A Guide to Surgical Hand Antisepsis

There is a standardised procedure for surgical hand antisepsis, gowning and gloving which minimises bacterial contamination of the operator and operative field.

The fundamental principles of aseptic technique must be adhered to when performing surgical hand antisepsis, gowning and gloving prior to surgical intervention.

Surgical hand antisepsis should be undertaken immediately prior to donning sterile gowns and gloves before participating in surgical and invasive procedures, in order to reduce the risk of cross infection in event of glove perforations.

It is necessary to have a standardised procedure and to practise to a high level of competence (AfPP 2016).

This poster presents a guide to surgical hand antisepsis.
A Guide to Surgical Hand Antisepsis

The aim of the surgical hand antisepsis is to remove or destroy transient microorganisms and inhibit the growth of resident microorganisms (AfPP 2016).

### Preliminary wash

The hands of the surgical team should be clean before entering the operating room by washing with a non-medicated soap and running water. If hands are visibly soiled, use soap and water, or use a no-touch hand disinfection device (AfPP 2016) and then discard.

WHO (2016) guidelines recommend washing hands and removing debris from underneath fingertips using a nail cleaner (not brushes) under running water (sinks should be designed to reduce the risk of splashes). Rinse hands and forearms up to elbows.

### Process

Each step of surgical 'scrubbing' consists of five strokes rubbing backwards and forwards and adapts Ayliffe's six step technique (Ayliffe et al 2000) into nine steps. Sources of evidence drawn on include AfPP’s Standards and Recommendations for Safe Perioperative Practice (AfPP 2016), AORN’s recommended practices (Paulson 2004), Ayliffe’s six step hand washing technique (Ayliffe et al 2000) and WHO guidelines (2016).

### Surgical hand antisepsis

Surgical hand antisepsis should be performed using either (but not combined) alcohol-based hand rub (ABHR) or a suitable antimicrobial antiseptic solution before donning sterile gloves (WHO 2009, 2016). Hands and forearms should be washed for the length of time recommended by the manufacturer, usually 2–5 minutes (WHO 2009, 2016). If using an antimicrobial solution, the temperature and flow of the water must be adjusted before the procedure is started to achieve comfort and avoid getting the scrub suit wet.

Ensuring that no part of the sink or taps is touched wet the hands and arms up to the elbow working from the fingertips towards the elbow in one direction only, keeping the hands higher than the elbows. During each of the following steps keep hands (clean area) above the elbows (dirty area) allowing water to drain away; avoid splashing surgical attire.

### Step Nine - Ending Scrub

**If using a solution**, rinse hands under running water - clean to dirty area. Turn off tap using elbows if necessary. Open gown pack onto a clean surface and take a hand towel. Hands are dried first by placing the opposite hand behind the towel and blotting the skin, then, using a corkscrew movement, to dry from hand to elbow - do not move back down towards wrist. Discard towel. Using a second towel, repeat the process on other hand and forearm before discarding.

**If using ABHR**, allow hands and forearms to dry completely before donning sterile gloves (WHO 2009, 2016).