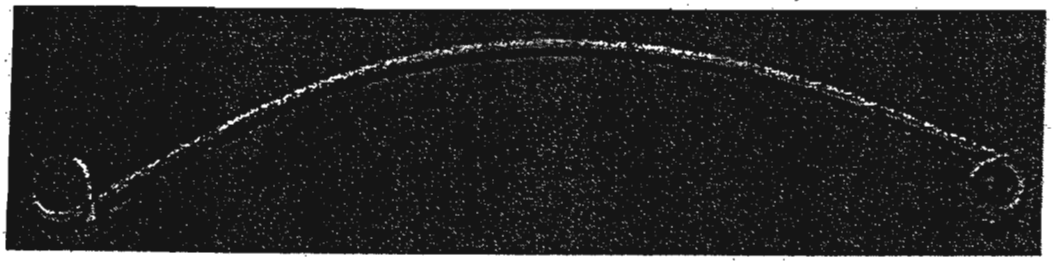
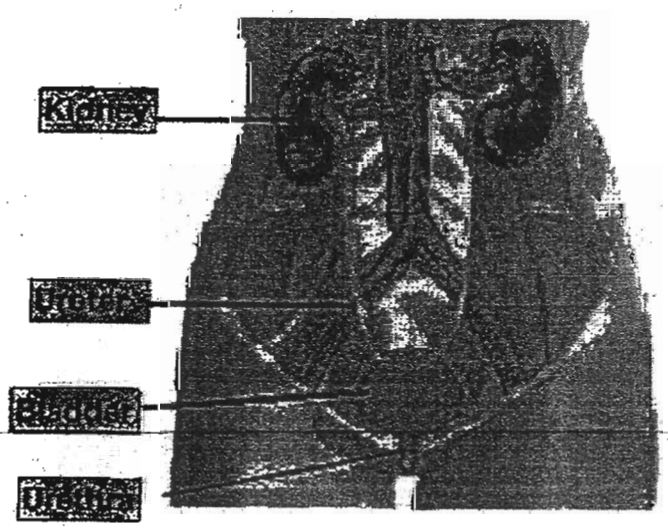
Kidney Stent

A ureteric stent (commonly referred to as kidney stent) is a specially designed hollow tube, made of a flexible plastic material. It is commonly placed inside the ureter, between the kidney and the bladder, in order to temporarily relieve obstruction.



Stents are designed to stay in the urinary system by having both the ends coiled. The top end coils in the kidney and the lower end coils inside the bladder to prevent it from being displaced during physical activity. Stents are flexible enough to withstand various body movements. The length of the stents used in adult patients varies between 24 to 30 cm. Although there are different types of stents, they all serve the same purpose.

Overview of the Urinary System



The urinary system consist of the kidneys, ureters, bladder, and urethra. The urine formed in the kidney is carried to the bladder by a fine muscular tube called a ureter. The urinary bladder acts as a reservoir for the urine and, when it is full, it is emptied via the urethra.

Sometimes the ureter may become blocked or obstructed, preventing urine from being excreted from the body. Common causes of obstruction of the kidneys and ureter include:

- kidney stone (or fragments of kidney stone moving into the ureter, either spontaneously, or occasionally following treatment, such as shock wave lithotripsy);
- narrowing of the ureter anywhere along its path. This may be caused by scarring of wall of the ureter or narrowing of the area where ureter starts from the kidney (pelvi-ureteric junction).
- **temporarily, following an operation to remove a kidney or ureteral stone**
- occasionally, obstruction can occur because of diseases of the prostate or tumors of the urinary system.

Whenever there is an obstruction, pressure builds up within the kidney, which can cause kidney damage (leading to kidney failure). The obstruction can also cause stagnation of the urine, which can lead to infection and further damage to the kidneys. It is, therefore, important to relieve or prevent obstruction of the kidney.

Using Kidney Stent to Relieve Obstruction

Ureteric Stent are sometimes used in the following circumstances:

- When it is essential to relieve obstruction (such as kidney stone) on a temporary basis before treatment of the underlying condition is carried out.
- It is not possible to identify what has caused an obstruction and immediate treat is necessary.
- Following an operation on the ureters. It takes time for the ureters to heal, so stents are used as a temporary measure to prevent obstruction and allow the ureters to heal properly.

