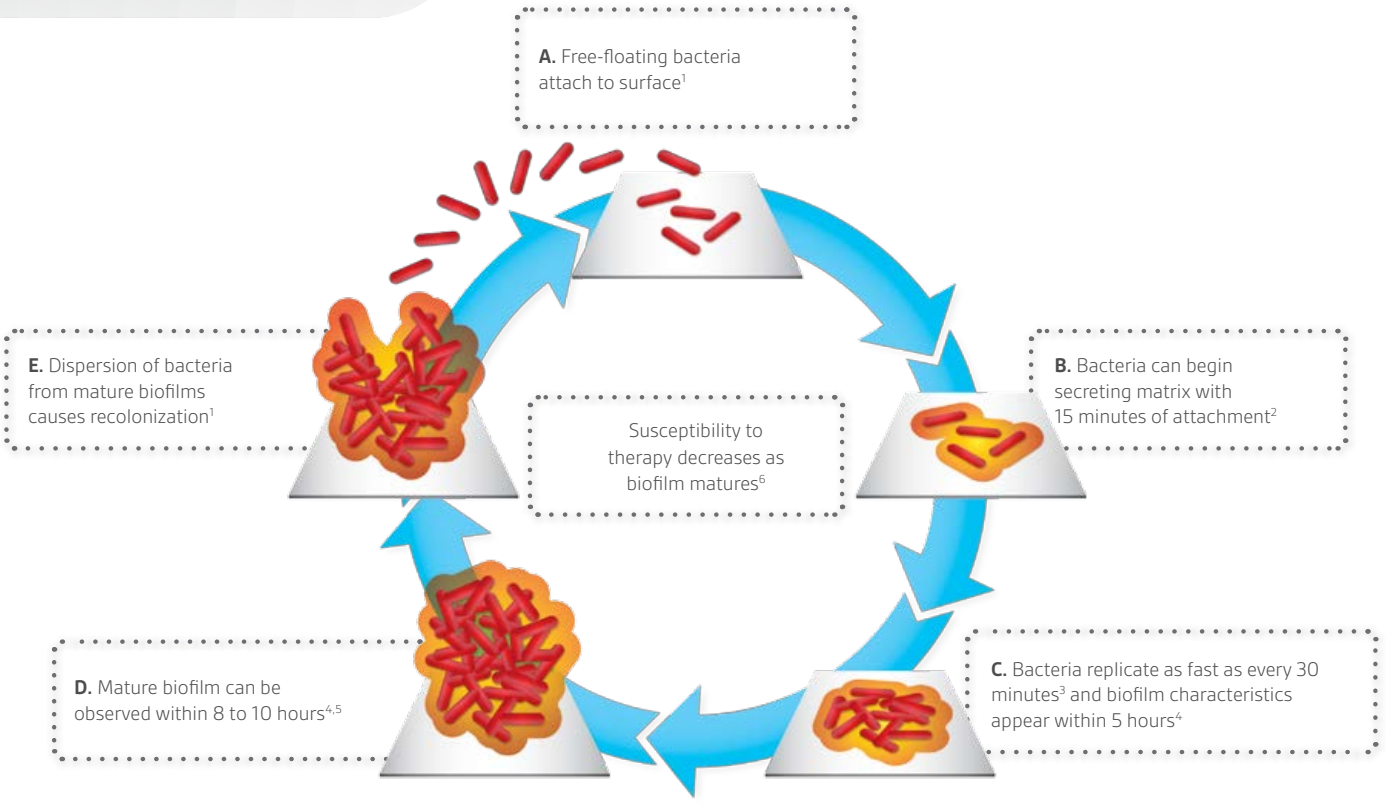
v.a.c. veraflo™

BIOBURDEN LIFECYCLE



Wound Care for Contaminated and Infected Wounds is a Multi-step Process Including:[7]

1. Patient and wound assessment
2. Initial debridement that removes necrotic and fibrinous tissue and decreases the bacterial load
3. Initiation of appropriate cleaning, maintenance debridement, and antimicrobial therapy
4. Removal of exudates
5. Increasing granulation tissue in preparation for wound closure

V.A.C. VERAFLO™ Therapy Delivers Wound Care Solutions that Can Help Break the Cycle

