

FREEDOM • FUNCTION • CONTROL

Urovalve has developed the world's **first** and **only** technology, the **Surinate®** Bladder Management System, designed to make it possible for men with a **urinary retention** problem to lead normal lives... *and* keep their secret to themselves.



"While the global market for urinary catheters is more than \$3 billion, there has been little innovation in this field, despite a dire need."

Thomas W. Winegar
Chief Technology Officer



"Urinary retention, or the inability to empty the bladder, develops as a result of many causes, including an enlarged prostate."

Jon M. Rogers, MD
Chief Medical Adviser



"Urovalve plans a pivotal clinical trial of Surinate for up to 28 days of continuous use in men who are experiencing urinary retention."

David L. West, PhD
Chief Regulatory Affairs Adviser



"Surinate is designed to free users from reliance on conventional urinary catheters that destroy self-image and may cause urinary tract infections."

Subbarao V. Yalla, MD
Harvard Medical School

The Surinate® Bladder Management System, comprised of a tiny magnetically controlled valve in the urethra and no tubes or urine bag, is designed to be activated by a patient using a hand-held magnet to *self-regulate* flow, representing a potential giant step forward over currently available urinary catheter devices, some of which have been around for a half century.

Magnetic appeal

By Ronald C. Trahan

URINARY RETENTION refers to the inability to urinate. The condition is common and *can* be treated. Unfortunately, urinary retention treatment devices have seen little innovation since the first such devices were used in the 1940s. Consequently, the current low-technology catheters used to treat urinary retention may destroy a man's self-image and too often cause a serious **urinary tract infection (UTI)**. The death rate for men admitted to a hospital for acute urinary retention is three times higher than for the general male population, says a November 2007 study published in *British Medical Journal*.

Indeed, catheter-associated UTIs affect an estimated 840,000 U.S. patients in acute care facilities annually and cost the healthcare system approximately \$1.5 billion annually to test and treat each catheter-associated UTI. The standard of care in urinary catheters—the Foley catheter—is inserted through the urethra and into the bladder, remaining continuously in the patient and connected to a urine collection bag that is usually strapped to the leg. For chronic use, the Foley catheter is replaced every two to four weeks, but the urine bag must be emptied frequently, as the patient is not in control of his bladder-emptying function.

"Foleys are physical and emotional tethers that limit patients' mobility, clothing choices, and social ease," says Urovalve CEO Harvey D. Homan, PhD. "A dangling drainage tube and urine collection bag are a constant nuisance, confounding simple activities such as rolling over in bed and limiting choices to clothes that conceal the tubing and urine bag. And there's a constant danger the urine bag will rupture and spill, and that the skin will be irritated by securing the urine bag."



"Surinate® is designed as a solution to the problems of lifestyle, urinary tract infections and substantial healthcare worker expenses associated with existing urinary catheters."

Dr. Harvey D. Homan,
President and CEO

Urovalve has designed the Surinate® Bladder Management System, without tubes or a urine collection bag. The system is comprised of a simple, *magnetically controlled* valve/catheter placed inside the urethra that is activated outside the body by the Surinate® patient, who uses a hand-held magnet to *self-regulate* flow. "The Surinate® technology is designed to bring urinary catheters into the 21st century," says Dr. Homan.