

Guidelines for the Safe Piercing of Skin

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Foreword

Body piercing and tattooing are activities that can affect public health when operators use unsafe techniques. There are significant hazards posed by contact with blood and body fluid, such as (the risk of) transmitting blood-borne viral diseases.

These guidelines update and expand on the 1989 Skin Piercing Guidelines prepared by the Medical and Scientific Sub-Committee of the National AIDS Council.

It is expected that they will be used widely by operators who offer body piercing and tattooing services in order to provide a framework of minimum standards with respect to infection control in the industry.

The guidelines are seen as an important part of the Ministry of Health's continued public health focus on communicable disease prevention and will be a valuable resource to skin piercing professionals, territorial authorities, educators, and those interested in health and safety in the workplace.

A handwritten signature in blue ink, appearing to read 'K. Poutasi', is positioned above the name and title of the Director-General of Health.

Karen O Poutasi (Dr)
Director-General of Health

Acknowledgements

This document was co-ordinated and developed by Glenn Doherty (Ministry of Health) with specialist input from the Ministry of Health Communicable Diseases Team in association with skin piercing professionals and experts in infection disease control.

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Purpose

The purpose of this booklet is to help those in the skin piercing industry better understand how to protect themselves and their clients from the risk of infection. In addition, it aims to encourage operators to reduce harm from skin piercing and promote healthy skin piercing practices.

This booklet will explain:

- how to minimise risk of transmitting blood borne and other infections by the use of standard precautions during skin piercing procedures
- how to ensure appliances are clean and sterile before being used for skin piercing
- how to minimise the risk of transmitting micro-organisms between the operator, the appliances used and other clients
- how to further promote a safe work environment for workers performing skin piercing operations.

Background

Skin piercing is a risk activity. There is the potential to cause harm and injury to a client or operator through unsafe practice. Public health is directly affected by the quality of the skin piercing service.

Operators and clients in the skin piercing industry risk contracting a range of infections which can lead to serious illness. Infection control procedures regulate this risk and prevent the transmission of disease.

Any operator interested in providing safe skin piercing services in order to reduce the risk of infection will need to set up some minimum strategies that aim to control (and therefore prevent) hazards in their day-to-day personal practice and business operations.

The Ministry of Health encourages all operators to implement risk management strategies for their business/service that take account of infection hazards and provide effective practical measures to minimise identified risks.

In the skin piercing industry a comprehensive approach to any risk analysis and management includes not only standard infection control measures, but also emphasises the need for:

- operator competency
- staff education and training, including first aid courses
- local registration and licensing, eg territorial authority by-laws
- compliance with relevant standards, by-laws and other regulations
- quality information systems

- purchasing reliable, safe and recommended equipment
- a comprehensive aftercare regime unique to each piercing.

While these guidelines focus largely on matters relating to infection control practices and procedures, if good practice is to be encouraged operators need to have an ongoing commitment to quality management in the industry.

Objectives

What are the skin piercing guidelines for?

To protect people from illness or injury due to infection or contamination resulting from skin piercing or activities associated with skin piercing.

Functional requirements

What is required?

Skin piercing operations should be undertaken and managed in a manner that ensures:

- only aseptic techniques are used
- adequate provision is made for collecting, storing and disposing of infectious and biological wastes
- adequate aftercare of wounds
- people who carry out piercings are competent
- an adequate level of personal and environmental hygiene is maintained in skin piercing premises.

Performance measures

How is this achieved?

- Skin piercing equipment and materials that are used to penetrate the skin or are applied beneath the skin following penetration shall be sterilised before they are used.
- Infectious and biological wastes shall be kept separate from general waste.
- Comprehensive advice to clients on the aftercare of wounds shall include instructions on: recognising infection, cleaning wounds, genital/oral piercings care, recommended jewellery, and commonly expected problems.
- Operators shall have knowledge of and skills in: first aid, aftercare, infection control, waste disposal, and preventative immunisations.
- Operators shall adhere to a high standard of hygiene.
- Sanitary facilities shall be provided and all building fixtures shall be maintained and cleaned.

What is skin piercing?

All reference to skin piercing in this document relates to any process involving piercing, cutting and puncturing the skin or any other part of the human body, or applying a dye or other substance for the purposes of colouring part of the skin.

Who are the guidelines for?

These guidelines have been written specifically for the tattooing and body piercing industry. They are not written for medical practitioners, dentists, nurses, physiotherapists, or podiatrists. Where relevant, they apply to acupuncturists, beauty therapists, hairdressers, pharmacists, jewellers, or other operators performing skin piercing procedures.

What is the current situation in New Zealand?

The Ministry of Health first developed skin piercing guidelines in 1989. These guidelines originated largely in response to the then HIV epidemic and hepatitis B (HBV) infection. In 1989, a further blood-borne virus, hepatitis C (HCV), was characterised.

HCV, HBV and HIV are easily passed from person to person by infected blood. Meticulous attention to hygiene is needed in order to avoid transmission during skin piercing as invisible quantities of blood are enough to cause infection.

Skin piercing is becoming increasingly popular. There are no regulations within the industry, although some Territorial Authorities (TAs) have begun to develop by-laws and licensing requirements to foster good practice and to increase operators' standards, essentially to minimise infection.

