

Hydrocortisone

Available as tablets containing Hydrocortisone 10 mg and 20 mg supplied under the trade name Hydrocortone. An injection containing Hydrocortisone 100 mg is also available but rarely used for the maintenance (replacement) therapy described below.

How does it work?

Hydrocortisone is a hormone replacement for cortisol, one of the steroid hormones produced by the adrenal gland (adrenal cortex), which plays a complex role in regulating body functions and, without which, survival would not be possible. Hydrocortisone tablets are taken as a *replacement* for the natural hormone where this is deficient, either because there is a failure of Hydrocortisone production by the adrenal gland (Adrenal Failure or Insufficiency) or pituitary deficiency of ACTH (the hormone that stimulates production of cortisol by the adrenal gland). Replacement therapy is also required for people who have congenital adrenal hyperplasia (a birth defect) or in cases where surgical removal of the gland (adrenalectomy) has been performed.

How do I take it?

In adrenal failure or insufficiency, it is usual to attempt to imitate the normal secretion of cortisol by the adrenal cortex by giving a dose twice or three times a day: in the morning, lunchtime and evening. The usual dose of Hydrocortisone is 20mg per day and is split into 10mg on waking, with a glass of water, 5mg at around midday and 5mg at around 5:00-6:00pm (much later may cause insomnia and bedwetting). Hydrocortisone does not need to be taken with food and should not be taken with antacids.

In patients with primary adrenal failure (e.g. Addison's disease), hydrocortisone is given with Fludrocortisone as this hormone is also deficient. This treatment also applies in secondary adrenal failure (e.g. pituitary failure) but is not combined with fludrocortisone.

It is very important that you always carry a Steroid Card with you in the event that you are taken ill and are seen by another doctor. Cards are available from chemists and should be supplied with your prescription. They tell other doctors all they need to know about your treatment that might have a bearing on other treatments you require, especially in an emergency. It is often necessary, for example, to supplement the hydrocortisone that you take with extra doses by injection if you suffer an acute illness or if you require any form of surgery.

What are the side effects?

None, provided the dose of steroid is not excessive. Long-term over-replacement causes osteoporosis and insulin resistance.

Monitoring

Hydrocortisone doses may need to be adjusted on the basis of a cortisol day curve. This involves admission to the day ward where multiple timed blood samples are taken and tested for cortisol. Once optimal dosage is achieved then the day curve will not need to be repeated unless symptoms develop.

Advice for illness

If you become ill then the body would naturally increase the output of steroid from the adrenals. Therefore, if you are on replacement steroid it is essential to imitate the natural response by doubling your dose of steroid until the illness is over.

What illnesses require extra replacement steroid?

- Cold with no fever: no change in dose is necessary.
- Fever (>38°C) or more severe illness (e.g. need to take a day off work): double the replacement dose for 48 hours or until the fever has passed then go back to maintenance dose. If unwell after 48 hours then consult GP.
- Vomiting, diarrhoea or severe illness: If you have diarrhoea or vomiting then you might not absorb your steroid even if you have doubled the dose so it is best to seek advice urgently from your GP or call at A&E. Remember you must see a doctor that day when you have diarrhoea or vomiting.

You should keep an ampoule of Hydrocortisone in the refrigerator or a cool dark cupboard for GP administration in an emergency.

Always carry a Steroid Card and wear a MedicAlert bracelet or necklace.

What if a dose is missed by mistake?

Remember, one dose missed is unlikely to cause a problem but missing two doses could result in hospital admission.

Where can I learn more?

Contact the Pituitary Foundation at:

Pituitary Foundation, PO Box 1944, Bristol BS99 2UB

Tel: 0845 450 0375 e-mail: helpline@pituitary.org.uk Websites: www.pituitary.org.uk

More information is available on the Trust website www.royalberkshire.nhs.uk

This document can be made available in other languages and formats upon request.

Centre for Diabetes and Endocrinology, July 2003

Reviewed: January 2019.

Review due: January 2021