

## **PATIENT GUIDE TO 24-HOUR and 10-HOUR URINE COLLECTIONS**

24-hour urine collections (UFC's) are used to measure various hormone levels. In this case, you have been asked to provide a sample to measure the amount of cortisol that your body is producing in a 24 hour time frame. Cortisol is a hormone produced by the adrenal glands in cases of "fight or flight" and other stressful situations. In patients with Cushing's syndrome, the body produces this hormone in excess. Some people have many physical symptoms, while others have very few. We use biochemical tests, such as the urine collection, to diagnose Cushing's syndrome.

### **HOW TO COLLECT THE SAMPLE**

1. Start your 24 hour urine test by waking early in the morning, 8AM is a good time.
2. Begin by voiding when you wake up. Do **not** collect this sample in your UFC jug. Make sure you collect your urine in a jug that has markings on the side that allows the lab to record your 24 hr urine volume. The jug does not need to have preservatives, such as boric acid.
3. Collect all urine from this point on and keep refrigerated in the UFC jug. Your last void collected in the jug should be exactly 24 hours from your start time, which includes the first morning urination of the following day. Do not put
4. Label the jug in the space provided with your name, date, and time collected. Do not put time collected other than 24 hrs, it only confuses the laboratory.
5. If you cannot send your UFC in to be processed immediately, it is recommended that you freeze the sample.
6. When you go to the pick up station, make sure they record your 24-hr volume. Ask the lab what the urine volume was and keep a record of it for yourself.

### **STORAGE INSTRUCTIONS**

While it is best to refrigerate your UFC sample for the entire 24-hour period, if you must take the jug with you for a few hours, this should not harm the sample. As soon as you can, however, return the sample to the refrigerator. You will want this to be received at the lab as soon as possible, as cortisol can break down in urine. An alternative suggestion would be to freeze the sample if you are unable to drop the sample off for a few days (i.e. over a weekend). This will preserve the sample for MUCH longer.

If you are in the LA area, there are drop points for Esoterix (please call them to verify locations). Sometimes they offer a pick up service as well, and their customer service people should be able to help you with this. The sample can stay viable for a few days, but if it will take longer than that to reach the lab, we suggest you contact Esoterix and they will instruct you on the best way to send your sample. Sometimes this is as simple as freezing your sample beforehand, or shipping it on dry ice. Either way, they are very knowledgeable on exactly what has to happen. Customer service can be reached at: (800) 444-9111. If you would like information on specimen pick-ups and couriers, customer service will take those calls also.

To access their website directly, please find them online at:  
<http://www.esoterix.com/contact/index.shtml>

## **HOW LONG WILL IT TAKE FOR ME TO SEE MY RESULTS?**

Twenty-four hour urine for urinary free cortisol (UFC) is an important test to diagnose Cushing's syndrome. Dr. Friedman also frequently measures cortisol metabolites using a test called 17-hydroxysteroids (17-OHS), a test that can be done on the same urine collection as the UFC. Both of these tests take approximately 7-10 days to process at the lab. Following that, the Doctor needs time to evaluate these tests and how they fit together with the other collected evidence. You have probably already had blood taken, and these results come in usually within the same 2-week time period. Salivary samples take a bit longer, mostly because the patient doesn't do them all right away. As more tests straggle in, Dr. Friedman will have what he needs to ascertain what your health problem is and design a treatment plan for you or decide if more testing needs to be done. Please try and be patient during this time since Dr. Friedman often prefers to wait until ALL your lab results are in before contacting you. The full picture is very important.

If the tests are inconclusive, more blood work, urine samples and salivary samples may be necessary. If you have episodic or periodic Cushing's syndrome, it is often challenging to determine what days are "good" "test" days, especially when you, the patient, is used to feeling pretty crummy most of the time. The urine testing process, particularly in episodic patients, can be time consuming and frustrating. The following are some tips when trying to decipher your "highs" and "lows".

### **AM I HIGH?**

Every patient is unique in how their bodies respond to fluctuations in cortisol. A "high" period has some telltale signs for most sufferers. However, in some cases, what patients have labeled as their "high" is really their "low" phase. Patients describe the following issues as things they tend to experience in a "high" phase:

- Wired at night
- Weight gain
- Acne
- Anxiety increase/mood swings/irritability
- Euphoria/more energy than usual
- Very few aches and pains
- Tasks seem easier
- Insomnia/inability to stay or fall asleep.
- Energy levels that "perk up" after sunset.
- "Speed talking" – mind is going faster than your brain can process the thoughts to speak them.
- Water weight gain – edema
- High blood pressure
- High blood sugar if diabetic

### **AM I LOW?**

- Nausea
- Weight loss
- Depression
- Lethargy

- Extreme fatigue
- Muscle/joint pain

When you first start testing, we ask that you test during both phases (high and low) and at random. Please jot down a brief note for each day you test indicating how you felt the time frame that you tested in. In this way, if we notice that you tend to get a high test result during a time when you feel a particular way, we can ask you to repeat your testing during these times only. Please keep in mind that these are general guidelines. If you have noticed overlapping symptoms between the “high” and “low” list, do not worry. It will take time to discover your cycle.

### **10-HOUR URINE COLLECTIONS**

Cushing’s syndrome is a condition of high cortisol at night. Day-time cortisol levels are often normal, but may be low. For that reason, Dr. Friedman sometimes recommends patients to collect 10 hour urine samples from 10 PM to 8 AM. This will include any urination during the night and the first void in the morning. You should void first at 10 PM. He measures the UFC/Cr ratio and considers a value greater than 16 consistent with Cushing’s syndrome. He does not measure 17-OHS and urine volume does not need to be noted. Please tell the pickup station that this is a 10hr sample and they should record the “comments” that Dr. Friedman notes on the requisition. You should collect during symptoms of a “high” as discussed above.