Under the Health Act 1956, TAs are obliged to improve, and protect public health within their districts. The Act empowers the TAs to inspect their districts regularly to ascertain if any nuisances, or any conditions exist that are likely to be injurious or offensive to health. The Health Act 1956 and associated regulations are currently being reviewed to ensure that future health legislation is more relevant, appropriate and takes account of the dynamic health environment.

Standards

There are a number of important standards referred to in this document that are relevant to operators and should apply across the industry. Wherever possible skin piercing operators should take account of these standards in their day-to-day practice. Copies of these standards can be obtained from Standards New Zealand Information Service, phone 0900 50 550. They include:

AS 4031:1992	Non-reusable Containers for the Collection of Sharp Medical Items used in Healthcare Areas
AS 2182:1994	Sterilisers-Steam-Portable
AS 2773:1985	Ultrasonic Cleaners for Hospital Use
NZS 4303:1990	Health Care Waste Management
AS/NZS 3816:1998	Management of Clinical and Related Wastes
AS/NZS 4261:1994	Reusable Containers for the Collection of Sharp Items used in Human and Animal Medical Applications. Amendment #1

The Model General By-laws Committee of Standards New Zealand is currently considering whether to draft a by-law for skin piercing as a possible addition to the current NZS 9201 series of by-laws.

Traditional and cultural skin piercing practices

New Zealand is home to a number of cultures where traditional skin piercing practices are common, particularly among Māori and Pacific peoples.

In some cases, bone and other traditional materials and substances are used as part of a particular cultural practice and therefore may fall outside the specific details of these guidelines. However, the fundamental infection control principles outlined can be applied across any skin piercing practice.

Cultural groups are encouraged to use these guidelines in the traditional or cultural context and foster appropriate hygienic procedures as an essential part of a good practice.

How do infections occur?

Wherever skin is pierced there is blood. The greatest danger from piercing is the transmission of infections between a piercer and/or their clientele.

Needles and other sharp instruments that are used to penetrate the skin will become contaminated by blood. The blood may be infected with a variety of blood-borne viruses and/or bacteria. Viruses such as hepatitis C, hepatitis B and HIV and common bacteria such as *Staphylococcus* can be transmitted when contaminated instruments penetrate the skin.

Infections and cross-contamination can also occur where:

- equipment is not properly cleaned between procedures
- used and clean instruments come in contact with one another
- clean instruments are placed on unclean surfaces
- contaminated linen, dressings, spatulas, or disposable gloves are not discarded immediately and appropriately
- materials that clients come in contact with are not clean or are not handled and used hygienically
- the operator does not keep themselves clean and hygienic
- the premises, including furnishings and fittings, are not kept clean, hygienic and in good repair
- disinfection/sterilisation practice and equipment are inadequate.

What are the likely infections?

Viral infections

Hepatitis C

This is a blood-borne virus and there is a particular risk of infection from the hollow needle procedure used in tattooing. Hepatitis C can cause long-term illness and can result in liver damage and cancer of the liver. There is no known cure for hepatitis C, nor is there a preventive vaccine. The majority of people infected with hepatitis C in New Zealand have contracted the virus by using injecting equipment or from contaminated blood transfusions conducted before blood screening was available.

Hepatitis B

Acute hepatitis B can cause fatigue, malaise, jaundice, and an inflamed and often painful liver. The infection can also result in long-term illness including liver damage and liver cancer. Hepatitis B can also be transmitted by blood on needles used for skin piercing and tattooing procedures and through poor hygiene. A safe effective vaccine is available and a course of three injections will provide full protection to most children and young adults. A blood test will show whether a person is protected. In the interests of their own personal health, operators of skin piercing or tattooing services should ensure they are protected with this vaccination and thus increase client safety. This vaccination can be arranged through your local doctor.

HIV

HIV (human immunodeficiency virus) is the virus that causes AIDS. The risk of contracting HIV can increase during skin piercing. At present there is no vaccine against HIV/AIDS and no cure. Safe and hygienic practices minimise transmission during skin piercing operations. Clients should also be warned that after genital piercing the risk of infection with STD and HIV may be increased.

It is also important to understand that these viral infections do not necessarily produce symptoms or have signs associated with them. For this reason, operators are encouraged to have the necessary tests that will exclude any possible unknown illness and to always practise safely and hygienically. In the case of HIV, it is imperative that the operator/client receives counselling and gives their consent before testing. In addition operators who believe they are at risk, ie hepatitis B carriers or are possibly HIV positive, should have their status checked and should discuss precautions with their medical practitioner.

Bacterial infections

Unhygienic practices can introduce common bacteria such as *Staphylococcus* that lead to skin infection, wound breakdown, scarring, and infection of the blood.

What are the principles for healthy and hygienic skin piercing?

Skin piercing operators should supply their clients with professionally competent, safe and hygienic services, provided in clean and congenial premises. It is essential for operators to be fully aware of the potential dangers and wider effects of their procedures and understand the precautions that need to be taken to minimise the likelihood of infection or spread of disease.

