JumpStart

ANTIMICROBIAL WOUND DRESSING

Inspired by the body.

Powered by electricity.

Energized by results.®

Arthrex® Vet Systems

JumpStart™

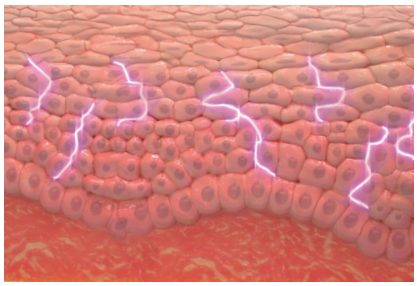
Antimicrobial Wound Dressing

Used in multiple applications, JumpStart provides sustained broad-spectrum antimicrobial efficacy and an optimal environment for wound healing.

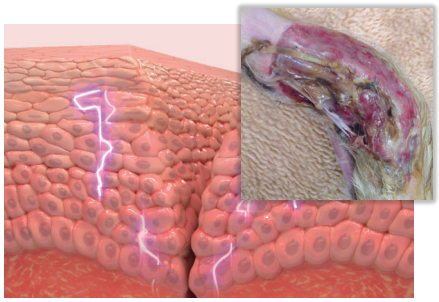
Inspired by the body.

Electricity Is Essential to Healing

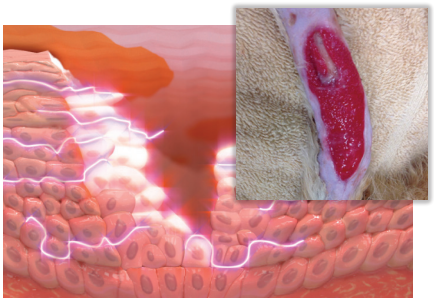
The body naturally creates and uses electrical energy to promote healing.[1]



An electric potential exists across intact skin.[2-4]



When skin is wounded, a change in electric potential occurs. This stimulus is the earliest guidance signal to initiate cell migration and re-epithelialization, and is essential to wound healing.[5]

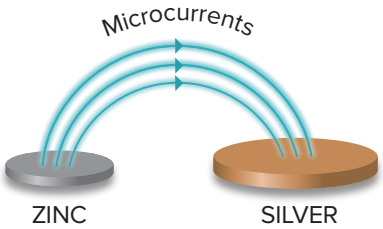


Designed to mimic the body's natural physiologic electric currents, JumpStart's embedded microcell batteries generate microcurrents in the presence of a conductive medium[6] to harness the power of electricity and support the body's natural electrical healing process.[7]

Versatile Application

JumpStart is used for a broad variety of superficial and full-thickness wounds:

- Surgical incisions
- Donor and/or recipient graft sites
- First- and second-degree burns
- Non-healing wounds
- Traumatic wounds
- Cuts and abrasions
- Punctures and lacerations
- Irritations and abscesses
- Proud flesh



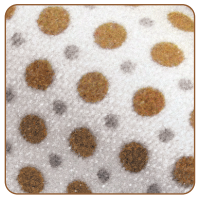
JumpStart antimicrobial dressing is powered by patented V.Dox™ technology – employs moisture-activated microcell batteries that wirelessly generate microcurrents.

JumpStart™ Dressings Product Features

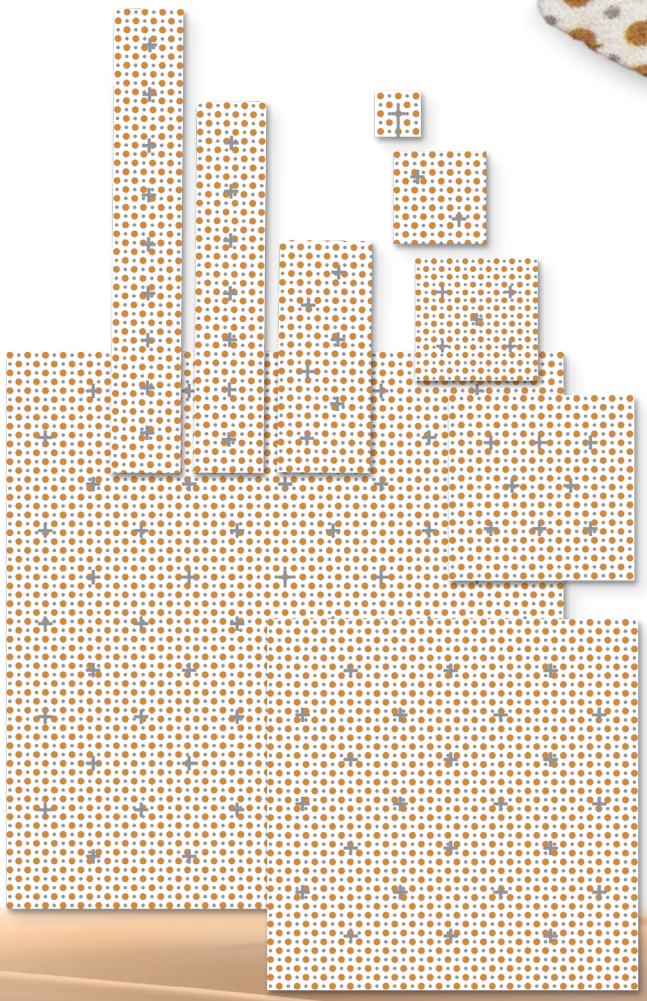
Advancing the Science of Animal Wound Care

