

Guidelines for dosage of cortisone and hydrocortisone in cases of stress

Stress can develop in any situation where extra demands, either physical or mental, are made on a person. Some examples of situations where stress may occur are: illness (especially when this is accompanied by fever), an accident, a long bike ride, exams, the death of a loved one, and so on. Stress is a very individual question; these are just a few broad examples of occasions on which it could occur. Under normal circumstances, the adrenal glands produce extra cortisol in times of stress. If the adrenal glands are not functioning then extra cortisone or hydrocortisone needs to be given.

The following points are important:

- If the stress situation can be anticipated (e.g. exams, a funeral or a children's party) then it is advisable to take (or give) the extra dosage of cortisone or hydrocortisone in advance.
- If you know well in advance that a stressful situation is likely to occur then it is advisable to discuss this with your doctor beforehand, e.g. planned surgical operations, holidays abroad, moving house, etc.
- If in doubt it is better to increase the dosage of cortisone or hydrocortisone. A one-off higher dosage will not do any harm but not increasing it could, in some cases, actually have serious consequences
- You should always follow the instructions of the treating physician. If you are unable to consult him for some reason, the examples below describe various stress situations and provide guidelines for cortisone/hydrocortisone dosages.

Situations of slight stress, e.g. a slight cold but no raised temperature: take no extra medicine unless you know from experience that a slightly higher dosage is necessary (in adults, for example, an extra 10% of the average daily dose would generally be 2.5-5mg or 20% would be 5-10mg).

Situations of moderate stress, e.g. raised temperature of between 37.5°C and 38.5°C, vomiting and/or diarrhoea, vaccination, influenza or other infections, exams: double the dosage of cortisone/hydrocortisone in adults and triple the dosage in children. If the normal dosage is 15-5-5mg hydrocortisone per day, this will then be 30-10-10mg per day for adults.

Situations of serious stress, e.g. temperature above 38.5°C, surgical operation, a visit to a dental surgeon or in cases of accident or serious injury: adults should take three times the dosage ($\times 3$) but multiply the dosage by five ($\times 5$) for a child. Always consult your doctor. If necessary (after vomiting for instance) a high dose of hydrocortisone (100mg Solu-Cortef®) may need to be injected.

Adults

Minor procedures. A single 100mg dose of hydrocortisone or 25mg prednisolone administered intravenously (i.v.) or intramuscularly (i.m.). Major and minor operations:

- One hour preoperatively and again postoperatively 100mg of hydrocortisone or 25 mg prednisolone administered i.v. or i.m.
- On the day of operation, another two doses of hydrocortisone 50mg or prednisolone 12.5mg should be administered i.v. or i.m. On the first and second postoperative days 50mg hydrocortisone or 12.5mg prednisolone i.v. or i.m. every 6 hours.
- In the absence of complications resume oral substitution, otherwise increase the dosage of hydrocortisone and check blood pressure and electrolyte balance frequently.
- In the case of major operations, corticosteroids must also be administered after the operation, e.g. 50mg hydrocortisone every 6 hours on the first and second days. If medication can then be taken orally, reduce dose of corticosteroids over the course of one week to normal substitution levels - unless complications arise.
- The dosage of fludrocortisone does not normally need to be increased.

Multiply the normally prescribed dosage of cortisone or hydrocortisone by five (5). The fludrocortisone dosage is not increased. Calculations must always be based on the daily dosage. If a child normally has 3-2-3mg then in the case of serious stress the dosage would be increased to 15-10-15mg. If the child is given an increased dosage for longer than three days then the dosage should be reduced again gradually. This procedure must be carried out in consultation with a doctor.

Oradexone (=Dexamethasone)

General: 1 tablet of 0.5mg oradexone is equal to approx. 20mg of hydrocortisone.

- Slight stress (e.g. a school trip): give one 0.5mg oradexone tablet in the morning. Do not give the normal morning and afternoon dosage. The normal dosage of the normal medication can be resumed in the evening.
- Serious stress: Children under 10: give half a tablet oradexone twice a day. Children over 10: give 1 tablet oradexone twice a day. In the case of an operation, unconsciousness, or accident, one ampule of oradexone (or half the dose in children under 4) may be given intramuscularly. It may also be given orally mixed with water. Get in touch with your own doctor.

MEDICAL INFORMATION FOR DOCTORS IN THE TREATMENT OF AN ADDISON CRISIS

To whom it may concern:

Mr./ Mrs. / child : _____
 date of birth : _____
 home address : _____ in _____ (NL)

has **non-functioning or only partially functioning adrenal glands** as a result of Morbus Addison / Cushing / adreno-genital syndrome (also known as congenital adrenal hyperplasia) / hypopituitarism*

The patient is taking the following medication *

- cortisone / hydrocortisone dexamethasone
- cortisone acetate fludrocortisone acetate
- prednisone

other medication or further particulars

In a **stress situation** (fever, infection) the patient may increase the dosage of cortisone acetate / hydrocortisone / dexamethasone / prednisone in accordance with instructions from the doctor (by at least two or three times), and should then get in touch with the treating physician.

The patient has an emergency ampule containing:

which should be administered intramuscularly in an **emergency situation** (vomiting, coma, accident). Contact should be made with the treating physician as quickly as possible.

Hospital : _____
 Name of treating physician : Dr. _____
 Telephone (practice) : +31 (0) _____
 Telephone (private) : +31 (0) _____

*Please delete or amend as applicable.