Simple principles for safe and healthy skin piercing

The following basic principles must be observed by operators of establishments that provide skin piercing services. They include:

- the premises must be kept clean and hygienic
- any article to be used for penetrating the skin must be sterile, and preferably a single-use disposable article
- any article that has penetrated the skin or is contaminated with blood must be either disposed of immediately as an infectious or biological waste, or cleaned and sterilised before being used on another person
- operators must keep themselves and their clothing clean, any cuts abrasions or wounds they have should be covered
- animals should not be permitted on the premises where skin penetration activities are carried out, except guide dogs for the blind

- employers in the skin piercing industry should provide adequate training for staff in all areas of hygiene, infection control and first aid
- hepatitis B vaccinations are advised for all skin piercing operators.

It is the operator's responsibility to ensure that the whole service is provided to a sufficient standard of hygiene to ensure client and operator safety.

Consent

Any procedure (which invades someone's body in any way) performed without permission, may be regarded as assault. It is therefore essential that the person receiving the procedure gives consent to the procedure.

While skin piercing may not strictly speaking be defined as a health service, the consent standards established in medical and surgical practice provide relevant guidance.

The essential elements of consent in health care are that it is:

- voluntarily given
- fully informed
- consented to by a person who has the capacity to consent.

Information must be given in a manner which fully explains the nature of the procedure, the outcomes of it and any risks involved. The information must be understandable and therefore take into account the age of the person involved and their understanding of the language used. Providing written as well as verbal explanation is a wise precaution as is obtaining consent in writing.

While a child or young person under 20 may legally consent to a procedure, care must be taken to ensure that the child is competent to do so in terms of capacity to understand what is involved and the full implications of the outcome of the procedure. If the child is judged as not competent their parent's consent is essential. Before seeking the consent of parents, the child must give permission for the parents to be given information in order to protect the child's privacy rights. Where children under 16 are concerned it would be wise to encourage the child or young person to involve their parents or guardians in the decision to have the procedure performed.

Tattooing and body piercing – hygienic procedures

Preparing the work area

It is important that the work area is fully prepared for the completion of the tattooing or body piercing procedure. Leaving the client in the middle of a body piercing procedure to get something else which may be needed increases the risk of cross-contaminating surfaces.

- Ensure that the work area is clean and tidy.
- Make sure all items needed are in easy reach and that any items not required are removed from the area before you start.
- Cover any work surfaces with disposable coverings or clean linen (this makes it easier to clean the work surface).
- Place a container labelled 'dirty instruments for sterilisation' in the work area for appropriate cleaning.
- Wash hands thoroughly with antibacterial soap and water; dry hands using paper towels; wear clean new gloves for each client.
- Wherever possible, packages containing sterile needles should be opened immediately before use on the client.

Preparing tattooing inks and other equipment

While tattooing is in progress, prevent surfaces from being contaminated if an item has to be handled or adjusted by following the guidelines listed below.

- Cover spray-bottles and ink bottles with single-use plastic bags so that only the nozzles are exposed.
- Cover any surfaces which may need to be touched, for example light fittings and power pack controls, with cling film.
- Place the required number of single-use disposable ink caps into stainless steel ink cap trays and dispense inks into ink caps. Alternatively, dispense inks onto a single-use disposable tray. Any leftover ink must be discarded with the container after each client.
- Place water to be used for rinsing between tattooing colours in disposable cups and dispose of the water and cups after each client.
- Tissues or wipes to be used during tattooing procedures should be stored where they cannot become contaminated. Enough wipes to be used on one client should be kept in the working area, and any not used should be immediately discarded into a biological and infectious waste container.
- Replace any sterile instruments accidentally touched by you or contaminated in any other way, either before or during a skin piercing procedure, with another sterile instrument or needle.

Skin preparation

Make sure the client is seated comfortably and positioned so they will not harm themselves if they faint.

- Check the client's skin is clean and free from infection.
- If area needs to be shaved, use a new disposable safety razor for each client, and dispose of the razor immediately following its use into an appropriate sharps container.
- Prior to tattooing/body piercing, the skin around the site must be disinfected. Areas around the eyes should be cleaned with povidone-iodine.
- Skin on other areas can be disinfected using any of the following preparations:
 - 70 percent w/w ethyl alcohol
 - 80 percent v/v ethyl alcohol
 - 60 percent v/v isopropyl alcohol
 - alcoholic (isopropyl and ethyl) formulations of 0.5 to 4 percent w/v chlorhexidine
 - aqueous detergent or alcoholic formulation of povidone-iodine (1 percent w/v available iodine).

Use-by dates on disinfectants must be observed. In some people, povidone-iodine may cause a skin reaction if left on the skin.

The above disinfectants can be applied to the skin using a spray-bottle or pump pack and wiping with a clean disposable cloth. Alternatively, skin disinfectants may be decanted from their original container into a single-use container. At the end of tattooing/body piercing each client, any remaining fluid and disposable cloth must

be discarded into a biological and infectious waste container. Alcohol in the form of sterile disposable swabs may also be used to disinfect the skin.

It is important to wait at least two minutes between skin preparation and skin penetration so that the disinfectant has sufficient time to kill organisms.

