

HIBI® GUIDE

Frequently asked questions about CHG, HibiClens®,
and the Hibi® Universal Bathing System (HUBS).

FAQ.

Frequently asked questions about CHG, HibiClens® and the Hibi® Universal Bathing System (HUBS).

1 Why should we use HibiClens® antiseptic skin cleanser when we already have other CHG solutions?

HibiClens® is a 4% chlorhexidine gluconate (CHG) skin cleanser that, when used with the Hibi® Universal Bathing System (HUBS), supports a full wash-lather-rinse routine, giving patients the feeling of a real bath. Unlike CHG wipes, our solution use a rinse-based process that also helps remove spores and debris from the skin, supporting a thorough and consistent cleansing.

2 Why is rinsing important in CHG bathing?

Rinsing physically removes dirt, debris, and spores from the skin. For infections like *Clostridioides difficile* or *C. diff.*, where CHG alone is insufficient, a full rinse is essential, especially since wipe-only methods have shown limited efficacy.¹

3 Is HibiClens® safe for daily use?

Yes. In irritation studies, it scored the lowest among all tested CHG products, earning a Class 2 rating: "Probably mild in normal use."² Incorporating daily bathing into care routines is one way facilities can support consistent hygiene and infection prevention efforts.

4 Can CHG be included in SSI bundles for pre-op and post-op bathing?

HibiClens® antiseptic skin cleanser can fit into any SSI bundle or specialty. Pre- and post-op use of HibiClens® as part of a bundle has been shown to reduce the risk of SSIs and readmissions once the patient returns home, at which point we can no longer control the environment.^{3,4,5}

The most cost-efficient way to use HibiClens® is to bathe with it the night before and morning of a procedure, as well as post-op for wound cleansing.^{3,4,5}

Sources:

1. Kassakian SZ, Mermel LA, Jefferson JA, et al. Impact of Chlorhexidine Bathing on Hospital-Acquired Infections among General Medical Patients. *Infect Control Hosp Epidemiol.* 2011;32(3):238-243.
2. Irritation Study Summary, Mölnlycke Health Care, 2017.
3. Colorectal Surgery Surgical Site Infection Reduction Program: A National Surgical Quality Improvement Program Driven Multidisciplinary Single-Institution Experience, Robert Cima, MD, et al.; on behalf of the Colorectal Surgical Site Infection Reduction Team, Mayo Clinic, 2013.
4. Colorectal Surgical Site Infection Prevention Kits Prior to Elective Colectomy Improve Outcomes, Sarah E. Deery, MD, MPH, et al, *Annals of Surgery*, January 24, 2019
5. Creating a Surgical Site Infection Prevention Bundle for Patients Undergoing Cesarean Delivery, Laura Money, MSN, RN, et al, *AORN Journal*, October 2018.

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5 We've been using other seemingly convenient solutions, but some units still have issues with *clostridioides difficile*. How are HibiClens® and HUBS different?

For infections like *clostridioides difficile*, where CHG alone is insufficient, a full rinse is essential, especially since wipe-only methods have shown limited efficacy.¹

HibiClens® and HUBS also provide bathing standardization with the wash-lather-rinse process recommended by the CDC and a separate protocol for patients with *clostridioides difficile* is not needed.

6 What's the difference between 4% and 2% CHG solutions?

The most obvious and primary difference is that 4% CHG has a higher concentration than 2% solutions.

Another difference is that 2% CHG solutions are regularly left on the skin, leaving a residue that builds up over time, and a sticky feeling on the patient's skin, affecting their overall experience. Whereas 4% CHG solutions like HibiClens®, follow a wash-lather-rinse component without washing all the CHG down the drain.²

In fact, CHG does not wash away. It binds to the patient's skin during application and rinsing. CHG begins working on contact, remains on the skin, and continues to kill flora long after alcohol and other antiseptics would have stopped being effective.²

The combination of washing and rinsing, even when using CHG, can remove pathogenic spores such as *clostridioides difficile*. This rinsing step during the bathing process helps to physically remove spores that are otherwise not addressed by topical 2% antiseptics; this is essential to fight the spread of CDI. Meanwhile, the CHG helps to kill vegetative *clostridioides difficile* cells that it may encounter.³

Sources:

1. Kassakian SZ, Mermel LA, Jefferson JA, et al. Impact of Chlorhexidine Bathing on Hospital-Acquired Infections among General Medical Patients. *Infect Control Hosp Epidemiol*. 2011.

2. Common Myths About CHG: do they hold water? Article. Mölnlycke Health Care, 2023.

3. Rupp ME, Cavalieri RJ, Lyden E, Kucera J, Martin M, Fitzgerald T, et al. Effect of hospital-wide chlorhexidine patient bathing on healthcare-associated infections. *Infect Control Hosp Epidemiol*. 2012 Nov.

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7 What's the difference between CHG impregnated wipes and the Hibi® Universal Bathing System (HUBS)?

