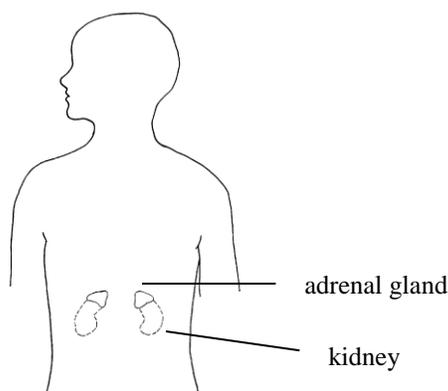


Adrenal insufficiency: Hormone replacement therapy

What is adrenal insufficiency?

Adrenal insufficiency is a decrease in the hormones made by the adrenal glands (located on top of the kidneys).

Cortisol, one of the hormones made by the adrenal glands, is essential to maintaining life. Without this hormone, the body cannot respond to stress. In young children, cortisol is also needed to maintain normal blood sugar levels. Other hormones are also made by the adrenal glands. Blood tests are done to see which hormone levels are too low.



How is it treated?

Treatment involves giving hormones to replace those that are too low. For example, **hydrocortisone** is a human-made cortisol.

The goals of treatment are:

- normal energy level
- normal growth and sexual maturation (development) at puberty

How should I give the medicine?

Hormone replacement therapy is given two or three times daily by mouth. It is important to give it at regular times to keep a steady level in the bloodstream.

Your child should be awake and alert when taking any medicine.

If using liquid medicine, shake well right before using. Draw up the correct amount in the medicine dropper or oral syringe. Give a small squirt of the medicine inside the child's cheek. To avoid choking, let your child swallow each squirt before giving more.

For babies, you may want to mix the medicine with a small amount of formula or breast milk and give it with a bottle nipple before a feeding. Do not add medicine to a whole bottle because if your baby does not finish it you will not know how much of the medicine was taken.

For children who cannot swallow pills:

- If it is a tablet, crush it between 2 spoons, inside a plastic bag, or in folded paper.
- Mix the powder with a **very small** amount (about 1 teaspoon) of soft food, such as applesauce, chocolate syrup, ice cream, jelly, or yogurt. Make sure that your child takes all of the mixture.
- Ask doctor to prescribe liquid formulation in future.

Are there any precautions about food or other medicines?

Hydrocortisone should be taken with food to prevent an upset stomach.

Check with your pharmacist about whether any other medicines your child is taking should be given with food.

What should I do if a dose is missed?

If one dose is missed, give it as soon as possible, within 2 to 3 hours of the prescribed time. There is no need to give a double dose.

If your child vomits (throws up) within 30 minutes after receiving a dose, give it again. If the dose is vomited again, call the clinic. If your child vomits after 30 minutes, do not repeat the dose.

Call the doctor if your child misses or vomits 2 doses in a row.

What are the side effects?

Large doses of hydrocortisone may have side effects. However, the amount prescribed for your child only **replaces** what the adrenal glands should make under **normal**, daily, non-stressful conditions.

When should I call the doctor?

If your child is unable to take medicines by mouth (vomiting or refusing), you **must** call the doctor right away or take your child to an emergency room.

What else do I need to know?

Important: A child with adrenal insufficiency **must** receive extra cortisone when seriously ill or injured. There is a risk of rapid worsening of the condition and death. You will need to know how to give it by injection (shot). See the education sheet “Injections.”

Your child should **always** wear a medical-alert bracelet or necklace that states “steroid dependent.”

You and your child should know the names of all the medicines he or she is taking. It is important to share this information with anyone involved in your child’s care.

Always make sure you have enough medicine on hand. Each time you refill your prescription, check to see how many refills are left. If no refills are left, give the pharmacist 2 or 3 days to contact the doctor to renew the prescription.

Check the label and the expiration date before giving each dose. Ask your pharmacist what to do with outdated or unused medications. If there is no ‘take-back’ program empty them into the trash. Store all medicines in their original container and away from direct sunlight or heat. Do not store in humid places such as the bathroom. Keep them out of children’s reach, locked up if possible.

If too much or the wrong kind of medicine is taken, call the Poison Control Center toll-free at 1-800-222-1222. If your child is unconscious or has a seizure, **call 911**.

Medicine schedule

| Name of medicine | Morning dose (mg.) | Mid-day dose (mg.) | Bedtime dose (mg.) |
|------------------|--------------------|--------------------|--------------------|
| Hydrocortisone | | | |
| | | | |
| | | | |
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Important: If your child has any of the following, call the doctor or give extra cortisone as ordered:

- vomiting
- illness such as chicken pox, infection, fever higher than 101° F
- injury
- surgery
- any other physical stress

If able to take medicine by mouth, give:

_____, _____ mg. by mouth every _____ hours.
(Name of medicine)

If vomiting or refusing medicine, give:

_____, _____ mg. by injection, and **call the doctor right away.**
(Name of medicine)

If you cannot reach the doctor, take your child to the Emergency Room right away!

For more reading material about this and other health topics, please call or visit the Family Resource Center library, or visit our Web site: www.childrensmn.org.

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