask your doctor or nurse.

## Benefits and Risks of Treatment

Cortisol Deficiency is easily controlled with replacement therapy. However if a person with cortisol deficiency becomes very stressed or unwell, either emotionally or physically and they are unable to increase the production of Cortisol to help the body cope, this could be life threatening. In these circumstances, the amount of hydrocortisone given needs to be increased quickly. This is done by, either:

- Increasing the dose of the oral hydrocortisone taken as tablets or medicine
- Giving an injection into the child's thigh (intramuscular hydrocortisone)

You should **increase** or **start** your child's hydrocortisone when either of the following occurs:

- Vomiting or Diarrhoea
- Chest infection
- Reduced activity
- High temperature with infection

**If you have severe adrenal suppression you may also be given Hydrocortisone for I/M injection. This will be needed if the child needs:** Dental fillings or extractions, vomiting and can not keep the tablets/medicine down, has a general anaesthetic for an operation or have a serious injury, such as a bump on the head, breaks a limb or sustains burns.

If for any reason you find your child with symptoms of hypoglycemia (low blood sugar) they are pale, clammy, drowsy, confused, glazed and not responding as they would do normally. Dial 999 and request emergency help. Lay the child in the recovery position and elevate the legs. Give Hypo-stop rubbing it into the side of the mouth. If **(trained)** to do so give the child I/M injection of Hydrocortisone.

If you have any further questions, please contact your child's consultant via their secretary via the hospital switchboard.

The secretaries are available Monday to Friday, 9.00 am to 5.00 pm

If you need to contact the department outside of these hours, please phone either:

Ward 3F      0151 430 1616

Ward 4F      0151 430 1791

Whiston Hospital  
Warrington Road,  
Prescot, Merseyside, L35 5DR  
Telephone: 0151 426 1600

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