V.A.C. VERAFLO™ Therapy combines the benefits of V.A.C.® Therapy with automated topical wound solution instillation and removal. It can help with wound care steps 3-5 above by:

- Cleansing the wound through instillation of topical wound cleansers that can help soften and loosen wound debris
- Delivering topical antiseptic/antimicrobial wound solutions that can help reduce the bacterial population
- Removing solubilized wound debris and infectious materials, including planktonic bacteria, during the V.A.C.® Therapy Cycle
- Promoting granulation tissue formation and perfusion during the V.A.C.® Therapy Cycle, helping prepare the wound for closure
- Providing contained and controlled wound irrigation without the risk of bacterial aerosolization typically generated during manual lavage.[8]

KCI
An Acelity Company

Acelity™

Considerations when choosing the instillation cycle:

> Type of organisms > Amount of bioburden > Solution manufacturer's recommended soak time > Pain level

- The V.A.C. VERAFLO™ Therapy default settings are:

Soak Time: 10 min

V.A.C. VERAFLO™ Therapy: 3.5 hours at -125mmHg

Default setting provides a 7-times daily soak frequency

Note: These default settings fall within the range of clinical data available and should be adjusted based on clinical judgment. If PRONTOSAN® Wound Irrigation Solution is used, manufacturer guidelines recommend at least 15 min of soak time.

You have instillation choices; here's what others have done*

Solution Class	Solution	Instillation Therapy Settings	Patient/Wound Type
Biguanides	Polyhexanide 0.1% (Prontosan®)	Soak Time: 6 min V.A.C.® Therapy Time: 3.5 hr Soak Frequency: 7 times daily **or** Soak Time: 20 min V.A.C.® Therapy Time: 2 hr Soak Frequency: 10 times daily	Sixty-eight patients with infected wounds requiring hospitalization and surgical debridement:[9] - 34 patients in 6 min group - 34 patients in 20 min group
Isotonic solutions	Normal saline (Sodium chloride 0.9%)	Soak Time: 10 min V.A.C.® Therapy Time: 4-12 hours Soak Frequency: 2-6 times daily	131 patients with complex wounds (eg, open fracture, pressure ulcer, diabetic foot ulcer, and non-healing postoperative dehiscence wounds)[11]
	Lactated Ringer's solution	Soak Time: 15 min V.A.C.® Therapy Time: 3.5 hr Soak Frequency: 6-7 times daily	Two patients: - 74-year-old male with hypertension and an infected neuropathic foot wound - 56-year-old diabetic male with an infected foot wound[10]
Hypochlorite-based solutions	Dakin's solution (sodium hypochlorite 0.125%)	Soak Time: 10 min V.A.C.® Therapy Time: 50 min Soak Frequency: 24 times daily	Five patients with colonized venous stasis ulcers[12]
		Soak Time: 5 min V.A.C.® Therapy: 4 hr Soak Frequency: 6 times daily	26-year-old female with abdominal wound with exposed biological mesh[13]
	Microcyn®	Soak Time: 5-10 min V.A.C.® Therapy Time: 2-4 hr Soak Frequency: 6-12 times daily	Five patients with difficult-to-heal wounds: - 83-year-old male with post-operative contaminated wound at a previous ileostomy site[13,14] - 60-year-old male with a contaminated complex chest wall wound[13] - 70-year-old male with a hip wound[13] - 32-year-old male with several surgeries for bowel perforation and abdomen washout[13] - 70-year-old male with open infected transmetatarsal foot wound with osteomyelitis[13]
Silver nitrate	Silver nitrate (0.5%)	Soak Time: 1 sec V.A.C.® Therapy Time: 2 hr Soak Frequency: 12 times daily	Fifteen patients with complex open infected wounds[14]
Topical lidocaine (diluted in saline)	Lidocaine HCl 1% (Diluted to 0.05%)	Soak Time: 5 minutes V.A.C.® Therapy Time: 3 hr Soak Frequency: 8 times daily	48-year-old male with an infected (cellulitis and areas of necrosis) below-the-knee amputation wound[15]

