

The 24-Hour Urine Test

The Complete Collection & Understanding Guide

Preparation, step-by-step collection, results, worksheets, and answers to common questions

1. What Is a 24-Hour Urine Test?

A 24-hour urine test (also called a **24-hour urine collection**) measures what your kidneys release into your urine over one full day. Instead of testing a single sample, you collect **every drop of urine you make for 24 hours** in a special container. The lab then measures the total volume and the amounts of specific substances, such as creatinine, protein, calcium, oxalate, citrate, sodium, uric acid, or hormones like cortisol and metanephrines.

Why a full day? Your body does not release substances at a steady rate. Hormones rise and fall with the time of day, meals, activity, and sleep. A single “spot” urine sample is only a snapshot; a 24-hour collection averages out these swings and gives a much more reliable picture of what your body is truly excreting. It also allows labs to report results as an **amount per day**, which is the standard way to judge kidney function, stone risk, protein loss, and hormone output.

At a Glance

Duration: Exactly 24 hours, collecting every urine void (the first void of the day is discarded; the last void at the 24-hour mark is included).

Where: At home, work, or in the hospital, using a container supplied by your lab or clinic.

Pain or risk: None. It is non-invasive. The only risks come from handling the container (some contain a preservative) and from collection errors that make results unreliable.

Diet: Usually your normal diet and fluids, unless your care team tells you otherwise for a specific test.

Results: Typically 1 to 7 days; specialized hormone or genetic tests can take 1 to 2 weeks.

Who Typically Needs This Test?

- People with **kidney stones**, especially recurrent stones, to find out why stones keep forming and how to prevent them.
- People with **chronic kidney disease (CKD)**, **nephrotic syndrome**, diabetes, lupus, or high blood pressure who may be losing **protein** in their urine.
- People being evaluated for **hormone-related conditions**: Cushing syndrome (cortisol), pheochromocytoma or paraganglioma (catecholamines and metanephrines), primary aldosteronism (aldosterone), carcinoid syndrome (5-HIAA).
- People being checked for **metabolic or genetic conditions** such as cystinuria, primary hyperoxaluria, hypercalciuria, hypocitraturia, or renal tubular acidosis.
- Living kidney donor candidates and some transplant patients, to measure **creatinine clearance** (an estimate of filtration).
- People being evaluated for **heavy metal exposure** or **porphyria**, and some patients whose care team wants to check dietary **sodium** or **protein** intake.

- Patients who have started a treatment (diet change, potassium citrate, thiazide, allopurinol) and need a **follow-up collection** to see whether it is working.

2. What Does the Lab Measure?

Your doctor chooses which substances to measure based on your history and symptoms. The lab may run a single test or a whole panel. Below are the most common measurements, what they tell your care team, and the **approximate** reference ranges. Ranges vary by laboratory, assay method, age, sex, body size, and diet. **Always use the reference range printed on your own report.**

Measurement	What it tells your care team	Approximate typical range
Total volume	Fluid intake and hydration. Low volume concentrates stone-forming minerals.	800–2,000 mL/day (stone prevention goal is usually 2,500 mL or more)
Creatinine	Muscle by-product released at a steady rate. Used to check collection completeness and to calculate creatinine clearance.	Men ~14–26 mg/kg/day; women ~11–20 mg/kg/day
Protein (total)	Protein leakage from damaged kidney filters (glomeruli).	Under ~150 mg/day; over 3,500 mg/day is nephrotic-range
Albumin	Most sensitive early marker of kidney damage in diabetes and high blood pressure.	Under 30 mg/day
Calcium	High levels (hypercalciuria) are the most common metabolic cause of calcium stones.	Women up to ~250 mg/day; men up to ~300 mg/day (or under 4 mg/kg/day)
Oxalate	A key stone-forming substance from diet, gut absorption, or the liver.	~20–40 mg/day (lab-specific)
Citrate	Natural stone inhibitor. Low levels raise stone risk.	Usually above 320 mg/day (lower if low)
Uric acid	Linked to uric acid stones and gout; reflects purine intake.	Up to ~750–800 mg/day
Sodium	Reflects dietary salt. 2,300 mg sodium $\approx$ 100 mmol. High sodium increases urine calcium.	~40–220 mmol/day (diet-dependent)
Potassium	Reflects fruit/vegetable intake and some medicines.	~25–125 mmol/day
Magnesium / Phosphorus	Additional stone inhibitors/promoters; also reflects intake and absorption.	Mg ~3–5 mmol/day; Phos ~400–1,300 mg/day
Urea nitrogen	Reflects dietary animal-protein intake and protein breakdown.	~6–17 g/day
Urine pH	Acidic urine favors uric acid and cystine stones; alkaline urine favors calcium phosphate stones.	Commonly ~5.5–7.0 (averaged over the day)
Cystine	Screens for cystinuria, a genetic cause of recurrent stones.	Under ~30 mg/day
Free cortisol	Screens for Cushing syndrome (too much cortisol).	Roughly 4–50 mcg/day (assay-dependent)
Metanephrines / catecholamines	Screens for adrenal or nerve-tissue tumors that release adrenaline-like hormones.	Highly lab-specific
Aldosterone	Evaluates primary aldosteronism in resistant high blood pressure.	Lab- and sodium-intake-specific
5-HIAA	Serotonin by-product; used to evaluate carcinoid syndrome.	Typically under ~6–10 mg/day (lab-specific)

