Preoperative Care

- Nose To Toes™ Systems
- 2% Chlorhexidine Gluconate Cloth

Sage Products is now part of Stryker.
A primary threat to surgical patients: surgical site infection

Surgical site infections (SSIs) are one of the most common healthcare-acquired infections and one of the most costly.\(^1\) SSIs occur after 2% to 5% of inpatient surgeries. That amounts to 160,000-300,000 SSIs/year.\(^2\) SSIs can also add 7-11 days to a patient’s length of stay\(^2\) and increase costs and mortality risk.\(^3\)

SSIs + Readmission: A Costly Problem

**Human Cost:**\(^3\)
- Twice as likely to die
- 60% more likely to spend time in an ICU
- Over 5 times more likely to be readmitted

**Financial Costs:**
- SSIs are the #1 most costly healthcare-acquired infection (HAI), costing hospitals more than $3 billion a year.\(^4\)
- Each SSI can increase costs by an average of $25,546; that number can reach over $100,000 in some cases.\(^5\)
- The Centers for Medicare and Medicaid Services (CMS) no longer reimburse hospitals for certain SSIs, including mediastinitis.\(^6\)

The #1 reason for unplanned readmission\(^7\)

A study published in JAMA found that the most common reason for unplanned readmission after surgery was surgical site infections (SSIs) at 19.5%.

**REFERENCES:**
The #1 source of surgical site infection: patients’ flora

The CDC implicates eight pathogens that cause 80% of the most common healthcare-acquired infections (HAIs). Endogenous flora can lead to surgical site infection (SSI) - one of the most common HAIs. In fact, the #1 cause of SSIs is *Staphylococcus aureus*, which can be found in bacterial reservoirs all over the body, including the skin, nose, and oral cavity.

Skin
The skin is a major reservoir for bacteria, including methicillin-resistant *S. aureus* (MRSA).

Nose
*S. aureus* colonization exists in 20-30% of healthy people.

Oral Cavity
Bacteria, including dental plaque, can colonize in the oropharyngeal area, and these pathogens can be aspirated into the lungs, causing infection.

REFERENCES:
Biofilms: A risk factor for pneumonia

Biofilms are a thin, usually resistant layer of microorganisms (such as bacteria) that form on and coat various surfaces.¹ Biofilms have been found to be involved in up to 80% of infections.² One biofilm commonly known as dental plaque is associated with various periodontal diseases, including gingivitis.

**Comprehensive oral hygiene addresses three key VAP risk factors.³**

- Bacterial colonization of the oropharyngeal area
- Aspiration of subglottic secretions*
- Colonization of dental plaque with respiratory pathogens

* Routine suctioning minimizes oral secretions, which can migrate to the subglottic area.

Early antiseptic pre-op prep strategies help reduce SSI risk

**Night Before Surgery**

Early prepping can begin at the patient’s home. 2% Chlorhexidine Gluconate (CHG) Cloths are easy to use, which may improve compliance to physician recommendations.

**Morning of Surgery**

Once patients arrive at the hospital, it is important to continue early prepping by addressing the three main reservoirs of bacteria—nose, oral cavity, and skin—before the patient enters the OR. Sage’s Nose To Toes™ kits help you address these reservoirs before surgery to reduce the risk of SSI.

**REFERENCES:**


A March 2015 study published in JAMA Surgery demonstrated a greater than 50% decrease in SSI rates in patients undergoing orthopedic implant surgery after implementation of a preoperative decontamination protocol featuring chlorhexidine gluconate (CHG) washcloths, intranasal povidone-iodine solution, and CHG oral rinse.⁴

