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KIDNEY STONES · GENERAL GUIDE

Kidney stones: preventing new ones

Measures that reduce the risk of new stones, whatever the type.



🔎 Why do stones form?

Kidney stones form when urine has too little water and too many minerals. Anyone who has had a stone is at risk of another. **Knowing the stone type** (stone analysis and sometimes a 24-hour urine test) allows targeted prevention.

2.5 to 3 L
of fluid a day, to pass
at least 2 to 2.5 L of urine

🚰 Drinking water: measure no. 1

- Spread it through the day — include a glass at bedtime and if you wake at night.
- Drink **more** in hot weather (Algarve summer, beach), with exercise or working in the sun.
- Aim for **pale**, straw-coloured urine. Dark urine = drink more.
- Water should be your main drink; avoid fizzy and sugary drinks.

✅ The most important things

- **Don't cut calcium**: 1000–1200 mg/day (≈ 3 servings of dairy), with meals.
- **Salt < 5 g/day**: less salt, less calcium in the urine.
- **Moderate animal protein**: 0.8–1.0 g/kg/day; no high-protein diets.
- **More vegetables, fruit and fibre** every day.

🚦 Food traffic lights

Choose

- Water (your main drink)
- Vegetables and fresh fruit (including oranges and lemons)
- Milk, yoghurt and fresh cheese, with meals
- Pulses and wholegrains
- Fish, eggs and white meat in moderate portions
- Olive oil, herbs, garlic and lemon for seasoning

In moderation

- Red meat, fish and shellfish: moderate portions
- Cured cheeses and bread (contain salt)
- Chocolate, nuts, spinach (oxalate)
- Coffee and tea: in moderation
- Wine or beer: a little

Avoid / rarely

- Cured and smoked meats, poorly soaked salt cod (bacalhau)
- Salty snacks, stock cubes, ready meals
- Fizzy and sugary drinks
- High-protein diets and protein shakes
- High-dose vitamin C supplements
- Hours in the sun or at the beach without drinking

🍽️ A kidney-friendly day — example

Breakfast	Lunch	Snack	Dinner	Bedtime
Milk or yoghurt, mixed-grain bread with fresh cheese, fruit + 1 glass of water	Vegetable soup; grilled fish with rice and salad; fruit; water	Plain yoghurt with fruit; water	Omelette or chicken with vegetables and boiled potatoes; water	1 glass of water (and another if you wake at night)

📞 Contact your doctor if…

- Colic with fever or shivering → A&E
- You cannot pass urine or pass very little
- Pain not relieved by your medicines
- Vomiting that stops you drinking or taking medicines
- Single or transplanted kidney with colic → A&E
- Blood in the urine that persists

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🔄 Easy swaps

INSTEAD OF…	CHOOSE…
✗ Fizzy drink at the beach	✓ A bottle of cool water (with lemon, if you like)
✗ Cutting out milk and cheese	✓ 2–3 servings of dairy a day, with meals
✗ Large steak or double portion of meat	✓ Moderate portion + vegetables + pulses
✗ Packet crisps, lupin beans (tremoços)	✓ Fruit or vegetable sticks
✗ Effervescent vitamin C tablet	✓ Fresh fruit (orange, kiwi, strawberries)

💊 Medicines and products: take care!

- 🍊 **High-dose vitamin C** (≥ 1 g/day, e.g. effervescent tablets): avoid — it turns into oxalate.
- ☀️ **High-dose vitamin D** without monitoring: avoid; only on advice and with blood tests.
- 🧠 **Topiramate, zonisamide, acetazolamide** promote stones. Don't stop them: talk to your doctor.
- 🔥 **During colic**: use the medicines prescribed. Anti-inflammatories work well, but use them with caution if you have kidney disease or a stomach or duodenal ulcer, or if you take anticoagulants.
- 🥛 **Calcium supplements**: only if advised and **always with meals** (between meals they increase the risk).
- 🚽 **Laxatives** used daily/excessively: can cause stones and dehydration.
- 💉 Some medicines can form stones (e.g. indinavir, atazanavir, sulfadiazine, triamterene) — say you have kidney stones.
- 🌿 **Teas and products "to dissolve stones"**: no proven benefit; they do not replace the measures in this leaflet.

🏃 Lifestyle

💧 Heat and exercise
Always carry a bottle of water; drink before, during and after.

⚖️ Weight
Aim for a healthy weight (BMI 18–25). Excess weight increases the risk.

🚶 Physical activity
Stay active: regular activity, ≥ 150 min a week.

🧂 Salt
< 5 g a day: salt increases calcium in the urine.

🩺 Other conditions
Control diabetes, blood pressure and gout: they are linked to stones.

🔬 Follow-up
Keep any stone you pass and bring it for analysis; do the tests requested.

🥛 Calcium: reaching 1000–1200 mg a day, without supplements

🥛 1 glass of milk (250 mL) ≈ **300 mg** 🥄 1 plain yoghurt ≈ **150–200 mg** 🧀 1 slice of cheese (30 g) ≈ **200 mg**

Example: milk at breakfast + yoghurt as a snack + 1 slice of cheese or another dairy food at lunch/dinner. Have them **with meals**.

🕑 Water timetable — about 2.5 L a day (more in hot weather)

On waking	Breakfast	Mid-morning	Lunch	Afternoon	Dinner	Bedtime and at night
1 glass of water	1 glass	1 small bottle (0.5 L)	1–2 glasses	1 small bottle (0.5 L)	1 glass	1 glass

🔬 If you pass a stone or do a 24-hour urine test

- **Stone**: pass urine through a strainer or filter; keep the stone dry in a jar and bring it for analysis.
- **24-hour urine**: discard the first urine of the morning, then collect all urine after that, up to and including the first urine the next morning. Eat as usual and follow the laboratory's instructions.
- Have the scans and tests requested: stones can come back without symptoms.

References (sources of these recommendations):

1. European Association of Urology. EAU Guidelines on Urolithiasis, 2025 edition (Skolarikos A et al.). Arnhem: EAU Guidelines Office.
2. Pearle MS et al. Medical Management of Kidney Stones: AUA Guideline (2014, amended 2019). J Urol. 2014;192:316–324.
3. KDIGO 2024 Clinical Practice Guideline for the Evaluation and Management of CKD. Kidney Int. 2024;105(4S):S117–S314.
4. Direção-Geral da Saúde (Portuguese Directorate-General of Health) – PNPAS: Food Wheel and salt reduction recommendations (≤ 5 g/day, WHO).

This leaflet is for information only and does not replace individual advice from your doctor or dietitian. Targets should be personalised. Do not change or stop any medicine without talking to your doctor.