



STERIS

PREVENT – PROTECT - HEAL

Preventing Surgical Site Infections



Steri3X is a non-antibiotic, microbicidal liquid that sterilizes the epidermis by killing all organisms (bacteria, fungus, and virus) on contact.

Cost of Surgical Site Infections

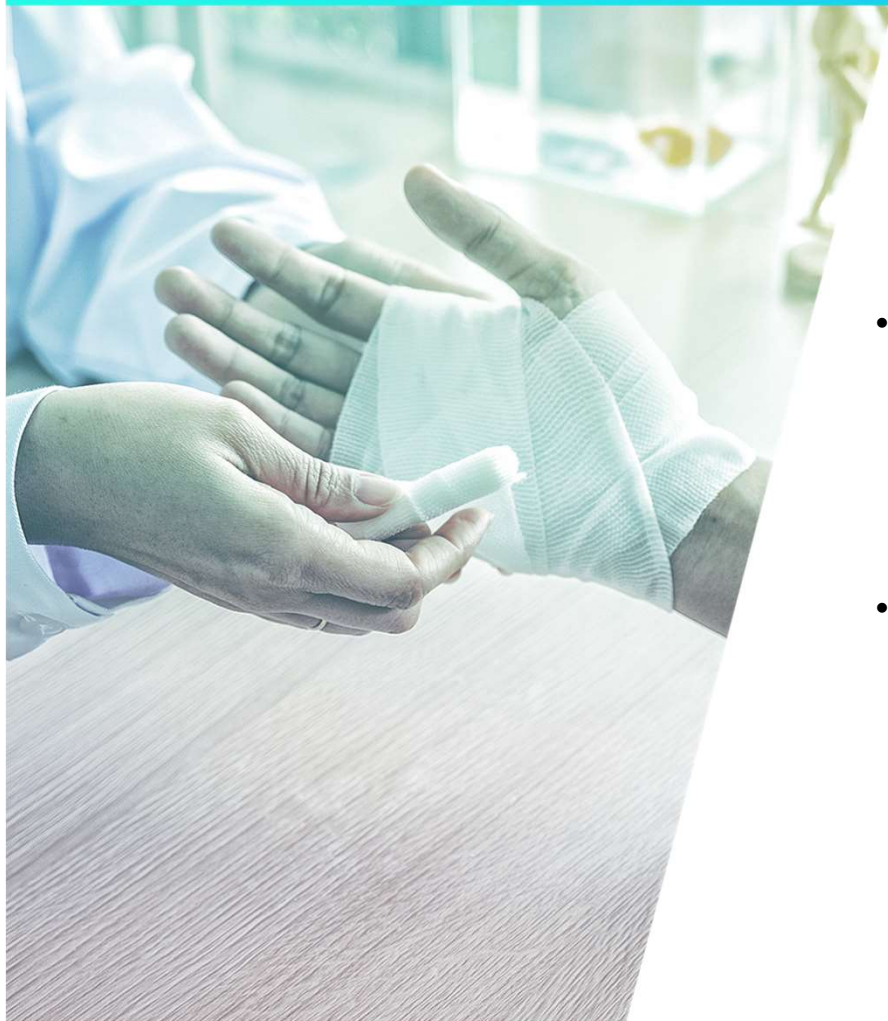
- ~300,000 SSIs/yr (17% of all HAI; second to UTI)
- ~7-10 additional postoperative hospital days
- 3 % mortality
- Up to \$10 billion annually in the US

CDC Surgical Site Infection (SSI) Toolkit: Anderson DJ, et al. Strategies to prevent surgical site infections in acute care hospitals. Infect Control Hosp Epidemiol 2008;29:S51-S61 for individual references

How Steri3X Works

Steri3X functions in three ways to Prevent, Protect and Heal:

- When applied to the epidermis, the microbicidal active ingredient kills any organism (including bacteria, fungus, and virus) on contact.
- When the polymer dries (in 30 seconds) it forms a protective film barrier which blocks harmful elements such as water, dirt, and germs from entering the wound.
- As the polymer dries it creates an optimal healing environment by releasing carbon dioxide which lowers the pH level of the wound while the capillary system brings oxygen to the wound that is captured by the protective film barrier.