A special report in the AORN Journal states, "The ability to control the nasal antisepsis process by having perioperative personnel perform it within 60 to 90 minutes before surgery reduces application and compliance variabilities that result when nasal decolonization is performed by the patient at home." ⁶
The clinical significance of Peridex oral rinse’s antimicrobial activity is not clear. Three months after Peridex oral rinse was discontinued, the number of bacteria in plaque had returned to baseline levels and resistance of plaque bacteria to chlorhexidine gluconate was equal to that at baseline. Clinical effectiveness and safety of Peridex oral rinse has not been established in children under age 18. Peridex oral rinse is indicated for use between dental visits as part of a professional program for the treatment of gingivitis. Patients with a known sensitivity to chlorhexidine gluconate should not use Peridex oral rinse. The effect of Peridex oral rinse on periodontitis has not been determined. Common side effects associated with the use of Peridex oral rinse include an increase in the staining of oral surfaces, an increase in calculus formation, and an alteration in taste perception. For additional information, please see the full prescribing information.

The Nose To Toes early prepping systems help address infection risk factors on three main reservoirs of bacteria: the nares, the oral cavity, and the skin.

**Sage Nose To Toes™ Pre-op Prepping Systems**

**Address bacteria of 3 reservoirs:**
Nares, Oral Cavity, and Skin

The Nose To Toes early prepping systems help address infection risk factors on three main reservoirs of bacteria: the nares, the oral cavity, and the skin.

**Nasal prepping**
- Alcohol-free
- Convenient, single-dose bottle
- Two-minute application fits easily into your preoperative process
- Provides 12 hours of persistence against 98.8% of total bacteria post-prep
- Antiseptic formulation won’t lead to resistance or impact antibiotic stewardship
- One hour efficacy – helps reduce bacteria in the nares just one hour after application

**Oral cleansing**
- 2 convenient oral rinse options
  - Single dose bottle of 3M™ Peridex™ (Chlorhexidine Gluconate 0.12%) Oral Rinse – effective against gingivitis, a risk factor for other infections. See label on page 8
  - Burst packet of Corinz®️ – provides antiseptic cleansing and moisturizing to reduce bacteria
- Ultra-Soft Toothbrush contains nylon bristles to gently remove plaque, debris, and oral secretions

**Skin prepping**
- The solution remains on the skin and provides antimicrobial activity for up to 6 hours after application
- Effective against MRSA, VRE, and Acinetobacter
- Fast-acting and effective against a broad spectrum of microorganisms

**REFERENCES:**
1. 3M Study-05-011100
2. 3M Study-05-011322

The clinical significance of Peridex oral rinse’s antimicrobial activity is not clear. Three months after Peridex oral rinse was discontinued, the number of bacteria in plaque had returned to baseline levels and resistance of plaque bacteria to chlorhexidine gluconate was equal to that at baseline. Clinical effectiveness and safety of Peridex oral rinse has not been established in children under age 18. Peridex oral rinse is indicated for use between dental visits as part of a professional program for the treatment of gingivitis. Patients with a known sensitivity to chlorhexidine gluconate should not use Peridex oral rinse. The effect of Peridex oral rinse on periodontitis has not been determined. Common side effects associated with the use of Peridex oral rinse include an increase in the staining of oral surfaces, an increase in calculus formation, and an alteration in taste perception. For additional information, please see the full prescribing information.
Sage 2% Chlorhexidine Gluconate (CHG) Cloths

Address multi-drug resistant organisms on your patient’s skin prior to surgery

Our skin-friendly cloths are easy to use and provide a uniform dose of CHG. Fast-acting, broad-spectrum, and alcohol-free, our 2% CHG stays on the skin to help prevent infection.

