Cleaning, Disinfection & Sterilisation

Most infectious diseases that are transmitted whilst performing services are often due to poor cleaning, disinfection and sterilisation of instruments and equipment. It is important that all reusable instruments and equipment are effectively decontaminated before use on another client.

Decontamination includes:
1. *Cleaning* – reduces foreign matter and infectious agents from the surface (low risk items/procedures)
2. *Disinfection* – reduces the number of infectious microorganisms to a safe level (medium risk items/procedures)
3. *Sterilisation* – kills all microorganisms (high risk items/procedures)

Depending on the type of equipment and how it is used, will depend on the level of decontamination.
Items that penetrate the skin (i.e. needles, jewellery) must be sterilised.

Cleaning of implements and articles
All equipment including combs, rollers, scissors and clippers should be cleaned in between uses and maintained in a clean and dry condition.
Steps include:
1. Rinse with warm water
2. Wash with warm water detergent
3. Rinse with warm to hot water and dry with a clean lint free cloth or in a drying cabinet

For implements that cannot be placed in water then it is essential they are thoroughly wiped clean with a high level instrument grade disinfectant and allow to dry.

Care of cleaning equipment
Utensils that aid cleaning include:
• Small brush with firm plastic bristles (i.e. toothbrushes)
• Light-grade nylon or similar non-abrasive scouring pad
• Disposable pipe cleaner

These items should be maintained in a clean and serviceable condition through regular cleaning, maintenance and replacement. These should be stored in a clean and dry condition.

Implements and articles that require disinfection
Instruments and equipment that come into contact with broken skin and intact mucous membranes, such as tweezers, clamps and nail files are considered medium risk and require disinfection after cleaning.

Instruments and equipment can be disinfected by:
• 70-80% ethyl alcohol
• 60-70% isopropyl alcohol solution; or
• Methylated spirits.

However the recommended method is to thermally disinfect using heat and water at temperatures that destroy microorganisms. The cheapest way to do this is boiling water and hot water baths following the below temperature and holding times.

Surface temp (°C)	Minimum disinfections (minutes)
90	1
80	10
75	30
70	100

Implements and articles that require sterilisation
It is essential that all equipment used to penetrate the skin is sterile. All needles used in skin penetration must be single use.
If you are using implements and articles that penetrate the skin and will be reused on another client (such as scalpels, cuticle cutters, derma rollers and micro-dermabrasion heads) then these are to be cleaned and

sterilised. Any jewellery is to be pre-sterilised and to remain in sealed sterilising package until use.

Sterilisation must be achieved by use of a benchtop autoclave that is:
• Maintained in accordance with AS2182 – 1998
Sterilisers – steam – benchtop
• The sterilisation is carried out in accordance with
AS/NZ 4815: 2006 - Office based health care facilities – reprocessing of reusable medical and surgical instruments and equipment and maintenance of the associated environment.
Autoclaves use steam and pressure to efficiently kill microorganisms.
Sterilisation depends on:
• *Temperature* – the correct temperature must be reached for a specified time.
• *Cleanliness* – items to be sterilised must be thoroughly cleaned beforehand.
• *Circulation* – the container must be designed so that the sterilising agent can circulate freely around the items being treated. Items should be placed within the sterilising packaging.
• *Load* – the steriliser must be calibrated to suit the standard load conditions. Do not over pack sterilising packages.

Autoclave sterilisation
At least one person must be present at the time of sterilisation and staff must be adequately trained in the operation of the device.
Autoclaves should be serviced regularly by a qualified service technician. They should be tested and calibrated at least once per year. Biological indicators (bacterial spores) should be used to check the sterilising power of the unit. Service records should always be available at the premises.

Preparation of equipment
• Clean and dry items prior to sterilising
• Place items autoclave bags to protect them from becoming contaminated after being sterilised
• A chemical indicator is to be included upon the autoclave bag to indicate correct processing
• Do not reuse autoclave bags
• Items and equipment that are within packaging that is damaged or has a broken seal, are wet or have been dropped, are no longer sterile and must be discarded or reprocessed
• Dirty equipment must never be stored or processed near clean areas or near the autoclave

Record keeping
Documentation of the sterilisation process using a autoclave must be recorded. The following information must be recorded at the completion of each batch processed:
• Time and date;
• The length of time held at maximum pressure and temperature
• Maximum pressure and temperature achieved.

Keep any record or printout from the bench top steriliser. All modern sterilisers have print out facilities.

More information
Visit NSW Health website for more information:
http://www.health.nsw.gov.au/environment/skinpenetration/

Alternatively, contact Council and ask to speak to the Environmental Health Officer.