



**SV Spectrum™:**  
a compendium of evidence

**Providing proven protection  
against CRBSIs.<sup>1</sup>**

SV SPECTRUM™  
CATHETERS  
meet the

**CDC 1A  
RECOMMENDATION**

as a component of  
the prevention of  
CLABSIs.<sup>2</sup>

1. Raad I, Darouiche R, Dupuis J, et al. Central venous catheters coated with minocycline and rifampin for the prevention of catheter-related colonization and bloodstream infections: a randomized, double-blind trial. *Ann Intern Med.* 1997;127(4):267-274.

2. O'Grady NP, Alexander M, Burns LA, et al. Guidelines for the prevention of intravascular catheter-related infections, 2011. Centers for Disease Control and Prevention website. [www.cdc.gov/infectioncontrol/pdf/guidelines/bsi-guidelines.pdf](http://www.cdc.gov/infectioncontrol/pdf/guidelines/bsi-guidelines.pdf). Updated February 15, 2017. Accessed July 6, 2017. The 1A recommendation from the Centers for Disease Control and Prevention (CDC) is to "Use a chlorhexidine/silver sulfadiazine or minocycline/rifampin -impregnated CVC in patients whose catheter is expected to remain in place >5 days if, after successful implementation of a comprehensive strategy to reduce rates of CLABSI, the CLABSI rate is not decreasing."





# Providing proven protection against CRBSIs.<sup>1</sup>

## The science and efficacy of minocycline + rifampin catheters.

This compendium of studies organizes the vast body of research investigating and supporting SV Spectrum™ into manageable sections that are easy to understand and quickly reference.

If you require any additional resources, please contact your Spectrum Vascular sales representative.

To learn more about SV Spectrum™ technology, visit [spectrumvascular.com](http://spectrumvascular.com).

1. Raad I, Darouiche R, Dupuis J, et al. Central venous catheters coated with minocycline and rifampin for the prevention of catheter-related colonization and bloodstream infections: a randomized, double-blind trial. *Ann Intern Med.* 1997;127(4):267-274.

## SV Spectrum™ efficacy

- 1. Effectiveness of minocycline and rifampin vs chlorhexidine and silver sulfadiazine-impregnated central venous catheters in preventing central line-associated bloodstream infection in a high-volume academic intensive care unit: a before and after trial.**  
Bonne S, Mazuski JE, Sona C, et al.  
*Journal of the American College of Surgeons*. 2015;221(3):739-747.  
[ncbi.nlm.nih.gov/pubmed/26199017](http://ncbi.nlm.nih.gov/pubmed/26199017)
- 2. Novel approach using antimicrobial catheters to improve the management of central line-associated bloodstream infections in cancer patients.**  
Chaftari A, Kassis C, El Issa H, et al.  
*Cancer*. 2011;117(11):2551-2558.  
[onlinelibrary.wiley.com/doi/10.1002/cncr.25807/full](http://onlinelibrary.wiley.com/doi/10.1002/cncr.25807/full)
- 3. The clinical effectiveness of central venous catheters treated with anti-infective agents in preventing catheter-related bloodstream infections: a systematic review.**  
Hockenhull JC, Dwan KM, Smith GW, et al.  
*Critical Care Medicine*. 2009;37(2):702-712.  
[ncbi.nlm.nih.gov/pubmed/19114884](http://ncbi.nlm.nih.gov/pubmed/19114884)
- 4. A systematic review comparing the relative effectiveness of antimicrobial-coated catheters in intensive care units.**  
Ramritu P, Halton K, Collignon P, et al.  
*American Journal of Infection Control*. 2008;36(2):104-117.  
[ncbi.nlm.nih.gov/pubmed/18313512](http://ncbi.nlm.nih.gov/pubmed/18313512)
- 5. Antimicrobial central venous catheters in adults: a systematic review and meta-analysis.**  
Casey AL, Mermel LA, Nightingale P, et al.  
*The Lancet Infectious Diseases*. 2008;8(12):763-776.  
[ncbi.nlm.nih.gov/pubmed/19022192](http://ncbi.nlm.nih.gov/pubmed/19022192)
- 6. Effectiveness of impregnated central venous catheters for catheter related blood stream infection: a systematic review.**  
Gilbert RE, Harden M.  
*Current Opinion in Infectious Diseases*. 2008;21(3):235-245.  
[ncbi.nlm.nih.gov/pubmed/18448967](http://ncbi.nlm.nih.gov/pubmed/18448967)
- 7. Rifampicin-impregnated central venous catheters: a meta-analysis of randomized controlled trials.**  
Falagas ME, Fragoulis K, Bliziotis IA, et al.  
*Journal of Antimicrobial Chemotherapy*. 2007;59(3):359-369.  
[jac.oxfordjournals.org/content/59/3/359.full](http://jac.oxfordjournals.org/content/59/3/359.full)
- 8. Comparative in vitro efficacies and antimicrobial durabilities of novel antimicrobial central venous catheters.**  
Hanna H, Bahna P, Reitzel R, et al.  
*Antimicrobial Agents and Chemotherapy*. 2006;50(10):3283-3288.  
[ncbi.nlm.nih.gov/pmc/articles/PMC1610097](http://ncbi.nlm.nih.gov/pmc/articles/PMC1610097)