FDA approved 2% CHG formula

- Rinse-free formula provides antimicrobial activity up to 6 hours after application
- Cleans and moisturizes with surfactants and humectants
- Fast-acting and effective against a broad spectrum of microorganisms
- Active in the presence of blood and other organic matter

FDA approved applicator cloth

- Provides a uniform dose (500mg of CHG in each cloth) of CHG to the skin
- Easy to use for a patient with impaired mobility
- Replaces bottled solutions, which can be rinsed off in the shower
- Nonabrasive, textured cloth removes debris, allowing CHG to thoroughly cover prep area
- No drips, runs, or pooling

Prep Check™ label

- Peel-and-stick label helps improve communication by notifying staff that a patient’s skin has been prepped
- Enhances documentation procedures

up to 6 HOURS of persistence
Effective against prevalent SSI-causing pathogens\(^1,*\)

<table>
<thead>
<tr>
<th>Gram-Positive Pathogen</th>
<th>Sage 2% CHG Cloth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staphylococcus aureus (including MRSA)</td>
<td>✓</td>
</tr>
<tr>
<td>Enterococcus faecalis &amp; faecium (including VRE)</td>
<td>✓</td>
</tr>
<tr>
<td>Coagulase-negative staphylococci</td>
<td>✓</td>
</tr>
<tr>
<td>Streptococcus pneumoniae &amp; pyogenes</td>
<td>✓</td>
</tr>
<tr>
<td>Various other gram-positive aerobes</td>
<td>✓</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Gram-Negative Pathogen</th>
<th>Sage 2% CHG Cloth</th>
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</thead>
<tbody>
<tr>
<td>Acinetobacter baumannii</td>
<td>✓</td>
</tr>
<tr>
<td>Bacteroides fragilis</td>
<td>✓</td>
</tr>
<tr>
<td>Enterobacter aerogenes</td>
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<tr>
<td>Escherichia coli</td>
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<tr>
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<tr>
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<td>✓</td>
</tr>
<tr>
<td>Serratia marcescens</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Fungi</th>
<th>Sage 2% CHG Cloth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candida Albicans</td>
<td>✓</td>
</tr>
</tbody>
</table>

* In vitro testing.

No-rinse 2% CHG cloth leaves more CHG on skin than 4% solution

A study published in the American Journal of Infection Control found that 2% CHG impregnated cloths left more CHG on the skin than 4% CHG antiseptic solution.\(^2\)

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**REFERENCES:**

1. Time Kill and MIC Testing conducted by an independent laboratory; data on file.

**APIC:** “A rinse-free Cloth has been introduced as an alternative to CHG showers, and some data suggest ease of use and improved patient compliance as well as reduced rates of SSI.”\(^3\)

**SHEA:** “To gain the maximum antiseptic effect of chlorhexidine, adequate levels of CHG must be achieved and maintained on the skin. Typically, adequate levels are achieved by allowing CHG to dry completely.”\(^4\)
Pre-Op Prepping Systems product ordering

With 3M™ Peridex™ (Chlorhexidine Gluconate 0.12%) Oral Rinse

Skin antisepsis, oral cleansing, nasal antisepsis
3 Packages containing:
2 Cloths 2% Chlorhexidine Gluconate* Patient Preoperative Skin Preparation
1 Package containing:
1 Single dose bottle of 3M™ Peridex™ (Chlorhexidine Gluconate 0.12%) Oral Rinse
1 Ultra-Soft Toothbrush
1 Untreated Swab
1 Package containing:
1 Single dose bottle of 3M™ Skin and Nasal Antiseptic (Povidone-Iodine Solution 5% w/w (0.5% available iodine) USP) Patient Preoperative Skin Preparation
4 Sterile Swabs
20 systems/case
Reorder #9011

Skin antisepsis and oral cleansing
3 Packages containing:
2 Cloths 2% Chlorhexidine Gluconate* Patient Preoperative Skin Preparation
1 Package containing:
1 Single dose bottle of 3M™ Peridex™ (Chlorhexidine Gluconate 0.12%) Oral Rinse
1 Ultra-Soft Toothbrush
1 Untreated Swab
20 systems/case
Reorder #9001

