

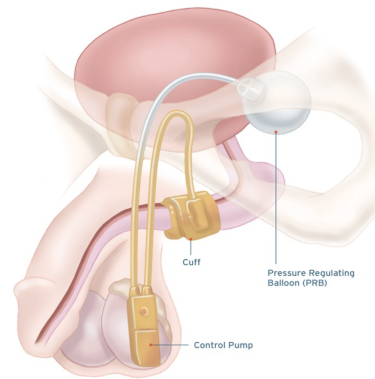
## Artificial Urinary Sphincter: Ten Questions

### DIAGNOSIS:

An artificial urinary sphincter is placed for people with incontinence, most often we are placing this for men AFTER prostate removal for prostate cancer. The type of incontinence that occurs after prostate removal is called STRESS INCONTINENCE. Coughing, sneezing, lifting. Candidates for this type of surgery are generally men with moderate to severe urinary leakage such as those who have had prior prostate surgery.

### HOW AN ARTIFICIAL URINARY SPHINCTER WORKS:

There are 3 components to an artificial urinary sphincter. 1. First there is a cuff or ring that is placed around the urethra which does the work of restricting the urethra to prevent the leakage 2. There is a pump placed in the wall of the scrotum which can be manually squeezed. 3. There is a pressure regulating balloon that is placed in the abdomen underneath your stomach muscles usually right next to your bladder.



The cuff is always closed because there is pressure in the system. Upon squeezing the pump, fluid is shifted from the cuff to a balloon or reservoir that is placed behind the abdominal muscles. This movement of fluid allows the cuff to open resulting in opening of the urethra and subsequent passage of urine. The cuff spontaneously closes as fluid returns from the reservoir to the cuff. When the cuff is closed, the urethra is compressed, and leakage is generally eliminated or reduced to a minimum.

Once the sphincter is in place and functioning, the patient releases the sphincter and empties the bladder by depressing a button hidden in the scrotum. Once urination is complete, the sphincter automatically closes, keeping the urine in the bladder and keeping the patient dry.

### PROCEDURE DESCRIPTION:

The AUS is placed through an incision in the perineum (space between the anus and the scrotum) as well as a small incision in the lower abdomen. The surgery can be performed with either a general or spinal anesthesia and patients typically spend one night in the hospital.

### BENEFITS:

The goal of the procedure is **full continence** or control of the urine. The artificial sphincter is not a guarantee of complete control. It is anywhere from **about 85% successful** in nearly all men. But there are limitations to how tightly we can squeeze on the urethra which limits the success of the operation.

### DRAWBACKS/RISKS:

Todd D Brandt MD

tburology.com

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As with any surgery there is a risk of **infection, bleeding, anesthesia risk** and of course the **discomfort** associated with surgery.

If the **urethra is injured** while placing the cuff, we need to stop the procedure and let that heal before attempting that again. That is rare but can happen because we need to get behind the urethra to wrap the cuff around the urethra.

**Infection** is one of the biggest concerns whenever we put an implant, foreign material into the body. If this device gets infected it must be removed, and usually on an urgent basis. An infection can make you quite sick, with high fevers and bacteria in the bloodstream. We use quite a bit of antibiotics during the procedure and the implants we use are also antibiotic coated.

The sphincter can **fail to relieve the leakage**, either from poor fit of the cuff or because your urethra doesn't collapse well enough to prevent leakage.

Occasionally we need to revise the surgery to place a second cuff or to place a smaller cuff if there is continued leakage after the procedure.

The device can fail over time with a **mechanical breakdown**. This result in the sphincter failing to work with leakage the result.

Putting pressure on the urethra can cause it to thin, and a risk of the procedure in the long and short term is **urethral erosion**, where the cuff wears through the urethra with subsequent problems.

Men with history of stricture or infection or need for **future bladder procedures** such as men with bladder cancer that will need resection of bladder tumors may not be a good candidate for this procedure because of the risk to the cuff of having to pass instruments multiple times through the urethra.

The rate of revision surgery is about 28% at 5 years.

You must avoid any catheter placement in the future unless directed by a urologist because attempts at catheterization while the AUS is in place may cause irreversible damage requiring device removal.

### **ALTERNATIVES:**

Alternatives to the sphincter are continuing the use of the diapers or pads, using an external compression device on the penis such as a Cunningham clamp, biofeedback, and external catheterization such as a condom catheter. There is another procedure called the male urethral sling, the Boston Scientific product is called the Advance XP. The sling is most often used for patients with less incontinence, usually up to only a couple of pads a day, who also have some ability to start and stop the urine stream and some overall control.

### **HOW COMMON IS THIS PROCEDURE?**

The artificial urinary sphincter is not a common procedure. Most men who have had a prostatectomy don't have leakage severe enough to require a sphincter. The number of these procedures I typically do every year is as few as five to up to twenty.

### **WHY NOW?**

The timing of placing a sphincter is usually at least one year from the time of the prostatectomy. It takes time for some men to regain urinary control. Most of you reading this far

Todd D Brandt MD

tburology.com

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already know that you have continued problems with incontinence. You have tried Kegel exercises, biofeedback and possibly medication. You have also tried the external compression devices and the urinary pads, and you are looking for a definitive solution. Choosing when to do this surgery is such a personal decision but most men, once they have decided, are ready to go NOW.

### **PREPARING FOR THE PROCEDURE:**

Do not eat or drink anything after midnight the night before the procedure.

You should take your usual medications as you normally would the morning of your procedure with a small sip of water or clear liquid only (avoid juice, milk, coffee).

Starting 5 to 10 days prior to your procedure (ask your doctor for a specific time), it is important to stop taking medications that might increase your risk of bleeding. For a list of blood-thinning medications that should be avoided.

Preparing your skin by washing with antibacterial soap or Hibiclens for a week prior to surgery will help decrease the bacterial count on your skin to help with infection.

Have a driver and know the route to the hospital, how you will get home, and how we will take care of you when you do get home.

### **AFTER THE PROCEDURE:**

You will stay the night in the hospital. Pain is controlled, you will eat a normal diet and begin to walk around after surgery right away.

We leave a catheter in overnight and remove the next day. The sphincter is left deactivated and open after the surgery and activated about six weeks after surgery. That means that you will continue to leak after surgery until the sphincter is activated.

You will go home on antibiotics. Take the complete course of antibiotics prescribed unless you have a reaction to the medicine.

Plan to do only light duty for a couple of weeks after surgery. I usually will have an appt with you 2 weeks after the operation.

### **INSURANCE COVERAGE:**

Yes, there is usually good insurance coverage for this procedure. There is a prior authorization process, and our business office will help guide you. Know that you have coverage for this procedure BEFORE you get to the hospital on the day of surgery. We have had to cancel procedures for patients or move them from one hospital to the next because of a failure on our part during, the patient's part or as well as a failure from insurance companies so this really is critical. You don't want to have to sort through the billing issues after the procedure. Paying for a procedure is a patient's responsibility; obviously we want to help you as much as we can prevent any confusion before the procedure.