



SOFTA-MAN® ABHR
FOR SURGICAL HAND
PREPARATION AND GENERAL
HAND DISINFECTION

SURGICAL HAND PREPARATION AND GENERAL HAND DISINFECTION WITH ALCOHOL BASED HAND RUBS (ABHRs) MADE SIMPLE AND EFFICIENT



Established 1922

Medical and Surgical Requisites Pty Ltd

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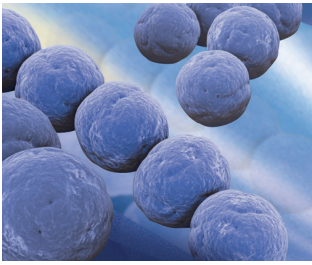
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AN IDEAL SURGICAL HAND DISINFECTING AGENT SHOULD HAVE THE FOLLOWING PERFORMANCE CHARACTERISTICS:

ANTIMICROBIAL ACTION



Broad spectrum antimicrobial activity against pathogenic organisms that works rapidly.¹

PERSISTENT ACTIVITY



An ideal hand disinfecting agent should have persistent activity that keeps bacterial count low under gloves.¹

SAFETY



An ideal hand disinfecting agent should be non-irritating, safe to use and not be damaging to the skin or environment.¹

ACCEPTANCE



An ideal hand disinfecting agent should encourage compliance & support from Healthcare users in adapting to a new product.¹

COMMON AGENTS USED IN THE OPERATING THEATRE ENVIRONMENT

GOOD

LIQUID OR FOAM SOAPS



Liquid or foam medical soap used in conjunction with water and dry scrub brushes or sponges are the most common products used for surgical scrub. Antimicrobial agents in these products include CHG (chlorhexidine gluconate), iodophor or PCMX (parachlorometaxyleneol) which are very drying, and with repeated scrubbing, can cause skin damage.⁵

Mitchell and colleagues suggested a brushless surgical hand scrub as early as the 1980s.²

BETTER

IMPREGNATED SCRUB BRUSHES/SPONGES



Scrub brushes/sponges preloaded with CHG, iodophor or PCMX are water-aided products. Skin irritation and dermatitis are more frequently observed after surgical hand scrub with chlorhexidine.⁴

Loeb's randomised, controlled clinical trial, published in the American Journal of Infection Control, failed to demonstrate an additional antimicrobial effect by using a brush.⁵

STATE-OF-THE-ART

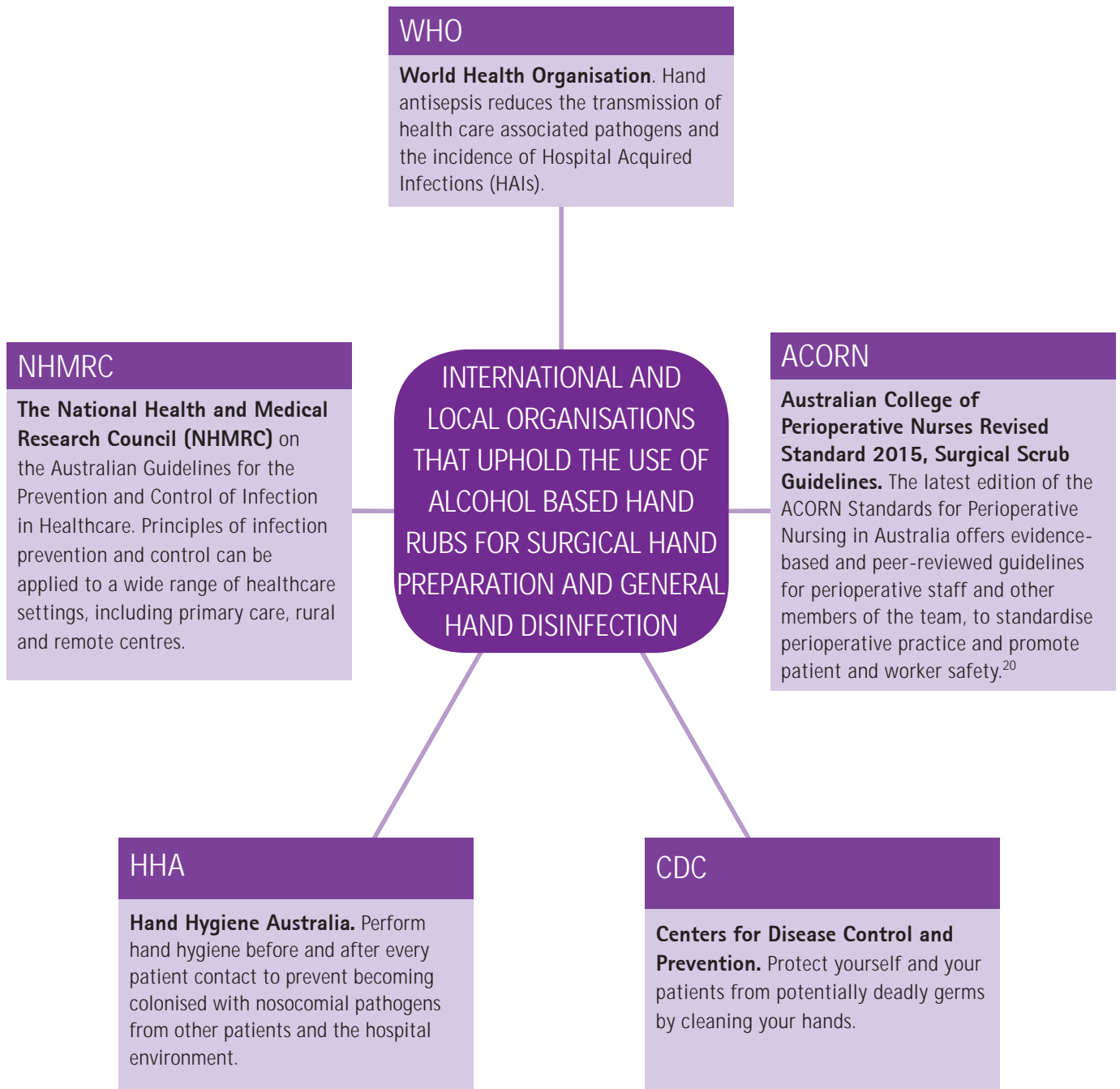
ALCOHOL BASED SURGICAL HAND RUBS (ABHRs)