Common Test Panels

Panel Name	Typically Includes	Usually Ordered For
Kidney stone risk profile	Volume, pH, calcium, oxalate, citrate, uric acid, sodium, potassium, magnesium, phosphorus, creatinine, sulfate, ammonium, and calculated supersaturation values	Recurrent kidney stones; first stone with risk factors; children with stones
Proteinuria panel	Total protein, albumin, creatinine, sometimes protein electrophoresis	Nephrotic syndrome, glomerular disease, diabetic kidney disease, lupus nephritis
Creatinine clearance	Urine creatinine and volume plus a blood creatinine drawn during or right after the collection	Estimating kidney filtration; donor evaluation; dosing of some medicines
Cushing screen	Urinary free cortisol, creatinine, volume (usually 2–3 collections)	Weight gain, purple stretch marks, high blood pressure, high blood sugar, bruising
Pheochromocytoma screen	Fractionated metanephrines and catecholamines, creatinine	Episodes of pounding headache, sweating, racing heart, or very high/unstable blood pressure
Primary aldosteronism confirmation	Aldosterone, sodium, potassium, creatinine	Resistant hypertension with low potassium
Carcinoid screen	5-HIAA, creatinine	Flushing, diarrhea, or a known neuroendocrine tumor

3. Before You Begin: Preparation

Step 1: Talk With Your Care Team First

Preparation is the single biggest factor in getting a result you and your doctor can trust. Before you start, ask your care team or the lab these questions and write the answers in the worksheet at the back of this guide:

- Which test(s) are being run, and do I need one container or several (some labs use a different preservative for different tests)?
- Should I eat and drink normally, or restrict any foods, caffeine, alcohol, or supplements before and during the collection?
- Should I **continue or temporarily hold** any medicine or supplement? **Never stop a prescribed medicine on your own.**
- What start time works best, and where and when do I return the container?
- Will I need a **blood test** at the same time (for example, blood creatinine for creatinine clearance)?
- Do I need to repeat the collection once or twice for accuracy?

Step 2: Choose the Right Day

- Pick a **calm, ordinary day** when you will be mostly at home, or when you can bring your container with you. A weekend or a day off work is ideal.
- Avoid collecting while you have a **fever, vomiting, diarrhea, or a urinary tract infection**, unless your doctor specifically wants that. Illness changes volume and chemistry.
- Avoid **heavy or unusual exercise** (a marathon, an intense gym day), which can temporarily raise urine protein and muscle-related substances.

- If you menstruate, tell the lab. Many labs prefer that you wait until your period has ended, because blood contamination can alter results (especially protein).
- Tell your doctor if you are **pregnant** or may be pregnant.

Step 3: Medicines, Vitamins, Supplements, and Imaging

Many substances can interfere with a urine result. The list is long and test-specific, so ask your lab for its own list. Common examples include:

