**Bacteria**

High levels of bacteria delay healing.

Mechanical stress caused by low-frequency ultrasound result in bacterial cell death and reduction of bacterial count.

<table>
<thead>
<tr>
<th>Sham Control</th>
<th>MIST® Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pseudomonas aeruginosa</td>
<td></td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Bacteria</th>
<th>Risk Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pseudomonas aeruginosa</td>
<td>93.9%</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>99.6%</td>
</tr>
<tr>
<td>Acinetobacter baumannii</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Mayo Clinic**
- 5 x 10^6 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 trial**
- 11 patients with Stage III pressure ulcers showing no clinical signs of acute infection
- Pre-treatment bacteria loads were >10^5 CFU/g tissue
- 13 different types of bacteria were cultured from pre-punch biopsies
- 6 MIST treatments
  - 3 treatments/week (2-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\(^1\text{-}^3\) including the most difficult to treat: *VRE, MRSA, Acinetobacter, E. coli*
Biofilm

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.

MIST® Therapy Reduced Bacteria in Highly Colonized Stage III Pressure Ulcers*

Northwestern University

- Established rabbit ear biofilm model using *Pseudomonas aeruginosa*
- 3 MIST treatments every other day over 6-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

*Data were compiled utilizing MIST Therapy. UltraMIST is the successor but maintains the same mechanism of action.

**UltraMIST**® Therapy can reduce a wide range of bacteria including the most difficult to treat: VRE, MRSA, Acinetobacter, E. coli


Phone: 1-844-963-2273
Email: customerservice@celularity.com

For more information, please contact Celularity at 1-844-963-2273 or refer to the UltraMIST Therapy Instructions for Use.