The antimicrobial efficacy of alcohol-based formulations is a superior method of preoperative surgical hand preparation. Alcohol rubs have rapid and immediate antibacterial action; and do not eliminate good microorganisms naturally present on the skin.³

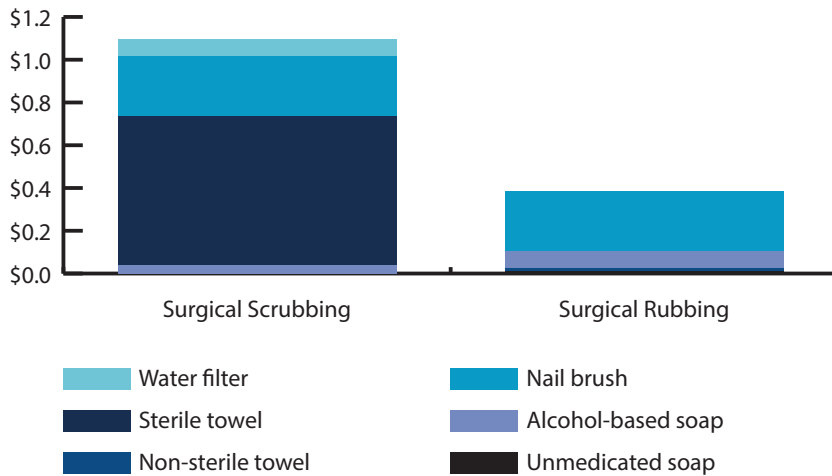
Alcohol rubs are less drying to the skin; allergy is rare and toxic effects have not been reported.^{6,7,8}

RECOGNISED GUIDELINES FOR SURGICAL HAND PREPARATION AND GENERAL HAND DISINFECTION



SURGICAL HAND SCRUBBING VERSUS SURGICAL HAND RUBBING

COST OF SURGICAL HAND SCRUBBING VERSUS ALCOHOL BASED HAND RUBBING:



Tavollacci study compared the efficacy of Surgical Hand Rubbing (SHR) against efficacy of Surgical Hand Scrubbing (SHS). The costs of SHR and SHS were estimated based on standard hospitals costs. The study concluded that SHR had immediate efficacy similar to that of SHS, however SHR had more lasting effect. SHR reduced costs by 67%. In summary, SHR is a cost-effective alternative to SHS.⁹

HAND SCRUBBING VERSUS ALCOHOL BASED HAND RUBBING: TIME SAVINGS



Up to 5 minutes



90 seconds

Studies demonstrate that SHR is 150% quicker in achieving Surgical Standard EN12791 which allows more time to focus on the operation list.²³

HAND SCRUBBING VERSUS ALCOHOL BASED HAND RUBBING: SKIN TOLERABILITY



A Healthcare Worker's (HCW) hand after 2 weeks of hand hygiene using non-medicated liquid soap with 2% chlorhexidine containing solution; showed hand cracks and evidence of bleeding.



After 2 weeks of application of an alcohol based hand rub containing emollients.

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Note: Actual picture from a file presented by Prof. Pittet, MD, MS, CBE, Director, Infection Control Programme & WHO Collaborating Centre on Patient Safety, The University of Geneva Hospital and Faculty of Medicine, Health Service Delivery and Safety, WHO Headquarters, Geneva, Switzerland.²⁷



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SOFTA-MAN® ALCOHOL BASED HAND RUB

FOR SURGICAL HAND PREPARATION AND GENERAL HAND DISINFECTION

What makes Softa-Man® unique?

An unusual name for a unique product: Man is derived from the Latin term hands, Manus. Softa-Man® literally means **soft hands**.

