

CEDARS-SINAI MEDICAL CENTER
O.R./ANESTHESIA/SURGERY CENTER SERVICES
OPERATING ROOM

**GUIDELINES: INFECTION CONTROL PRACTICES: SURGICAL HAND SCRUB
PROCEDURE**

EFFECTIVE: **June, 2008**

Prev. Issued: **N/A**

I. Purpose:

To provide standardized guidelines for nursing and non-nursing personnel in accordance with roles and responsibilities as outlined in the job descriptions along with the AORN standards of practice. To provide guidelines for surgical hand asepsis/hand scrubs.

II. General Information:

Microorganisms transfer from the hands of health care providers to patients; this is an important factor with regard to health-care associated infections (i.e. nosocomial). Skin is a major source of microbial contamination in the surgical environment. Although the scrubbed members of the surgical team are wearing surgical gloves and gowns, their hands and forearms are to be cleaned preoperatively to significantly reduce the number of microorganisms.

The purposes/goals of the surgical scrub include:

1. To remove or deactivate debris, soil, hand lotions, natural skin oils, and transient microorganisms from the hands and forearms of the sterile team members.
2. To keep the numbers of microorganisms on the skin to an irreducible minimum.
3. To decrease the risk of microbial contamination of the surgical wound by the skin flora.

Definitions:

General hand hygiene - refers to the decontamination of the hands by either washing with antimicrobial soap or plain soap and water, or by using an antiseptic hand rub (i.e. Purell).

Surgical hand antisepsis – refers to the antiseptic surgical scrub or antiseptic hand rub that is performed prior to donning surgical attire preoperatively.

III. AORN Recommended Practices:

- a. Refer to AORN Standards

III. Procedure:

- A. All surgical team members who will come in contact with the operative field during surgery must perform a surgical hand scrub prior to gowning and gloving.

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- B. Fingernails must be free of any artificial nail enhancements to include but not limited to acrylics, bonding, wraps and tips. Nail polish will be free of cracks and chips. All rings, watches and bracelets must be removed prior to scrubbing.
- C. Cuticles, hands, and forearms should be free of open lesions and breaks in skin integrity. If in doubt about skin condition and ability to scrub, check with Nurse Manager or designee. Individuals who are allergic or sensitive to the available antimicrobial surgical hand scrub agents will be referred to the Nurse Manager, and Employee Health accordingly.
- D. A vigorous 2-3 minute hand and forearm scrub or a counted brush-stroke method with a reliable agent is effective. Agents include hexachlorophene, povidone-iodine, and chlorhexidine. In addition, hands and forearms may be prepared using CSMC approved scrubless-brushless-waterless skin preparation method utilizing alcohol based solution (such as 3M Avagard).

IV. Surgical Hand Scrub Procedure:

Note: The Association of Operating Room Nursing (AORN) recommends preceding the surgical hand scrub with a thorough washing, rinsing, and drying of hands and arms.

- A. Turn on water and adjust to desired temperature.
- B. Select and open a disposable scrub brush containing the antimicrobial agent of your choice.
- C. Moisten hands and arms. Keep brush in palm of hand; and, under running water, clean subungual spaces with disposable nail stick.
- D. Maintain hands above elbow level, holding hands and arms away from scrub attire and unsterile surfaces, such as faucets, sink, etc.
- E. Perform the following counted stroke or timed hand scrub:
 - 1. To perform counted-stroke hand scrub, proceed as follows:
 - a) With scrub brush held in one hand, bristles perpendicular to nail tips, begin scrubbing across nails and fingertips using 30 strokes. One up-and-back motion counts as one stroke.
 - b) Next scrub fingers of the same hand, using 10 strokes to each

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- side of fingers. Imagine fingers as having four surfaces (one on each side of each finger). Each surface gets 10 strokes.
- c) Give special attention to webbed spaces between fingers while scrubbing.
 - d) Scrub hand next. Imagine hand as having four surfaces also (palmar, dorsal, medial, lateral) and give each surface 10 strokes.
 - e) Repeat the above steps (a to d) on other hand. Add water to sponge as necessary to maintain a good lather.
 - f) Next scrub arm surfaces from wrists to 2" above elbows. Again, envision the arms as having four surfaces, and give each surface 10 strokes. To make stroke motion easier on length of arm, arm length should be divided in half, i.e. scrub from wrist to mid-arm on one arm, then the other. Continue from mid-arm to 2 inches above elbow on that arm, then complete the other.
 - g) Once a surface has been scrubbed, do not go back over it.
 - h) Wash hands with soap and water following surgical procedures.
2. To perform 3 minute timed surgical hand scrub, proceed as follows:
- a) Note time on clock. The scrub for each hand should take 45 seconds. Each arm should take 45 seconds.
 - b) With scrub brush held in one hand, bristles perpendicular to nail tips, begin scrubbing across nails and fingertips.
 - c) Next scrub fingers of the same hand. Imagine fingers as having four surfaces. Scrub all four surfaces of each finger including webbed spaces.
 - d) Scrub palm and dorsum of hand.
 - e) Repeat steps a) through d) on opposite hand. Add water to sponge as necessary.
 - f) Scrub each arm using circular motions from wrist to 2 inches

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above elbow beginning at wrist and progressing up the arm. Once a surface has been scrubbed do not return to it.

g) Wash hands with soap and water following surgical procedures.

F. At the completion of the surgical hand scrub:

1. Drop the scrub brush into a trash receptacle if available; otherwise drop the brush into the sink.
2. Rinse thoroughly by passing hands and arms under running water while maintaining the level of the hands above the elbow so that the scrub agent residue will not irritate the skin.
3. If you accidentally contaminate an area, you must rescrub it. If you are still holding your scrub brush, simply rescrub that area. If you have discarded your brush, you may ask someone to open another brush for you. If you must open a brush yourself, you must repeat scrub procedure from the beginning.
4. Turn off water.
5. Continuing to hold hands higher than elbows, allow excess water to drip into sink.
6. Using the back of your body, open the door of the operating room keeping hands and arms from becoming contaminated.
7. Proceed with drying hands and arms and don sterile surgical gown and gloves as outlined in Infection Control Practices: Surgical Gowning and Gloving I-3.

Scrubless-waterless-brushless solution: (3M Avagard)

Note: The Association of Operating Room Nursing (AORN) recommends preceding the scrub/scrubless-waterless-brushless skin prep with a thorough washing, rinsing, and drying of hands and arms at the beginning of the day or if skin is visibly contaminated .

A. Apply to clean, dry hands and nails.

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- B. For the first use of each day, clean under nails with a (3M Avagard) nail cleaner.
- C. Cup hand and hold 1-2 inches from the nozzle.
- D. Depress foot pump completely to dispense one pump (2 ml) of (Avagard) antiseptic hand prep.
- E. Dispense one pump (2 ml) of antiseptic hand prep into the palm of one hand. Dip the fingertips of the opposite hand into the hand prep and work it under the nails. Spread the remaining hand prep over the hand and up to just above the elbow covering all surfaces.
- F. Using another 2 ml of (Avagard) antiseptic hand prep, repeat above procedure with the other hand.
- G.** Dispense another 2 ml of antiseptic hand prep into either hand and reapply to all aspects of both hands up to the wrist. Allow to dry before donning gown and gloves.
- H.**
Note: Facilitate drying; continue rubbing hand prep in to hands until dry.
- I. Wash hands with soap and water following surgical procedures.

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References:

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