For tattooing

- A detergent-based lotion containing one of the above antibacterial preparations may be used on the skin before placing a stencil. The method of applying this lotion to the skin should be the same as for antibacterial skin cleansers.
- Because of the high risk of cross-contamination with blood, it is important that stencils are not re-used on other clients.
- Apply lubricating jelly to the tattoo site using a clean, new, single-use spatula for each client. Never use gloves or bare fingers to apply lubricating jelly, always apply with a spatula and dispose of the spatula after each application into a biological and infectious waste container.
- Any leftover jelly must be discarded and must not be used on another client.

In body piercing

Where the needle is to be passed through body tissue and out the other side, a sterile, no touch technique must be used. Ordinary disposable gloves are not sterile and therefore, touching any part of the needle while wearing them means the needle is no longer sterile and should not be pulled through. Therefore, in such circumstances,

forceps should be used to handle the needle and sterile forceps must also be used to handle sterile jewellery. In addition, disposable gloves should be worn when handling the needle. Care must be taken when putting on sterile gloves so that you do not contaminate them.

Piercing guns

Piercing guns are only appropriate for use when piercing ears (lower lobe only) and when used by trained operators. These guns may damage body tissue when used for piercing other parts of the body or when used incorrectly on ears. Manufacturers of ear piercing guns provide training information about:

- preparing and maintaining the equipment
- piercing ears
- aftercare
- potential problems.

It is important to follow instructions and be aware of the potential risks associated with using piercing guns. Some piercing organisations and operators do not believe that guns are safe or clean and believe that safe ear piercings can only be completed by using aseptic hollow needle piercing techniques.

Safe operation includes ensuring that:

- the gun is made of stainless steel with no parts that could be damaged by repeated steam sterilisation
- operators who use guns autoclave the device between each use and store the device in a sterile bag between uses

- operators use appropriate jewellery with the gun and do so in a manner that will not damage body tissue
- piercing gun operators are thoroughly trained in infection control.

Local anaesthetic

It is illegal to supply and inject local anaesthetic if you are not an appropriate qualified practitioner (ie medical or dental). If surface creams or jelly anaesthetic are to be used they should be thoroughly wiped off with alcohol before skin penetration occurs and should not be re-used.

How to minimise infection

Infection control is the process of minimising the risks of spreading infections while providing tattooing and body piercing services to clients.

It is important that all operators adhere to standard precautions. An infection control framework will include the following fundamental elements:

- personal hygiene
- sterilisation and disinfection
- disposal of hazardous waste (sharps, biological and infectious waste, chemical)
- environmental cleaning

- accident planning (needlestick injury, bleeding)
- aftercare and health education.

As a guide to practice, the blood, all other body substances (except sweat) and non-intact skin and mucous membranes of every person should be considered potentially infected with blood borne or other diseases. Blood and body substances include blood, and all body secretions.

Personal hygiene

When to wash hands

- Before and after contact with each client.
- After contact with any blood or other body substance.
- Immediately after removing disposable gloves for any reason.
- After going to the toilet.

Hand washing

The surface of hands and nails must be clean before any client contact. Abrasions, cuts or lesions should be covered with a waterproof dressing, and it is recommended that disposable sterile gloves be worn when sterile instruments are being used and when contact with blood and/or body substances is anticipated.

How to wash hands

- Remove jewellery.
- Liquid soap or detergent with warm running water is recommended for regular hand washing.

- If reusable liquid soap containers are used, they and the plunger should be thoroughly cleaned and dried before refilling with fresh soap and replacing plungers.
- Lather hands vigorously for a minimum of 15 seconds during washing.
- Wash hands all over, including, backs of hands, wrists, between fingers, and under finger nails, as well as forearms up to the elbows.
- Rinse hands well.
- Thoroughly dry hands with a new, single-use, disposable paper towel or dry them under an air dryer. If cloth towels are used, they should be laundered after each use.

What to wear

- Gowns and/or disposable plastic aprons should be worn when there is a likelihood of splashing blood or body fluids or contaminating clothing.
- Disposable surgical gloves are to be worn when contact with blood and/or body substances is anticipated and when performing separate and distinct procedures on the same client.
- General purpose utility gloves should be worn when performing duties such as cleaning.
- Gloves should be discarded and replaced with new gloves if there is evidence of tearing or deterioration.
- Face protection (eye protection, and masks or face shields) should be worn when performing procedures that are associated with splash or spray of blood or body substances.

Managing waste

Waste management should comply with the New Zealand Standard NZS 4303:1990 Health Care Waste Management.

- Biological or infectious waste must be separated and disposed of appropriately, for example, blood stained swabs and blood contaminated gloves produced on the premises must be placed in a bin marked biological and infectious waste.
- Containers for biological or infectious waste must be clearly identified.
- All non-infectious wastes/papers and so on must be placed into a suitable refuse receptacle as soon as practicable after treating each client and removed from inside the premises at least daily.

Environmental cleaning

Following the client's treatment all contaminated appliances should be removed and either disposed of or reprocessed in accordance with the section on how to sterilise your instruments.

Contaminated paper towelling should be disposed of in an appropriate refuse container and linen laundered before re-use. Surfaces within the treatment room that have been exposed to contamination or bare skin should be cleaned using disinfectant and water.