- 1. Softa-Man® is a ready to use alcohol solution for both surgical hand preparation and general hand disinfection.**
 - One product to fit operating theatres, critical, semi critical areas and general wards
 - Passes EN12791 for surgical hand preparation - 90 seconds²⁵
 - Passes EN1500 for general hand preparation - 15 seconds²⁵
- 2. Softa-Man® has a unique two alcohol combination as active ingredients in 79.5% concentration:**
 - Ethanol - highly effective against virus (virucidal)¹⁰
 - n - Propanol - highly effective against bacteria (bactericidal)¹⁰
- 3. Softa-Man® is enriched with high quality skin emollients (dexpanthenol, allantoin and bisabolol).**
 - Protects hands and skin during repeated and long term use
 - Gentle on the hands and skin
- 4. Softa-Man® contains hypoallergenic perfumes and is free of colourants.**
 - Available in solution and liquid gel form in various sizes
 - Offers flexibility to fit user's preference



KEY POINTS

- When compared to surgical hand scrubbing (SHS) it is clear that surgical hand rubbing (SHR) with ABHR offers **significant cost savings**, when taking into account standard hospital costs.⁹
- Additionally, there is significant **time saved** when ABHR hand rubbing is used compared to SHS²³. Therefore, time saved means a more effective Operating Theatre utilisation on all productivity measures.
- WHO guidelines on hand hygiene **discourage** the use of brushes for surgical hand preparation.³

SOFTA-MAN® FEELS LIKE A COSMETIC WHILST EFFECTIVELY PROVIDING SURGICAL AND GENERAL HAND DISINFECTION



BISABOLOL¹¹

(active ingredient from medical plant Chamomile)

- Used in traditional medicine for hundreds of years
- Has anti-inflammatory properties
- Protects and heals the skin from effects of daily stress

ALLANTOIN¹²

(from the Comfrey root)

- Has soothing benefits for sensitive/irritated skin
- Aids in the healing of damaged skin by stimulating new tissue growth
- Helps alleviate irritant contact dermatitis (ICD)

PRO-VITAMIN B¹³

- Offers skin-repairing properties (Dexpanthenol)
- Stimulates cellular proliferation
- Assists in absorbing skin moisture contents

TWIN ALCOHOL CONCENTRATION AT 79.5% MEETS SURGICAL DISINFECTION STANDARD EN12791²⁵

n-PROPANOL

- Bactericidal activity¹⁰
- Penetrates the fatty cell membranes of bacteria

ETHANOL

- Effective against bacteria, viruses and fungi¹⁰
- Works by denaturing proteins and dissolving lipids

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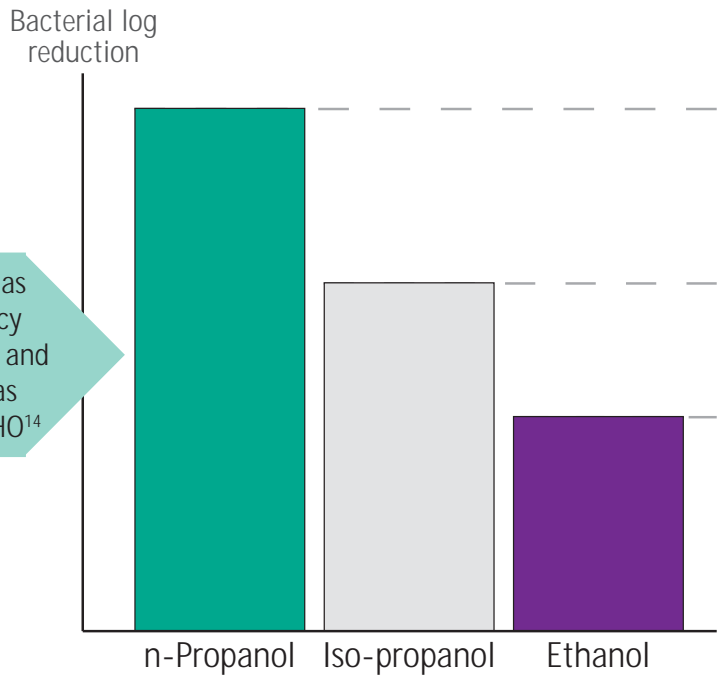


NOT ALL ALCOHOL HAND RUBS ARE THE SAME

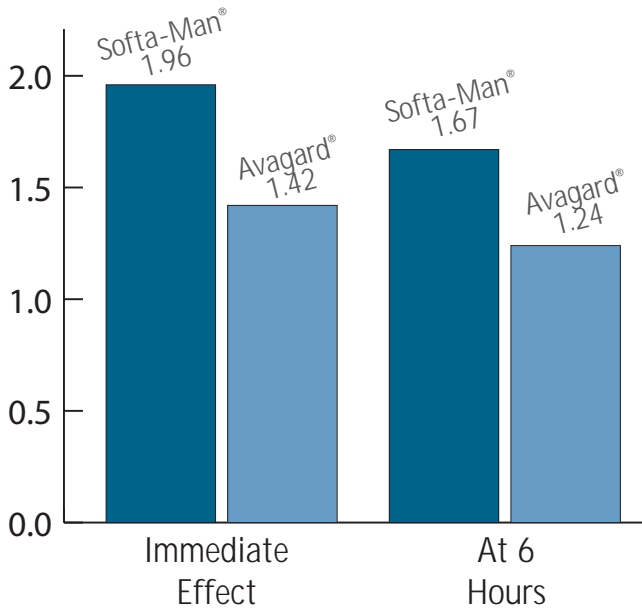
n-Propanol (Softa-Man®) outperforms other common alcohols¹⁴

