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KIDNEY STONES · URIC ACID

Uric acid stones

Water, less acidic urine and fewer purines: the three keys to preventing — and even dissolving — these stones.



🔎 Uric acid stones

They form when urine is **too acidic** (pH < 5.5) and/or contains a lot of uric acid. They are more common with excess weight, diabetes and gout. **Good news:** they can often dissolve if the urine is made less acidic.

🧪 Your urine pH

- Target to prevent: **pH 6.2 to 6.8**
- To dissolve a stone (if advised): **pH 7.0 to 7.2**
- Your doctor checks your pH with the urine tests they request
- Your doctor may prescribe potassium citrate or sodium bicarbonate

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 — **preferably alkaline water** (e.g. Monchique water); avoid fizzy and sugary drinks.

✅ The most important things

- 🧪 **Less acidic urine**: through water, diet and the medicines prescribed.
- 🥩 **Fewer animal purines**: offal, shellfish, red meat.
- 🍺 **No beer or sugary drinks** (fructose).
- ⚖️ **Losing weight** and controlling diabetes help make urine less acidic.

🚦 Food traffic lights

● Choose

- Water, preferably alkaline (e.g. Monchique water)
- Vegetables and fruit (make urine less acidic)
- Low-fat milk, yoghurt and fresh cheese
- Eggs; pulses; wholegrains
- White fish (hake, sea bream, sea bass) in moderate portions
- Olive oil, herbs and lemon

● In moderation

- Chicken and turkey: moderate portions
- Sardines, mackerel and anchovies: in moderation
- Red meat: small portions, not often
- Wine: a little, with meals
- Very sweet fruit in large amounts

● Avoid / rarely

- Offal: liver, kidney, gizzards, tripe (dobrada)
- Large amounts of shellfish (seafood platters, prawns, clams)
- Beer and spirits (aguardente, medronho)
- Fizzy drinks, carton juices, nectars (fructose)
- Concentrated meat stocks and extracts
- High-protein diets and protein shakes

📞 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…
✗ A beer (imperial) after work	✓ Sparkling water with lemon, or unsweetened iced tea
✗ Seafood platter or seafood rice	✓ Grilled white fish or fish cataplana
✗ Liver (iscas), gizzards, tripe	✓ Eggs, skinless chicken or pulses
✗ Fizzy drink or carton juice	✓ Water or whole fruit
✗ Lots of meat at dinner	✓ Small portion + half the plate vegetables

💊 Medicines and products: take care!

- 🧪 **Potassium citrate / sodium bicarbonate**: take as prescribed. If you have kidney disease or high potassium, your doctor will choose the safest.
- 🍊 **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.
- 💊 **Allopurinol/febuxostat**: if prescribed (high uric acid in urine or gout), take every day.
- 🥛 **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**.

🍽️ A low-purine day — example

Breakfast	Lunch	Snack	Dinner	Drinks
Skimmed milk with oat flakes; orange	Vegetable soup; omelette with rice and salad; watermelon	Low-fat yoghurt with fruit	Boiled hake (pescada) with potatoes and broccoli; fruit	Alkaline water (e.g. Monchique); no beer or fizzy drinks

🥩 Purines in foods

⚪ Low
- Low-fat dairy and eggs
- Vegetables and fruit
- Rice, pasta, bread, potatoes

⚪ Moderate
- Red meat, chicken, turkey: small portions
- Sardines, mackerel, anchovies

⚪ High: avoid
- Offal and shellfish
- Meat stocks and extracts
- Beer

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.