

# Overview

## The History of Specialty Foley Catheters

Invented by Dr. Frederick E.B. Foley as early as the 1930s, the indwelling balloon catheter was co-manufactured by two companies, B.F. Goodrich and the Davol Rubber Company. C.R. Bard, Inc. was one of the main distributors for the specialty catheter. Bard later acquired Davol Rubber Company, which remains with us today as the Davol Surgical Division.

The secrets behind the Foley catheter are hidden within the walls of Bard's facility in Moncks Corner, South Carolina, one of Bard's many manufacturing sites. The manufacturing facility is the only facility in the United States that formulates its own latex. The building process is quite tedious and perfecting one catheter requires over 26 hours with at least 10 hands skillfully directing it to the finish. Layers upon layers of latex are dipped to ensure quality and preciseness. Over 80,000 Bard Latex Foley catheters are produced per day.

A Foley catheter is a hollow urinary drainage tube that is held in the bladder by a small, water-inflated balloon. It is also known as an indwelling catheter designed to remain in place over time.

The difference between a Foley catheter and a straight catheter is the balloon. A "specialty" Foley catheter is determined by the tip configuration, number of lumens or channels, and the size of the balloon.

## What is a Foley Catheter?

Four basic models exist including:

- 2-way catheters (inflation and drainage)
- 3-way catheters (inflation, drainage and irrigation)
- 4-way catheters (inflation, drainage, irrigation and prostatic surgical irrigation)
- Diagnostic catheters (used to diagnose such medical conditions as urethral diverticula)

These catheters are primarily differentiated by:

- Material (Latex, Red Latex, Silicone)
- Coatings (Bacti-Guard<sup>®</sup>\* Silver Alloy Coating, Bard<sup>®</sup> Hydrogel, and Silicone Elastomer)
- Balloon Sizes (3cc, 5cc, 30cc, 75cc)
- Tip Types (Councill, Coude, Olive, Couvelaire, Round, and Whistle)
- Tip Length (Short, Medium, Long)
- Number and Size of Drainage Eyes and Lumens

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## Catheter Materials

Bard Latex Catheters - Bard manufacturing practices incorporate an extensive leaching process that removes the maximum amount of allergens in the latex.

- In the last 70 years, there have been no confirmed allergic reactions to Bard coated latex Foley catheters.

**Amber Latex**—Very soft, flexible, and durable.

**Red Latex**—Stiffer and radiopaque for observation under fluoroscopy. (Barium sulfate added to amber latex)

**Silicone**—Long-term catheter used in patients who are sensitive to latex or coatings.

## Catheter Coatings

**Bardex<sup>®</sup> I.C. Anti-Infective Foley Catheters with Bacti-Guard<sup>®</sup>\* Silver Alloy Coating and Bard<sup>®</sup> Hydrogel -** Combines Bacti-Guard<sup>®</sup>\* silver alloy coating and Bard<sup>®</sup> Hydrogel coating to minimize bacterial adherence.

- Preserves the body's natural defenses by minimizing trauma to urethral cells
- Reduces adherence of urinary tract infection (UTI) pathogens, including Gram-positive bacteria, Gram-negative bacteria, and yeasts
- Reduces the incidence of catheter associated urinary tract infections (CAUTIs).<sup>1,2,3</sup>
- Absorbs mucosal fluid to form a “cushion” between the catheter surface and delicate urethral tissue, reducing friction and irritation that can lead to infection
- Provides a surface that resists encrustation

## And More Coatings...

**Bard® Hydrogel**—Hydrophilic coating produces a cushion of fluid between the catheter and the mucosal lining of the urethra and the bladder.

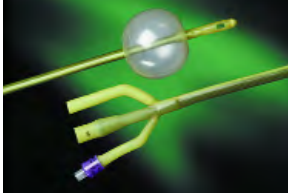
- Reduces friction
- Increases biocompatibility
- Resistance to cell adhesion
- Less encrustation
- Less clot formation

**Silicone Elastomer**—Hydrophobic material that rejects moisture.

- Protects from irritation
- Smooth surface
- Permanent coating

# The Quality Story

## Proximal to Distal



Features	Benefits
<p><b><u>Tips</u></b></p> <ul style="list-style-type: none"><li>• Round &amp; Smooth</li><li>• Reinforced woven fabric cup</li><li>• Anatomically correct length</li></ul> <p><b><u>Drainage Eyes</u></b></p> <ul style="list-style-type: none"><li>• Smooth and burnished</li><li>• Properly sized</li></ul>	<ul style="list-style-type: none"><li>• Reduces trauma upon insertion</li><li>• Provides added strength during catheter insertion with a stylet.</li><li>• Reduces irritation and bladder coiling</li><li>• Reduces potential for irritation to delicate urethral mucosa and bladder upon insertion</li><li>• Reduces occlusion by blood clots</li><li>• Provides maximum drainage</li></ul>

# The Quality Story

Features	Benefits
<p><b><u>Balloon</u></b></p> <ul style="list-style-type: none"><li>• Individually made and pre-tested</li><li>• Ribbed</li><li>• Non-blister process</li><li>• Correct anatomical shape</li><li>• Special latex or silicone formulation</li></ul> <p><b><u>Shaft</u></b></p> <ul style="list-style-type: none"><li>• Coated</li><li>• Thick, strong walls</li></ul>	<ul style="list-style-type: none"><li>• Eliminates substandard balloons</li><li>• Ensures strength and symmetry</li><li>• Eliminates occlusion</li><li>• Holds tip in proper upright position</li><li>• Provides memory</li><li>• Reduces body's response to reject latex</li><li>• Smoothness of outer layer promotes less bacterial adhesion and more patient comfort</li><li>• Inner layer strength aids in insertion by providing smooth, uniform walls</li><li>• Resists collapse during aspiration</li></ul>

# The Quality Story

Features	Benefits
<p><b><u>Drainage Lumen</u></b></p> <ul style="list-style-type: none"><li>• Proper taper</li> <li>• Round with optimal internal diameter</li></ul> <p><b><u>Inflation Valve</u></b></p> <ul style="list-style-type: none"><li>• Universal Adapter</li> <li>• Self-sealing</li><li>• Ergonomically designed</li> <li>• Color-coded:<ul style="list-style-type: none"><li>White 12 Fr.</li><li>Green 14 Fr.</li><li>Orange 16 Fr.</li><li>Red 18 Fr.</li><li>Yellow 20 Fr.</li><li>Purple 22 Fr.</li><li>Blue 24 Fr.</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Resists kinking and collapsing during aspiration</li> <li>• Resists obstruction and potential for encrustation</li><li>• Provides secure connection to most drainage tubes.</li>       <li>• Accommodates most luer-lock syringes</li><li>• Easy, positive seal</li><li>• Enhances speed of inflation and deflation</li><li>• Easy identification of French size for syringes 14-24</li></ul>