WHO guidelines (section 11.13, pg.39) state that n-Propanol (an ingredient in Softa-Man®) has superior effect than other common alcohols (Ethanol).¹⁴ Softa-Man® has twin-alcohols (Ethanol and n-Propanol) to ensure speed of efficacy against bacteria and viruses.

n-Propanol has higher efficacy than Ethanol and Isopropanol as stated by WHO¹⁴



Mean log RF



Softa-Man® outperformed Avagard® at 6 hours

Softa-Man® outperformed Avagard® both immediately and also after 6 hours by showing higher log reduction.¹⁵ Statistically significant results proves that modern Alcohol Based Hand Rubs (ABHRs) for surgical hand antisepsis do not require Chlorhexidine (CHX).¹⁵

*Avagard® is a trademark of 3M



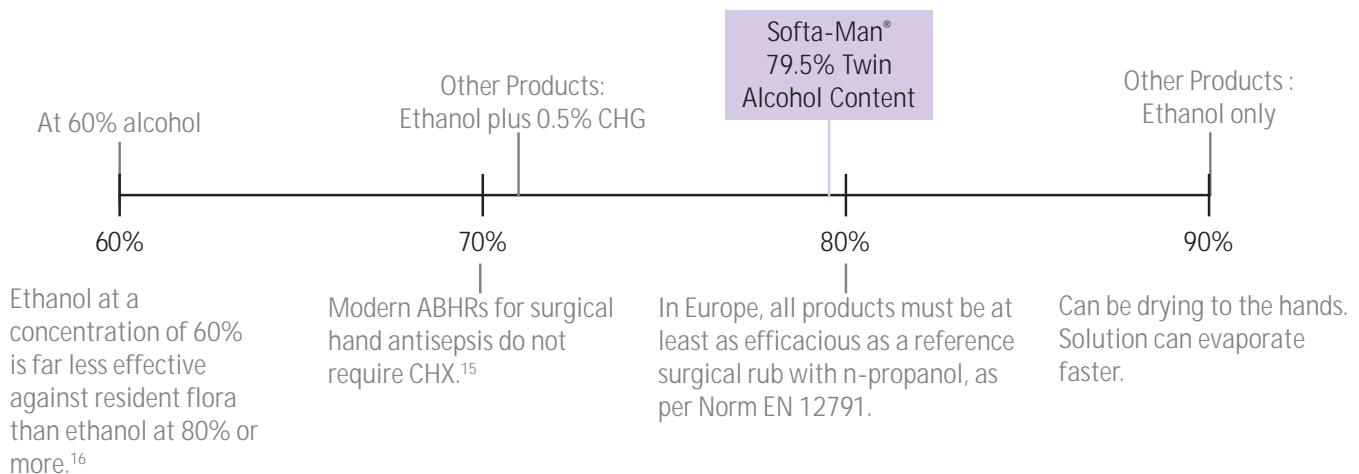
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ALCOHOL % CONTENT

WHO STATES THAT ALCOHOL BASED HAND RUBS CONTAINING 60-80% ALCOHOL ARE MOST EFFECTIVE; WITH HIGHER CONCENTRATIONS BEING LESS POTENT. THIS PARADOX RESULTS FROM THE FACT THAT PROTEINS ARE NOT DENATURED EASILY IN THE ABSENCE OF WATER¹⁴



Alcohols tested at the same concentration and in terms of efficacy demonstrated that Ethanol is less efficacious than Isopropanol and Isopropanol is less active than n-Propanol.¹⁴

OPTIMUM WORKING CONCENTRATION OF ETHANOL AND n-PROPANOL

The microbiocidal efficacy of alcohol against bacteria is increasing with the length of the carbon chain. Primary alcohols (n- or 1-) are more effective than secondary or tertiary alcohols.

Ethanol is mostly produced by the fermentation of sugars, by yeasts, or by petrochemical process. Ethanol kills organisms by denaturing their proteins, by dissolving lipids and is effective against most bacteria, fungi and many viruses. However, ethanol is ineffective against bacterial spores.²¹

n-Propanol is thought to be 2-4 times more potent than Ethanol. It is manufactured by catalytic hydrogenation of propionaldehyde.²³

SURGICAL HAND PREPARATION WITH ALCOHOL-BASED HANDRUBS (ABHRs)

- The hands of the surgical team should be clean upon entering the operating theatre by washing with a non-medicated soap. Non-medicated soaps are sufficient, and the procedure is necessary only upon entering the operating theatre.
- It is not necessary to wash hands before performing alcohol based handrubbing **unless hands are visibly soiled or dirty**.
- The activity of the ABHR may be impaired if hands are not completely dried before application.
- Repeating handrubbing with ABHR without handwash or scrub is recommended before switching to the next procedure.
- Hands should be wet from the ABHR for 90 seconds during the whole rubbing procedure. This requires approximately 15 ml depending on the size of the hands. The size of the hands and forearms determines the volume required to keep the skin area wet during rubbing procedure.

