

Guidance notes 2 (GN2): Decontamination

There are many bacterial, viral and fungal infections which can be easily contracted by contaminated equipment. These include Herpes, Hepatitis B, Hepatitis C and HIV, all good reasons for ensuring appropriate cleaning and sterilising techniques.

What is cleaning, decontamination, disinfection and sterilisation?

Definitions

- Cleaning is a physical process which removes dirt eg dust and organic matter, along with large proportions of germs.
- Cleaning instruments is an essential part of the decontamination process, inadequately cleaned instruments cannot be sterilised effectively.
- Decontamination is a general term used to render an item safe for use.
- Disinfection is a process that reduces the number of micro-organisms to a level where they will not be harmful to health but which may not necessarily inactivate some viruses and bacterial spores.
- Sterilisation (eg autoclaving) is a process that renders equipment free from all living organisms including viruses, protozoa, fungi, bacterial and their spores. It is essential that all instruments in contact with non-intact skin are sterile.

Cleaning of the environment and equipment

- Several products are available to the industry to ensure that risks of cross contamination are reduced to a minimum.
- Equipment that comes into contact with intact skin must be cleaned before re-use including chairs and workbenches.
- Cleaning with warm water and general purpose detergent breaks up grease and dirt and can be carried out to remove the majority of micro-organisms.
- This is essential prior to disinfection and sterilisation of instruments and equipment as disinfectants are often inactivated by organic material such as soiling and dirt.
- They may also be inactivated by other cleaning products such as anionic detergents and soap.
- Equipment with complex shapes such as forceps and tattooists' needle bars etc should first be cleaned manually with general purpose detergent and hot water and then cleaned ultrasonically prior to sterilisation.



When to sterilise/disinfect

Risk	Application	Recommendation
High	Items in close contact with a break in the skin or mucous membrane or skin piercing involved	Sterilisation
Intermediate	Items in contact with intact skin, or mucous membrane	Sterilisation or disinfection
Low	Items in contact with healthy skin or not in contact with the client	Disinfection or cleaning

Recommended cleaning and disinfectant agents for the environment

- General purpose detergent eg fairy liquid and hot water are used for cleaning surfaces at end of sessions/day prior to disinfection.
- Cream cleaner which is used for cleaning surfaces prior to disinfection.
- Disinfectant spray eg supermarket brands used for cleaning surfaces between clients.
- Bleach (hypochlorite) e.g. household bleach, used for environmental disinfection but not for use on metal surfaces.
- Alcohol (70 percent isopropyl) e.g. surgical spirit for disinfecting surfaces.

Recommended cleaning and disinfectant agents for tools

- General purpose detergent and hot water, used for cleaning tools after each client prior to disinfection.
- Disinfectant spray, used for sanitising non-immersible or non-metal tools.
- Bleach (hypochlorite), used for tool disinfection but not for use on metal surfaces.
- Alcohol (70 percent isopropyl), used for disinfecting non-immersible or non-metal tools.
- Quaternary ammonium compounds e.g. barbicide, marvicide, used for tools (such as small metal instruments) disinfectant. Immersion time is important and it must be made up accurately following manufacturer's instructions.

- Chlorine-based e.g. sodium hypochlorite, sodium dichloroisocyanate, used for disinfection of pools.
- Peroxygen e.g. Ozone, used in the disinfection of pools.

Skin disinfectants

- Alcohol, (70 percent ethyl or isopropyl alcohol), used in impregnated wipes, a useful way of using alcohol on the skin.
- Chlorhexidine e.g. Savlon liquid needs to be freshly made up or used as individual sachets as bulk packs of wipes and stored solutions are easily contaminated.
- Benzalkonium chloride, used for cleaning wounds and skin surfaces.
- Povidone iodine or betadine preparations, used for preparing skin for skin piercing, tattooing and acupuncture procedures.
- This can cause allergic response and may cause damage to sensitive tissues.
- N.B Glutaraldehyde (Cidex) must never be used in special treatment centres.

Sterilisation

All equipment used to penetrate the skin must be sterile. All re useable instruments used in the procedure to pierce a person's skin e.g. clamps, forceps or objects in contact with broken skin, should be considered to be contaminated and should not be used until they have been sterilised. Water boilers, hot air ovens and UVA light boxes are not effective methods of sterilisation.

The recommended method of sterilisation is autoclaving and this method must be used where possible. Autoclaves and other sterilising equipment must be used and

maintained strictly in accordance with the manufacturer's instructions to ensure reliable operation.

Products are available which can be used as chemical high level disinfectants in certain circumstances when autoclaving is not possible e.g. peroxygen systems such as perasafe for immersion of equipment. These products can be purchased in powder form and made up when required.

It is important to remember the following when using chemical sterilisers:

1. The products must be made up strictly in accordance with the manufacturer's recommendation and the quantities must be measured carefully.
2. The made up solution must only be kept for as long as the manufacturer specifies then disposed of.
3. No further equipment must be added during the immersion time.
4. Care must be taken that the immersed equipment is fully submerged and devoid of bubbles on the equipment surface or the exposed areas will not be sterile.

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