The Hibi® Universal Bathing System (HUBS) is a patient bathing system **with dry, disposable washcloths** that can be used with a high-quality 4% skin cleansing solution like HibiClens®. It **standardizes bedside bathing** while supporting infection prevention protocols across care settings and **providing the feeling of a real bed bath**. CHG wipes on the other hand, are disposable cloths that contain 2% chlorhexidine gluconate (CHG) used to wipe down patients.

8 We've recently heard about CHG binding to cotton, does that mean HUBS is not as effective when used with a 4% CHG skin cleanser like HibiClens®?

Although CHG can minimally bind to cotton, according to Graham Denton's study, the amount that would likely be bound to a cotton washcloth during normal use would be minuscule, perhaps even undetectable.¹

Our washcloths **do not contain cotton**, so this shouldn't be a concern for our customers or patients. In fact, HUBS is very effective when used with our 4% CHG skin cleansing solution like HibiClens®.

9 How does HibiClens® and the Hibi® Universal Bathing System (HUBS) support patient satisfaction?

HibiClens® when used with HUBS, supports a full wash-lather-rinse routine, **giving patients the feeling of a real bath**. Unlike CHG wipes, our solution use a rinse-based process that also helps remove spores and debris from skin, supporting a thorough, consistent cleansing without any sticky residue building up on the patient's skin.

Sources:

1. Denton, 1991; Showron, et I, 2021; Marrian-Webster Dictionary accessed 2025.

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10 Is there any antimicrobial resistance for CHG?

No. Studies have not indicated:

1. Increased resistance of microorganisms to CHG.¹
2. Any conclusive trends in the prevalence of chlorhexidine-resistant MDROs.¹
3. Increased MICs in pre-post studies.¹
4. Resistance at clinical disinfection concentrations.¹
5. Ineffectiveness of bathing concentrations, these remain microbicidal.¹
6. Significant levels of resistance. Only low levels have been observed.¹
7. Resistance at clinical concentrations used for bathing.¹

The World Health Organization (WHO) points out that when "resistant" organisms were exposed to normal clinical or in-use concentrations, the organisms were susceptible to the antimicrobial effects of the chlorhexidine.

11 Can HUBS be used in place of CHG wipes?

Yes, when paired with a skin cleanser like HibiClens®, the Hibi® Universal Bathing System (HUBS) provides a rinse-based alternative that avoids sticky residue and elevates hygiene outcomes.

12 How common is an allergy to CHG?

"Rare but serious" is the term used by the Federal Drug Administration (FDA) to describe the frequency of CHG allergic reactions.²

In 1998, the FDA issued a public health notice warning healthcare providers about the risk for serious allergic reactions with medical devices such as dressings and intravenous lines that contain chlorhexidine gluconate. Since 1998, the FDA has identified a total of 52 cases of anaphylaxis with the use of chlorhexidine gluconate products applied to the skin.²

Worldwide, in the 46 years between January 1969 and early June 2015, FDA received reports of 43 cases. More than half of the 43 cases were reported after 2010.²

Sources:

1. Warren, et al, 2021; Musuza, et al, 2017; Warren, et al, 2016; Gall, et al, 2020; Poel, et al, 2022; WHO 2012
2. Drug Safety Communication: FDA warns about rare but serious allergic reactions with the skin antiseptic chlorhexidine gluconate, <http://www.fda.gov/Drugs/DrugSafety/ucm530975.htm>, 2-2-201

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13 What's the cost benefit of switching from CHG wipes to HUBS?

While wipes might seem less expensive upfront, they're typically single-use per patient bath, whereas a single bottle of HibiClens® 4oz can support two to three bathing sessions.

14 Can we use HibiClens® or CHG for skin cleansing prior to a C-section?

Surgical site infection (SSI) following cesarean delivery remains a substantial cause of postoperative morbidity and increased health care cost because of maternal readmission. Current evidence indicates CHG for surgical skin preparation and for preoperative skin cleansing before cesarean section as part of a bundled approach significantly reduce SSI rates.¹

15 Is CHG on the mother's breasts harmful to a breastfeeding baby?

CHG remains on the skin and is shed with the skin.²It may be possible that the baby can ingest skin cells shed from the nipple during feeding.

Studies conducted on human subjects demonstrated that chlorhexidine gluconate is poorly absorbed from the gastrointestinal tract. Detectable levels of CHG were not present in the plasma of subjects 12 hours after ingestion of a 300 mg. dose. Excretion of CHG occurred primarily through the feces.³

Chlorhexidine has been used vaginally*or topically on the abdomen or perineum prior to delivery to prevent infection. No toxicity has been reported in breastfed infants.⁴

Topical application of chlorhexidine to the breast before and after nursing did not appear to adversely affect the breastfed infants in one study. Even use of a chlorhexidine oral rinse by a nursing mother was unlikely to adversely affect the infant.⁴

Sources:

1. Reduction of surgical site infections in low transverse cesarean section at a university hospital, May Mei-Sheng Riley RN, MSN, MPH, ACNP, CCRN, CIC, et al, American Journal of Infection Control, 2012
2. Chlorhexidine in Healthcare: Your Questions Answered, Laura A. Stokowski, RN, MS, www.medscape.com, August 04, 2010
3. Chlorhexidine Gluconate 0.12%, Oral Rinse, USP, <https://dailymed.nlm.nih.gov/dailymed/archives/fdaDrugInfo.cfm>, Revised: 02/2008 Actavis Mid Atlantic LLC
4. Chlorhexidine use while Breastfeeding | Drugs.com, 8/28/13

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16 Can CHG used for skin cleansing be absorbed through the mother's skin?