CARING FOR THE HANDS AND SKIN TO MAXIMISE ADHERENCE TO ALCOHOL BASED HAND RUBBING

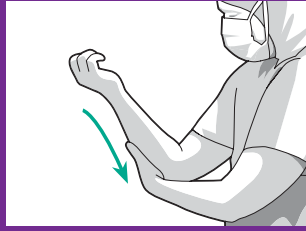
- Proper skin care management is essential in preventing occupational skin disorders.
- HCWs at risk of irritant contact dermatitis or other adverse reactions to hand hygiene products need additional skin moisturisers.
- Use of hand lotions and creams containing humectants, fats, and oils can increase skin hydration and replace altered or depleted skin lipids.

PRIMARY STRATEGIES FOR MINIMISING HAND HYGIENE RELATED IRRITANT CONTACT DERMATITIS AMONG HCWs

- Select less irritating hand hygiene products.
- Avoid certain practices that increase the risk of skin irritation.
- Use moisturising skin care products following hand cleansing.¹⁴

How To Perform Alcohol Based Hand Rubbing according to WHO guideline on surgical hand preparation

STEP ONE - 15 SECONDS

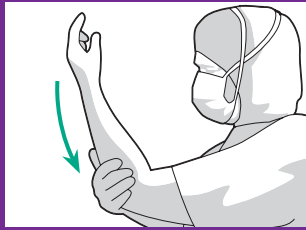


Step 1:

Apply 5mls of Softa-Man® (equivalent to approximately 3 elbow pump actions) into your left palm and dip fingernails of right hand in the left palm for 5 seconds.

Afterwards bring the left hand with the alcohol solution to the right wrist and rub around the wrist in a circular motion all the way to the elbow for 10 seconds.

STEP TWO - 15 SECONDS

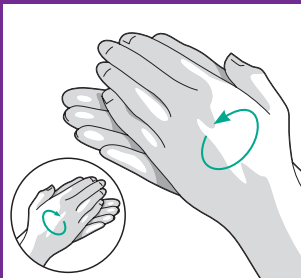


Step 2:

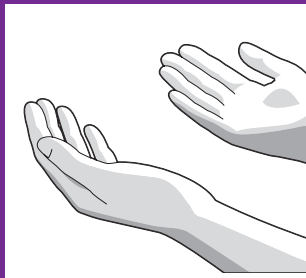
Apply 5mls of Softa-Man® (equivalent to approximately 3 elbow pump actions) into your right palm and dip fingernails of left hand in the right palm for 5 seconds.

Afterwards bring the right hand with the alcohol solution to the left wrist and rub around the wrist in a circular motion all the way to the elbow for 10 seconds.

STEP THREE - 30 SECONDS



STEP FOUR - 30 SECONDS



Step 3:

Apply 5 mls of Softa-Man® (equivalent to approximately 3 elbow pump actions) to left palm and rub vigorously in the following order for 15 seconds:

- | | |
|----------------------|-------------|
| a) palm to palm | d) knuckles |
| b) fingers interlace | e) thumbs |
| c) back of hands | |

Step 4:

Allow both hands to dry (approx. 30 seconds) before donning gloves.

B. Braun offers skin health products compatible with Softa-Man® to align with the WHO skin care strategies.

CLEANSE

LIFOSAN® SOFT, LIFOSAN® PURE, SOFTASKIN® PURE FOAM



- A range of body/hand wash products.
- High quality skin care components.
- Alkali, soap free and pH-skin neutral.

MOISTURISE

TRIXO®-LIND



- A rich, oil-in-water skin soothing emulsion.
- Allergy-tested and neutral pH, providing skin with intensive care.
- Can be used by those who have allergies to alcohols and lanolin derivatives.

PROTECT & HYDRATE

LINOVERA® OIL



- Contains 200 active molecules that include proteins, vitamins and amino acids that ward off inflammatory cell reaction.
- Linovera® oil prevents skin dehydration whilst restoring the skin's water/lipid film.

HAND HYGIENE

(GENERAL HAND DISINFECTION)



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“Around the world people die or become ill in hospitals everyday because they are exposed to bacteria carried on the hands of those who care for them”²⁴

In Australia, an estimated 175,000 hospital associated infections (HAIs) occur annually, but the exact figure is unknown.*