Unique Product

- **Steri3X** fits easily into standard physician protocols because it can be reapplied several times a day or a single application can remain on the wound for up to ten (10) days.
- **Steri3X** will not adhere to wounds or new growth tissue so it will not disturb new skin growth when removed. This allows for frequent dressing changes without disrupting the healing process.



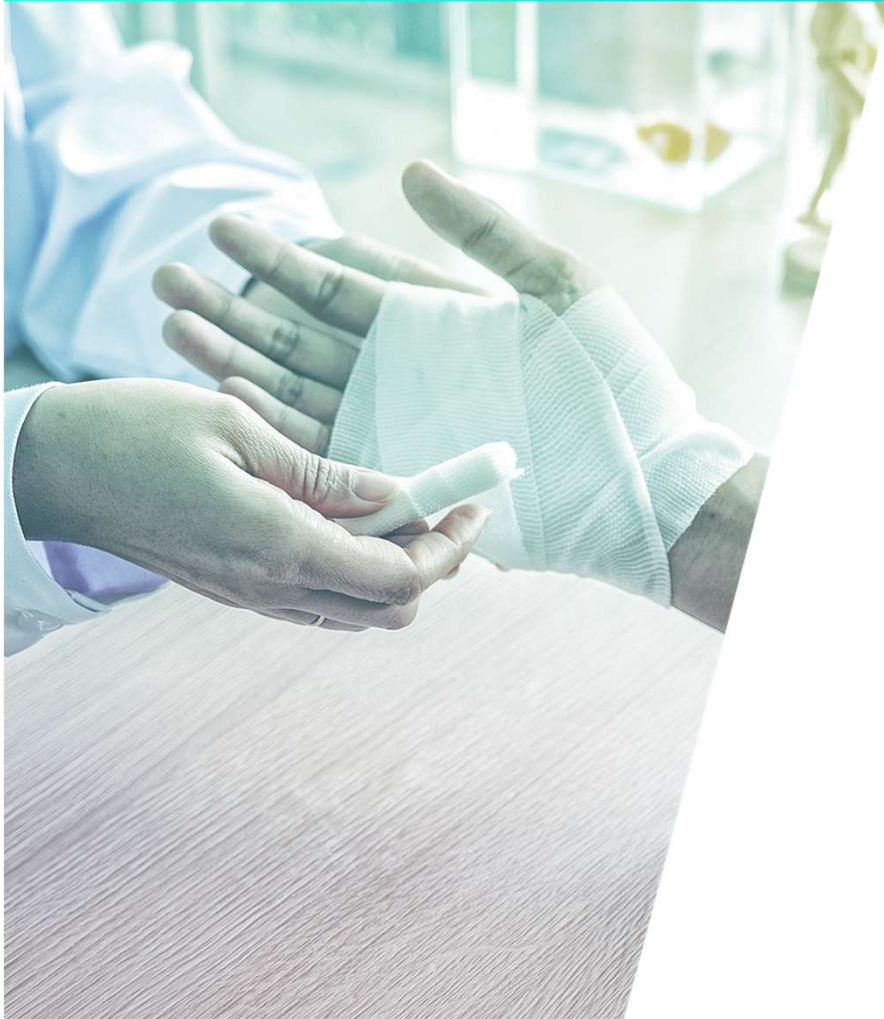
Advantages

- Elastomeric - will not degrade, split or crack when flexed or extended
- Non-flammable
- No known microbial resistance
- No known adverse effects
- No antibiotics