Evidence suggests no. One study showed no detectable penetration of chlorhexidine through full-thickness human skin after 2 min and 30 min of exposure to aqueous CHG.¹ In a second study, the vagina* was swabbed for one minute with gauze sponges soaked in 4% CHG. There were not any detectable maternal blood concentrations afterwards. Neither have any reports describing the excretion of CHG into breast milk been located.²

17 Can HibiClens® be used in the NICU?

HibiClens® can be used in the NICU **with care**, particularly in premature infants or those under 2 months of age, under strict medical supervision and with careful application. CHG products may cause irritation or chemical burns, so use should be limited to small areas and avoided on mucous membranes or deep wounds, as directed on the label.

18 Why should Chlorhexidine Gluconate (CHG) compatible lotions be used when cleansing patients with HibiClens®?

The activity of CHG depends upon the chemical deposition of the CHG cationic (positively charged) molecule on the skin, where it binds to the stratum corneum. This binding helps it to persist on the skin and continue its residual antimicrobial activity.

It is known that anionic-based (negatively charged) substances have a diminishing effect on residual CHG activity by subjecting the CHG to possible inactivation. Lotions that contain anionic emulsifying agents will reduce the antimicrobial effect of CHG.³

Positively charged CHG is incompatible with sodium lauryl sulphate, sodium carboxymethyl cellulose, alginates, and many pharmaceutical dyes. These are negatively charged organic molecules often found in soaps and lotions. In certain instances, there will be no visible signs of incompatibility, but the antimicrobial activity will be significantly reduced.⁴

Most healthcare facilities will purchase lotions that are cationic or nonionic (neutral), making them compatible with CHG used by staff or patients.

Sources:

1. Penetration of Chlorhexidine into Human Skin, T. J. Karpanen, T. Worthington, B. R. Conway, A. C. Hilton, T. S. J. Elliott, and P. A. Lambert, *Antimicrobial Agents and Chemotherapy*, Oct. 2008
2. Chlorhexidine in pregnancy and breastfeeding, 3/26/11
3. Chlorhexidine in Healthcare: Your Questions Answered, Laura A. Stokowski, RN, MS, <http://www.medscape.com/viewarticle/726075>, August 04, 2010
4. Disinfection, Sterilization and Preservation Fifth Edition (Chapter 15), Graham Denton, 2001

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19 Can HibiClens® be used in genital areas?

We **do not recommend** the use of HibiClens® in genital area. Our solution is meant for external use only.

Some facilities have incorporated the use of our solution for perineal care after doing their own research, but we advise only to use as described on the FDA approved label.

20 Can Hibi® Universal Bathing System (HUBS) be used with regular soap?

Yes, our dry cloths can be used with any soap and works well with 4% CHG antiseptic skin cleansing solutions like HibiClens® as part of infection prevention protocols for patient bathing. Comprehensive protocols that include patient bathing with HibiClens® + HUBS have been shown to reduce healthcare-associated infections – HAIs, central line – associated bloodstream infections – CLABSIs, and catheter-associated urinary tract infections CAUTIS. ^{1,2}

21 How does HibiClens® compare in terms of skin irritation to other solutions?

A study evaluating both 2% & 4% CHG solutions found that with its unique formulation HibiClens® has shown to have the lowest potential for irritation, highlighting HibiClens® as a milder and more skin-friendly option for healthcare use. ³

The closer the pH to human skin the better. ⁴ Our formulation falls within the pH range of normal human skin, while other solutions can be harsh and irritating affecting the skin integrity.

Sources:

1. Chlorhexidine Gluconate Bathing Program to Reduce Health Care-Associated Infections in Both Critically Ill and Non-Critically Ill Patients. Leigh Chapman, MS, RN, CIC; Lisa Hargett, MPH, CIC; Theresa Anderson, MS, RN, CIC; Jacqueline Galluzzo, MS, RN, CIC; Paul Zimand. Crit Care Nurse (2021).
2. Effectiveness of Chlorhexidine Bathing to Reduce Catheter-Associated Bloodstream Infections in Medical Intensive Care Unit Patients. Susan C. Bleasdale, MD; William E. Trick, MD; Ines M.
3. Irritation Study Summary, Mölnlycke Health Care, 2017.
4. Chapman, et al., 2021; Gerges, et al, 2021; Becker, et al, 2014; Kotner, et al, 2013; Galliano, et al, 2023; Swan, et al, 2014

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