Hand Washing Policy

Background

Hand hygiene refers to the process for the physical removal of dirt, blood, body fluids and transient microorganisms from the hands (hand washing) and/or destruction of microorganisms (hand antisepsis). It is an important measure for preventing the spread of infection and is the cornerstone of good infection control. Direct contact is one of the main modes of transmission of the multi-drug resistant pathogenic bacteria MRSA or of viruses such as Herpes viruses, which cause cold sores and shingles. Even during simple contact such as shaking hands or touching a patient's face bacteria and viruses are picked up on the hands. These transient bacteria, which do not become part of the dentist's normal resident bacterial hand flora, can persist for many hours unless they are removed. The microbes can be destroyed and the transmission of infection stopped, by the simple procedure of hand hygiene.

Correctly performed, hand hygiene will remove transient microorganisms from the surface of the skin. For routine dentistry it is not necessary to try and remove the resident bacterial flora, which have a symbiotic protective role. However, for surgical procedures (e.g. implant surgery) more extensive disinfection of the hands is required to reduce the numbers of resident bacteria.

When to Clean Your Hands

Hands must be cleaned immediately before each and every episode of dental treatment or after contact with saliva, blood or other bodily fluid. This prevents contamination of the patient's oral cavity and face with organisms carried on the dental team's hands.

Hand hygiene performed after an episode of patient care and following removal of gloves minimise contamination of the environment and oneself.

Summary of when to clean hands

1. Before donning gloves for dental treatment
2. After removing gloves
3. If your hands become contaminated with blood/body fluids
4. After contact with contaminated dental equipment
5. After cleaning up blood or body fluid spills
6. After handling waste

Hand hygiene techniques

Hand hygiene is divided into preparation, washing and rinsing, and drying. There is a science to hand washing/cleaning in the same way as there is to cleaning teeth effectively. Ayliffe’s hand cleaning technique is shown in table1. This method of hand cleaning employs vigorous rubbing to create friction and ensures that all surfaces of the hands and wrists are exposed to the disinfectant and thoroughly cleaned in a systematic manner. It is suitable for
applying alcoholic hand rub or hand washing with non-medicated soap and antiseptic handwash solutions. Hands washed with liquid soap or antiseptic hand wash solutions should be thoroughly rinsed under running water. Completely drying the hands is a key factor in effective handwashing and maintaining skin integrity, as microorganisms can proliferate on damp hands and damaged skin.

Rings and watches prevent effective cleaning of the skin and should be removed. Gloves are more prone to tearing if rings are worn. Microbiological studies show that the skin under rings becomes heavily colonised with bacteria e.g. Staphylococcus aureus. Artificial nails and chipped nail polish may also harbour bacteria. Artificial nails have been implicated in outbreaks of bacterial and fungal infections in hospital wards. So it is best to keep fingernails short, clean and free from nail polish and artificial nails and jewellery (except wedding rings) should not be worn.

**Use of Alcohol hand rubs**

In preparation for dental treatment, hand hygiene should be carried out using a skin disinfectant preferably an alcohol based hand rub. Alcohol (gel/solution) hand rubs reduce the bacterial and viral load rapidly and are an effective alternative to hand washing for clean hands. Alcohol based hand rubs have the advantages of requiring no paper towels for drying, can be performed at the chair-side, and are less irritating to hands than soaps. Many products also incorporate a moisturiser.

Alcohol will not remove dirt or kill bacterial spores such as those of C. difficile. So dirty hands that are visibly soiled, or potentially grossly contaminated with dirt or organic material will need to be washed with liquid soap first. A non-medicated liquid soap removes dirt and transient microorganisms rendering hands socially clean. Alcohol hand gel can be used thereafter as long as hands remain visibly clean. Hand rubs are also available in an individual dispenser that can be carried in the pocket or a belt and are ideal were there is limited access to a sink such as on a domiciliary visit.

As may occur with any skin preparation, a small proportion of people can develop hypersensitivity to alcohol based hand rubs. Affected staff should change to an alternative product and seek medical advice from Occupational Health or their GP. Alcohol is flammable and care should be taken to avoid contact with direct heat or sunlight, especially when it is stored in bulk. As is the case with all disinfectants a COSHH assessment must be undertaken. Keep it out of reach of children who might be tempted to drink it!

