HEALTH BASICS

Stent

A stent is a small tube used to hold a narrowed body passage open.

WHAT IT IS
A small tube that holds a body passage open

WHERE IT COMES UP
Treatment for narrowed vessels, ducts, or hollow organs

WHY IT MATTERS
Restores flow or keeps a narrowed passage open

WHAT IT IS NOT
A device, not a disease or diagnosis

WHO TO ASK
The specialist managing the stent or affected organ

HOW IT IS CHECKED
Imaging, endoscopy, or blood-flow tests selected for its location

Overview

A stent is a small tube placed inside a blood vessel, duct, or other hollow part of the body. It supports the walls of that passage so blood, urine, bile, air, or food can move through it.

A stent is not a disease or diagnosis. It is a medical device used to manage a narrowing, blockage, leak, or weak area.

Stents can be placed in several locations. Common examples include:

The word "stent" does not identify one specific device. Stents differ in material, size, shape, purpose, and how long they are intended to remain in place.

Some are permanent. Others must be removed or exchanged after a set period. Knowing which kind you have is important.

- Coronary arteries, which supply blood to the heart
- Arteries in the neck, legs, kidneys, or other areas
- Ureters, which carry urine from the kidneys to the bladder
- Bile ducts, which drain bile from the liver
- The oesophagus, which carries food to the stomach

- Airways, such as the trachea or bronchi

How it works

Most stents are narrow mesh or plastic tubes. They are usually placed through a catheter, which is a thin flexible tube, or through an endoscope, which is a flexible instrument with a camera.

A balloon-expandable stent is fitted over a small balloon. When the balloon is inflated, the stent opens and presses against the wall of the passage. The balloon is then deflated and removed.

A self-expanding stent opens by itself after it is released from its delivery system. These stents are useful where the device needs to adjust to movement or changes in the passage.

Some artery stents are coated with medicine. These are called drug-eluting stents. The medicine reduces excessive tissue growth inside the stent. A bare-metal stent does not have this drug coating.

A stent graft is covered with fabric. It may be used to direct blood past a weak or damaged section of an artery, such as an aneurysm. An aneurysm is an area where the artery wall has widened or bulged.

A ureteral stent often has curled ends that help keep it in position between the kidney and bladder. Bile duct, airway, and oesophageal stents have designs suited to those organs.

Why it matters for your health

A stent can restore or maintain flow through a narrowed passage. The health effect depends on where it is placed and why it is needed.

A coronary stent improves blood flow through a narrowed heart artery. It does not remove the underlying build-up of fatty material, called atherosclerosis. Medicines and management of factors such as smoking, blood pressure, cholesterol, and diabetes may still be important.

A ureteral stent allows urine to drain when a stone, swelling, or another problem is blocking the ureter. A bile duct stent helps bile drain past a narrowing. Airway and oesophageal stents help keep those passages open.

The stent's intended duration also matters. Some temporary stents can become harder to remove or more likely to block if left in longer than planned. Permanent stents may still require medication or follow-up related to the condition for which they were placed.

What can go wrong

Complications differ by location and device type. The team placing the stent should explain the main risks that apply to yours.

A blood clot can form inside an artery stent. This is called stent thrombosis. In a coronary artery, it can suddenly reduce blood supply to the heart. Tissue can also gradually narrow the inside of an artery stent, a process called restenosis.

Other stents may become blocked by tissue growth, stones, thick secretions, food, sludge, or tumour tissue. A stent can also move out of position, known as migration.

Placement can sometimes cause bleeding, infection, inflammation, or damage to the nearby vessel or organ. Ureteral stents can collect mineral deposits, called encrustation, particularly when they remain in place for longer periods. They may also cause bladder irritation, frequent urination, or discomfort in the side or bladder area.

Seek emergency help for:

Contact the service managing the stent urgently for fever with shaking chills, worsening pain, inability to pass urine, repeated vomiting, jaundice that is worsening, or a sudden return of the problem the stent was meant to relieve. Jaundice means yellowing of the skin or whites of the eyes.

Mild discomfort after a procedure may be expected, depending on the stent. Routine questions about ongoing discomfort, activity, medicines, or the next appointment can usually be discussed with the specialist team during normal service hours.

- New or severe chest pressure, especially after coronary stent placement
- Severe difficulty breathing
- Signs of stroke, such as facial drooping, arm weakness, or trouble speaking
- Fainting, confusion, or uncontrolled bleeding

What you can do

Ask for the name, location, and purpose of your stent. Keep the procedure report or device card if one is provided. Your record should state whether the stent is permanent or needs removal or replacement.

Useful questions include:

After an artery stent, you may be prescribed medicines that reduce blood clotting, often called

antiplatelet medicines. Do not stop them because of bruising, dental work, surgery, or another procedure without first speaking with the clinician managing them. Stopping certain medicines too early can increase the risk of a clot inside the stent.

Tell healthcare and dental teams that you have a stent. Before an MRI, provide the imaging service with the device card or procedure details. Many stents can be scanned under specified conditions, but the imaging team needs to confirm the device and timing.

There is no home test that can reliably show whether a stent is open and correctly positioned. When checking is needed, it may involve an ultrasound, X-ray, CT scan, endoscopy, urine or blood tests, or tests of blood flow. The appropriate method is based on the stent's location and the reason it was placed.

If "stent" appears in a report but you are unsure whether one was actually inserted, ask the service that produced the report. If no stent was placed and none is being considered, there is usually nothing specific you need to do about the term itself.

- What type of stent was placed?
- When should it be checked, removed, or exchanged?
- Which medicines are needed because of the stent?
- Are there temporary limits on lifting, exercise, driving, or travel?
- Who should be contacted if a problem occurs?
- Is the exact device safe for MRI scanning?

Common questions

Can I feel a stent?

Most people cannot feel a stent inside a blood vessel. A ureteral stent may cause urinary urgency, bladder discomfort, side pain, or blood in the urine. Stents in other hollow organs may sometimes be noticeable during swallowing, breathing, or movement.

Can a stent be removed?

Some can. Ureteral stents and certain bile duct, airway, or oesophageal stents may be designed for later removal or exchange. Coronary artery stents are generally intended to remain permanently. Do not assume that a temporary stent will come out by itself.

How long does a stent last?

There is no single lifespan for all stents. The planned duration is based on its location, material, purpose, and the condition being managed. Your procedure record should include a follow-up

or removal plan when one is required.

Will a stent set off airport security equipment?

Small internal stents do not usually cause problems at airport security. Carrying the device card can still be helpful, particularly when travelling soon after a procedure.

Is a stent the same as bypass surgery?

No. A stent supports a passage from within. Bypass surgery creates another route around a narrowed or blocked area. The suitable approach is based on the location, extent of the problem, overall health, and expected benefits and risks.

Sources

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