Skin antisepsis and nasal antisepsis
3 Packages containing:
2 Cloths 2% Chlorhexidine Gluconate* Patient Preoperative Skin Preparation
1 Package containing:
1 Single dose bottle of 3M™ Skin and Nasal Antiseptic (Povidone-Iodine Solution 5% w/w (0.5% available iodine) USP) Patient Preoperative Skin Preparation
4 Sterile Swabs
20 systems/case
Reorder #9012

With Corinz® Antiseptic Cleansing and Moisturizing Oral Rinse

Skin antisepsis, oral cleansing, nasal antisepsis
3 Packages containing:
2 Cloths 2% Chlorhexidine Gluconate* Patient Preoperative Skin Preparation
1 Package containing:
1 7ml Burst Pouch of Corinz® Antiseptic Cleansing and Moisturizing Oral Rinse
1 Ultra-Soft Toothbrush
1 Applicator Swab with sodium bicarbonate
1 Package containing:
1 Single dose bottle of 3M™ Skin and Nasal Antiseptic (Povidone-Iodine Solution 5% w/w (0.5% available iodine) USP) Patient Preoperative Skin Preparation
4 Sterile Swabs
20 systems/case
Reorder #9010

Skin antisepsis and oral cleansing
3 Packages containing:
2 Cloths 2% Chlorhexidine Gluconate* Patient Preoperative Skin Preparation
1 Package containing:
1 7ml Burst Pouch of Corinz® Antiseptic Cleansing and Moisturizing Oral Rinse
1 Ultra-Soft Toothbrush
1 Applicator Swab with sodium bicarbonate
20 systems/case
Reorder #9009

2% Chlorhexidine Gluconate* Cloth product ordering

2% Chlorhexidine Gluconate* Cloth
2 Cloths per package
cloth size: 7.5” x 7.5”
96 packages/case
Reorder #9705

2% Chlorhexidine Gluconate* Cloth
2 Cloths per package
cloth size: 7.5” x 7.5”
48 packages/case
Reorder #9706

2% Chlorhexidine Gluconate* Cloth
3 Individually wrapped packages
(2 cloths per package);
cloth size: 7.5” x 7.5”
32 packages/case
Reorder #9707

*Equivalent to 500mg chlorhexidine gluconate per cloth
3M and Peridex are trademarks of 3M
Peridex™ (Chlorhexidine Gluconate 0.12%) Oral Rinse

DESCRIPTION: Peridex™ Chlorhexidine Gluconate 0.12% Oral Rinse is an oral rinse containing 0.12% chlorhexidine gluconate (1, 11-hexamethylene bis [5-(p-chlorophenyl) biguanide] di-D-gluconate) in a base containing water, 11.5% alcohol, glycerin, PEG-40 sorbitan diisostearate, flavor, sodium saccharin, and FD&C Blue No. 1. Peridex is a near-neutral solution (pH range 5–7). Chlorhexidine gluconate is a salt of chlorhexidine and gluconate acid. Its chemical structure is:

\[
\text{CHLORHEXIDINE}
\]

Peridex therapy should be initiated directly following a dental prophylaxis. (CHLORHEXIDINE)

Ingestion of 1 or 2 ounces of Peridex by a small child (~10 kg body weight) might result in gastric irritation. Detectable levels of chlorhexidine gluconate were not present in the plasma of these subjects. The mean plasma level of chlorhexidine gluconate reached a peak of 0.206μg/g in Peridex users. The excretion of chlorhexidine in the urine was noted in clinical testing in Peridex users compared with control users. It is not known if Peridex use was discontinued, the number of subjects or plasma had reached to baseline levels and resistance of plaque bacteria to chlorhexidine gluconate was not found after baseline.

PHARMACOLOGIC DATA: Peridex provides antiplaque activity during clinical decay. The clinical effectiveness of Peridex has been determined based on the number of colonies of certain assessed bacteria, both aerobic and anaerobic, ranging from 54.0% through 89.0% as seen in six months. Use of Peridex or a six-month clinical study did not result in any significant changes in bacteria resistance, except for potential opportunities for other adenine changes in the oral microbial ecosystems. Nine months after Peridex use was discontinued, the number of subjects and plasma had reached to baseline levels and resistance of plaque bacteria to chlorhexidine gluconate was not found after baseline.