**Hand hygiene technique**

1. Cuts and abrasion must be covered with a waterproof dressing
2. Fingernails should be kept short, clean and free from nail polish, artificial nails and nail art
3. Remove wrist watches, jewellery and roll up/remove long sleeved clothing. Rings (except wedding rings) should not be worn during a clinical session
4. Before donning gloves, vigorously wash and/or rub all aspects of hands and wrists using a skin disinfectant or alcohol hand rub (on clean hands)

**Hand washing with liquid soap or antiseptic hand wash solutions**

1. Wet hands under lukewarm running water before applying liquid soap or antiseptic hand wash solution into cupped hands
2. Rub hands together vigorously to lather all surfaces of hands and wrists
3. Wash palms, backs of hands, finger and thumb webs, tips of fingers and thumbs, especially the nail area
4. Wash for 15 seconds
5. Rinse hands thoroughly under running water
6. Dry hands completely with a soft, absorbent disposable paper towel
Hand hygiene with alcohol hand rub/gel

1. Distribute alcohol hand rub the solution evenly over every part of the hand, fingers and wrists.
2. Rub hands together vigorously using the Ayliffe method. Pay particular attention to the tips webs and nail beds of the fingers and thumbs
3. Continue until the solution has completely evaporated and the hands are dry
4. Gloves must be worn and changed between patients
5. Hand cream should be applied regularly to protect skin from drying. However, communal tubs should be avoided as these can become contaminated

Surgical hand washing (hand antisepsis) is used to destroy transient and resident microorganisms

Hand antisepsis is indicated prior to minor oral surgery, periodontal and implant surgery and aims to remove transient microorganisms and reduce resident microorganisms. It requires a more time intensive technique using aqueous antiseptic or alcohol solution. Hands are washed with antiseptic hand wash solution (Chlorhexidine (Hibiscrub), Povidine -iodine (Betadine) or Triclosan (Aquasept) or equivalent) for 2 minutes. Alternatively use an alcohol hand rub. Two x 5ml applications of alcohol rub solution can be applied to socially clean hands that have been washed with soap and water. Rub hands and wrists using the method described above until completely dry.

Dedicated Handwashing sink and consumables

1. Easily accessible dedicated hand washing sink
2. Hand washing sinks need to comply with Health Building Note (HBN) 95 i.e. no plugs or overflows and the water jet must not flow directly into the plughole. This reduces the generation of contaminated aerosols
3. Sink, taps and tile surrounds should be visibly clean and free of clutter
4. Be supplied with hot and cold water (preferably with mixer taps to avoid scalding )
5. Taps should preferably be elbow, wrist or foot operated taps to reduce the risk of hand contamination
6. Liquid soap (dispensed in disposable cartridges rather than refillable cartridges). Avoid refillable cartridges, which become contaminated with microorganisms during the 'topping up' process
7. Soap bars are not suitable for use in the clinical setting as they easily become colonised with Gram-negative bacteria and Pseudomonas spp. and can therefore act as a source of cross-infection
8. Wall mounted disposable paper towels. Reusable towels are not suitable for clinical settings as they become readily contaminated with microorganisms
9. Nailbrushes are not indicated for hand hygiene in dental practice. If needed to clean nails, then a sterile brush should be used on each occasion

Hand Care and prevention of irritant dermatitis

Staff who have an existing skin conditions such as dermatitis or who develop skin irritation with a particular product should seek expert advice on treatment and management.

Intact skin is a barrier to infection, so it is essential that you take care of your hands and wear heavy duty gloves for work in the home and garden. Soaps and disinfectants cause drying and abrasion of the hands, which in some cases can lead to an irritant dermatitis. In order to avoid these problems apply hand cream several time a day. Hand cream has been shown to reduce cross infection by preventing shedding of residential bacteria. Do not use petroleum based products as they can weaken the latex and increase glove permeability.

Avoid sharing communal pots of hand cream as these can become contaminated. Use individual supplies or pump dispensers of hand cream.
Hand care is vital to infection control; lacerated, abraded and cracked skin can offer a portal of entry for microorganisms. Clean hands complement the use of gloves; neither is a substitute for the other. Training in hand hygiene should be included in a staff induction programme and regular update training provided to all staff.

