



**A S A P**

**Australian Society of Acupuncture Physiotherapists Inc**

**GUIDELINES FOR  
SAFE ACUPUNCTURE  
AND DRY NEEDLING  
PRACTICE**

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## **FORWARD**

This document is designed to be used as a guide to safe acupuncture practice for physiotherapists practicing acupuncture in Australia. Acupuncture practice by physiotherapists may include Traditional Acupuncture, Western Acupuncture or Dry Needling.

The guideline was constructed via consultation with various Australian and International acupuncture guidelines, including the minimum standards set by the International Acupuncture Association of Physical Therapists (IAAPT). The federal government's Infection Control Guidelines (January 2004) was also considered along with the National Health and Medical Research Council's Australian Immunisation Handbook (2003) and the Standards of Practice for Acupuncture: Health (Infectious Diseases) Regulations (1990). Consultation was also sought from the Australian Medical Acupuncture College and The Australian Acupuncture & Chinese Medicine Association. Relevant journal based literature was also considered. The guidelines will be reviewed and revised by the ASAP as required.

It should be noted that individual states and territories around Australia will have varying guidelines on skin penetration and infection control and physiotherapists are urged to view the relevant information from their local governing bodies. Physiotherapists are also advised to refer to any relevant legislation set by individual state physiotherapy registration boards.

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APA – Australian Physiotherapy Association  
SPA – Sports Physiotherapy Australia  
MPA – Musculoskeletal Physiotherapy Australia  
GG – Gerontology Group  
ASG – APA Acupuncture Study Group

ASAP – Australian Society of Acupuncture Physiotherapists  
PAANZ – Physiotherapy Acupuncture Association of New Zealand  
NZSP – New Zealand Society of Physiotherapists  
ANZAOP - Australia/New Zealand Academy of Orofacial Pain

## **INTRODUCTION**

Physiotherapists may practice acupuncture under any of the following paradigms; Traditional Chinese Acupuncture<sup>1</sup>, Western Acupuncture<sup>2</sup> or Dry Needling<sup>3</sup>. For the use of this safety document Acupuncture and Dry Needling are defined as follows;

- 1. Traditional Acupuncture:** Utilisation of meridian or extra points based on a Traditional Chinese Medicine approach which includes diagnosis and clinical reasoning using various Chinese medicine assessment methods and/or paradigms. Utilisation within the context of physiotherapy will include a diagnosis based on clinical reasoning as part of an overall management approach.
- 2. Western Acupuncture:** Western acupuncture utilises meridian points but applies it to western reasoning with particular consideration to neurophysiology and anatomy. It does not utilise any traditional Chinese medicine assessment methods or paradigms. Utilisation within the context of physiotherapy will be based on clinical reasoning as part of an overall management approach.
- 3. Dry Needling:** Needling to altered or dysfunctional tissues in order to improve or restore function. This may include (but is not limited to) needling of myofascial trigger points, periosteum and soft tissues. Utilisation within the context of physiotherapy will be based on clinical reasoning as part of an overall management approach.

The basic introductory training necessary for a physiotherapist to practice acupuncture or dry needling competently depends on the paradigm being employed. **For a Traditional Acupuncture approach a 150 hour course is recommended by the ASG as a basic introduction.** The current APA ASG Level 1 Acupuncture course is based on an Oriental Medicine paradigm and **equates to 150 hours** of study including self directed study and face to face teaching. It should be noted that the APA ASG has run an introductory Traditional Acupuncture course which is APA accredited since 1979. **For Dry Needling or Western Acupuncture a 2 day course is considered adequate as a basic introduction.** The length of the minimum training required for dry needling or western acupuncture is based on the fact that the clinical reasoning basis for dry needling and western acupuncture does not differ from the anatomical and neurophysiology knowledge that physiotherapists already possess. Two days is considered minimum with respect to training safety issues in relation to skin penetration. This is also in line with other western nations where physiotherapists practice Dry Needling or Western Acupuncture, such as the United Kingdom, New Zealand and Canada. Following the minimum training requirements physiotherapists are advised to complete **30 hours of continuing professional development in physiotherapy acupuncture over a three year period** to remain competent in this field of practice.