Uses for Steri3X

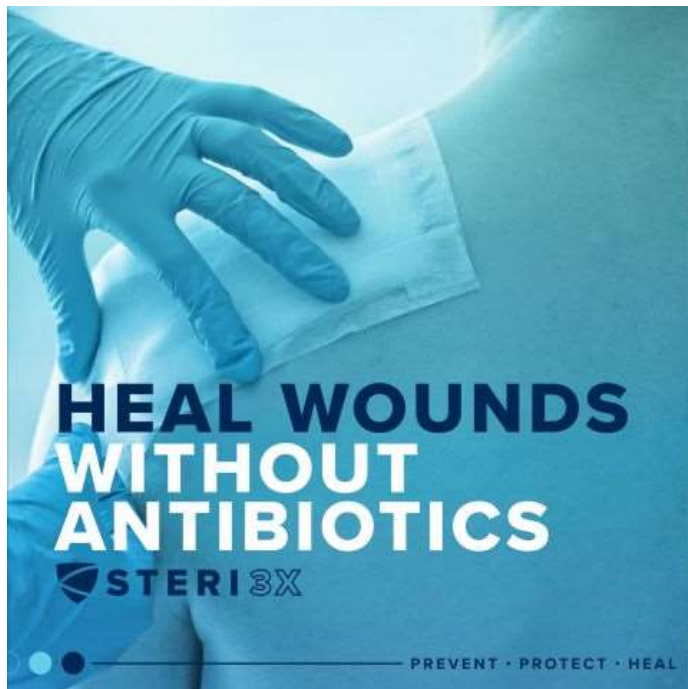
- Pre-surgical clean
- Post-surgical incisions
 - Cleanse and protective barrier
 - Can be applied over sutures, steri-strips and staples
- Ongoing wound care



Additional Uses

- Shingles
- Fungus
- Burns
- Scrapes, scratches, cuts, punctures

Antibiotic Resistance



As a microbicide that kills

Staphylococcus aureus, both MSSA (methicillin-sensitive *Staphylococcus aureus*) and MRSA (Methicillin-resistant *Staphylococcus aureus*), *Candida albicans*, *Aspergillus niger*, *Escherichia coli* (*E-coli*), *Pseudomonas aeruginosa*, *Candida auris* (*C. auris*), and other bacteria, fungus and virus on contact,

Steri3X is a non-antibiotic approach to preventing infection and a key resource in combating antibiotic resistance.



Randomized Controlled Trial (RCT)



Around the world, thirty-seven percent (37%) of live births are by caesarean section. The rate of surgical site infections (SSI) following caesarian sections ranges from 13% to 27% even in developed countries such as the United States.

L&D surgeons at Regional One Health in Memphis, Tennessee, a Level I Trauma Center are conducting a randomized controlled trial (RCT) addressing the reduction of surgical site infections (SSI) following caesarian section surgery.

Surgical Incision Post-Op Infection Healed in 48 Hours

Patient follow up four days post C-section. Bleeding and skin layer dehiscence following removal of staples. Steri3X applied.

Day 0



Day 2



Wound Non-Healing 75+ Days Healed in 1 Week

14-year-old boy with knee wound following bike accident. Treated with topical antibiotic. Healing stalled after one week. Treated with steroids. Healing started then again stalled after 3 weeks. Biofilm developed. Wound stagnant for 75 days. Steri3X applied. Healing began immediately.

Day 0



Day 2



Day 4



Day 6





Diabetic Wound Healed in 7 Days

80-year-old diabetic. Injuries to face from fall. Healed within one week of application of Steri3X.

Chronic Fungal Infection Healed in 7 Days

Youth athlete with chronic infection. Tried many different products and with no effect. Began applying Steri3X daily. Infection cleared in one week.

Day 0



Day 1



Day 3



Day 5



Day 7



Second Degree Burns Healed in 3 Weeks

30 year-old female. Second degrees burns on calf. Immediately began applying Steri3X daily.