Inserting a Kidney Stent

A patient is usually placed under general anesthetic before inserting a ureteric stent. A special telescope called a cystoscope is then passed through the urethra into the bladder. The stents are then placed in the ureter and kidney via the opening of the ureter in the bladder. The correct position of a stent is then checked by taking an x-ray.

How is a Kidney stent removed?

Once the underlying condition that caused blockage of the ureter is resolved and the ureter is healed, the stent can be removed. Kidney stent removal is a short procedure. The stent is removed using a cystoscope, usually under local anesthesia. Sometimes a stent can be left with a thread attached to its lower end that stays outside the body through the urethra. The doctors can remove such stents by just pulling this thread.

Living with a Kidney Stent

In the majority of patients, kidney stents are required for only a short period of time. This could range from a few weeks to a few months. When the underlying problem is not a kidney stone, the stent can stay in for several months.

While side effects are usually mild, a stent can sometimes be uncomfortable. Some of the side effects include:

- an increased frequency of passing urine
- the need to rush to pass urine (urgency)
- a small amount of blood in the urine. This is quite common and the situation can improve with a greater fluid intake.
- the stents can also result in a sensation of incomplete emptying of the bladder.
- very occasionally, especially in women, there is a slight risk of incontinence episodes.
- patients with a stent in place will be aware of its presence most of the time.
- discomfort or pain, commonly in the bladder and kidney (loin) area. Sometimes this can affect other areas such as the groin, urethra and genitals. The discomfort or pain may be more noticeable after physical activities and after passing urine.

A patient may experience one or some of these symptoms, especially soon after the ureteric stent is inserted. There is a tendency, however, for some of these symptoms, such as pain while passing urine and blood in the urine, to improve with time.

Kidney Stent and urinary tract infection

The presence of a ureteric stent, along with the underlying kidney problem, makes it more likely that a urinary tract infection can be developed. If a patient develops urinary tract infection, some of the symptoms may include raised body temperature, increased pain or discomfort in the kidney or bladder area, a burning sensation while passing urine and feeling unwell. This usually requires treatment with antibiotics.

How does a kidney stent affect daily activities?

A patient with a kidney stent can perform most activities with little or no problems. There are some situations, however, where having a stent can affect daily activities. Let us look at some of the activities that can be affected.

- Physical activities and sports
  Provided the underlying kidney condition and your health allows it, most patients can carry on with various physical activities while the stent is in place. However, some discomfort may be experienced in the kidney area and passing of blood in your urine, especially if sports and strenuous physical activities are involved. Sometimes side effects associated with a stent can make you feel more tired than normal. It is advisable to moderate physical activities while the stent is in place.

- Work activities
  You can continue to work normally with the kidney stent inside your body. However, if the work involves strenuous physical activities, you may experience more discomfort. Occasionally side effects, such as urinary symptoms and pain associated with the stent, may make you feel tired. If the stent causes significant problems, you can discuss it with your

manager and colleagues so that possible temporary adjustments can be made at your work place.

- Social life and interactions
  The presence of a kidney stent should not significantly affect your social life. Symptoms such as, increased frequency and urgency of urination, may require that you use public toilets more frequently, while taking part in outdoor activities. Occasionally you may need a little more help from family members or colleagues, because of any pain or tiredness you may feel.

- Sex
  Few patients experience discomfort during sexual activities. Occasionally the side effects associated with the stent may reduce sexual desire. If you have a ureteric stent with a thread coming outside the body through the urethra, sexual activities may be difficult. Care will also be required so as not to dislodge the thread, which could then in turn displace the stent.

Thankfully, most patients only have to put up with these inconveniences for a short period of time. Once the underlying condition is resolved and the ureter is sufficiently healed, the stent can be removed and life returns to full normalcy.

If you have a kidney stent it is essential that you drink at least 1.5 to 2 liters of fluids, mainly water, a day. This will help to minimize the risk of infection and will reduce the amount of blood in the urine. It will also help in the treatment of kidney stones. If you experience bothersome pain you can take painkillers for relief, on the advice of a doctor. If you have a kidney stent with a thread coming down from the urethra outside the body, then more care will be needed so as not to dislodge the thread.

If you have a kidney stent or are about to have one inserted, you should talk to your doctor about all the implications, including side effects and restriction of any activities. Check with your doctor, immediately, if you experience any severe symptoms or if the stent gets dislodged or falls out.