PHARMACOKINETICS: Pharmacokinetic studies with Peridex indicate approximate 39% of the active ingredient, chlorhexidine gluconate, is retained in the oral cavity following the 0.5 oz rinse. The retained drug is slowly released into the oral fluids. Studies conducted on human subjects and animals have determined chlorhexidine (chlorhexidine gluconate) is poorly absorbed from the gastrointestinal tract. The mean plasma level of chlorhexidine gluconate reached a peak of 0.206μg/g in human 30 minutes after they ingested a 0.5 oz rinse of the drug. Detectable levels of chlorhexidine gluconate were not present in the plasma of these subjects 12 hours after the compound was administered. Detectable levels of chlorhexidine glucoside occurred permanently followed by the zero hour. Less than 1% of the oral concentration was eliminated in the urine.

INDICATIONS AND USAGE: Peridex is indicated for use between dental visits as part of a professional program for the treatment of gingivitis as characterized by redness and swelling of the gingiva, including gingival bleeding upon probing. Peridex has not been tested among patients with acute necrotizing ulcerative gingivitis (ANUG). For patients having colonic polyposis and polyposis, see PRECAUTIONS.

PRECAUTIONS:

INDICATIONS:

1. For patients having coexisting gingivitis and periodontitis, the presence or absence of gingival inflammation following six months of Peridex use was assessed by measurement of plaque index and rebound of plaque resistance. Numbers of plaque bacteria and the presence of gingival inflammation following six months of Peridex use was assessed by measurement of plaque index and rebound of plaque resistance.

2. Peridex can cause staining of oral surfaces, such as tooth surfaces, restorations, and the dorsum of the tongue. Not all patients will experience staining. Stain will be more pronounced in patients who have heavier accumulations of unremoved plaque. Stain resulting from use of Peridex does not appear to affect health of the gingiva or other oral tissues. Stain can be removed from most tooth surfaces by conventional prophylactic techniques. Additionally, several patients may experience an alteration in taste perception while undergoing treatment with Peridex. Rare instances of permanent taste alteration following Peridex use have been reported via postmarketing product surveillance.

PHARMACOKINETICS: Chlorhexidine gluconate is rapidly absorbed from the oral cavity. In a drinking water study in rats, carcinogenic effects were not observed at doses up to 2580 ppm and 50ppm, respectively. No evidence of impaired reproduction was observed when chlorhexidine gluconate was administered to dams at doses that were over 10 times greater than that which would result from a person’s ingesting 30ml (1 oz) daily orally of Peridex per day. Pediatric Use: Clinical effectiveness and safety of Peridex have not been established in children under the age of 12. For children of 0–12 years of age, Peridex should not be used by persons who have a history of allergic reactions to Peridex ingredients.

ADVERSE REACTIONS: Most common side effects associated with chlorhexidine gluconate oral rinses are:

1. Some patients may experience an alteration in taste perception while undergoing treatment with Peridex. Rare instances of permanent taste alteration following Peridex use have been reported via postmarketing product surveillance.

2. Peridex can cause staining of oral surfaces, such as tooth surfaces, restorations, and the dorsum of the tongue. Not all patients will experience staining. Stain will be more pronounced in patients who have heavier accumulations of unremoved plaque. Stain resulting from use of Peridex does not appear to affect health of the gingiva or other oral tissues. Stain can be removed from most tooth surfaces by conventional prophylactic techniques. Additional effects may be required to complete the prophylaxis. Treatment should be used when preparing to patients with arterial facial vasomotor deficiencies with rough surfaces or in infants. If soft tissues cannot be removed from these oral surfaces, painful, Peridex users should be excluded from Peridex treatment if permanent discoloration is unacceptable. Stain in these areas may be difficult to remove by dental prophylaxis and in some cases may necessitate replacement of these restorations.