Premises should be cleaned routinely to reduce the level of environmental contamination and to keep up a general standard of cleanliness.

Accident management

Sharps are objects or devices that have sharp points, protuberances or cutting edges capable of cutting or piercing skin.

Sharps injuries and contact with blood or body fluids

Because of the risk of blood-borne infection, operators and clients should avoid contact with other people's blood and body substances.

In the case of a parenteral (needle stick, cut or other) or mucous membrane (splash to eye, nose or mouth) exposure to blood or other body fluids or cutaneous exposure of non-intact skin (chapped, abraded or afflicted with dermatitis) involving blood, promptly wash away the contaminated blood or fluid. Following this:

- encourage bleeding, then wash with iodine skin disinfectant and water or copious amounts of water
- if skin is contaminated with blood, without a cut or puncture, wash with iodine or soap and water
- if eyes are contaminated, rinse open eye gently with tap water or saline irrigate for at least five minutes
- if blood gets in the mouth, spit it out and then wash mouth thoroughly and repeatedly with water.
- report the contact to your local doctor who will give advice
- in the case of injury by sharps, dispose of the object safely.

High-risk exposure to blood-borne viruses should be evaluated as soon as possible by a medical practitioner. The person who is the source of the blood or body fluid contact should be informed of the

exposure, and following appropriate explanation, should be asked to consent to serological testing for evidence of HIV, hepatitis B and hepatitis C. You may need a hepatitis B vaccination after a needle stick injury, if you are not already immune. Blood samples should be collected as soon as possible after the incident.

Bleeding

Should prolonged and unexpected bleeding occur at any time in the course of a tattoo or body piercing procedure, the following steps should be followed:

- put on disposable surgical gloves if you are not already wearing them
- stop the bleeding by applying pressure to the wound with a dry sterile disposable dressing
- if bleeding does not stop, continue to apply pressure and seek medical assistance immediately
- handle soiled disposable dressings and contaminated instruments carefully to avoid contact with blood from the client or the instrument. Dispose of contaminated instruments into sharps container and clean and sterilise the instruments
- clean surfaces such as benches, chairs or floors that have become contaminated with blood or other body fluids as soon as possible, using a disposable cloth soaked in 1:4 dilution of bleach
- wash the contaminated surfaces with hot water and detergent then dry them with a clean disposable wipe
- disinfect the surfaces with dry powder bleach or clean up fluid spills with a disposable paper towel and then disinfect with bleach

- dispose of all cloths used for wiping blood spills by placing them in the bin marked biological and infectious waste
- after treating wounds, handling contaminated dressings or cleaning up blood or other body fluids, remove both gloves, dispose of them in the biological and infectious waste bin and wash hands thoroughly.

Handling and disposing of sharps

Sharps represent the major cause of accidents involving potential exposure to blood borne diseases.

- Operators using sharps are responsible for management and disposal of those sharps.
- Dispose of used sharps into an Australian Standard (AS 4031:1992) or (AS/NZ 4261:1994) specified, disposable sharps container immediately after use.
- Non-reusable sharps should be discarded immediately the skin penetration procedure is completed; do not recap sharps.
- Do not forcefully insert items into the disposable container since this may lead to injury.
- Once the disposable sharps container reaches the full level, seal it and dispose according to Australian Standard AS 4031:1992 Non-reuseable Containers for the Collection of Sharp Medical Items, used in Healthcare Areas.

Choice of instruments, needles and jewellery

Pre-sterilised, single-use, disposable needles and instruments should be used wherever possible. These must be disposed into sharps containers immediately after use. Under no circumstances should any item marked by its manufacturer as ‘single use’ be cleaned and sterilised for re-use on another client.

Plated metal surfaces of equipment deteriorate as a result of repeated use, and as a result of repeated autoclave sterilisation processes (unless the autoclave includes a drying cycle). Therefore, it is recommended that good quality stainless steel needles and instruments be used and maintained properly for tattooing and body piercing procedures.

Reusable instruments that are used for penetrating the skin must be cleaned and sterilised for re-use on another client. Other instruments that have accidentally penetrated the skin or are contaminated with blood must be properly cleaned and sterilised before further use.

The most suitable forms of metal for body piercing are 316L or LVM¹ implant grade high quality surgical stainless steel and gold (14 or 18 ct gold), as they can be effectively sterilised in the autoclave prior to piercing. Gemstone bead selection in bead rings should be based on materials that can be sterilised effectively in the autoclave. The

¹ 316 series steel is the only grade which has been found to be consistently high enough quality for insertion into piercings. The L stands for low carbon, as high carbon 316 steel is used for welding and is inferior. Some manufacturers use LVM or low carbon vacuum moulded steel. This means that the steel was formed in a vacuum and is theoretically of a slightly higher grade than 316L.

use of gemstones, gold and sterling silver beads in the bead ring are unsuitable for genital piercing, as these materials react with urine.

Other materials suitable for body piercing include:

- niobium
- titanium
- platinum
- a dense, low-porosity plastic such as monofilament nylon, acrylic, or lucite.

Appropriate jewellery is well polished, designed specifically for body piercing, with no nicks, scratches or irregular surfaces.