## **PRINCIPLES OF SAFE PRACTICE**

- 1. Physiotherapists should confine their use of acupuncture to treatment of conditions within the scope of practice of physiotherapy for which they have training and experience. Physiotherapists should practice acupuncture with respect to the level of training they have received and should attend further training if they wish to extend the use of acupuncture within their practice. This is particularly pertinent for any needling in the trunk, thorax or cervical regions.**
- 2. Physiotherapists should only implement needle insertion techniques after attending a two day training course.**
- 3. Physiotherapists must comply with current legislation of any local, state or federal governing bodies (e.g. local, state or federal governments and state registration boards).**
- 4. Physiotherapists should keep clearly documented records describing the acupuncture procedure. Warnings given and informed consent should be noted. For consent of a child less than 16 years of age a parents or guardians consent should be gained. It may be pertinent to document both the parents and the childs consent, especially if the child is in the 14-16 year age group.**
- 5. Warnings and consent should include contraindications and precautions and possible adverse outcomes. Verbal consent is usually sufficient but in some cases it may be pertinent to gain written consent.**
- 6. Physiotherapists should comply with the management of needle accidents and adverse reactions guidelines as outlined in this guide.**
- 7. Physiotherapists should comply with the hygiene requirements as outlined in this guide. Physiotherapists should be aware of any further hygiene requirements of employers (e.g. hospital department guidelines).**
- 8. Physiotherapists should comply with the waste disposal guidelines for needles or bodily fluids as outlined in this guide. Physiotherapists should be aware of additional requirements for waste disposal of needles or bodily fluids as set by local governing bodies.**
- 9. Physiotherapists should recognize and comply with the safety guidelines for moxibustion, cupping/spooning and the application of auricular needles, press needles and beads as outlined in this guide.**

### **PATIENT EXPLANATION**

The patient should be told of the proposed treatment and what it entails. This explanation will possibly include:

- The procedure of the needle insertion into the skin.
- Inform the patient that sterile, single use, disposable needles will be used.
- A brief explanation of how the type of acupuncture that is being implemented works.
- If using additional stimulation of the needle, such as manual stimulation, electrical stimulation or moxa, this should be discussed with the patient.
- The possibility of transient symptoms during and/or after the treatment, such as fatigue, light headedness or temporary aggravation of the symptoms should be considered.
- Any advice following the treatment that may be pertinent for the individual patient, such as care with driving long distances after any needling treatment or in regards to the use of heat or local ice following Dry Needling.

The physiotherapist must remain within hearing distance so that they are immediately accessible to the patient and can monitor treatment and make any appropriate checks of the patient.

## **CONTRAINDICATIONS AND PRECAUTIONS FOR ACUPUNCTURE AND DRY NEEDLING**

### **1. PROHIBITED AREAS FOR NEEDLING**

Prohibited areas for physiotherapists using acupuncture techniques include nipples, the umbilicus, external genitalia.

Scalp areas of infants before the fontanelles have closed are also contraindicated.

### **2. DANGEROUS OR VULNERABLE POINTS**

The following are useful points in the body which may not be needled until appropriate training is undertaken;

- GB21 (trapezius), BL 11, LU 1 and any other point in the thorax due to the relative risk of pneumothorax. Needling in this region should be shallow **and/or** away from lung tissue **and/or** over bone or cartilage.

Note lung and pleura anatomy.

#### **Lung fields:**

- Superiorly: extends 2-3 cm above clavicular line (hence GB21 being most frequent point documented with pneumothorax – thus sufficient minimum training is required to needle this point)
- Anterior-laterally: lung rib 6 mid clavicular to rib 8 mid axillary line

#### **Pleura:**

- 2 ribs below i.e. rib 8 mid-clavicular line down to rib 10-12 laterally (mid-axillary line)
  - Posteriorly: lung extends to rib 10, and pleura down to rib12 (at lateral border of erector spinae)
- Orbit of the eye points including BL 1, ST 1 and Ex Pt. (qiuhou) are generally considered to be contraindicated for physiotherapists.
  - Neck points including CV 22 (anterior neck), LI 18 (lateral neck over the major vessels), SI 17 (lateral neck over the baroreceptors), GV 15 (over the spinal cord), and GV 16 (over the brain stem).
  - ST 21 which lies over the gall bladder on the right should be needled superficially and/or obliquely.
  - CV 17 (over the sternum) and SI 11 (over the infrascapular fossa) should be needled superficially and/or obliquely due to congenital foramen (holes) in these boney structures which are evident in a percentage of the population.
  - Ah Shi (tender points) points close to vulnerable structures.