Item	Possible effect	Tests most affected
High-dose vitamin C (ascorbic acid)	Can raise urine oxalate and interfere with some chemistry measurements	Oxalate, stone panels, some catecholamine assays
Calcium or vitamin D supplements, antacids	Raise urine calcium	Calcium, stone panels
Diuretics (water pills) and thiazides	Change volume, sodium, calcium, citrate, and potassium	Stone panels, aldosterone, sodium, potassium
Potassium citrate, bicarbonate, allopurinol, febuxostat	Intentionally change pH, citrate, and uric acid (useful if you are being monitored on treatment)	Stone panels, uric acid
Corticosteroids (prednisone, creams, inhalers, injections)	Interfere with cortisol measurement	Free cortisol
Licorice (real black licorice)	Can alter cortisol and aldosterone-related findings	Cortisol, aldosterone
Some blood-pressure medicines, antidepressants, decongestants, stimulants, and acetaminophen	Can falsely raise or alter catecholamines and metanephrines	Metanephrines, catecholamines
Biotin (vitamin B7) high-dose supplements	Can interfere with some lab immunoassays	Hormone assays
Contrast dye (CT/MRI/X-ray)	Can affect kidney function and interfere with some assays for days	Creatinine clearance, protein, some metals
Creatine supplements, large amounts of cooked meat	Raise creatinine temporarily	Creatinine, creatinine clearance

Safety Rule

Never stop or change a prescription medicine, insulin, blood-pressure medicine, or any treatment because of a urine test unless the prescribing clinician tells you to. If instructions seem to conflict, call your care team before you start.

Step 4: Food, Fluids, Salt, and Alcohol

- **Eat and drink your usual way** for most tests (especially kidney stone panels and protein measurements), because the goal is to capture your real-life pattern. Do not “clean up” your diet just for the test unless told to; your doctor may need the true baseline.
- **Drink to thirst** and normal habits. Do not intentionally flood yourself with water, and do not restrict fluids. Extremely high intake (more than ~4–5 liters) can distort cortisol results.
- **5-HIAA test:** labs typically ask you to avoid serotonin-rich foods for 2–3 days before and during the collection (for example bananas, pineapple, kiwi, plums, tomatoes, walnuts, avocado, and eggplant).

- **Metanephrine/catecholamine tests:** some labs ask you to avoid caffeine, tobacco, and certain foods or medicines for a few days. Follow the lab sheet exactly.
- **Alcohol:** unless instructed otherwise, keep alcohol modest. Heavy drinking affects hydration, uric acid, and hormones.
- **Keep a simple food and fluid log** during the day (see the worksheet). It helps your clinician interpret unusual results.

4. Supplies and Safety

What Your Lab Should Give You

- A large **collection container**, usually 3 to 4 liters (about 1 gallon), often amber/brown to protect light-sensitive analytes. Some tests use two or more containers.
- A **preservative** already inside the container in some cases (such as hydrochloric acid, boric acid, acetic acid, or sodium carbonate). Always read the label.
- A **collection “hat” or pan** that fits under a toilet seat (for people who use a toilet), or a handheld urinal or wide-mouth cup.
- A **requisition form** and **labels** for your full name, date of birth, start and stop times, and test name.
- A **biohazard bag** or return bag in some labs.

What You Should Gather at Home

- A **clean funnel** (optional but helpful) and **disposable gloves** if you want them.
- A **cooler with ice packs**, or space in a refrigerator that is not used for food, or a dedicated bin on a refrigerator shelf away from food.
- A **clock or phone alarm** to record your exact start and stop times.
- A pen, the void log from this guide, and a reminder sign on the bathroom door: **“SAVE ALL URINE – 24-HOUR TEST IN PROGRESS.”**
- Soap and warm water for hand-washing after every collection.

Preservative Safety – Important

If your container has a preservative, it may be an **acid** and can irritate skin, eyes, and lungs. **Do not pour out, rinse, or dilute the preservative.** Do not sniff it, and keep it away from children, pets, and anyone who may be confused or have cognitive impairment.

If it spills on skin, rinse with plenty of running water for at least 15 minutes. If it splashes in your eyes, rinse continuously and seek urgent care. In the US, Poison Control is **1-800-222-1222** (24 hours). Call 911 for severe breathing trouble or eye injury.

Keep the lid tightly closed between uses and store the container **upright** in a cool, safe place.

5. Step-by-Step: How to Collect Your Urine

Day 1: Starting the Clock

1. Pick your **start time**, most people choose the time they wake up (for example, 7:00 a.m.). Write the date and time in the worksheet.

- At the start time, **empty your bladder into the toilet and flush. Do NOT collect this urine.** This is your “discard” void. Write the exact time on your form. **This is the moment your 24 hours begins.**
- From now on, **collect every single void** (urination) in the collection hat, cup, or urinal, then carefully pour it into the container using the funnel. Do this each time, day and night.
- After each collection, close the lid tightly, mix by gently tilting (do not shake vigorously), and place the container back in the cooler or refrigerator.
- Wash your hands after every collection. Jot the time and approximate volume in the void log if you wish.

