The mission of Dover™ urology products is to create and deliver innovative healthcare solutions. With 1 in 4 patients catheterized in the US, it is vital that your urology products are of the highest quality, with superb function, and provide lasting improvements to patients’ lives. Dover™ urology products embody these requirements due to collaboration with medical professionals and provide a Best-in-Class offering. Our goal is to deliver value to healthcare professionals for the purpose of improving patients’ lives.
Dover™ Urology Products

Catheterization complications extend beyond the Foley catheter. All components, including the Foley, drain bag, and prepping components, contribute to patient care and final outcomes. You care about the well-being of your patients and, therefore, you question the entire system.

*Dover™ urology products are the answer*

By focusing on each aspect of the system, Dover™ urology products offer a Best-In-Class product that helps reduce catheter-associated complications and improves overall collection system flow. Dover™ urology products have set out to produce the best possible outcomes and provide efficient and safe practices, while improving patients’ lives.

**Material Selection**

The Foley materials selected will have a direct impact on patient safety from the moment they are put into use. Selecting latex-free materials can help reduce complications associated with catheterization.

Dover™ urology products offer a premium solution, featuring the latest innovations in material and construction. Dover™ 100% silicone catheters help reduce encrustation, can lower the incidence of urethral irritation, and eliminate latex allergy concerns.
Comparing Latex to 100% Silicone

**LATEX**
Latex-based Foley catheters can present an increased risk to patients.

**LATEX IS:**

**Cytotoxic**
- Body rejects latex by exhibiting foreign body response (irritation) due to its toxic properties

**Organic**
- Organic protein rich material containing chemicals as a result of the manufacturing process
- Proteins act as a food source for bacteria

**Porous**
- Absorbs moisture causing catheter expansion

**Allergy Promoting**
- Latex material is known to cause various levels of allergic reactions (type I-IV)

**Adherent**
- Encourages encrustation

**HYPERSENSITIVITY**
Latex, when used in direct patient contact, can be a significant source of irritation.

“The ideal materials should be biologically inert, chemically stable in urine without any release of toxic contaminants and resistant to encrustation.”


The FDA requires a warning label on all products containing latex due to the inherently cytotoxic nature of this substance.
100% SILICONE

100% Silicone Foley catheters help reduce catheter-associated complications compared to Latex Foley catheters. Silicone material offers optimal performance while eliminating latex concerns.

SILICONE IS:

Biocompatible
• Non-reactive to human tissue

Inorganic
• Contains no extractable chemicals
• Protein-Free

Non-Porous
• Will not absorb body fluids and eliminates "Foley catheter expansion"

Non-Toxic
• Free of latex allergens and non-reactive to Human Urethral Cells

Non-Adherent
• Repels urine, blood, salts & organic materials
• Helps reduce encrustation, minimizing the likelihood of occlusion
Patients with indwelling Foley catheters are prone to many complications. Stricture, Encrustation, Bladder Lesions, and Hypersensitivity are some of the likely complications facing your patients.

By simply choosing Dover™ urology products, the probability of a complication is drastically reduced. As one of the largest manufacturers of 100% Silicone Foley catheters, Covidien’s line of Dover™ urology products provides an unmatched broad-spectrum solution to help reduce catheter-associated complications.
Encrustation

Encrustation is a significant cause of catheter failure.

“The silicone-based Dover catheters took a statistically significant longer time to block [occlude] than did latex-based BARDEX* catheters.”


<table>
<thead>
<tr>
<th>Type of Catheter</th>
<th>Mean Time to Blockage in Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bardex*† Lubricath*†</td>
<td>30.5 hours</td>
</tr>
<tr>
<td>Bardex*† IC</td>
<td>29.8 hours</td>
</tr>
<tr>
<td>Dover Silicone</td>
<td>53.7 hours</td>
</tr>
<tr>
<td>Dover Silver</td>
<td>51.7 hours</td>
</tr>
</tbody>
</table>

Average mean time to block ± 1 SD. Statistically significant in vitro study.

Urethritis

Urethritis is a major source of patient discomfort and contributes to a breakdown in tissue integrity.

"Of those with latex catheters 22% developed urethritis, compared with 2% of those in the silicone catheter group. This difference is statistically significant (P<0.01).”


Incidence of Urethritis

Peer-reviewed, published, clinical in vivo study
Source: Nacey JN, Tulloch AGS, Ferguson AF.
**Stricture**

Stricture reduces the ability of a patient to void which may lead to bladder distention, kidney failure and other major complications.

“Thus the overall incidence of urethral stricture in the group with latex catheters was 5.2% when followed up for between 15 and 24 months compared with 0% in those with silicone catheters followed up for between 12 and 28 months.”

“On the basis of our two series, we suggest that silicone catheters be used routinely for short-term catheterization in men undergoing bypass surgery.”


Peer-reviewed, published, clinical in vivo study.
Source: Ferrie BG, Groome J, Sethia B, Kirk D.