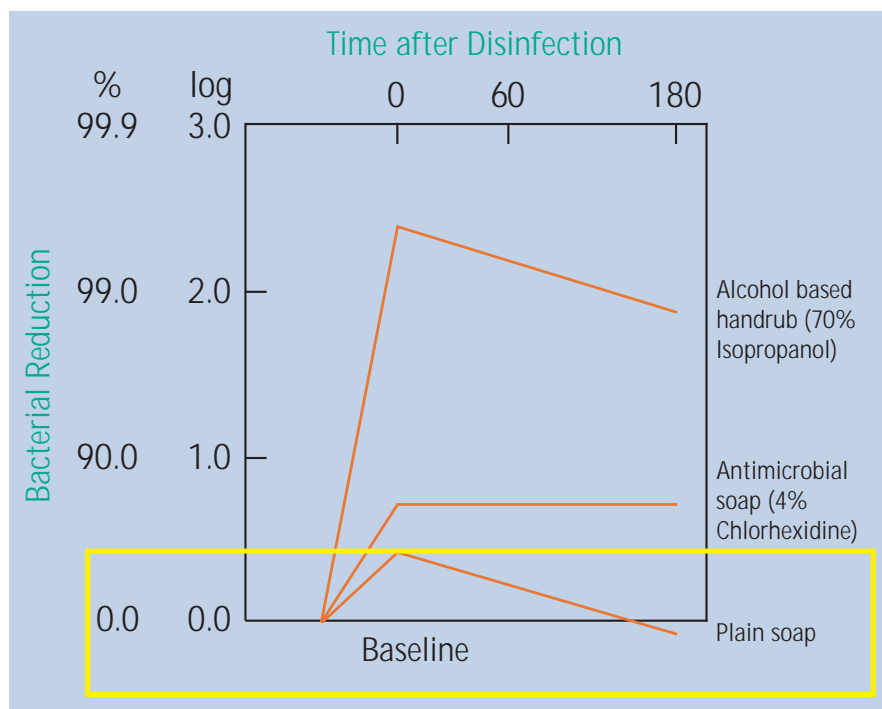
- Hand hygiene reduces the incidence of HAIs.
- Widespread use of hand hygiene products that improve adherence to recommended hand hygiene practices promote patient safety and prevent infections.
- Hand hygiene is performed before patient contact, before donning gloves, when inserting central venous catheters, urinary catheters, peripheral vascular catheters or any other invasive devices that don't require surgery.
- Hand hygiene is also performed after contact with a patient's intact skin, contact with body fluids or excretions, non-intact skin, wound dressings and after removing gloves.



ABILITY OF HAND HYGIENE AGENTS TO REDUCE BACTERIA ON HANDS¹⁹

According to WHO and Hand Hygiene Australia, ABHR is the gold standard of care for hand hygiene practice in healthcare settings; handwashing with soap and water is reserved only for situations when hands are visibly soiled, or when gloves have not been worn in the care of patients with Clostridium Difficile.

ABHR is the hand hygiene product of choice for all standard aseptic non-touch technique procedures. Alcohol-based hand rubs are **more effective** against most bacteria and many viruses than medicated or non-medicated soaps.¹⁸



¹⁹ Philip L Russo, Allen Chang, et al. Healthcare Associated Infection in Australia: Time for National Surveillance. Australian Health Review, 2015, 39, pg.37-43, CSIRO Publishing.