9. **Vancomycin-resistant organisms on a burn unit.**  
Still J, Law E, Friedman B, et al.  
*Southern Medical Journal*. 2001;94(8):810-812.  
[ncbi.nlm.nih.gov/pubmed/11549193](http://ncbi.nlm.nih.gov/pubmed/11549193)
10. **A comparison of two antimicrobial-impregnated central venous catheters.**  
Darouiche RO, Raad II, Heard SO, et al.  
*New England Journal of Medicine*. 1999;340(1):1-8.  
[nejm.org/doi/full/10.1056/NEJM199901073400101](http://nejm.org/doi/full/10.1056/NEJM199901073400101)
11. **The evolving technology of venous access.**  
Wenzel RP, Edmond MB.  
*New England Journal of Medicine*. 1999;340(1):48-50.  
[ncbi.nlm.nih.gov/pubmed/9878645](http://ncbi.nlm.nih.gov/pubmed/9878645)
12. **The ex vivo antimicrobial activity and colonization rate of two antimicrobial-bonded central venous catheters.**  
Marik PE, Abraham G, Careau P, et al.  
*Critical Care Medicine*. 1999;27(6):1128-1131.  
[ncbi.nlm.nih.gov/pubmed/10397217](http://ncbi.nlm.nih.gov/pubmed/10397217)
13. **Antimicrobial durability and rare ultrastructural colonization of indwelling central catheters coated with minocycline and rifampin.**  
Raad I, Darouiche RO, Hachem R, et al.  
*Critical Care Medicine*. 1998;26(2):219-224.  
[ncbi.nlm.nih.gov/pubmed/9468157](http://ncbi.nlm.nih.gov/pubmed/9468157)
14. **Central venous catheters coated with minocycline and rifampin for the prevention of catheter-related colonization and bloodstream infections: a randomized, double-blind trial.**  
Raad I, Darouiche R, Dupuis J, et al.  
*Annals of Internal Medicine*. 1997;127(4):267-274.  
[annals.org/article.aspx?articleid=710759](http://annals.org/article.aspx?articleid=710759)

## SV Spectrum™ science

15. **Anti-adherence activity and antimicrobial durability of anti-infective coated catheters against multidrug-resistant bacteria.**  
Raad I, Reitzel R, Jiang Y, et al.  
*Journal of Antimicrobial Chemotherapy*. 2008;62(4):746-750.  
[jac.oxfordjournals.org/content/62/4/746](http://jac.oxfordjournals.org/content/62/4/746)
16. **The broad-spectrum activity and efficacy of catheters coated with minocycline and rifampin.**  
Raad I, Darouiche R, Hachem R, et al.  
*The Journal of Infectious Diseases*. 1996;173(2):418-424.  
[jstor.org/stable/30126138](http://jstor.org/stable/30126138)
17. **Antibiotics and prevention of microbial colonization of catheters.**  
Raad I, Darouiche R, Hachem R, et al.  
*Antimicrobial Agents and Chemotherapy*. 1995;39(11):2397-2400.  
[ncbi.nlm.nih.gov/pmc/articles/PMC162954](http://ncbi.nlm.nih.gov/pmc/articles/PMC162954)

- 18. Antibiotic susceptibility of staphylococcal isolates from patients with vascular catheter-related bacteremia: potential role of the combination of minocycline and rifampin.**  
Darouiche RO, Raad II, Bodey GP, et al.  
*International Journal of Antimicrobial Agents*. 1995;6(1):31-36.  
[ncbi.nlm.nih.gov/pubmed/18611682](https://pubmed.ncbi.nlm.nih.gov/18611682)