During the 24 Hours

- Before you have a bowel movement**, urinate first into your collection device, then move to the toilet. Urine often comes out with a bowel movement; this is the most common cause of missed urine.
- Make a plan for the night.** Place the container, funnel, and hat by the toilet before bed so that a half-asleep trip to the bathroom doesn't become a missed void.
- Women:** use the hat under the seat, sit as usual, and avoid contaminating the sample with toilet paper, menstrual blood, or vaginal discharge when possible. Pour from the hat into the container.
- Men:** you may urinate directly into a clean wide-mouth cup or handheld urinal and pour into the container; avoid touching the rim to skin.
- Do not** urinate into the container if it contains a preservative, because splashing is hazardous. Use an intermediate cup and pour carefully.
- Keep it cold.** Store the container in the refrigerator or in a cooler packed with ice. Heat and time allow bacteria to grow and chemicals to break down.
- If the container **fills up**, ask the lab beforehand about a second container. Label both with the same name and the same start and stop times and number them “1 of 2” and “2 of 2.”

Day 2: Finishing the Clock

- At the same clock time the next day (for example, 7:00 a.m.), **empty your bladder one final time and add this urine to the container.** This is your last collection.
- Record the **exact end time** on the form and label. The total period should be as close to 24 hours as possible.
- Make sure the lid is tight, the label is complete, and the container is kept cold until you deliver it.
- Deliver the container** to the lab or clinic as instructed (often within a few hours, or the same morning), ideally in a bag in a cooler. Bring the requisition form.

Sample 24-Hour Timeline

Clock Time	What You Do
Day 1, 7:00 a.m.	Empty bladder into toilet and flush (discard). Write down start time. Everything after this is collected.
7:00 a.m. – 11:00 p.m.	Collect every void. Mix gently; keep container cold. Eat and drink normally. Hands washed each time.
Bedtime	Container, funnel, hat, and flashlight at the bathroom. Alarm set for the final collection.
Overnight	Collect any middle-of-the-night voids. Return container to cold storage.
Day 2, 6:45 a.m.	Reminder alarm. Prepare to void into collection hat.
Day 2, 7:00 a.m.	Last void goes INTO the container. Write down stop time.
Day 2, morning	Label container, bag it with the form, keep cold, and deliver to the lab.

6. Special Situations

What If I Make a Mistake?

Mistake	What to do
I forgot to collect one void.	Do not guess or “make up” the volume. Tell the lab. Many labs ask you to restart the 24-hour period; some can interpret the result with a note. Calling the lab is the safest route.
I accidentally urinated in the toilet and noticed right away.	Same as above: record the time and let the lab know. If it was a very small amount, your clinician may still accept it, but it should be noted.
I started the collection but forgot to discard the first void.	Tell the lab. This often requires restarting because first-void urine reflects overnight accumulation before the start time.
I spilled or poured out part of the container.	Restart the test with a new container and a new start time. Notify the lab and replace the container if needed.
The container filled up.	Use a second labeled container or call the lab. Do not overfill or leave it uncapped.
I forgot to refrigerate it for several hours.	Tell the lab. Warm storage can spoil results. They may ask you to repeat.
I took a prohibited medicine or food.	Write it down on the form and tell your doctor. Some tests must be redone.
The preservative spilled.	Handle with gloves, ventilate, and rinse the area. Call the lab for a replacement container.

Children and Infants

A true 24-hour collection is difficult in young children. Labs may use adhesive **pediatric urine collection bags** for infants and toddlers, changed frequently, or may substitute **spot urine ratios** (such as calcium-to-creatinine or protein-to-creatinine) when appropriate. For toilet-trained children, the same steps apply, but an adult should supervise every collection, especially if there is a preservative. Ask the pediatrician which approach is acceptable.

People With Catheters, Incontinence, or Limited Mobility

- **Indwelling catheter:** the drainage bag is changed to a new collection system. Keep the container on ice in a clean tray. A nurse or caregiver can help with transfers.
- **Incontinence:** collection is harder; ask about adult-sized urine collection devices, external catheters, or whether a different test (blood tests, spot ratios) can substitute.
- **Limited mobility or cognitive impairment:** involve a caregiver, keep the preservative container locked away, and consider a bedside urinal.
- **Dialysis patients who still make urine:** residual urine volume collections are sometimes used to measure remaining kidney function. Follow your dialysis unit's collection schedule, since timing relative to dialysis matters.