- Avoid needling into vulnerable pathological sites including varicous veins, acutely inflamed areas, areas of unhealthy tissue or infected tissue.
- Avoid needling into a limb affected by lymphoedema or needling directly into breast tissue. Japanese acupuncture using non-insertion techniques may be utilized in this case.

### **3. PREGNANCY**

Acupuncture should be used with caution on pregnant patients. Acupuncture points that should be avoided include LI 4, SP 6, BL 60, BL 67 and LV 3, points over the abdomen, ear points for the endocrine & genitor-urinary system and scalp points for the genital & foot motor sensory areas. Needle GB 21 with caution. The upper lumbar spine should be needled with caution. Strong electro-acupuncture and over stimulation of points should be avoided during pregnancy.

As one in four to five pregnancies naturally abort especially in the first trimester, the risk of acupuncture should be fully outlined and it may be advisable to seek written as well as verbal consent prior to acupuncture treatment.

### **4. DIABETES**

Due to poor peripheral circulation care must be taken when needling diabetic patients and the relative risk of needling peripheral regions should be considered.

### **5. PACEMAKERS**

Patients with pacemakers should not receive electro-acupuncture.

### **6. CONFUSED PATIENTS**

The patient must be able to consent to the proposed treatment. Should the patient appear disorientated or confused then acupuncture treatment is not advisable. Children under the age of 16 require the consent of their parents.

### **7. CHILDREN**

Parental consent must be gained when treating children under the age of 16. Physiotherapists should also consider gaining consent from both the parent and the child, especially if the child is in the 14-16 year age group.

### **8. BLEEDING DISORDERS**

Naturally occurring hemorrhagic diseases are a relative contraindication to treatment (e.g. Haemophilia, Von Willebrands). If needling techniques are implemented the lighter stimulation and smaller gauge needles would be indicated.

### **9. ANTICOAGULANTS**

Patients on high levels of blood thinning medications such as Plavix or Warfrin may not be suitable for acupuncture. Care should be taken when needling patients on

anticoagulants (consider finer gauge needles) and it is advisable to apply pressure to the site of insertion after withdrawing the needle. Avoid needling into joints to minimise the risk of haemarthrosis.

## **10. CANCER**

Due to the immunological risks extra care should be taken when needling patients with cancer.

## **11. BLOOD BORNE DISEASES**

Patients may be questioned as to their awareness of having a blood borne disease. Care should be taken when needling any patient in reference to their likelihood of having a blood borne disease. Gloves are not usually worn when needling a patient however some institutions may have guidelines that require the physiotherapist to don a pair of gloves particularly when removing the needles when the risk of a bleed is greater. Physiotherapists should also consider current legislation of any local, state or federal governing bodies (e.g. local, state or federal governments and state registration boards) which may have guidelines concerning the use of gloves when practicing acupuncture.

## **12. ACUTE IMMUNE DISORDERS**

Patients with acute immunological disorders (e.g. acute states of rheumatoid arthritis or systemic lupus erythema) have an increased risk of infection and therefore should be considered a relative precaution and care should be taken when needling such patients.

## **13. INCOMPETANT HEART VALVE OR VALVE REPLACEMENTS**

Patients with an incompetent heart valve or valve replacement have an increased risk of infection and therefore should be considered a relative precaution and should be needled with care. It may be pertinent to seek advice (in terms of consent or antibiotic prescription) from the patient's general practitioner or cardiac specialist.

## **14. ALLERGY TO METALS**

Patients allergic to metals may react to acupuncture needles and relative risks should be discussed prior to treatment.

## **15. UNSTABLE EPILEPSY**

Patients with epilepsy, especially unstable epilepsy, should be needled with care. The number of needles, strong points, stimulation of the needles and length of time that the patient is needled should be considered when needling such patients.

