

ADRENAL INSUFFICIENCY

IMPORTANT INFORMATION FOR PATIENTS

WHAT ARE ADRENAL GLANDS AND WHAT DO THEY DO?

- The adrenal glands, located just above each of your kidneys, are organs that make several important hormones.
- Cortisol is important for your metabolism, helps your body respond to stress, and is necessary for you to live. The pituitary gland makes a hormone called ACTH which regulates cortisol production.
- Aldosterone helps to regulate your salt level, blood pressure, and potassium. Aldosterone is regulated by a hormone called renin which is made by the kidney.
- Several other hormones made by the adrenal glands – including androgens and epinephrine (“adrenaline”) – are also made by other organs in your body, and therefore do not need to be replaced by medications if the adrenal glands are not working correctly.

WHAT IS ADRENAL INSUFFICIENCY?

- Adrenal insufficiency is a disorder where your body is unable to make enough cortisol for you to live and feel well.
- In *primary adrenal insufficiency*, also called Addison’s disease, the adrenal glands do not function normally. Cortisol and aldosterone levels are both low.
- In *secondary adrenal insufficiency*, the pituitary gland does not send the correct signal to the adrenal glands. Because the adrenal glands are not receiving the appropriate signal, they do not produce cortisol. While cortisol levels are low, aldosterone levels are normal.

WHAT MEDICATIONS WILL I BE TAKING?

- You will be taking a medicine to replace your body’s cortisol. These cortisol-like medicines are called glucocorticoids. Examples of glucocorticoid medications include hydrocortisone, prednisone, and dexamethasone.
- If you have primary adrenal insufficiency, you will likely take fludrocortisone (Florinef®) *in addition* to one of the glucocorticoid medicines listed above, to replace your body’s aldosterone.

HOW ARE THE MEDICATIONS TAKEN? HOW ARE THEY ADJUSTED?

- Hydrocortisone and prednisone are taken one to three times daily. The morning dose should be taken first thing when you get up. If you are taking an afternoon dose, it is generally taken at 4 or 5 in the afternoon. Occasionally a noon dose is also needed. Your doctor will help you to adjust your medication schedule.
- Your doctor will help you adjust your medications based on your symptoms and other specific tests. Because getting too much or too little medication can be harmful to you, *it is important that you do not adjust your medications without consulting your doctor.*

HOW DO I ADJUST MY MEDICATIONS WHEN I AM SICK?

- For minor illnesses like a cold, you do not need to adjust your medications. If you have a fever (temperature > 100° F), vomiting, or diarrhea, you should double the dose of glucocorticoid (hydrocortisone, prednisone, dexamethasone) that you are taking. If you are taking fludrocortisone (Florinef®), you do not need to adjust the dose when you are sick.
- If you are vomiting and are unable to take your medicines, then you should go to the emergency room so you can be given your medicines by vein. Some doctors will prescribe injectable steroid medicines for times when you cannot take oral medication. Please call your doctor if you need to use injectable steroid medicine.

WHY DO I NEED A MEDICAL ALERT BRACELET OR NECKLACE?

- If you need emergency surgery or are involved in a major accident, you will need to be given large doses of steroid medicine by vein. The medical alert bracelet or necklace lets those taking care of you in the case of emergency know that you have adrenal insufficiency so that you may be treated appropriately. You should also carry an emergency medical card in your wallet or purse.
- Applications for medical alert bracelets and necklaces can be obtained from the Endocrine Clinic, from many pharmacies, or from websites like www.medicalert.com or www.laurenshope.com. The bracelet or necklace should say “adrenal insufficiency – on steroids.”

WHAT DO I DO IF I NEED SURGERY? WHAT IF I BECOME PREGNANT?

- If you will be having an operation, you will need to receive extra glucocorticoid medicine around the time of surgery. Please let your (endocrine) doctor know if you will be having surgery, so that recommendations can be discussed with your surgeons.
- If you become pregnant, you *may* require a change in your medication during your pregnancy, and you will need extra medicine during the delivery of the baby. Please let your (endocrine) doctor know if you become pregnant.