Work, Travel, and Hospital Stays

- If you must be away from home, carry a small insulated bag with the container and ice packs. A discreet sports bottle holder or cooler works well for the workday.
- Do **not** use an unlabeled water bottle or a food container. Use only the container provided by the lab.
- Do not collect during air travel, long road trips, or events where you cannot maintain cold storage.
- **In hospital:** nursing staff usually manage the collection. Remind them of your start time and tell them if a void is missed.

Pregnancy

Pregnancy changes kidney function, protein excretion, and several hormone levels. Ranges are different, and some tests are used to evaluate preeclampsia. Always tell the lab you are pregnant so results are interpreted with the right reference ranges.

7. Labeling, Storing, and Returning Your Sample

- **Label every container** with your full name, date of birth, start date/time, and end date/time. Add the test name and ordering clinic if the lab form asks for it.
- Record your **height and weight** if requested; labs use body weight to compute mg/kg/day creatinine.
- Keep the sample **cold (about 36–46°F / 2–8°C)** and out of direct sunlight until you hand it in.
- Do not freeze unless told to; do not pour part of it into another cup or send only a portion unless the lab tells you to (some labs measure the total volume and take their own aliquot).
- Deliver the **entire container**, upright, in a leak-proof bag, as soon as possible after the end time. If a drop-off is not possible, ask the lab about overnight cold storage.
- Ask the lab when and how results will be given (patient portal, clinic call, follow-up appointment).

The Creatinine Check

Most labs measure urine creatinine on every 24-hour sample as a **quality control check**. Because your body makes creatinine at a fairly steady rate, a result far below your expected range often signals an **incomplete (under-collected)** sample, and a result far above may signal **over-collection** (for example, collecting longer than 24 hours). If this happens, the lab or your doctor may ask you to repeat the test. Do not be discouraged; repeats are common and are not a sign you did anything wrong.

8. Understanding Your Results

A 24-hour urine result is a set of numbers with reference ranges. A number outside the range is not a diagnosis by itself. Your clinician interprets results in the context of your symptoms, blood tests, imaging, medicines, and diet. Here are common patterns and what they might prompt your care team to consider.

Finding	Possible explanations	What often happens next
Low urine volume	Too little fluid intake, heavy sweating, hot climate, incomplete collection	Goal setting for fluids, especially with stones. Repeat if collection errors are suspected.
High calcium (hypercalciuria)	High sodium or animal-protein intake, excess calcium/vitamin D supplements, hyperparathyroidism, sarcoidosis, certain medicines, genetic tendencies	Diet adjustments (sodium reduction, balanced calcium intake), blood tests (calcium, PTH), possible thiazide-type therapy per clinician.
High oxalate (hyperoxaluria)	High-oxalate foods, low dietary calcium, fat malabsorption (Crohn disease, bariatric surgery, pancreatic problems), excess vitamin C, genetic hyperoxaluria	Diet review, evaluation of the gut, genetic testing in select cases; nephrology referral.
Low citrate (hypocitraturia)	Metabolic acidosis, chronic diarrhea, high animal-protein diet, low potassium, some medicines	Diet changes and sometimes alkali therapy such as potassium citrate, directed by the clinician.
High uric acid	High purine diet (organ meats, some seafood), gout, high fructose intake, certain medicines, tumor lysis	Dietary changes, hydration, possible urine alkalinization or uric-acid-lowering medicine per clinician.

Finding	Possible explanations	What often happens next
Low urine pH (acidic)	High animal-protein diet, diarrhea, insulin resistance	May increase uric acid stone risk; clinicians may adjust diet or add alkali.
High urine pH (alkaline)	Urinary tract infection with urea-splitting bacteria, renal tubular acidosis, some medicines	May increase calcium phosphate or struvite stones; further testing guided by the clinician.
High sodium	High-salt diet, processed foods, restaurant meals	Sodium reduction counseling. Often lowers urine calcium too.
High protein (proteinuria)	Glomerular disease, diabetic kidney disease, hypertension, lupus, infections, strenuous exercise, orthostatic proteinuria	Repeat testing, blood tests, imaging, possible biopsy or nephrology referral.
High free cortisol	Cushing syndrome, steroid use, severe stress, depression, alcohol use disorder, excess fluid intake, pseudo-Cushing states	Repeat collections, late-night salivary cortisol, dexamethasone suppression tests, imaging.
High metanephrines/ca techolamines	Pheochromocytoma/paraganglioma, interfering medicines, severe stress or illness	Repeat testing after medicine adjustment, plasma testing, imaging, endocrinology referral.
Low creatinine (mg/kg)	Incomplete collection, low muscle mass, advanced kidney disease	Collection technique review, repeat testing, or alternate measurements.
High cystine	Cystinuria (inherited)	Genetic counseling, high fluid intake, urine alkalinization, specialist care.