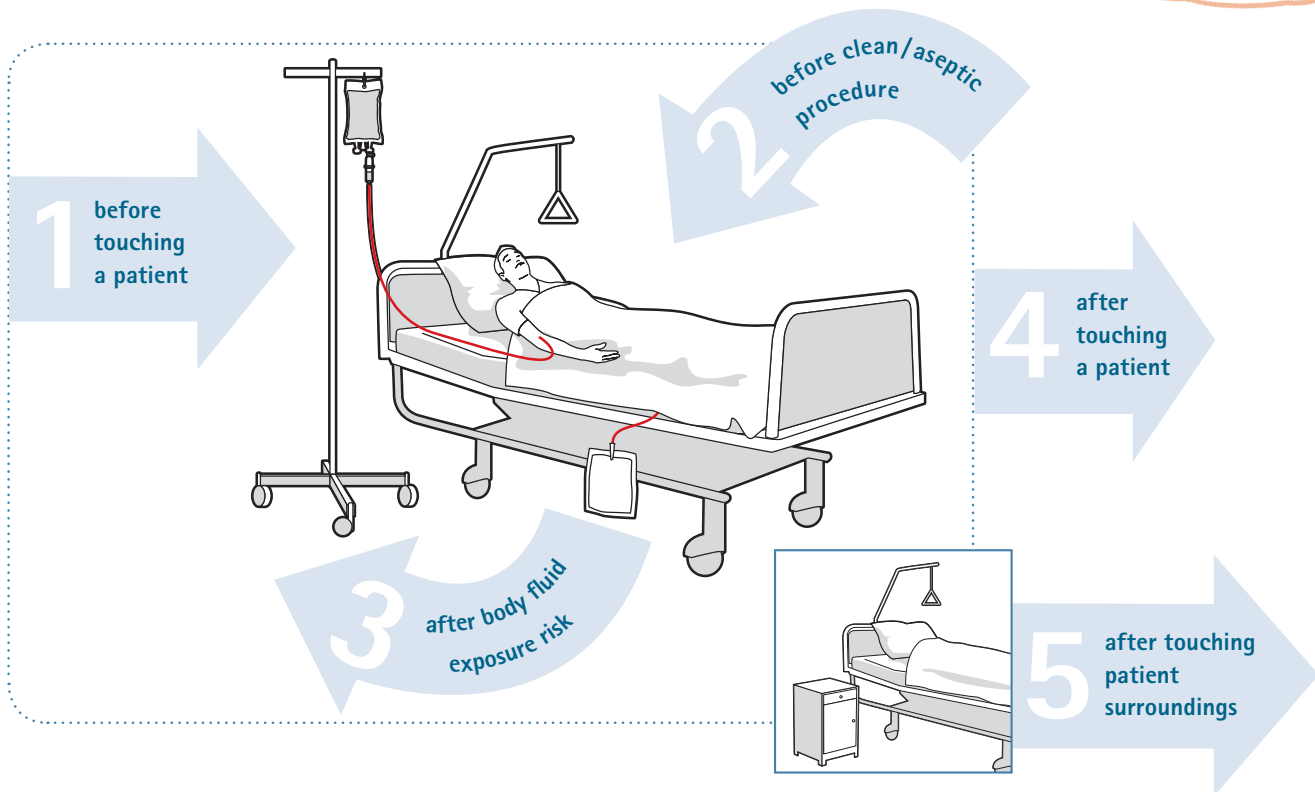
5 MOMENTS OF HAND HYGIENE

CLEAN HANDS ARE SAFER HANDS. ARE YOURS CLEAN?

According to WHO Global Patient Safety campaign: Clean Care is Safer Care.



WHEN?



1 before touching a patient	When? Why?	Clean hands before touching a patient. To protect the patient against harmful germs carried on HCWs hands.
2 before clean/aseptic procedure	When? Why?	Clean hands before performing a clean/aseptic procedure. To protect the patient against harmful germs, including the patient's own, from entering his/her body.
3 after body fluid exposure risk	When? Why?	Clean hands immediately after exposure risk to body fluids (and after glove removal). To protect HCWs and the healthcare environment from harmful patient germs.
4 after touching a patient	When? Why?	Clean hands after touching the patient and her/his immediate surroundings and when leaving the patient's side. To protect HCW and the healthcare environment from harmful patient germs.
5 after touching patient surroundings	When? Why?	Clean hands after touching any object or furniture in the patient's immediate surroundings and when leaving – even if the patient has not been touched. To protect HCW and the healthcare environment from harmful patient germs.

For further information please see: www.who.int/gpsc/en/

SOFTA-MAN® ALCOHOL BASED HAND RUB: ONE PRODUCT THAT CAN BE USED IN ALL CLINICAL AREAS

Surgical

Critical areas and
Semi-Critical areas

Wards

Operating Theatres



Cardiac Cath labs



- Softa-Man® passes EN12791 and EN1500.²⁵
- n-Propanol-containing preparation is significantly more effective against all test organisms than the Ethanol-based product.²⁶
- Softa-Man® contains high quality emollients that protect and moisturise the hands and skin during repeated and long term use.^{11, 12, 13}
- Softa-Man® is a single product that can be used in all clinical areas provide efficiency and cost savings to the hospital.^{9, 23}



ACCESSORIES

FOR SOFTA-MAN® AND SKIN HEALTH RANGE

Wall Dispenser plus with plastic pump



- Aluminium housing
- Adjustable dosing from 0.5 ml to 1.5 ml
- Plastic pump is compatible with B. Braun alcoholic hand rubs, hand washing lotions and hand care lotions
- All parts can be reprocessed in a washer disinfector with a pH-neutral cleaner and autoclaved at 134 °C and 3 bar
- Plastic pump is not autoclavable

Visible lever arm length: 100mm	1418893	for 500 ml bottle E A/K
	1418892	for 1000 ml bottle E A/K
Visible lever arm length: 170mm	1418894	for 500 ml bottle E A/K
	1418895	for 1000 ml bottle E A/K

Accessories for Wall Dispenser



- Drip tray with white plastic tray
- Prevents dripping onto the floor
- Locking plate for manually operated dispensers incl. lock and key
- Anodized aluminium

Drip Tray	3908232	for Wall Dispensers plus E or ELS (500ml)
	3908240	for Wall Dispensers plus T or TLS (1000ml)
Locking plate	2400067	for Wall Dispensers plus E or ELS (500ml)
	2400064	for Wall Dispensers plus T or TLS (1000ml)

Automatic Touchless Dispenser System



- Sensor operated dispenser improves hygienic safety
- For all B. Braun hand disinfectants, liquid soaps and skin care lotions
- Autoclavable pump (max 123° C)
- Scratch resistant casing made of anodized aluminium
- Battery operated
- With emergency operating lever
- Adjustable dosing 0.75 - 1.5 ml including drip tray

	4400774	for 500 ml bottle
	3908403	for 1000 ml bottle

Please contact your B. Braun representative for any other dispensers, brackets and accessories not listed here.

ACCESSORIES

FOR SOFTA-MAN® AND SKIN HEALTHCARE RANGE

Automatic Touchless Dispenser



- Sensor operated dispenser improves hygienic safety
- For all B. Braun hand disinfectants, liquid soaps and skin care lotions
- Autoclave pump (max 123°C)
- Scratch resistant casing made of anodised aluminium
- Battery operated
- With emergency operating lever
- Adjustable dosing 0.75 - 1.5 ml

1420140	for 500 ml bottle
3908393	for 1000 ml bottle

Accessories for Automatic Touchless Dispenser



- For 500 ml and 1000 ml bottles
- To lock the product into Touchless Dispenser
- Plastic tray

Drip Tray	3908394	For Touchless Dispenser
Locking plate	3908394	For Touchless Dispenser