3. Some patients may experience an alteration in taste perception while undergoing treatment with Peridex. Rare instances of permanent taste alteration following Peridex use have been reported via postmarketing product surveillance.

4. Peridex therapy should be initiated directly following a dental prophylaxis. (CHLORHEXIDINE)

5. Peridex should not be used by persons who are known to be hypersensitive to chlorhexidine or any of the other ingredients.

WARNINGs: The effects of Peridex on pregnancy have not been determined. An increase in supragingival calculus was noted in clinical testing in Peridex users compared with control users. It is not known if Peridex use results in an increase in subgingival calculus. Calculus deposits should be removed by a dental prophylaxis at intervals not greater than six months. Ankylogus, as well as various allergic reactions, have been reported during premarketing use with clinical products containing chlorhexidine. See CONTRAINDICATIONS.

INGREDIENTS: 0.12% chlorhexidine gluconate in a base containing water, 11.5% alcohol, glycerin, PEG-40 sorbitan diisostearate, flavor, sodium saccharin, and FD&C Blue No. 1.

Rx only

KEEP OUT OF REACH OF CHILDREN

0.5 fl oz (15ml)

PERIDEX™ (CHLORHEXIDINE GLUCONATE 0.12%) ORAL RINSE

Your dentist’s prescription for Peridex™ (Chlorhexidine Gluconate 0.12%) Oral Rinse to treat your gingivitis, to help reduce the number and swelling of your gums, and also to help you control any gum bleeding. Use Peridex regularly, as directed by your dentist, in addition to daily brushing. Spat out after use. Peridex should not be swallowed. If you develop allergic symptoms such as rash, itch, generalized swelling, breathing difficulties, light-headedness, rapid or weak pulse, severe abdominal or diarrhea, seek medical attention immediately. Peridex should not be used by persons who have a tendency to or are a component of Peridex. Peridex may cause some tooth discoloration or increase in tartar accumulation, which can be removed by your dentist for removal of any stain or tartar at least every six months or more frequently if your dentist advises.

Both state and local governments should be removed by your dentist for situations where Peridex may cause punctate discoloration or staining on soft flesh tissues.

If you have any questions or comments about Peridex, contact your dentist, pharmacist or 3M ESPE Dental Products toll free at 800-323-2220.

Call your healthcare provider for medical advice about side effects. You may report side effects to FDA at 1-800-332-1088.

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3M ESPE Dental Products

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Simple Interventions. **Extraordinary Outcomes.™**

Our market-leading products solve real problems in the healthcare industry. We develop and manufacture these products to make it easier for you to deliver essential patient care, while helping to prevent infections, skin breakdown, and reduce the risk of staff injury.

- **Comfort Bath® Cleansing Washcloths:** Eliminate the contamination risk from bath basins.
- **Prevalon™ Heel Protector:** Help reduce the risk of heel pressure ulcers by continuously offloading the heel.
- **Q•Care® Oral Cleansing and Suctioning Systems:** Provide comprehensive oral care.
- **Prevalon™ Mobile Air Transfer System:** Help reduce the risk of staff injury.
- **Prevalon™ Seated Positioning System:** Address sacral pressure ulcer risk and reduce the risk of staff injury.
- **M-Care® Meatal Cleansing Cloths:** Standardize patient hygiene protocol with a clean technique.
- **Comfort Shield® Barrier Cream Cloths:** Help reduce your risk for incontinence-related skin problems.
- **Prevalon™ AirTAP Patient Repositioning System:** Helps reduce sacral pressure ulcer risk and reduces the risk of staff injury.
- **Comfort Bath® Cleansing Washcloths:** Eliminate the contamination risk from bath basins.
- **Prevalon™ Heel Protector:** Help reduce the risk of heel pressure ulcers by continuously offloading the heel.
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