1. Costerton JW, Stewart PS, Greenberg EP. Bacterial Biofilms: A Common Cause of Persistent Infection. Science. 1999; 284 (5418):1318-1322.
2. Davies DG, Geesey GG. Regulation of the Alginate Biosynthesis Gene algC in Pseudomonas aeruginosa during Biofilm Development in Continuous Culture. Appl Environ Microbiol. 1995; 61(3):860-867.
3. Cicmanec F, Holder IA. Growth of Pseudomonas aeruginosa in Normal and Burned Skin Extract: Role of Extracellular Proteases. Infect Immun. 1979; 25(2): 477-483.
4. Harrison-Balestra C, Cazzaniga BS, Davis SC, et al. A Wound-Isolated Pseudomonas aeruginosa Grows a Biofilm In Vitro Within 10 Hours and Is Visualized by Light Microscopy. Dermatol Surg. 2003: 29(6):631-635.
5. Schaber JA, Triffo WJ, Suh SJ, et al. Pseudomonas aeruginosa Forms Biofilms in Acute Infection Independent of Cell-to-Cell Signaling. Infect Immun. 2007; 75(8):3715-3721.
6. Wolcott RD, Rumbaugh KP, James G, et al. Biofilm maturity studies indicate sharp debridement opens a time-dependent therapeutic window. J Wound Care. 2010; 19(8):320-328.
7. Adapted from; Hess, C. (2008) Clinical Guide Skin & Wound Care (6TH ed.). Pennsylvania: Lippincott Williams & Wilkins.
8. Allen, D., et al., Comparison of tissue damage, cleansing and cross-contamination potential during wound cleansing via two methods: lavage and NPWT with instillation. Int Wound J, 2012. (e-pub ahead of print)
9. Kim PJ, Attinger CE, Steinberg JS, et al. The Impact of Negative-Pressure Wound Therapy with Instillation Compared with Standard Negative-Pressure Wound Therapy: A Retrospective, Historical, Cohort, Controlled Study. Plast. Reconstr. Surg.2014; 133: 709-716.
10. KCI V.A.C.Ulta™ Negative Pressure Wound Therapy System for V.A.C.VeroFlo™ Therapy Collection of Case Studies. 2012. DSL#12-0469.US (Rev 9/12).
11. Brinkert D, Ali M, Naud M, et al. Negative pressure wound therapy with saline instillation: 131 patient case series. Int Wound J. 2013 Dec; 10 Suppl 1:56-60.
12. Raad W, Lantis JC, Tyrie L, et al. Vacuum-assisted closure instill as a method of sterilizing massive venous stasis wounds prior to split thickness skin graft placement. Int Wound J. 2010; 7(2):81-85.
13. Wolvos T. The Use of Negative Pressure Wound Therapy with an Automated, Volumetric Fluid Administration: An Advancement in Wound Care. WOUNDS 2013; 25(3):75-83.
14. Gabriel A, Shores J, Heinrich C, et al. Negative pressure wound therapy with instillation: a pilot study describing a new method for treating infected wounds. Int Wound J. 2008. 5(3):399-413.
15. Wolvos T. Wound instillation-the next step in negative pressure wound therapy. Lessons learned from initial experiences. Ostomy Wound Manage. 2004 Nov; 50(11):56-66.

For more information, call **800-275-4524** or visit **acelity.com**

***CAUTION:** For illustration purposes only. Reference to a specific solution is not an endorsement of its clinical performance. Consult solution manufacturer instructions for specific use and safety information. V.A.C. VERAFLO™ Therapy is not indicated as a therapy for infected wounds. It can, however, be used as adjunctive treatment in the overall management of infected wounds. V.A.C. VERAFLO™ Therapy is not a replacement for systemic antibiotics. Individual results may vary.

The above topical solutions have been tested and found to be compatible with V.A.C. VERAFLO™ Therapy components. Other compatible topical solutions include benzalkonium chloride, octenidine dihidrochloride (Octenilin®), and mafenide acetate (Sulfamylon®). Contact solution manufacturers for suggested soak times.
NOTE: Specific indications, contraindications, warnings, precautions and safety information exist for KCI products and therapies. Please consult a physician and product instructions for use prior to application. Rx only.

KCI
An Acelity Company

Acelity™