## SV Spectrum™ cost effectiveness

- 19. Attributable cost of catheter-associated bloodstream infections among intensive care patients in a nonteaching hospital.**  
Warren DK, Quadir WW, Hollenbeak CS, et al.  
*Critical Care Medicine*. 2006;34(8):2084-2089.  
[ncbi.nlm.nih.gov/pubmed/16763511](https://pubmed.ncbi.nlm.nih.gov/16763511)
- 20. Evidence that prevention makes cents: costs of catheter-associated bloodstream infections in the intensive care unit.**  
Cosgrove SE.  
*Critical Care Medicine*. 2006;34(8):2243-2244.  
[ncbi.nlm.nih.gov/pubmed/16883193](https://pubmed.ncbi.nlm.nih.gov/16883193)
- 21. Antibiotic-impregnated catheters associated with significant decrease in nosocomial and multidrug-resistant bacteremias in critically ill patients.**  
Hanna HA, Raad II, Hackett B, et al.  
*Chest*. 2003;124(3):1030-1038.  
[ncbi.nlm.nih.gov/pubmed/12970034](https://pubmed.ncbi.nlm.nih.gov/12970034)
- 22. New choices for central venous catheters: potential financial implications.**  
Shorr AF, Humphreys CW, Helman DL.  
*Chest*. 2003;124(1):275-284.  
[ncbi.nlm.nih.gov/pubmed/12853534](https://pubmed.ncbi.nlm.nih.gov/12853534)
- 23. Which antimicrobial impregnated central venous catheter should we use? Modeling the costs and outcomes of antimicrobial catheter use.**  
Marciante KD, Veenstra DL, Lipsky BA, et al.  
*American Journal of Infection Control*. 2003;31(1):1-8.  
[ncbi.nlm.nih.gov/pubmed/12548250](https://pubmed.ncbi.nlm.nih.gov/12548250)
- 24. Making health care safer: a critical analysis of patient safety practices.**  
Shojania KG, Duncan BW, McDonald KM, et al.  
*Evidence Report/Technology Assessment Summary*. 2001;(43):1-12.  
[ncbi.nlm.nih.gov/pubmed/11510252](https://pubmed.ncbi.nlm.nih.gov/11510252)

## SV Spectrum™ and antibiotic resistance

- 25. Clinical effectiveness and risk of emerging resistance associated with prolonged use of antibiotic-impregnated catheters: more than 0.5 million catheter days and 7 years of clinical experience.**  
Ramos ER, Reitzel R, Jiang Y, et al.  
*Critical Care Medicine*. 2011;39(2):245-251.  
[ncbi.nlm.nih.gov/pubmed/21057308](https://pubmed.ncbi.nlm.nih.gov/21057308)

**26. Clinical experience with minocycline and rifampin-impregnated central venous catheters in bone marrow transplantation recipients: efficacy and low risk of developing staphylococcal resistance.**

Chatzinikolaou I, Hanna H, Graviss L, et al.  
*Infection Control and Hospital Epidemiology*. 2003;24(12):961-963.  
[ncbi.nlm.nih.gov/pubmed/14700414](http://ncbi.nlm.nih.gov/pubmed/14700414)

**27. New technology for reducing infection and resistance in the ICU.**

Crnich CJ, Maki DG.  
*The Journal of Critical Illness*. 2002;17:48-51.  
[business.highbeam.com/4312/article-1G1-83373440/new-technology-reducing-infection-and-resistance-icu](http://business.highbeam.com/4312/article-1G1-83373440/new-technology-reducing-infection-and-resistance-icu)

**28. Comparison of an untreated vs. silver/chlorhexidine vs. rifampin/minocycline central venous catheter in reducing catheter-related bloodstream infections.**

Brooks K, Dauenhauer S, Nelson M.  
Abstract presented at: APIC 28th Annual Educational Conference and International Meeting; June 10-14, 2001; Seattle, WA.  
No online source.

## SV Spectrum<sup>™</sup> long-term silicone

**29. Comparison of antimicrobial impregnation with tunneling of long-term central venous catheters: a randomized controlled trial.**

Darouiche RO, Berger DH, Khardori N, et al.  
*Annals of Surgery*. 2005;242(2):193-200.  
[ncbi.nlm.nih.gov/pmc/articles/PMC1357724](http://ncbi.nlm.nih.gov/pmc/articles/PMC1357724)

**30. Long-term silicone central venous catheters impregnated with minocycline and rifampin decrease rates of catheter-related bloodstream infection in cancer patients: a prospective randomized clinical trial.**

Hanna H, Benjamin R, Chatzinikolaou I, et al.  
*Journal of Clinical Oncology*. 2004;22(15):3163-3171.  
[ncbi.nlm.nih.gov/pubmed/15284269](http://ncbi.nlm.nih.gov/pubmed/15284269)



**Spectrum**<sup>™</sup>

**RISK INFORMATION**

For important product safety information, please refer to the product specific Instructions for Use (IFUs) and/or User Manual provided with the product for any Instructions, Warnings, Indications, Precautions, Potential Adverse Effects, Contraindications and Cautions.

**CAUTION**

Federal law (USA) restricts these devices to sale by or on the order of a physician.



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