

The UltraMIST[®] System

Removes Barriers to Healing

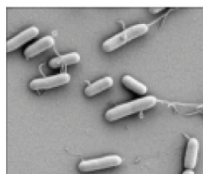
BACTERIA

High levels of bacteria delay healing.

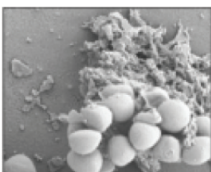
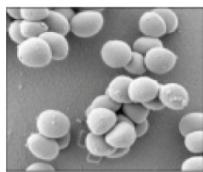
MECHANICAL STRESS CAUSED BY LOW-FREQUENCY ULTRASOUND RESULT IN BACTERIAL CELL DEATH AND REDUCTION OF BACTERIAL COUNT

SHAM CONTROL

MIST[®] THERAPY



Pseudomonas aeruginosa



Staphylococcus aureus

93.9%

RISK REDUCTION IN STAPHYLOCOCCUS AUREUS

99.6%

RISK REDUCTION IN ACINETOBACTE BAUMANNII

100%

RISK REDUCTION IN ESCHERICHIA COLI

Mayo Clinic¹

- 5 x 10⁶ bacteria on agar plates subjected to 2.5-minute treatments (UltraMIST[®] therapy or the Sham Control)
- Scanning Electron Microscopy photos of bacteria to characterize morphological effects after treatment

Multicenter trial²

- 11 patients with Stage III pressure ulcers showing no clinical signs of acute infection
- Pretreatment bacteria loads were >105 CFU/g tissue
- 13 different types of bacteria were cultured from prepunch biopsies
- Six MIST treatments
 - Three treatments/week (two-week duration)

ULTRAMIST THERAPY MECHANICALLY ALTERS BACTERIA CELL WALLS

ULTRAMIST THERAPY REDUCES BACTERIA IN HIGHLY COLONIZED STAGE III PRESSURE ULCERS

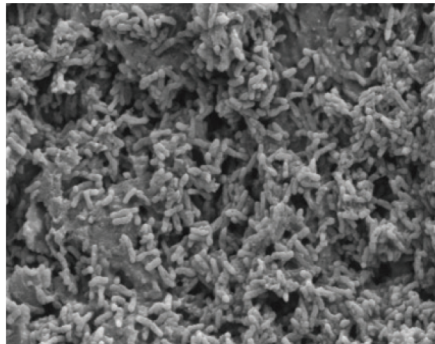
UltraMIST therapy can reduce a wide range of bacteria including the most difficult to treat: VRE, MRSA, Acinetobacter, E. coli.¹⁻³

MK2046 Rev A (08/2024)

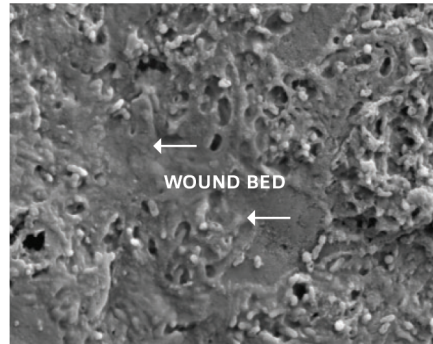
BACTERIA

Biofilm is a structured community of bacteria tightly enclosed within a self-produced exopolymeric matrix, and its presence is a significant barrier to healing. Since it is metabolically inactive, it is extremely hard to disrupt with topical/systemic antibiotics, antimicrobials, and/or antiseptics.

NLFU THERAPY DISRUPTED BIOFILM IN RABBIT EAR MODEL*



CONTROL (UNTREATED)



MIST® THERAPY

Northwestern University⁴

- Established rabbit ear biofilm model using *Pseudomonas aeruginosa*
- Three MIST treatments every other day over six-day period
- Scanning electron microscopy of images (15.03x) demonstrate dense amounts of bacterial cells in untreated wounds
- MIST-treated wounds show dramatically reduced density of biofilm bacteria and large amounts of visibly bare wound bed

NFLU disrupted biofilm to promote healing⁴

*Data was compiled utilizing MIST® therapy. UltraMIST® is the successor but maintains the same mechanism of action. *For more information, please refer to the UltraMIST® therapy instructions for use.*

1. Kavros SJ, Schenck EC. Use of noncontact low-frequency ultrasound in the treatment of chronic foot and leg ulcerations: a 51 patient analysis. *J Am Podiatr Med Assoc.* 2007;97(2):95-101. 2. Serena T, Lee SK, Lam K, Attar P, Meneses P, Ennis W. The impact of noncontact, nonthermal, low-frequency ultrasound on bacterial counts in experimental and chronic wounds. *Ostomy Wound Manage.* 2009;55(1):22-30. 3. Kavros SJ, Wagner SA, Wennberg PW, Cockerill FR. The effect of ultrasound mist transfer technology on virulent bacterial wound pathogens. Abstract. Presented at SAWC 2002. 4. Seth AK, Mustoe TA, Galiano et al. Noncontact, low-frequency ultrasound as effective therapy against *Pseudomonas aeruginosa*-infected biofilm wounds. *Wound Repair Regen.* 2013;21(2):266-274.