Creatinine Clearance: A Worked Example

When your doctor orders a creatinine clearance, the lab uses your urine and blood creatinine and the urine volume to estimate how many milliliters of blood your kidneys clear of creatinine each minute. The formula is: **CrCl (mL/min) = (Urine creatinine × Urine volume per minute) ÷ Plasma creatinine.**

Example

Urine creatinine = 80 mg/dL; 24-hour volume = 1,500 mL (that's 1,500 ÷ 1,440 minutes = about 1.04 mL/min); blood creatinine = 1.0 mg/dL.

Clearance = $80 \times 1.04 \div 1.0 \approx 83$ mL/min, which is in the normal range for many adults. Because the test is sensitive to collection errors, many clinicians rely on blood-based estimated GFR (eGFR) unless a measured clearance is specifically needed.

Why Repeat Collections Are Common

Day-to-day variation is normal. For kidney stone evaluation, many clinicians prefer **two separate 24-hour collections** to confirm patterns, and then repeat the test about 6 to 8 weeks after starting a dietary or medicine change to see whether the treatment is working. For hormone screening (cortisol, metanephrines), repeat collections reduce false positives and false negatives. A repeat request does not mean something is wrong.

9. When to Contact Your Care Team

Seek Urgent Medical Care If You Have:

Severe flank or abdominal pain that does not ease, especially with fever, chills, nausea, or vomiting (possible blocked, infected kidney).

Fever with painful urination, or visible blood or clots that make it hard to urinate.

Little or no urine for 8 hours or more, new swelling of face or legs with rapid weight gain, or confusion.

A chemical splash in the eyes or skin burns from a preservative (rinse first, then call Poison Control at 1-800-222-1222 or 911).

Call your clinic or lab (not an emergency) if you cannot complete the collection, missed a void, are unsure about instructions, started taking a new medicine, became ill during the collection, or want to know whether you should repeat the test.

10. Worksheets

Worksheet A: Pre-Test Planner

Item	My notes

Suggested rows to fill in: Test name(s) • Ordered by • Lab name and phone • Collection date • Start time • Stop time • Drop-off address/hours • Medicines to hold (confirmed with clinician) • Food or drink restrictions

Worksheet B: My Medicines and Supplements

Medicine / Supplement	Dose and frequency	Told my care team? (Y/N)	Instruction given

Worksheet C: 24-Hour Void Log

Use this log to keep track of each collection. It is optional, but many people find it prevents missed voids and helps if a question comes up later.

#	Date	Time	Collected? (✓)	Fluids/food/notes

Worksheet D: Questions for My Care Team

Question	Answer / Notes

Worksheet E: Results Tracker

Measurement	Collection 1 (date: ____)	Collection 2 (date: ____)	Reference range

Measurement	Collection 1 (date: ____)	Collection 2 (date: ____)	Reference range

Collection-Day Checklist

- ■ I confirmed the instructions, preservative type, and drop-off time with the lab.
- ■ I know which medicines to continue or hold, confirmed by my clinician.
- ■ I have my container, funnel, hat/urinal, labels, cooler, and ice packs.
- ■ I recorded my start time and discarded the first void.
- ■ I collected every void, day and night, and kept the container cold.
- ■ I collected my last void at the stop time and wrote the stop time on the label.
- ■ I labeled the container, completed the form, and delivered it to the lab on time.

11. Glossary

Term	Meaning
Aliquot	A smaller portion drawn from the full collection for testing.
Catecholamines / metanephrines	Adrenaline-like hormones and their breakdown products.
Creatinine	Waste from muscle metabolism; filtered by the kidneys.
Creatinine clearance	Estimate of how much blood the kidneys clear of creatinine per minute.
Cystinuria	Inherited condition causing cystine stones.
Glomerulus	Tiny kidney filter; damage lets protein leak into urine.
Hypercalciuria	Too much calcium in urine.
Hyperoxaluria	Too much oxalate in urine.
Hypocitraturia	Too little citrate, a natural stone inhibitor, in urine.
Nephrotic-range proteinuria	More than about 3.5 g of protein in urine per day.
Preservative	Chemical in the container that keeps urine stable for testing.
Spot urine	A single urine sample, not collected over 24 hours.
Supersaturation	A calculated measure of how likely a crystal or stone is to form.
Void	One urination.

