

InhibiZone™

Antibiotic Treatment



Built-In Protection Against Infection

AMS helps minimize the risk of infection with the proven protection of InhibiZone™ Antibiotic Surface Treatment.²⁻⁵

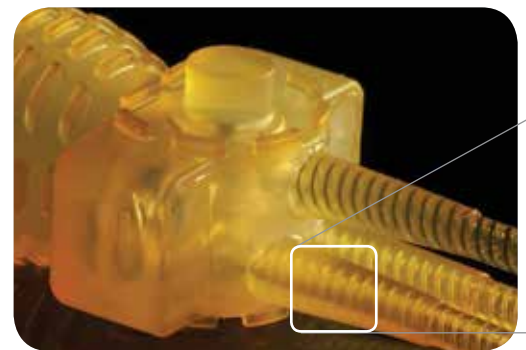
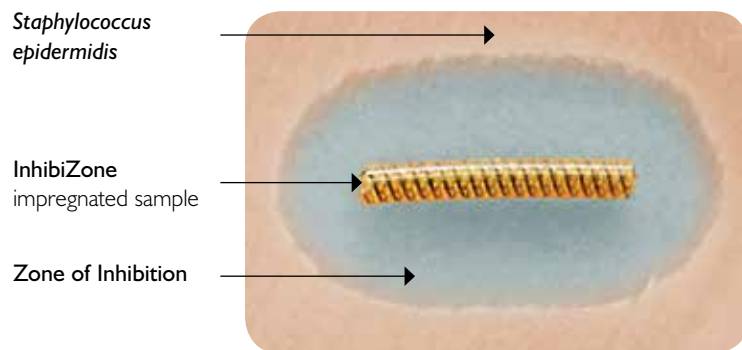
The AMS 700™ Penile Prosthesis is the **ONLY** antibiotic-impregnated penile prosthesis on the market.

What is InhibiZone Treatment?

InhibiZone Treatment is a proprietary combination of the antibiotics minocycline and rifampin that are impregnated into the three components of the prosthesis during the manufacturing process. Its elution creates a zone of inhibition effective against the bacteria commonly associated with inflatable penile prosthesis infections. It is intended to act on those bacteria that attempt to colonize the treated prosthesis surfaces.^{1,2}

Zone of Inhibition

InhibiZone Treatment creates a Zone of Inhibition, effective against the bacteria commonly associated with IPP infections.



Penile prosthesis impregnated with InhibiZone Treatment.

IMPORTANT SAFETY INFORMATION ABOUT INHIBIZONE TREATMENT⁶

Use of InhibiZone Treatment should carefully be considered in patients:

- With hepatic or renal disease
- Taking methoxyflourane, warfarin
- Using thionamids, isoniazid and halothane

* Please reference the IFU for additional information.

InhibiZone™

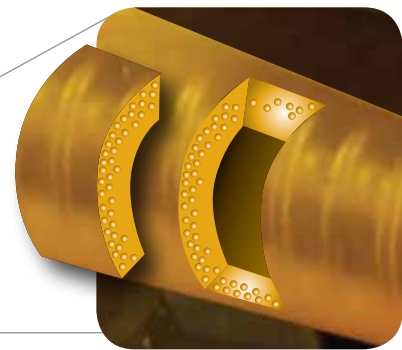
Antibiotic Treatment

InhibiZone Treatment Offers:

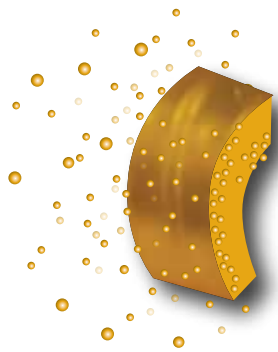
CONSISTENCY – The minocycline and rifampin antibiotics are applied during the manufacturing process, which delivers consistent, controlled antibiotic activity and offers proven protection without the ambiguity of dipping.^{2,6-9}

EFFICACY – The combination of minocycline and rifampin is active against the bacteria commonly associated with inflatable penile prosthesis infections and retains its activity against bacteria.⁵

EFFICIENCY – No separate cost for antibiotics applied to the prosthesis during the procedure.



InhibiZone Treatment is impregnated into the three components of the prosthesis.