JumpStart antimicrobial wound dressings use electricity to provide broad-spectrum antimicrobial protection for incisions and wounds in both small and large animals.

- Conforms easily to body contours for patient comfort
- Multiple sizes available to fit surgical and wound sites
- Can be cut to fit under secondary dressings
- Designed for multiday use for long-lasting protection



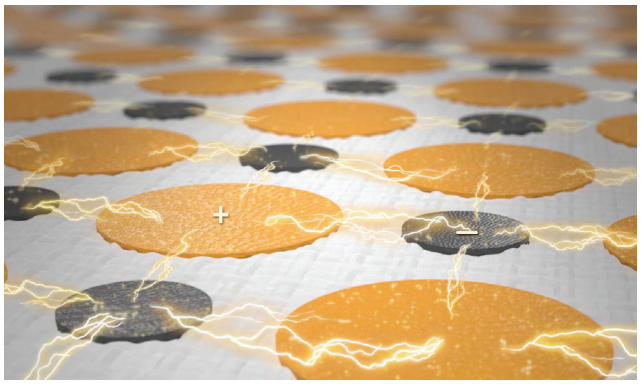
Proprietary islands of elemental silver and zinc form microcell batteries that generate electricity in the presence of moisture



Powered by electricity.

Augmenting the Body's Natural Healing Process

JumpStart™ Wound Dressings are an entirely new generation of incision and wound care solutions.

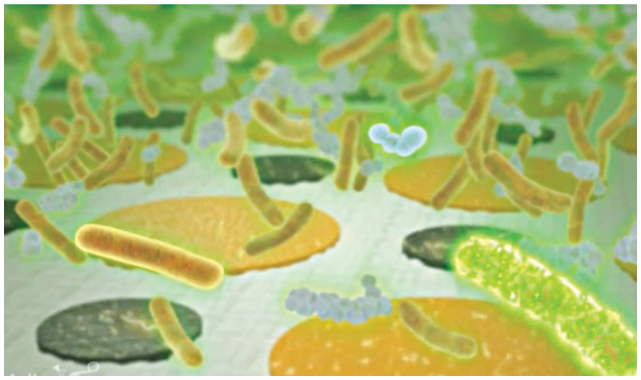


Advanced Microcurrent Technology

- Generates physiologic levels of microcurrent (2-10 µA) that are known to be necessary for healing[1]
- Flexible and portable with no need for external power source

Comfortable and Conformable

- Conforms to wound for maximum mobility and comfort
- Easily cut to fit
- Available in a variety of configurations, including JumpStart composite dressing and JumpStart non-adhesive single-layer dressings



Broad-Spectrum Antimicrobial Efficacy

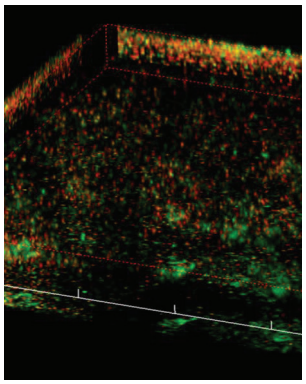
JumpStart's antimicrobial protection[8-10] creates an optimal environment for wound healing.[7]

- Provides effective and sustained antimicrobial efficacy[11]
- Kills antibiotic-resistant and biofilm-forming pathogens[8-10]
- No silver release into the bloodstream[6]

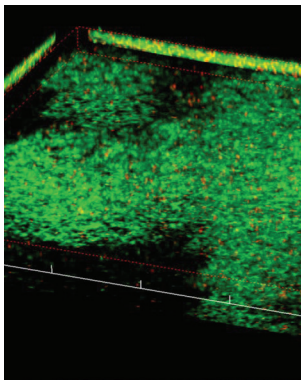
Energized by results.

Optimizing Outcomes

Studies have shown JumpStart™ reduces the risk of infection[9,10] and promotes the healing process[7] to optimize outcomes.