Application

To avoid cross-contamination, any fluid, cream, ointment, or similar substance should be removed from its original container or tube only by means of a single-use disposable applicator. Because of the high risk of cross-contamination of the pump outlet, self-dispensing pumps for cream, ointment or similar substances should be used only to dispense the substance onto a clean single-use, disposable applicator.

Any leftover cream, ointment or similar substances which has been removed from a container must not be returned to the original container and must be disposed of after each use. Liquid soap dispensers and spray bottles must be cleaned before refilling and must not be topped up as this increases risk of cross-contamination.

Wound care

On completing any body piercing, the operator undertaking the piercing should provide each client with suitable approved written instructions for the subsequent care of the piercing, essentially to lessen the chance of infection. It is important to advise that healing times for a new body piercing vary (up to months in some cases) with each person and the length of time depends on jewellery placement, location on the body, physical health and daily activities.

Aftercare for piercings should include, at the very least, information on the following:

- how to recognise infection and what to do
- how to clean a new piercing
- specific advice on oral/mouth and genital piercing, including appropriate advice on sexual activity during the healing period
- keeping the piercing dry and away from any obvious dirt
- the importance of saline solutions in helping with healing
- commonly expected problems and how they can be avoided
- changing and choice of jewellery
- specific comment on referral to a medical practitioner in situations where there are complications from the piercing.

If body piercing has been undertaken by following these guidelines and the client follows aftercare instructions, infections will normally be rare or infrequent. If a client develops infection, then they need to be referred to a doctor.

Cosmetic tattooing

Cosmetic tattooing is also referred to as pigment implants, semi-permanent creations, permanent make-up, derma-impigmentation, and micropigmentation. All these processes involve the same method of application as tattooing and should therefore follow the rules and procedures outlined in these guidelines.

The instruments used for cosmetic tattooing are referred to as permanent cosmetic machines or devices. The needle chamber must be capable of being detached from the motor housing to enable thorough cleaning and sterilisation. Only those devices that can be autoclaved are to be used.

How to sterilise your instruments

Cleaning all instruments before sterilisation

Reusable instruments must be cleaned as soon as possible after use. It is crucial to complete this step before sterilisation. Cleaning should take place in a cleaning area set aside for this purpose.

- Use single-use, disposable, pre-sterilised equipment wherever possible.
- Wear thick heavy-duty rubber gloves when washing contaminated instruments. This makes handling them safer. Care must be taken at all times to prevent any contact of the mucous membranes (such as eyes) with any blood or body fluid from contaminated equipment during the cleaning process.

- Carefully rinse the equipment in warm running water. Hot water at this stage can cook protein material and make it stick to the instrument. Cold water will harden fats making cleaning more difficult.
- Fully dismantle the instruments.
- Immerse instruments in hot water and detergent in a sink. While holding the instruments under the surface of the water, scrub the instruments with a heat-disinfected cleaning brush. This step may be carried out using an ultrasonic cleaner.
- Rinse cleaned instruments in hot running water.
- Carefully dry instruments with a lint free, single-use, disposable towel.
- Check the condition of the equipment.
- New reusable needles and instruments need to be cleaned and sterilised before use, if they are not purchased pre-sterilised.

Ultrasonic cleaners

Ultrasonic cleaners work by subjecting instruments to high frequency, high energy sound waves, that cause soil to be dislodged from instruments and dropped to the bottom of the tank or be sufficiently loosened to be removed during the rinsing process.

Ultrasonic cleaners must be operated with the lid on to prevent any micro-organisms present in the cleaning solution from becoming airborne and contaminating surfaces in the premises. They must be operated and maintained according to the manufacturer's directions and we encourage compliance with AS 2773:1985 Ultrasonic Cleaners for Hospital Use.

Ultrasonic cleaners do not sterilise or disinfect instruments. However, they do provide a very safe and effective means of cleaning instruments prior to sterilisation.

Sterilising all instruments

Effective sterilisation depends on the following factors:

- *Cleanliness* – the articles to be sterilised must be thoroughly pre-cleaned to allow good contact of all surfaces during the sterilisation process.
- *Temperature* – the correct temperature must be reached and maintained for all the articles being sterilised.
- *Time* – the sterilising temperature must be maintained for the correct period of time.

The only appropriate method of sterilisation is autoclaving. Benchtop autoclaves conforming to Australian Standard AS 2182:1994 Sterilisers-Steam-Portable should be used. The standard includes keeping a record of quality checks, for example, thermocouple, chemical and biological indicators.

Tattooing instruments which must be sterile before use include: the tube, nozzle, needle, needle bar, clamps, needle pushers, insertion tapes, and any other instrument that has been contaminated with blood or body fluids. Needles must be sterile, single-use and disposable. Forceps used to handle sterile instruments must also be sterile.

Sterilisation cannot be reliably and consistently achieved using microwave ovens, pressure cookers, ultraviolet cabinets, boiling water units, ultrasonic cleaners, and similar appliances or disinfectant.

Autoclaves

Ensure all people responsible for operating autoclaves are trained in their specific use. Specific instructions on the packaging and the use of autoclave should be displayed next to the machine. Autoclaves should be used in accordance with the manufacturer's instructions.