Following implantation, InhibiZone Treatment elutes from the penile prosthesis over a 14 day period.⁹

“I believe the single most important and effective innovation in prosthetic urology that I have seen, is the InhibiZone infection retardant process.”

Gerard Henry, MD

Protection Supported by Clinical Data: Post Market Study Findings²

The AMS 700™ Penile Prosthesis with InhibiZone Treatment is the only antibiotic-impregnated inflatable penile prosthesis. The clinical evidence showing a significant reduction in the rate of revisions due to infection in both original and revision implants.

InhibiZone Treatment is supported by FDA post market data published in the product's Instructions for Use, based on robust data with more than 40,000 patients reported over a 6.5 year period. The study concluded that use of InhibiZone Treatment resulted in a significant reduction in the rate of revision due to infection:

- In patients with penile prosthesis
- Among penile prosthesis implants in diabetic patients
- Among original and revision penile prosthesis implants
- In patients receiving a first-time AMS 700 implant
- In patients receiving an AMS 700 revision implant
- In diabetic patients receiving a first-time AMS 700 implant

No significant differences were found between treated and untreated AMS 700 Penile Prostheses for overall rates of revision due to mechanical malfunction, fluid loss, erosion, patient dissatisfaction or all other reasons.

POST-MARKET STUDY DATA: FDA APPROVAL OF THE AMS 700™ PENILE PROSTHESIS WITH INHIBIZONE™ ANTIBIOTIC TREATMENT²

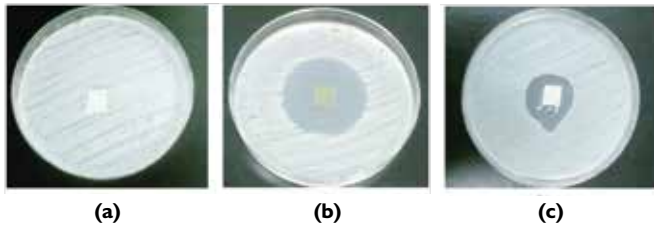
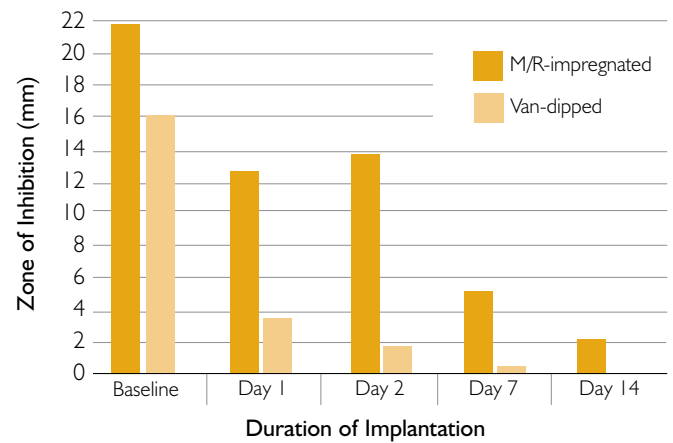
	InhibiZone	Non-InhibiZone
Original Penile prosthesis with InhibiZone Treatment for first-time AMS 700 implants revision rate due to infection (p<0.0001).	1.2%	2.5%
Diabetic Penile prosthesis with InhibiZone Treatment for first-time AMS 700 implants in patients with diabetes revision rate (p<0.0001).	1.4%	4.0%
Revision Penile prosthesis with InhibiZone Treatment for AMS 700 revision implants revision rate due to infection (p<0.025).	2.5%	3.7%

Impregnated vs. Dipped Devices: Laboratory Testing Data⁹

IMPREGNATED PROVIDES LARGEST ZONE OF INHIBITION

InhibiZone Treatment resulted in a significantly larger zone of inhibition against, both in vitro and in vivo, up to 14 days after implantation.

Zones of inhibition against *Staphylococcus aureus* produced by devices explanted from rabbits. M/R = minocycline and rifampin (InhibiZone Treatment); Van = vancomycin.



