

# **Artificial Bowel Sphincter (ABS)**

## **WE DO NOT PRESENTLY OFFER THIS PROCEDURE AT UNIVERSITY OF MICHIGAN HEALTH SYSTEM**

### **Definition**

The Artificial Bowel Sphincter, or ABS, is a device implanted under the skin which is designed to mimic the natural function of the anal sphincter. It is a new procedure being tried by some specialists to treat bowel incontinence.

### **Candidates**

The ABS is intended to be used when attempts to repair the muscle have failed or when there is nerve injury or insufficient healthy muscle to perform repair.

The ABS device was approved by the Food and Drug Administration (FDA) in 1999.

The device consists of three parts:

1. An inflatable cuff, placed in the anus
2. A balloon reservoir, placed in the pubic area
3. A pump, placed in the pubic area, connecting the cuff and balloon

### **Procedure**

The ABS is implanted in the operating room. It must be inserted by a surgeon with experience in treating incontinence. An inflatable cuff is placed around the anus and a reservoir and pump are placed in the labial or scrotal area.

After activation (6-8 weeks), when the tissues have healed, fluid can be transferred from the balloon to the cuff. Once inflated, the cuff places pressure on the anal canal and keeps it closed, preventing the accidental passage of stool.

To enable a bowel movement, the pump located in the labia or scrotum is pressed several times. This takes the fluid out of the cuff and moves it into the reservoir, reducing the pressure on the anal canal. This allows a spontaneous bowel movement to occur. Fluid will automatically move back into the cuff after several minutes, closing the anus once again.

### **Infection**

Complications, including infection and erosion of the cuff or balloon through the skin, occur commonly, despite precautions to prevent them. Infection is a major concern. Approximately 15% of patients may require removal of the device due to infection. Other complications that can occur after ABS placement include erosion, incontinence, pump migration, constipation, equipment failure, and outlet obstruction.

### **Erosion**

Erosion, wearing away, of the surrounding tissues may occur, causing migration of the pump, balloon, or cuff. This typically happens in older adults whose tissues are more fragile. If this happens, the device must be removed.

### **Incontinence**

Despite placement of the ABS device, incontinence may still occur. This can be caused by a cuff leak, fluid leak, cuff looseness, cuff remaining open, or pump malfunctions. Treatment can be as simple as adding additional fluid, a cuff size change, cuff replacement, or pump replacement or repositioning. Patients with poor rectal sensation may have continued problems with incontinence. In some cases, complete replacement or exploration may be required.

### **Constipation**

If constipation occurs, it may be the result of the cuff being too tight, pump malfunction, or taking too many narcotics. Treatment could involve replacing the cuff size, replacing the pump, or eliminating narcotics. Special attention needs to be given to constipation post-op. The passage of hard stool can tear stitches out of fragile muscle.

### **Pump Migration**

If pump migration occurs, it will have to be repositioned or replaced. The pump is usually placed in a similar location on the other side.

### **Effectiveness**

The effectiveness of the ABS device depends on many factors, only some of which can be controlled by the patient. It is imperative to follow dietary instructions and to avoid constipation.

Nothing should be inserted into the anus for at least 6 weeks after the ABS is placed, to avoid injury to the surgical area. Sexual intercourse, bicycle riding, intense physical exercise, heavy lifting, squatting, and bearing down should be avoided for 2-3 months.

Once activated, training sessions can assist in learning how to use the ABS device properly.

For more information, go to [www.visitAMS.com](http://www.visitAMS.com) and search for Acticon Neosphincter.

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