Packaging instruments prior to autoclaving

There are a number of self-sealing autoclave bag systems available on the market which can be obtained from most surgical supply companies. The purpose of placing cleaned instruments into these bags for autoclaving is to protect the contents from becoming contaminated after sterilising and to enable instruments to be more easily stored in a sterile condition. Packaged instruments must remain in the autoclave while the door is open slightly to allow them to dry and the packets must be completely dry before being removed from the autoclave. Autoclave bags are porous when they are wet and therefore, the instruments inside are liable to be contaminated if the bags are removed from the autoclave while they are still wet.

Only a small number of well spaced (to allow adequate air circulation), sealed packets of instruments are to be placed in autoclaves which do not have a drying cycle. A chemical colour indicator should be included on the autoclave bag to indicate those instruments that have been sterilised. Autoclave bags are to be used only once then discarded. Sealed packets must not be placed on top of one another as this will restrict airflow diminishing autoclave effectiveness.

Loading, operating and unloading the autoclave

When loading the autoclave, care needs to be taken to ensure that the air will freely circulate around the articles to be sterilised and that all surfaces are exposed to steam. Ensure that the following temperature and holding time is reached whenever the autoclave is used:

- autoclave at a minimum of 121°C, for 15 minutes (at a corresponding pressure of 103 KPa (15psi))
- autoclave at a minimum of 126°C, for 10 minutes (at a corresponding pressure of 138 KPa (20psi))
- autoclave at a minimum of 134°C, for 3 minutes (at a corresponding pressure of 206 KPa (30psi)).

The times given here are only holding times and do not include the time taken for the autoclave to reach the required temperature. When unloading sterile instruments from the autoclave, care needs to be taken to avoid contaminating them. Items that have been dropped, torn, have broken seals, or are wet are no longer sterile.

Sterile instruments that are not wrapped must be removed from the autoclave using sterile forceps. Used dirty instruments must never be stored near clean areas where sterilised instruments are unloaded from the autoclave.

Monitoring the sterilisation process

There is clearly no point in using an autoclave if it is not sterilising properly. Using instruments that are believed to be sterile may place clients at considerable risk of infection. Therefore, it is very important to monitor the sterilisation process on a regular basis to ensure that the autoclave is working correctly.

Autoclaves must be fitted with gauges to measure time, temperature and pressure. During each use these gauges must be viewed to ensure that the readings are correct and these readings should also be recorded.

Chemical indicator strips (such as those on autoclave bags) are available to use in autoclaves to test for procedural errors and equipment malfunction. However, these strips only test physical characteristics of the autoclave such as temperature and pressure.

Biological indicators need to be used to ensure that the sterilising process is destroying all forms of microbial life. Biological indicators must be used during installation, testing and after repairs and must be used according to the manufacturer's instructions.

Autoclaves must be serviced at six-monthly intervals to make sure that they are working correctly. Service records should be kept for information purposes.

Storing sterilised instruments

If sterile instruments need to be stored, they must be stored in a condition so as to maintain their sterility. Sterile, packaged instruments must remain in the original, sealed, autoclave bag and must be kept in a clean, dry, covered container until ready for use. Unpackaged sterile instruments must be handled with sterile forceps and be stored in a sterile container until ready for use.

Cleaning other instruments and articles

All instruments and articles that are not intended to penetrate the skin, but that are used on clients, must be thoroughly cleaned before and after each use. Containers, including their lids, used for storing items and for collecting dirty instruments must also be disinfected before and after each use.

For instruments and articles that could be damaged if immersed in water (eg, the electrical hand piece)

- Thoroughly wipe with clean cotton wool or cotton pad saturated with 70 percent w/w ethyl or isopropyl alcohol.
- Allow to dry naturally.
- Store clean instruments in a clean, impervious, covered container.

For garments and other washable fabrics

- Wash with soap or detergent in hot water (71°C for longer than 3 min or 65°C for longer than 10 min).
- Rinse and dry or have commercially laundered.
- Store items in a clean, appropriate area such as a cupboard or drawer.

Disinfectants

With the exception of the use of 70 percent alcohol to clean instruments that would be damaged if immersed in water, all non-skin penetration instruments used in tattooing and body piercing can be cleaned in accordance with the section on cleaning other instruments and articles described above.

The routine use of glutaraldehyde is no longer recommended, it is not only toxic but requires special ventilation. Under no circumstances should instruments be stored in disinfectants before sterilising.

Appropriate use of bleach

All references to bleach throughout this booklet relate to household grade bleach products with a concentration of 40 000 parts per million available chlorine (ppm avCl) or 4 percent avCl.

- To dilute bleach for a 1:4 dilution, add 1 cup of bleach (250 ml) to 3 cups of water (750 ml) making one litre of solution.
- Only dilute bleach on the same day it is used since its effectiveness deteriorates rapidly.
- To prevent deterioration, store bleach in dark, cool areas. Use-by dates on bleach products must be strictly followed.
- Wear gloves when handling bleach since it can cause skin irritation.
- Take care to avoid bleach coming into contact with most metals as they can be easily rusted or corroded.

Premises

The premises should be planned carefully to provide client treatment areas that are totally separate from areas set aside for cleaning and/or sterilising equipment.