Description	Type	Size	Code	Best use
Softa-Man® Liquid	Flip Cap	100ml	19699	Patient to patient – attach to staff belt with clip
Softa-Man® Liquid	Pump Pack	500ml	19700	Ward wall mounted or Surgical Prep area
Softa-Man® Liquid	Pump Pack	1000ml	19844	Ward wall mounted or Surgical Prep area
Softa-Man® Gel	Flip Cap	100ml	19701	Patient to patient – attach to staff belt with clip
Softa-Man® Gel	Pump Pack	500ml	19702	Ward wall mounted or Surgical Prep area
Softa-Man® Gel	Pump Pack	1000ml	19846	Ward wall mounted or Surgical Prep area

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REFERENCES

1. ICT: Infection Control Today Best practices: How To Perform Surgical Hand Scrubs. May 1, 2001 Posted in HYPERLINK "http://www.infectioncontroltoday.com/articles.aspx" Hand Antisepsis By Deborah Gardner, LPN, OPAC, and Ellen Anderson-Manz, RN, BSN
2. Mitchell KG, Rawluk DJR. Skin reactions related to surgical scrub-up: results of a Scottish survey. *British Journal of Surgery*. 1984;71:223–224
3. WHO Guidelines on Hand Hygiene in Healthcare, Side Effects of Surgical Hand Scrub (2009), Section 13.4, pg.4
4. Parienti Et. Al. (2002) Hand-Rubbing with a Aqueous Alcoholic solution vs. traditional Surgical Hand-Scrubbing and 30-day Surgical Site Infection rates, A randomised Equivalence Study. *JAMA* 2002; 288(6) 722–727.
5. Loeb MB, et al. A randomized trial of surgical scrubbing with a brush compared to antiseptic soap alone. *American Journal of Infection Control*. 1997;25:11–15
6. Parienti Et. Al. (2002) Hand-Rubbing with a Aqueous Alcoholic solution vs. traditional Surgical Hand-Scrubbing and 30-day Surgical Site Infection rates, A randomised Equivalence Study. *JAMA* 2002; 288(6) 722–727.
7. Lai, K, Foo, T et al. Surgical hand antisepsis – a pilot study comparing povidone iodine hand scrub and alcohol-based chlorhexidine gluconate hand rub. *Ann Acad Med Sinagapore* 2012; 41:12–16.
8. Tavolacci, M, Pitrou, I, et al. Surgical hand rubbing compared with surgical hand scrubbing: comparison of efficacy and costs. *J Hosp Infect* 2006; 63:55–59.
9. M.P. Tavolacci et. al. (2006), Surgical hand rubbing compared with surgical hand scrubbing: comparison of efficacy and costs.
10. G. Kampf/A. Kramer (2004). Epidemiologic Background of Hand Hygiene and Evaluation of the Most Important Agents for Scrubs and Rubs.
11. <https://www.truthinaging.com/ingredients/bisabolol> Technical paper on Bisabolol, an emollient in Softaman.
12. <http://www.advanced-dermatology.com.au/allantoin>
13. <https://en.wikipedia.org/wiki/Panthenol>
14. WHO Guidelines on Hand Hygiene in Healthcare (2009), Section 11.3, pg.32
15. S. Werner, A. Arndt, T.-J. Hennig Is Chlorhexidine Essential in Alcohol Based Handrubs for Surgical Hand Antisepsis? HygCen Germany GmbH, Bornhövedstrasse 78, 19055 Schwerin, Germany
16. Günter Kampf and Christiane Ostermeyer Efficacy of two distinct ethanol-based hand rubs for surgical hand disinfection – a controlled trial according to prEN 12791. *BMC Infectious Diseases*. Published: 22 March 2005. *BMC Infectious Diseases* 2005, 5:17 doi:10.1186/1471-2334-5-17
17. T. Koburger (2009), Gutachterliche Stellungnahme/Experts Report- Softaman Independent Tests Varying EN12791 and EN 1500.
18. Australian Institute of Health and Welfare
19. Hospital Epidemiology Infection Control, 2nd edition 1999.
20. Dr. Jef Duff, President 2014-2016 ACORN.
21. Mcdonnell G, Russell AD; Russell (1999). "Antiseptics and Disinfectants: Activity, Action and Resistance". *Clin Microbiol. Rev.* 12 (1): 147–79.
22. n-Propanol Health-Based Assessment and Recommendation for HEAC.
23. MedInsight (2014, Clinical and economic report on the use of alcoholic solutions for surgical hand preparation in Brazilian hospital settings.
24. Crouzet, Thierry (2016), "Clean Hand Save Lives" Forward, Published under Creative Commons DY-NC-ND License, pg.7
25. T6A Registration #195246, 195247; Softa-Man® IFU.
26. P. Goroncy-Bermes, "Hand Disinfection According to the European Standard EN1500: A study with Gram-negative and Gram-positive test organisms". *International Journal of Hygiene and Environmental Health* (2001), vol. 204, Issues 2–3, pg.123–126
27. Professor Didier Pittet, Infection Control Programme, University of Geneva Hospitals and Faculty of Medicine Extreme Programma Lead, WHO First Global Patient Safety Challenge: Clean Care is Safe Care.