**Bladder Lesions**

Pressure-induced bladder distention and catheter-associated suction lesions are both inherent complications of catheterization in non-vented closed systems.

“Top-vented catheter valve tubing will produce a clinically and statistically significant difference in suction lesions of the bladder versus traditional non-vented catheter drainage tubing.”


**Suction Comparison of Vented and Non Vented Urine Collection Systems**

Increased suction may cause bladder lesions.

* Source data on file (meter and bag average)
It’s not just how it’s made – It’s how it works

Proven construction and materials matter.
Proven performance matters even more.
When you select a market leading Dover™ 100% silicone catheter, you have chosen a product that is fabricated from materials that out-perform latex. The result? The extrusion molding process, combined with the unique properties of silicone, provide larger internal lumens, greater resistance to shaft collapse and improved flow. Dover™ urology products work better because they are made better.
Construction

For unparalleled patient comfort and consistent clinical performance, today’s silicone provides larger internal lumens, stronger catheter walls, better flow rates and true French sizes — all in a biocompatible material.
Improved Flow

Cross-section of Dover™ Silicone Catheter

Cross-section of Bardex™ Lubricath™ Catheter

24Fr, 30cc 2 Way Foley

Bardex™ Latex Catheter
Dover™ 100% Silicone Catheter

16Fr, 5cc 2 Way Foley

18Fr, 5cc 2 Way Foley

16Fr, 5cc 2 Way Foley

2000

Source: Data on file* ASTM-F623-99

16Fr, 5cc 2 Way Foley

18Fr, 5cc 2 Way Foley

True French Sizes (16FR)

Catheter O.D. Comparison: Dover™ 16Fr Catheter vs. Bardex™ 16Fr Catheter

Dover™ silicone catheters offer superior extrusion manufacturing processes to provide consistent and accurate catheter sizing. Compared to Bard™ Latex catheters, Dover™ silicone catheters are more than 2X more accurate.

- 16Fr Dover silicone catheter tolerances are +/- 2.5Fr
- 16Fr Bardex™ Lubricath™ catheter tolerances are +/- 5.2Fr

Source: Data on file*
Dover™ silver 100% silicone Foley catheters represent the very latest in catheter technology. Its phosphate silver ion technology, coupled with a hydrogel coating on both the internal and external surfaces, slowly releases ionic silver particles. This technology is engineered to release higher concentrations of silver ions during the first five days and provide consistent elution over time.

Best in class

silver

elution performance
Programmable Release Technology

Not all silver technology is created equal. Phosphate silver ion technology, coupled with a hydrogel coating on both internal and external catheter surfaces, slowly releases ionic silver particles from the Dover™ 100% silicone catheter platform.

Magnified View of Hydrogel Silver Elution Process

Suspended within the catheter hydrogel coating lies a completely efficient ionic silver elution technology.
Silver Coating on a Premium Silicone Platform

Dover™ silver catheters release higher concentrations of silver ions during the first five days and provide consistent elution over time. Coupled with a “slicker” hydrogel coating on inert silicone material, the silver is truly “available”.

Hydrogel Coating

As compared to the Bardex™ IC catheter, the Dover™ silver catheter hydrogel coating reduces friction, limiting urethral irritation.

Compared to the Bardex™ IC catheter, the Dover silver catheter coating is 3.5x thicker.
A urine collection system requires constant flow to ensure the bladder empties properly and remains free of positive and negative pressures that act on the urinary tract. Eliminating these pressures by using a vented system minimizes complications such as bladder distention and bladder lesions. A vented system optimizes flow performance, minimizing caregiver time and improving patient comfort and safety.

Dover™ urology products’ total system approach addresses all aspects of urine collection to optimize flow and improve patient safety with an ergonomic design.
The Collection System

Dover™ urology products provide the ideal urine collection system that is easy to use while increasing patient comfort and safety. The new design incorporates features that mitigate the issues currently experienced with traditional systems.

“Dynamic flow problems may place patient at risk for incomplete bladder evacuation and various inflammatory conditions.”

“A filter prevents airborne bacteria from gaining access to the urinary drainage system and prevents urine leakage.”

- **Anti-Reflex Device**: Lower point of entry to further assist the gravity fed downward flow dynamic.

- **Bag Vent**: Along with top vent, bag vent minimizes pressure within the system and the patient’s bladder while the inner membrane also acts as a bacterial and viral barrier with greater than 99.99% efficiency.

- **Drain Spout**: 45 degree pedestal ensures device remains vertical during operation, offers one-handed operation reduces in exposure to fluids while maintaining a truly closed system.

- **Flow**: Vented System
  - Loop Clip
  - Anti Reflex Device

- **Safety**: Needleless Luer Lock Sampling
  - Vented System
  - Loop Clip
  - Anti Reflex Device
  - Drain Spout
  - True Closed System
  - Latex Free
  - Pre-attached Catheter Securement

- **Ease of Use**: Needleless Luer Lock Sampling
  - Loop Clip
  - Hanger Hooks
  - Drain Spout