In areas where tattooing or body piercing is carried out and where instruments and equipment are cleaned, disinfected or sterilised, the floor, benches, shelving, fittings, and furniture should be constructed of smooth impervious materials capable of being kept clean and in good repair. There should also be good lighting and ventilation throughout the premises.

The cleaning area should be arranged so that dirty instruments are received in one area. All dirty instruments should be moved through the cleaning area in a one-way direction so that sterile instruments, clean instruments and dirty instruments remain separate from one another. There should be sufficient bench space to accommodate equipment. Premises should be constructed in accordance with bylaws of the territorial authority and in accordance with any applicable provisions of the Building Act 1991 and the Health Act 1956. Consult your territorial authority for further details on the requirements of these Acts.

Mobile operators

Operators performing procedures away from fixed premises should comply with these guidelines as far as possible and in consultation with their territorial authority. Operators performing procedures in these circumstances need to take extra precautions to ensure that appliances are stored safely before and after use and that hands are adequately washed and gloves used prior to performing procedures.

Records

As part of any professional practice it is important not only to have good information about your business, but also to have information about clients and the nature of the client contact. It is important to emphasise that records should be strictly confidential and all personal client information should be made secure in an appropriate dedicated lockable area.

The main purpose for collecting information should be to assist operators with providing aftercare advice for patients who have complicated piercings and to also be used as a opportunity to audit the quality of piercings technique should complications occur.

Information that should be recorded includes:

- name, address, phone contact
- piercing type
- consent.

Health information that should be asked about, should include:

- tendency for bleeding, eg haemophilia (we would not advise operators to undertake body piercings or tattoos on clients who have a medical history of bleeding disorders, clients who fall into this category should be referred to their doctor for further advise)
- infectious disease status, including HIV, hepatitis B and hepatitis C. In the situation where an operator decides to undertake a piercing on a client with a known infectious illness, all universal precautions should be taken as outlined in the guideline to ensure risk of disease transmission is minimised.

Health and safety in the workplace

Employers have a responsibility to provide a safe work environment without risks to the health of their employees, clients or other persons who enter their premises.

The Health and Safety in Employment Act 1992 (HSE Act) applies to employers operating body piercing establishments. Self-employed people are expected to achieve the same standard for themselves as would apply to any employees.

The HSE Act requires that employers identify hazards and take steps to control them by means of elimination, isolation and minimisation. Employers must monitor these control measures.

There are significant hazards posed by contact with blood and body fluid, such as transmission of blood borne viral diseases. The Occupational Safety and Health Service of the Department of Labour (OSH) which administers this legislation has indicated that:

- eliminating the risk is not a practical option
- isolating the risk already occurs (to registered body piercing enterprises in areas where territorial authorities enforce by-laws).

Minimising the risk requires that:

- appropriate care is taken to ensure equipment used is properly sterilised
- it is the view of OSH and the Ministry of Health that autoclaving is the only appropriate means of sterilisation

- staff in tattooing and body piercing businesses must be inducted and trained in the risks they face and the appropriate procedures they should follow in the event of a body fluid/blood incident, including appropriate first aid courses
- all staff in tattooing and body piercing businesses should be immune to hepatitis B virus (HBV). Where operators are known hepatitis B carriers, not only should they take the necessary infection control precautions as outlined in the guideline, but they should also discuss their infectious status with their medical practitioner and the implications for their employment in the body piercing industry
- all staff in tattooing and body piercing businesses should be monitored (as to their HBV antibody status; with ongoing monitoring for hepatitis C virus and HIV status following an incident).

Above all, the keys to controlling the risks in this industry lie in training staff adequately, following the appropriate procedures carefully, and using HBV immunisation.

Glossary

The following definitions apply throughout these guidelines:

Applicator

A device, such as a spatula or rod, used for putting something on to something else (especially in relation to a body).

Cleaning

The method of removing dirt and reducing the number of micro-organisms from the surface of an object by a process such as washing in detergent.

Cosmetic tattooing

The process by which cosmetics are applied permanently to the human body by implanting the coloured pigment into the dermis layer of the skin.

Cross-contamination

Spreading micro-organisms from one place or person to another or from something that is contaminated to something that is not.

Disinfection

A process intended to kill or remove disease-causing micro-organisms.

Infection control

The process of minimising the risk of spreading infection.

Biological and infectious waste

Includes all waste which is known to be or could potentially be contaminated with disease-causing micro-organisms.

Instrument

A tool; including an appliance or apparatus (including a needle).

Mucous membrane

Thin, moist, hairless mucous-secreting lining of body cavities or passages that are open to the external environment, for example, the eyes, mouth and anus.

Operator

A person who undertakes skin penetration procedures for fee, reward or as a public service.

Sterilisation

A process intended to destroy or eliminate all forms of microbial life, including bacterial spores.

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In addition to these standards, the Association of Professional Piercers (APP) has published a 1998 Procedural Standards Edition. APP is an international, non-profit, educational, health and safety organisation dedicated to disseminating critical information about body piercing. Those practising in the industry should have as much good information as possible about piercing and related issues. For further information visit the APP Web site at:
www.piercing.org/app/