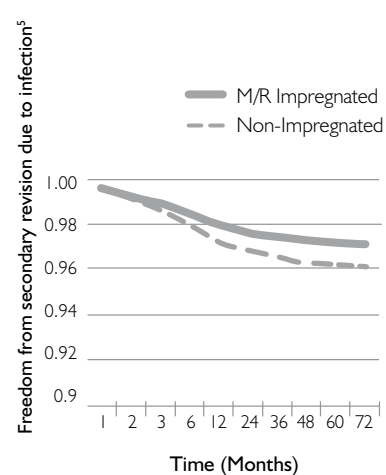
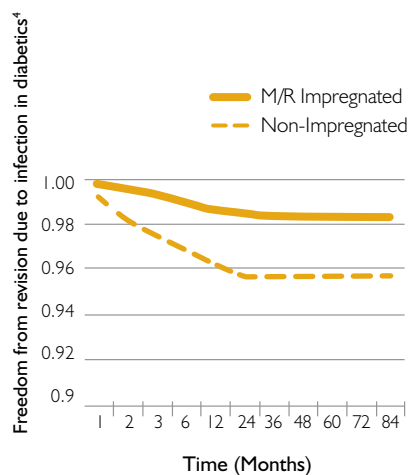
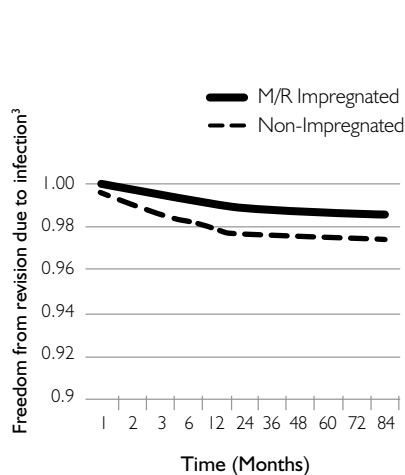
Baseline zone of inhibition produced by I T 1-cm against *Staphylococcus aureus*, (a) control (b) minocycline and rifampin (M/R) - pre-impregnated segments and (c) vancomycin-dipped.

The M/R-impregnated devices also yielded significantly larger zones of inhibition against *Staphylococcus aureus* than vancomycin-dipped implants, both in vitro ($p < 0.003$) and in vivo throughout the 14 day period of device implantation in rabbits ($p < 0.03$).

“The most important thing we can do is reduce the infection rate. If you can dramatically reduce the number of patients where devices are being removed for infection, you’re going to get better outcomes.”

LeRoy A. Jones, MD

Significantly Lower Published Rates of Clinical Infection Related Revision



FREEDOM FROM REVISION DUE TO INFECTION

*Carson 2011*³

A long-term retrospective study of 39,005 patients with first-time implants showed significantly fewer patients with antibiotic-impregnated implants had a revision due to infection. The authors concluded that this long-term outcome analysis provides substantial clinical evidence of a decrease in costly infection related revision using an antibiotic-impregnated IPP.

Infection-related revisions throughout 7.7 years

- **1.1%** of 35,737 antibiotic-impregnated
- 2.5% of 3,268 non-impregnated

FREEDOM FROM REVISION DUE TO INFECTION IN DIABETICS

*Mulcahy 2011*⁴

A sub-group study of 6,695 diabetic first-time implants showed significantly fewer patients with antibiotic-impregnated implants had a first revision due to infection. The authors conclude that this long-term evidence establishes antibiotic-impregnated IPPs as standard preferred choice in helping to reduce complication in the high-risk diabetic population.

Infection-related revisions throughout 7.7 years

- **1.5%** of 6,071 antibiotic-impregnated
- 4.2% of 624 non-impregnated

FREEDOM FROM SECONDARY REVISION DUE TO INFECTION

*Nehra 2012*⁵

A separate long-term study of 11,396 implants showed secondary revisions due to infection were significantly less frequent in patients with antibiotic-impregnated replacement implants compared to non-impregnated replacement IPPs. Secondary revision was defined as the first recorded device revision operation for any reason after replacement implant surgery.

Infection-related secondary revisions throughout 6.6 years:

- **2.5%** antibiotic-impregnated
- 3.7% non-impregnated

“I personally think that the development of InhibiZone is probably the most important thing that’s happened with penile prosthesis implantation in the last decade.”