12. Questions & Answers

Q1. Do I count the very first urine when I wake up on Day 1?

No. When you start, empty your bladder into the toilet and flush. That discarded void sets your start time. Every void after that is collected, including the first void of the next day at your end time.

Q2. What if my 24 hours is 23 or 25 hours? Is that okay?

Try to be as close to 24 hours as possible. A few minutes of difference is usually acceptable, but large errors will distort the daily total. Record the exact start and stop times so the lab can account for them.

Q3. Should I drink more water during the test?

Drink your usual amount, guided by thirst, unless your clinician has given a target. For stone prevention you will later be asked to drink enough to produce about 2.5 liters of urine per day, but the baseline test should reflect your normal habits.

Q4. Do I need to avoid exercise, coffee, or alcohol?

For many tests, normal habits are fine, but avoid unusually strenuous exercise. For metanephrine, catecholamine, and cortisol tests, the lab may ask you to limit caffeine, alcohol, or certain medicines. Follow the lab's written instructions.

Q5. Can I take my regular medicines?

Yes, unless your clinician tells you otherwise. Never stop a medicine on your own. Share your complete medicine and supplement list with the lab or clinician so results are interpreted correctly.

Q6. What if I'm menstruating?

Tell the lab. Many ask you to wait until the period ends because blood can raise protein and other results. If you cannot wait, tell your clinician.

Q7. How cold does it have to be?

Refrigerator temperature (about 36–46°F or 2–8°C) is ideal. A cooler with ice packs works when you are away from home. Do not leave it at room temperature all day.

Q8. Is the preservative dangerous?

Some preservatives are acids and can irritate skin, eyes, and lungs. Keep the lid closed, don't pour out the liquid, keep the container away from children and pets, and rinse well with water if it contacts skin. Call Poison Control (1-800-222-1222) with questions.

Q9. Why do they check creatinine in my urine?

Creatinine is made at a fairly steady rate. If the amount in your 24-hour sample is much lower or higher than expected for your body size, it can signal that part of the urine was missed or that the collection ran longer than 24 hours.

Q10. What if I only missed a tiny amount?

Even small misses matter, especially for stone and hormone tests. Write down what happened and call the lab. Some will accept the sample with a note; others may ask you to repeat.

Q11. Can I collect the sample if I have a urinary tract infection?

Usually it is better to treat the infection first, because infection changes the chemistry and may make results unreliable. Ask your clinician before you start.

Q12. How long does it take to get results?

Routine chemistry results often return in 1 to 7 days. Specialized hormone and send-out tests can take 1 to 2 weeks. Ask where and how you will get your results.

Q13. Do I need to repeat the test?

Often, yes. Stone workups commonly use two collections, and hormone screening may require repeat testing. Repeat testing is routine and helps your clinician make decisions based on reliable averages.

Q14. Can a 24-hour urine test tell me whether I have kidney disease?

It can give important clues, such as protein loss or creatinine clearance, but diagnosis typically combines urine tests, blood tests (like creatinine and eGFR), imaging, and clinical evaluation. No single test is a diagnosis.

Q15. Can my child have this test?

Sometimes, young children may use collection bags or have spot urine ratios instead. Ask your pediatrician for the best approach for your child's age and condition.

Q16. What is the single most important tip for success?

Plan ahead. Put the container, funnel, and collection hat in the bathroom, set alarms, keep the container cold, and urinate into the collection device before every bowel movement. If you make a mistake, call the lab instead of guessing.

Q17. What question should I ask my care team when I get my results?

Ask: "Which of my numbers are outside the range, what do they mean for me, what changes should I make, and when should I repeat the test?" Write the answers in Worksheet D.

Disclaimer

This guide is provided by The Liver and Kidney Hope Foundation (TLKHF) for educational purposes only. TLKHF is not a medical provider. This guide does not provide medical advice, diagnosis, or treatment. Reference ranges are approximate and vary by laboratory. Always follow the specific instructions from your doctor and testing laboratory, and contact your care team with any questions or concerns.

My Notes