**Hand hygiene**

There are different levels of hand hygiene depending on the potential for contamination of the hands and the process to be undertaken.

**Social** (10-15 seconds) will remove transient microorganisms using plain or antimicrobial liquid soap.  
*When*: general non-clinical activities, including decontamination.

**Hygienic** (15-30 seconds) will destroy microorganisms and provide a residual effect using an antiseptic cleanser or antimicrobial soap from a dispenser.  
*When*: before wearing gloves to carry out clinical procedures and after contact with blood and other body fluids.

**Surgical scrub** (2-3 minutes, ensuring all areas of the hands and forearms are covered) will substantially reduce the numbers of resident microorganisms using an antiseptic hand cleaner (chlorhexidine gluconate 4%, povidone iodine 7.5%).  
*When*: oral, periodontal and implant surgery

A poster depicting the relevant method(s) should be displayed above every wash-hand basin in the practice. A poster is included in the Department of Health’s guidance (HTM 01-05).

To reduce the risk of irritation, mild liquid soap should be applied to wet hands and hands washed under running water. Hands should be washed:

1. Before and after each treatment session  
2. Before and after the removal of PPE  
3. Following the washing of dental instruments  
4. Before contact with sterilised instruments (wrapped and unwrapped)  
5. After cleaning or maintaining decontamination devices used on dental instruments  
6. At the completion of decontamination work.

After washing, hands should be dried thoroughly, using disposable towels, to prevent transfer of microorganisms and prevent skin damage. Hand cream (preferably water-based) will help to avoid chapped or cracking skin. A wall mounted dispenser with disposable cartridges should be used.

Fingernails should be kept clean, short and smooth. False nails and nail polish should not be used. Rings, bracelets and wrist watches should not be worn during clinical procedures. If a wedding ring is worn, the skin beneath it should be washed and dried thoroughly.

Further information is available in the BDA’s model policy on hand hygiene, available on the BDA website at [www.bda.org/infectioncontrol](http://www.bda.org/infectioncontrol).
Gloves

Gloves must be worn for all clinical procedures and treated as single use items, so a new pair of gloves must be used for each patient. It is important that gloves fit properly. Gloves should be put on immediately before contact with the patient and removed as soon as clinical treatment is complete. Used gloves must be disposed of as clinical waste.

There is a variety of gloves available for clinical procedures. Those selected should be –

1. good quality non-sterile medical gloves (to European standard BSEN 455, parts 1 and 2, medical gloves for single use), worn for all clinical procedures and changed after every patient
2. Well fitting and non-powdered. The powder from gloves can contaminate veneers and radiographs, disperse allergenic proteins into the surgery atmosphere and interfere with wound healing
3. Low in extractable proteins (<50μg/g) and low in residual chemicals.
4. Domestic household gloves, if used, should be washed with detergent and hot water and left to dry after each use to remove visible soil. These gloves should be replaced weekly or more frequently if torn or visible soil cannot be removed by washing.

Latex allergy

Allergic contact dermatitis is rare but, if it develops, it may be serious enough to cause the person to cease practice. If it is suspected, the advice of a dermatologist should be sought. Irritant contact dermatitis is more common and can be avoided by careful choice of glove and hand disinfectant and meticulous hand care.

All clinicians are encountering patients who are allergic to latex or the chemicals used in glove manufacture. Non-latex gloves are available but additional precautions will be needed to protect the allergic patient against contact with latex through other sources in the surgery – local anaesthetic cartridges, rubber dam and eye protection, for example. A BDA Fact File on hand dermatitis and latex allergy is available to download. The advice of occupational health may need to be sought on the treatment of the patient. Further guidance is also available from the Faculty of General Dental Practice and the Health and Safety Executive.

How we implement this Hand Washing Policy

1. All staff members are trained in hand hygiene and sign up to this policy.
2. We update training on a regular cycle
3. We display the relevant posters
4. We use appropriate equipment and materials

I have read, understood and work under this policy

Signed Date

Name

Policy Implemented 01/01/2010 Next Review of Policy Due 01/01/2013