JumpStart dressing



Silver only

Reduce Risk of Infection

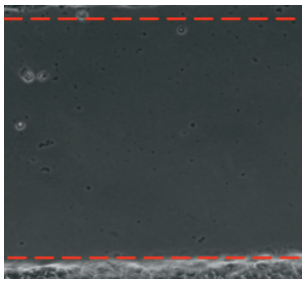
- Effective, sustained broad-spectrum antimicrobial efficacy for up to 7 days[11]
- Prevents bacterial growth[10]
- Electricidal antimicrobial efficacy vs silver alone[10]

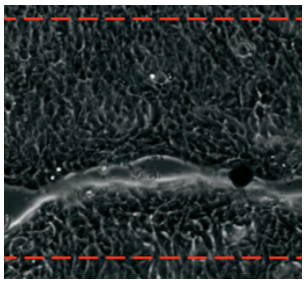
Live/dead fluorescence staining demonstrates bacterial killing of *P Aeruginosa* within JumpStart dressing compared to a standard silver-based dressing at 24 hours. Red = dead, Green = alive

Optimal Environment for Wound Healing

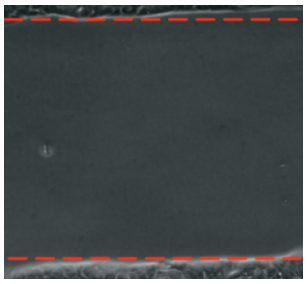
- Keratinocyte migration vs silver observed at 9 hours, in vitro scratch assay[7]

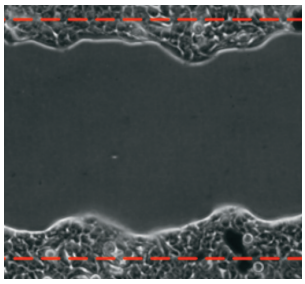
JumpStart Dressing

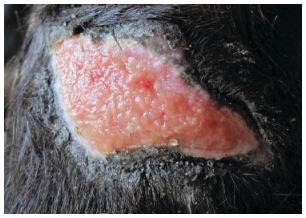




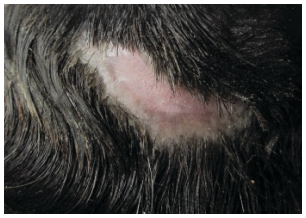
Silver Only







Initial wound



One month later

Promote Healing[12-15]

- Improved scar appearance vs standard dressings[13,15]
- 45% shortened wound healing time in a clinical study[14]
- Cleared by the US FDA for partial- and full-thickness wounds in humans

Electrical Antimicrobial Efficacy

JumpStart™ kills a broad spectrum of harmful pathogens, including multidrug-resistant[8] and biofilm-forming bacteria[9,10] to help reduce the risk of infection.

Biofilm-Producing Pathogens	Anti-Biofilm Efficacy
Acinetobacter baumannii	4
Corynebacterium amycolatum	4
Enterobacter aerogenes	4
Enterococcus faecalis	4
Escherichia coli	4
Klebsiella pneumoniae	4
Pseudomonas aeruginosa	4
Staphylococcus aureus	4
Staphylococcus epidermidis	4
Serratia marcescens	4

Antibiotic-Resistant Pathogens	Bactericidal Efficacy
Klebsiella pneumoniae (ESBL)	4
Pseudomonas aeruginosa (MDR)	4
Staphylococcus aureus (MRSA)	4
Vancomycin-resistant *Enterococcus raffinosus* (VRE 510)	4
Staphylococcus aureus (NRS1, NRS12, NRS73, NRS116)	4
Vancomycin-resistant *Staphylococcus aureus* (VRS1, VRS9, VRS11b)	4

Pathogens	Antimicrobial Efficacy
Acinetobacter baumannii	4
Acinetobacter calcoaceticus	4
Aspergillus niger	4
Candida albicans	4
Corynebacterium amycolatum	4
Corynebacterium xerosis	4
Enterobacter aerogenes	4
Enterobacter cloacae	4
Enterococcus faecalis	4
Escherichia coli	4
Klebsiella pneumoniae	4
Propionibacterium acnes	4
Pseudomonas aeruginosa	4
Serratia marcescens	4
Staphylococcus aureus	4
Staphylococcus epidermidis	4
Staphylococcus simulans	4
Streptococcus pneumoniae	4
Trichophyton rubrum	4

The tables show the efficacy of JumpStart dressings against various bacterial and microbial species in vitro, using AATCC Test Method 100-1993.[8]

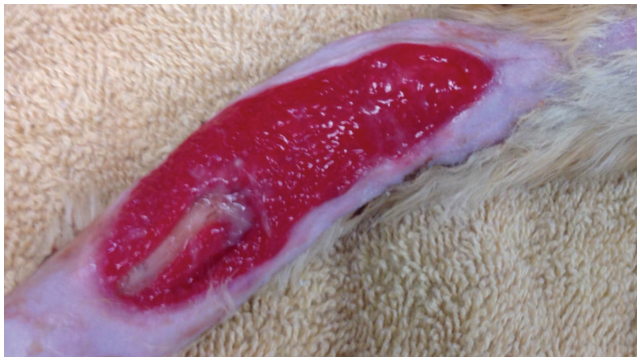
Some of the strains used for efficacy testing were clinical wound pathogens. In some of the studies more than one strain for each organism was tested. Anti-biofilm efficacy testing was conducted using poloxamer hydrogel and/or colony-drip flow reactor (CDFR) biofilm models.

