

Urethral Obstruction in Dogs and Cats

Quick Take

A urethral obstruction occurs when **urine cannot flow** from the bladder to the outside of the body. This is a **true medical emergency**, especially in male cats, and can become **life-threatening within 24–48 hours**.

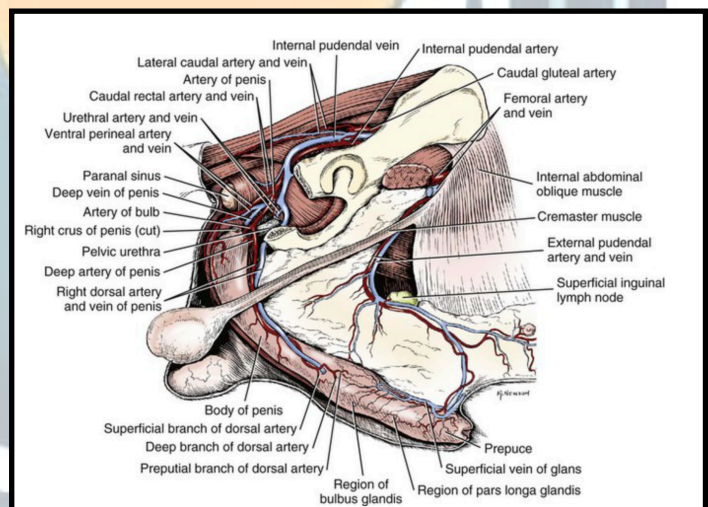
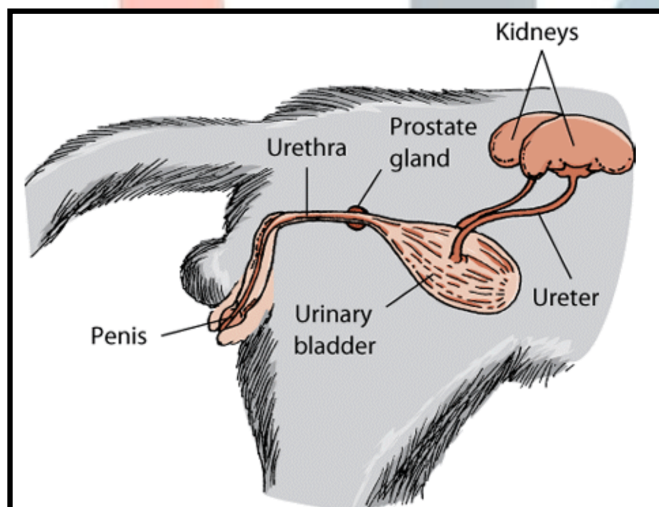
Cats: most commonly affected, especially male cats

Dogs: less common, but often more complex when it occurs

Untreated obstruction can cause:

- Severe pain
- Bladder rupture
- Kidney failure
- Dangerous electrolyte imbalances
- Death

While many cases can be relieved initially with a urinary catheter, **surgery becomes essential when obstruction is recurrent, complete, traumatic, or caused by irreversible narrowing or stones.**



1) What's going on inside?

(The urethra is the tube that carries urine from the bladder to the outside. When it **becomes blocked**:

Step 1: Pressure builds
The bladder stretches painfully
Urine backs up toward the kidneys

Step 2: Kidney damage
Filtration slows or stops
Waste products accumulate in the bloodstream



Step 3: Dangerous electrolyte changes
Potassium rises (can stop the heart)
Acid–base balance is disrupted

Step 4: Structural damage
Bladder wall weakens
Urethra may tear
Bladder may rupture
This progression can happen rapidly, particularly in cats.

2) Common causes of urethral obstruction

Cats (most common)

- Urethral plugs (mucus + crystals)
- Struvite or calcium oxalate crystals
- Inflammation (feline idiopathic cystitis)
- Urethral spasm
- Urethral strictures (scar tissue)
- Blood clots

Dogs

- Uroliths (stones)
- Prostatic disease (intact males)
- Tumours
- Trauma
- Urethral strictures
- Blood clots
- Severe inflammation

Male animals are far more likely to obstruct due to their long, narrow urethra.

3) What owners typically notice

Early signs

- Repeated trips to the litter box or outdoors
- Straining without producing urine
- Vocalising or crying
- Licking the genital area

Progressive signs

- No urine at all
- Distended, painful abdomen
- Lethargy
- Vomiting
- Loss of appetite

Emergency signs

- Collapse
- Weakness
- Slow heart rate
- Hypothermia
- Shock

!!! If a pet is straining and not producing urine, immediate veterinary care is critical.

4) Diagnosis

A) Physical exam

- Large, firm, painful bladder
- Dehydration
- Abnormal heart rhythm (from high potassium)

B) Blood tests

- Elevated creatinine and urea
- High potassium (especially cats)
- Acid–base imbalance



C) Urinalysis

- Crystals
- Blood
- Inflammatory cells

D) Imaging- Specialist Imager rarely needed as most Specialist surgeons will be able to run these tests;

- X-rays for stones
- **Positive-contrast is CRITICAL** to detect the different types of injuries. Not performing any imaging is the main cause of complication.
- Ultrasound for soft-tissue obstruction, tumours, bladder integrity

5) Treatment Overview

Treatment occurs in two phases:

1. Emergency stabilisation and relief of obstruction
2. Definitive management to prevent recurrence

6) Emergency management (initial treatment)

A) Stabilisation

- IV fluids
- Pain relief
- Correction of potassium abnormalities
- ECG monitoring if needed

B) Urinary catheterisation

- Sedation or anaesthesia required
- Catheter relieves pressure and allows urine to drain
- Bladder is flushed
- This step is life-saving, but it does not always solve the long-term problem.