Day 0



Day 1



Day 7



Day 14



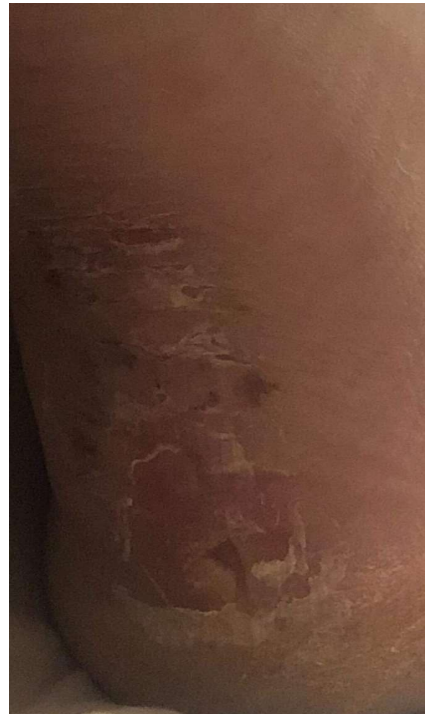
Day 21



Post-Op Infection Eliminated within 48 Hours

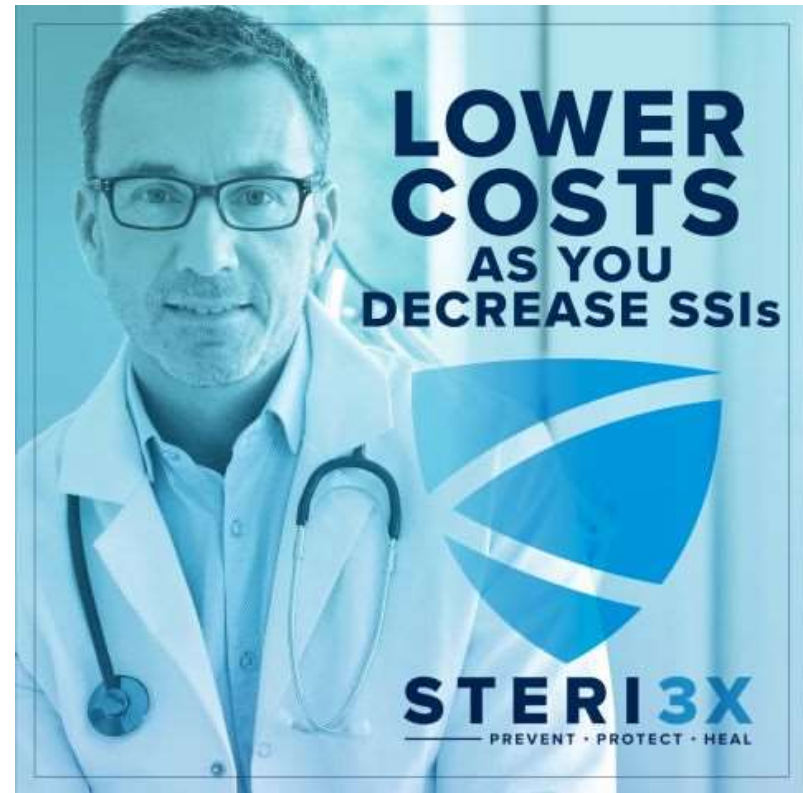
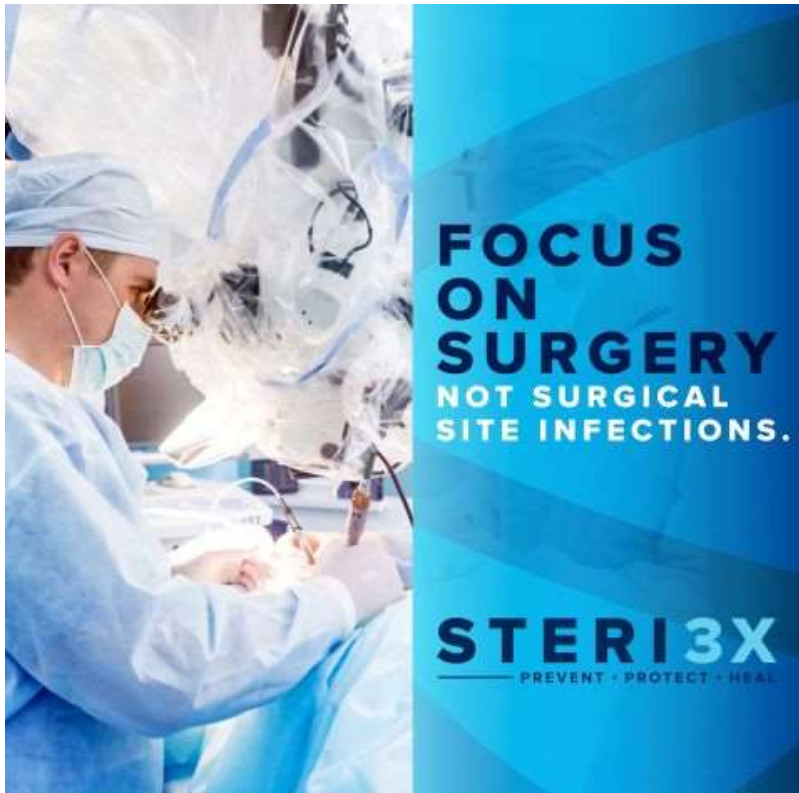
Patient developed infection after surgery.
Steri3X applied.
Within two days deep infection gone and
wound healing.

