

## 24 hour urine collections

### What is a 24 hour urine collection?

You have been asked by your doctor to collect a 24 hour urine sample for testing by the laboratory. A 24-hour urine collection is a simple diagnostic procedure that measures the components of urine. The test is noninvasive (the skin is not pierced), and may be used to assess kidney (renal) function. It involves you collecting your urine for a whole day or 24 hours.

### Why would I need this procedure?

Your doctor has asked you to do this so that he or she can test your urine to see if something is present or to see how much of something you may be passing (making) in 24 hours including how much urine (the volume) you make over this period. Urine consists of water and dissolved chemicals, such as sodium, potassium, urea (formed from protein breakdown), and creatinine (formed from muscle breakdown), along with other chemical compounds. Normally, urine contains specific amounts of these waste products. If these amounts are not within a normal range, or if other substances are present, it may be an indication of a particular disease or condition. The results of a 24-hour urine collection may provide information to help your doctor make or confirm a diagnosis.

Twenty-four hour urine collections may be performed to determine how much creatinine clears through the kidneys, but may also be used to measure protein, hormones, minerals, and other chemical compounds. Creatinine clearance testing provides information about kidney function.

### What are the symptoms that have led to me having this procedure?

There are many and varied reasons why your doctor has asked you to collect urine for testing and your doctor should have discussed this with you before or when you were asked to make a 24 hour urine collection.

### What are the alternatives?

Not collecting urine may mean that you may have to have another type of test instead such as a blood test. Sometimes this may not be possible and indeed, you may find that you need other tests such as a blood test as well as your urine test to best diagnose or treat your condition.

### What are the potential risks and side effects?

Twenty-four hour urine collection is a safe, non-invasive procedure that can easily be carried out at home or work if adequate facilities are available.

Certain factors or conditions may interfere with the accuracy of a 24-hour urine collection. These factors include, but are not limited to, the following:

- Forgetting to collect some of your urine
- Going beyond the 24-hour collection period and collecting excess urine
- Losing urine from specimen container through spilling
- Not keeping urine cold during collection period
- Acute stress

- Vigorous exercise
- There are certain food types, or drugs that can affect some of the test done in urine and they should be avoided during urine collection. For guidance please refer to the instruction for urine tests that require dietary restriction section below
- Not filling in all the details such as name date of birth and hospital number (if you know it), on your sample.
- Using containers other than those supplied to you for example jam jars or juice bottles.

Don't worry if your doctor has not told you to avoid certain foods. It just means that it is not necessary for your particular test.

## **Instruction for urine tests that require dietary restriction during collection**

- **Urine 5HIAA:**

Foods such as avocados, bananas, pineapples, plums, walnuts, tomatoes, kiwi fruit, aubergine and health food supplements containing 5-hydroxytryptophen can increase 5-HIAA and should be avoided for three days prior to and during urine collection.

*There are also a variety of drugs that can affect the 5-HIAA test. Drugs that can increase 5-HIAA include acetaminophen, caffeine, ephedrine (an ingredient found in some cough medicines), diazepam (Valium), nicotine, glyceryl guaiacolate (an ingredient found in some cough medicines), and phenobarbital. Drugs that can decrease 5-HIAA include aspirin, ethyl alcohol, imipramine, levodopa, MAO inhibitors, heparin, isoniazid, methyl dopa, and tricyclic antidepressants. Patients should talk to their doctor before decreasing or discontinuing any medications.*

- **Urine Metanephrines (Metadrenalines)**

Excess caffeine intake (tea, coffee, caffeine containing drinks etc) should be avoided before and during the collection period. There are also many medications that can potentially affect test results. Talk to your doctor about any prescriptions and over-the-counter drugs and supplements that you are taking. Wherever possible, those that are known to interfere should be discontinued prior to and during sample collection. Emotional and physical stresses and vigorous exercise should be minimised prior to, and during, test collection as they can increase catecholamine secretion.