Culley C. Carson, MD

Low Infection Rate in Diabetic Patients

Wilson 2007¹⁰

This prospective study of 467 patients with implants impregnated with InhibiZone Treatment showed very low clinical infection rates throughout the greater than 1 year observation:

- No infections developed among 223 non-diabetic patients (0.0%)
- One infection developed among 83 diabetic patients (1.2%)

INFECTION RATES FOR PENILE PROSTHESES WITH INHIBIZONE™ ANTIBIOTIC TREATMENT¹⁰

Type of Implant Operation/Patient	Patients	Observed Infection Rate	Historical Infection Rate	P Value (Observed vs. Historical)
Virgin Implant, Nondiabetics	223	0.0%	3%	0.0024
Virgin Implant, Diabetics	83	1.2%	8%	0.0141
Revision Implants with Washout	122	3.3%	10%	0.0095

Since the launch of InhibiZone Treatment in 2001, there have been 13 clinically stringent peer reviewed published research studies and articles reviewing InhibiZone Treatment outcomes.

“IZ is the only FDA approved antibiotic coating on IPPs in the marketplace. In our four center study with over 300 patients being cultured at the time of Revision / Replacement / Removal surgery, none of the bacteria isolates that showed resistance to the combination of Minocycline and Rifampin on the culture data reports.”

Brian Christine, MD

AMS 700™ Series Inflatable Penile Prosthesis

Prior to use, please review the Instructions for Use for a complete listing of indications, contraindications, warnings, precautions and potential adverse events.

Indications: The AMS 700™ Series Inflatable Penile Prosthesis Product Line is intended for use in the treatment of chronic, organic, male erectile dysfunction (impotence).

Contraindications: Patients who have active urogenital infections or active skin infections in the region of surgery or for the AMS 700™ with Inhibizone™, have a known sensitivity or allergy to rifampin, minocycline, or other tetracyclines.

Warnings: Implantation will make latent natural or spontaneous erections, as well as other interventional treatment options, impossible. Men with diabetes, spinal cord injuries or open sores may have an increased risk of infection. Implantation may result in penile shortening, curvature, or scarring.

Potential Adverse Events: Urogenital pain (usually associated with healing), edema, ecchymosis and erythema; reservoir encapsulation; patient dissatisfaction; auto-inflation; mechanical malfunction; impaired urination; and infection.

1 Dhabuwala C, Sheth S and Zamzow B. Infection Rates of Rifampin/Gentamicin-Coated Titan Coloplast Penile Implants. Comparison with Inhibizone-Impregnated AMS Penile Implants. J Sex Med. 2011;8:315-320.

2 AMS 700™ Penile Prosthesis Product Line Instructions for Use. American Medical Systems. 2013.

3 Carson CC III, Mulcahy JJ, Harsh MR. Long-term infection outcomes after original antibiotic impregnated inflatable penile prosthesis implants: up to 7.7 years of followup. J Urol 2011 Feb;185(2):614-618.

4 Mulcahy JJ, Carson CC III. Long-term infection rates in diabetic patients implanted with antibiotic-impregnated versus nonimpregnated inflatable penile prostheses: 7-year outcomes. Eur Urol 2011 Feb 4. [Epub ahead of print]

5 Nehra A, Carson CC III, Chapin AK, Ginkel AM. Long-term infection outcomes of a 3-piece antibiotic impregnated penile prostheses used in replacement implant surgery. J Urol 2012 July 19. [Epub ahead of print]

6 Eid JF, Wilson SK, Cleves M, Salem EA. Coated implants and "no touch" surgical technique decreases risk of infection in inflatable penile prosthesis implantation to 0.46%. Urology 2012 Jun;79(6):1310-6. Epub 2012 April 21.

7 Ohl DA, Brock G, Ralph D, Bogache W, Jones L, Munarriz R, Levine L, Ritenour C. Prospective Evaluation of Patient Satisfaction, and Surgeon and Patient Trainer Assessment of the Coloplast Titan One Touch Release Three-Piece Inflatable Penile Prosthesis. J Sex Med. 2012 Sep;9(9):2467-2474. Epub 03 Jul 2012.

8 Titan™ and Titan™ OTR Inflatable Penile Prosthesis Instructions for Use. Coloplast Corporation. 2013.

9 Mansouri MD, Boone TB, Darouiche RO. Comparative Assessment of Antimicrobial Activities of Antibiotic-Treated Penile Prostheses. Eur Urol. 2008 Dec 30. [Epub ahead of print]

10 Wilson SK, Zumbo J, Henry GD, Salem EA, Delk JR, Cleves MA. Infection reduction using antibiotic-coated inflatable penile prosthesis. Urology. 2007 Aug;70(2):337-40.