Day 2



Day 0







THE FUTURE OF WOUND CARE IS HERE

Non-antibiotic | Microbicidal liquid bandage | Functions in 3 ways to prevent, protect & heal

The Steri3X process promotes wound healing by **providing an optimum environment** for enhancing your patient's natural wound healing process.

As a microbicidal liquid, when applied to a clean, dry dermis, **Steri3X kills any organism** (including bacteria, fungus, and virus) on contact to prevent infection.

When the active ingredient evaporates (in 30 seconds) the polymer dries to form a **protective film barrier** which blocks harmful elements such as water, dirt, and germs from entering the wound preventing future infection.

As it dries (in less than one minute), carbon dioxide, which was infused into the liquid polymers during the manufacturing process, is released **lowering the pH level of the wound while the capillary system brings oxygen to the wound** that is captured by the protective film barrier and which serves as the fuel for wound healing.

Provides an immediate kill of the main causes of healthcare-associated infections, **without using antibiotics**, making it a key resource in combating antibiotic resistance.

SCAN WITH YOUR PHONE TO LEARN MORE ►





REVOLUTIONARY WOUND CARE WITHOUT ANTIBIOTICS

- FDA 510(k) cleared Class I Medical Device
- Steri3X provides an immediate kill of the main causes of healthcare-associated infections:
 - Staphylococcus aureus (staph)
 - Both MSSA (methicillin-sensitive Staphylococcus aureus) and MRSA (Methicillin-resistant Staphylococcus aureus)
 - Candida albicans, escherichia coli (E-coli), pseudomonas aeruginosa, and candida auris (C. auris). It has no known microbial resistance.
- Elastomeric to assist in wound management complicated by movement such as flexing, bending and creasing skin
- Can be applied on clean, dry skin or wounds and can be used with sutures or other products such as steri-strips and staples
- Fits easily into standard wound care protocols because it can be reapplied every day or a single application can remain on the wound for several days
- Will not adhere to wounds or new growth tissue and will not disturb new skin growth when removed
- Allows for frequent dressing changes without disrupting the healing process
- Non-flammable making it safe to use in the OR
- No known microbial resistance
- No known adverse effects

For more information or free samples, contact Gregory Bryan:
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Steri3x.com



MECHANISM OF ACTION

Steri3X is a wound management process that promotes wound healing by preventing infection and providing an optimum environment for enhancing the natural wound healing process. It functions in multiple ways to prevent infection and promote healing.