7) When medical management is NOT enough

Surgery is recommended when:

- Obstruction **reoccurs repeatedly**
- **Catheter cannot be passed**
- **Urethra is damaged** or torn
- Stones are lodged and cannot be flushed
- **Urethral stricture** is present
- Tumour is obstructing flow
- Trauma has disrupted the urethra

8) Surgical options

A) Perineal Urethrostomy (PU) – Cats

Gold-standard surgery for recurrent feline obstruction

What it is:

- the narrow penile portion of the urethra is removed, and a wider pelvic urethra is permanently redirected to a new opening beneath the tail.



Why it works

- Removes the narrowest section of the urethra
- Greatly reduces risk of future obstruction
- Allows crystals or mucus to pass more easily

Indications

- Recurrent obstruction
- Severe urethral damage
- Urethral strictures
- Failed medical management

Success rate

85–95% long-term success

Life after PU

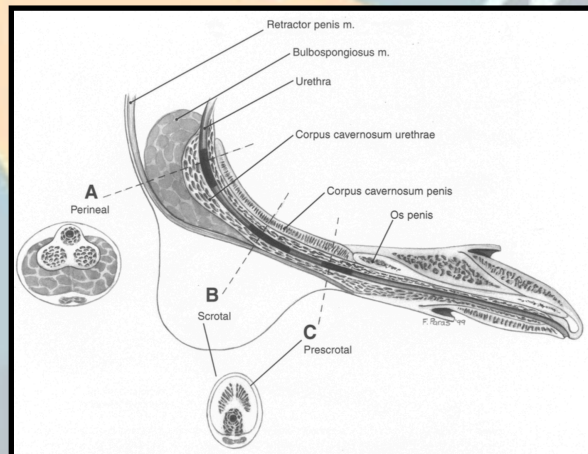
- Cats urinate normally
- Slightly different urine stream
- Normal quality of life

B) Urethrostomy in Dogs

Used less often but critical in selected cases. Different types depending on the level of the obstruction.

Types:

- Scrotal urethrostomy (most common)
- Perineal urethrostomy
- Prepubic urethrostomy (salvage procedure)



Indications

- Recurrent stone obstruction
- Urethral strictures
- Tumours
- Severe trauma

Outcomes

- Very effective for preventing life-threatening obstruction
- Requires diligent hygiene



C) Cystotomy (bladder surgery)

Performed to:

- Remove stones
- Relieve obstruction source
- Prevent recurrence
- Often combined with dietary management afterward.

D) Urethral Reconstruction / Repair

Used for:

- Trauma
 - Urethral rupture
 - Severe scarring
- Complex procedures performed by specialists.

E) Temporary or Permanent Urinary Diversion

Used in extreme trauma or cancer cases

Salvage procedures

Aim to preserve life and comfort

9) Complications and realistic rates

Complication	Approx. Rate	Notes
Urinary tract infection	10-25%	Higher after urethrostomy (shortening of the urethra)
Bleeding	Common early, usually for 3-4 days	Usually temporary
Stricture after surgery	5-15%	More likely with poor healing- interference with the wound
Urine scalding	Variable	Hygiene is critical. Less frequent in cats with regular PU. Can occur in dogs.
Incontinence	Rare	Depends on surgery type
Re-obstruction after PU (cats)	< 5-10%	Can occur if a large enough stone is produced in the urinary bladder
Death (severe cases)- anaesthetic	5-15%	Often due to kidney failure or delay

10) Recovery and aftercare

Immediately after surgery

- Hospitalisation 2–5 days
- Pain control
- IV fluids
- Monitoring urine output

At home

- E-collar mandatory



- Keep incision clean and dry
- Soft bedding
- Monitor urination closely
- Administer medications exactly as prescribed

Long-term care

- Increased water intake
- Prescription urinary diets
- Weight control
- Stress reduction (especially cats)

11) Long-term prognosis

Cats

- After PU, most cats live normal lives
- Obstruction recurrence is rare
- Mild UTIs may occur but are manageable

Dogs

- Prognosis depends on cause
- Stone-related obstruction: good with surgery + diet
- Tumour-related obstruction: guarded

Early surgical intervention dramatically improves outcomes.

12) Preventing recurrence

- Prescription urinary diets
- Encourage water intake (wet food, fountains)
- Litter box hygiene
- Stress reduction
- Regular veterinary check-ups

13) Selected Veterinary References

1. ACVS — Urethral Obstruction in Dogs and Cats
2. VCA Hospitals — Urinary Obstruction Overview
3. Buffington CAT et al., JAVMA — Feline lower urinary tract disease
4. Fossum TW — Small Animal Surgery (urinary surgery chapters)
5. Osborne et al., Vet Clin North Am Small Anim Pract — Urolithiasis and urethral obstruction
6. Bjorling & McNulty, Veterinary Surgery — Urethrostomy techniques and outcomes

Bottom Line

- Urethral obstruction is a life-threatening emergency.
- Initial catheterisation saves lives but does not always prevent recurrence.
- Surgical intervention provides the most reliable long-term solution in recurrent, traumatic, or irreversible cases.
- Perineal urethrostomy in cats and urethrostomy or cystotomy in dogs dramatically reduce the risk of future obstruction.
- With timely surgery and appropriate aftercare, most pets regain excellent quality of life.