Improved Clinical Outcomes

Equine - Initial

Equine - One month

Feline - Initial



Feline - Day 17

Canine - Initial

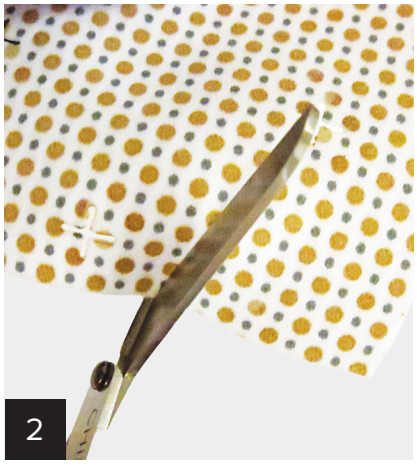
Canine - Week 1

Canine - Initial

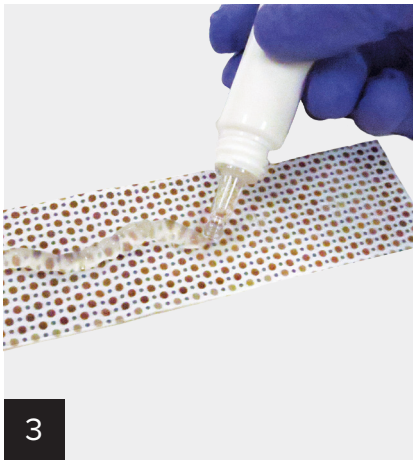
Canine - Week 1

Contact Layer Instructions for Use

Cleanse the wound area with an appropriate water-based wound cleanser.



If needed, cut to a shape that will extend 1 to 2 inches beyond the wound edge.



Moisten the JumpStart™ dressing with a sterile agent such as saline solution, water, or water-based wound gel (hydrogel).

Apply JumpStart dressing to the wound site, with the dotted side against and directly contacting the wound surface.

Cover JumpStart with two layers of moistened sterile gauze to maintain appropriate moisture levels. Secure in place with elastic adhesive tape.

To ensure even pressure distribution, apply cotton batting to the wounded area and surrounding tissue.

Brown gauze may be used to secure the cotton batting layer.

Apply a self-adherent bandage to secure the dressing in place and to extend its longevity.

Apply cotton elastic adhesive tape to the dressing edges to secure in place.

For full application instructions and safety information, please refer to JumpStart™ Wound Care with patented V.Dox™ technology Instructions for Veterinary Use.

References

1. Nuccitelli R. A role for endogenous electric fields in wound healing. *Curr Top Dev Biol.* 2003;58:1-26.
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11. 12. Harding AC, Gil J, Valdes J, Solis M, Davis SC. Efficacy of a bio-electric dressing in healing deep, partial-thickness wounds using a porcine model. *Ostomy Wound Manage.* 2012;58(9):50-55.
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13. Whitcomb E, Monroe N, Hope-Higman J, Campbell P. Demonstration of a microcurrent-generating wound care device for wound healing within a rehabilitation center patient population. *J Am Coll Clin Wound.* Spec. 2013;4(2):32-39. doi: 10.1016/j.jccw.2013.07.001. eCollection 2012 Jun.
14. Varhus JD. A novel bioelectric device enhances wound healing: an equine case series. *J Equine Vet Sci. 2013;34(3):421-430. 10.1016/j.jevs.2013.07.011.*

Ordering Information

JumpStart™ Contact Layer Dressing

Dressing Size (in)	Dressing Size (cm)	Qty/Box	Item Number
1 × 1 Fenestrated	2.5 × 2.5 Fenestrated	10	ABS-**4001**
1.5 × 8	3.5 × 20	10	ABS-**4005**
1.5 × 10	3.5 × 25	10	ABS-**4006**
2 × 2	5 × 5	10	ABS-**4002**
2 × 5	5 × 12.5	10	ABS-**4025**
3 × 3	7.5 × 7.5	10	ABS-**4003**
4 × 4	10 × 10	10	ABS-**4004**
8 × 8	20 × 20	1	ABS-**4008**
12 × 12	30.5 × 30.5	1	ABS-**4012**

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Arthrex® Vet Systems

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