When Steri3X is applied the non-cytotoxic, microbicidal active ingredient lyses all organisms (including bacteria, fungus, and virus) on contact to prevent infection. The microbicidal performs this function by disrupting the proteins in the cell wall of these microorganisms. The microbicidal is proven to kill *Staphylococcus aureus*, both MSSA (methicillin-sensitive *Staphylococcus aureus*) and MRSA (Methicillin-resistant *Staphylococcus aureus*), *Candida albicans*, *Aspergillus niger*, *Escherichia coli* (*E-coli*), *Pseudomonas aeruginosa*, *Candida auris* (*C. auris*), and other bacteria, fungus and virus on contact. It has no known microbial resistance.

This eradication of organisms (eradication of bioburden) by the microbicidal active ingredient begins the process of the elimination of biofilm. Bioburden is the microorganism (bacteria, virus, fungus) load on a surface. Eradication of bioburden in and around a wound has a positive effect in preventing the formation of biofilm. Biofilm can form on any wound when microorganisms are not quickly killed by the immune system, antiseptics, or antibiotics. Preventing biofilms from forming is critical because they are commonly highly tolerant to antibiotics and biocides and thus difficult to eradicate. Because the biofilm protects the microorganisms from the natural immune response, it can be difficult for wounds to heal. Biofilms can delay wound healing and increase the risk of infection for patients. Steri3X prevents the formation of biofilm by preventing the colonization of microorganisms (biofilm).

The microbicidal active ingredient is the solvent that maintains the polymer in a liquid state. When the active ingredient contacts the skin (core surface area) above 50° F it evaporates due to core temperature and the polymer dries. When exposed to the air the solvent rapidly begins to evaporate allowing the polymer to dry. As the polymer begins to change from a liquid to a solid it releases into the wound carbon dioxide, that was infused into the polymers during the manufacturing process. The carbon dioxide assists in lowering the pH level of the wound to further promote healing by creating an environment more closely resembling that of normal human skin. The pH of skin is disturbed in wounds where the underlying tissue comes in contact with normal body fluids having a higher pH level. This lowering of the pH under the area of application can reduce microbial load on the wound surface.

Once the polymer fully dries, it creates an elastomeric, waterproof protective barrier which adheres to the skin. As the capillary system delivers oxygen to the wound, the occlusive dressing captures this oxygen which fuels the overall healing process. This barrier also prevents the migration of organisms and protects the wound from harmful elements (water, dirt, germs, microorganisms). This action in conjunction with the eradication of organisms function of the microbicidal active ingredient eliminates the presence of and prevents the migration of biofilm producing organisms into the wound bed preventing future infection.

The film barrier adheres to intact skin around clean wounds but not to open wound areas where new wound healing is taking place. This allows for reapplication as needed without concern for damage to newly formed tissue.



Instructions for Use

20mL Bottle

Application

- Completely clean and dry the dermis.
- Apply the liquid to the area being treated by dipping a cotton tip applicator into the bottle to remove the liquid and spread on the affected area, or by placing the liquid in a small stainless steel basin and using a raytek or cotton swab to apply the liquid.
- Cover the area that extends beyond the edges of the area being treated approximately 1 ½".
- Momentary stinging may occur.
- When used at room temperature, Steri3X will dry in less than 60 seconds and form a film barrier.
- Inspect the film barrier to ensure a complete, continuous covering of the wound and surrounding area.
- Allow Steri3X to dry completely before covering with additional dressing or adhesives. Dress the wound in your standard protocol.
- Reapply as needed. Steri3X can be used in any wound care protocol. It can be applied multiple times a day or be left on the area for up to ten (10) days. Remove and reapply or apply an additional layer over the existing film barrier.

Notes

- * Can be applied before and on top of sutures, staples or steri-strips.
- * Steri3X is not a skin glue/adhesive. Do not use to approximate skin edges.
- * Do not place in plastic basin.

Removal

- To remove the film, wash the area with soap and water and gently peel off.
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STERI3X
— PREVENT • PROTECT • HEAL —

(20 ml)



STERI 3X

For additional information:
<http://www.440innovatoions.com>