- **Urine Trimethylamine Screen**

It is recommended a dietary 'Choline Load' before sample collection using foods known to produce the odour eg beans, eggs, liver. Suggested Procedure: at 13:00 and 19:00 a high choline meal containing (eg 2 eggs + 400g baked beans or other beans – can reduce quantity for children). Then;

- For 24h urine collection, start '24 hour' the day after the choline load and collect urine until the end of the day
- For Random urine, collect a single 20mL sample first thing in the morning after the choline load. Random urine is recommended if 24hr collection is impractical (e.g. in young children)

## What are the expected benefits of treatment?

Important decisions regarding your treatment may depend entirely upon proper test results. It is most important that you make sure that your collections are complete and collected as your doctor instructs you to. An incomplete collection can give misleading results.

## Instructions for collection of 24 hour urines

You have been given a bottle(s) in which to collect the urine. Test results are based on the total amount of tested substance excreted by your body over a 24 hour period.

You should aim to collect every drop of your urine during the specified 24 hour period.

It does not matter what the volume of the urine is, as long as it represents every drop that you pass.

If you have a bowel movement, you must collect the urine separately.

If unable to do so you should abandon the collection and start again on another day, using a fresh container.

Females should avoid collection during a menstrual period.

For some tests there are dietary and drug restrictions. If in doubt, check with your doctor. Do not stop any of your medications unless you have first discussed it with your doctor. You may drink as much fluid as you normally would over the course of the collection.

Please do not use collection container other than the one(s) you have been given. If you think you will need another container ask your doctor or come to specimen reception at your local hospital to collect another one. It may be possible to collect an additional container from your GP surgery.

Plan your 24 hour collection on a day off or the weekend if you are not able or comfortable to do it at work. But remember, if you go out, do take your collection bottle with you!

Since the information your clinician gets from these samples is only as accurate as your collection procedure, it is most important that you collect the urine as follows:

1. Begin at the usual time that you wake.
2. At that time, pass your urine, flush it down the toilet and note the exact time. Do not collect this urine. You will now have an empty bladder and an empty bottle. The collection of urine will start from this time. **Please note both the date and time on the collection bottle label, where it says 'start date and time'.**
3. Collect every drop you pass during the day and night, for 24 hours, and finish the collection by passing urine at exactly the same time the next morning. You should add this final specimen to the bottle.
4. Keep the sample container cool; closed and protected from light between each time you pass urine.
5. The time you pass the last urine specimen should not vary by more than five or ten minutes from the time of starting the collection the previous day. This is the end of the collection. **Please note both the date and time on the bottle label.**
6. The specimen should be delivered as soon as conveniently possible after completing the collection to the 'specimen reception hatch,' at your local hospital. Please aim for this to be between the hours of 09:00 -17:00 Monday to Friday so that your urine can receive appropriate attention. It may be more convenient for you to drop your completed sample off at your GP surgery for transportation. Please contact your surgery to arrange this. Before you hand over your sample please check your name, date of birth, hospital number, if known (it may be on your request form), plus start and finish times and dates are on the sample. Please also

remember to include the request form with your sample. If you need help with this please ask when you hand in your collection.

For the results of your test, please contact your doctor.

## Sources of information

[www.labtestsonline.org](http://www.labtestsonline.org) - a web site about lab tests in general written for a general audience.

## Important information

The information in this leaflet is for guidance purposes only and is not provided to replace professional clinical advice from a qualified practitioner.

## Your comments

We are always interested to hear your views about our leaflets. If you have any comments, please contact the Patient Experience Team – Tel: 0300 131 4731 (direct dial) or by email at: [esh-tr.patientexperience@nhs.net](mailto:esh-tr.patientexperience@nhs.net)

## Hand hygiene

The trust is committed to maintaining a clean, safe environment. Hand hygiene is very important in controlling infection. Alcohol gel is widely available at the patient bedside for staff use and at the entrance of each clinical area for visitors to clean their hands before and after entering.

## Other formats

**If you require any of the Trust leaflets in alternative formats, such as large print or alternative languages, please contact the Equality and Human Rights Department.**

**Tel: 0300 131 4434 Email: [esh-tr.AccessibleInformation@nhs.net](mailto:esh-tr.AccessibleInformation@nhs.net)**

After reading this information are there any questions you would like to ask? Please list below and ask your nurse or doctor.

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## Reference

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