## **16. FRAIL PATIENTS**

Patients with a weak constitution after prolonged chronic illness may tolerate acupuncture poorly. Minimal treatment (reduced number of needles, reduced treatment times, finer gauge needles and minimal stimulation of the needles) should be considered.

## **17. MEDICATIONS**

Due to the effect on the autonomic system patients may have reactions that affect their current medications. Consequently as a result of the homeostatic action of needling an over correction of a patient's medical condition may occur. This is particularly pertinent for patients on blood pressure or diabetic medications. It is advisable for the physiotherapist to consider this possibility and it may be prudent to discuss this with the patient.

## **18. TREATMENT EXTERNAL TO CLINICAL ROOMS**

Care should be taken when needling patients at an external setting (such as on a home visit or at a sporting venue) to ensure that patients are adequately positioned to prevent injury should fainting occur. Patients skin should also be examined to ensure that it is clean prior to treatment (see Hygiene Requirements on page 12).

### **ADDITIONAL CONTRAINDICATIONS AND PRECAUTIONS FOR ELECTROACUPUNCTURE (EA)**

- Patients with heart pacemakers should not receive EA.
- All contraindications and precautions of manual acupuncture should be observed.
- Extra care must be taken if patients have bleeding disorders or are on anti-coagulant therapy as the muscle contraction and the movement of the needle may create a significant bleed.
- It is recommended that EA is not applied across the spinal cord.
- Use a biphasic stimulator, designed for EA. Direct current (DC) must be avoided in order to prevent polarisation of the needles due to electrolysis. The unit used must be battery (not mains) operated.
- Do not use needles with a plastic hilt/handle.

**ADDITIONAL CONTRAINDICATIONS AND PRECAUTIONS  
FOR MOXIBUSTION**

- It is essential to check sensitivity to heat before commencing.
- Used with great caution in hirsute (hair covered) areas of the body.
- Do not use moxibustion on broken or damaged skin.
- Use with care with children or frail patients.
- Where possible shield the skin with a protective guard to protect against burns.

**ADDITIONAL CONTRAINDICATIONS AND PRECAUTIONS  
FOR CUPPING AND SPOONING/GUA SHA**

- Not be used in hirsute areas of the body.
- It is not unusual for bruising due to prolonged or strong cupping to occur. Blistering due to prolonged strong cupping may occur. It is advisable to draw patients attention to any bruising that has occurred. Use a mirror if necessary, so they are not surprised when they get home.
- It is essential to check state of skin before commencing. Do not use on broken or damaged skin or inflamed tissue.
- Use with care with children or frail patients.
- Avoid the sacral area or abdomen of pregnant women.
- Avoid using cupping or spooning on patients who have bleeding disorders or are on anti-coagulant therapy.
- Be aware that some brands of suction cups have an inbuilt magnet, which contacts the skin. If the suction is too strong this magnet can press too strongly against the engorged tissue and break the skin creating a potential infection risk.

**ADDITIONAL CONTRAINDICATIONS AND PRECAUTIONS FOR  
AURICULAR NEEDLES; PRESS NEEDLES AND BEADS**

- All contraindications and precautions of manual acupuncture should be observed.
- Clean the ear with an alcohol swab or soap and water to remove dead cells/wax.
- In the case of press needles/beads sterilise the skin with 2% solution of iodine in 70% alcohol.
- In the case of press needles/beads, after applying a sterile disposable press needle/bead, apply 2% iodine in flexible colloden solution, or 2% iodine and cover with “Op-Site”. This seals the press needle/bead and reduces the risk of infection.
- These needles/beads may remain in place for 7-10 days. In humid conditions needles/beads should be left in-situ for much shorter periods.
- Press needles/beads may remain in place for 7-10 days. In humid conditions press needles/beads should be left in-situ for much shorter periods.
- At the time of removing the press needles check the tissue and assess whether an antiseptic ointment or antibiotic ointment is required to be applied to the needle site.
- Extra precautions must be taken with all ear acupuncture because the cartilage has a very poor blood supply. Therefore, if this becomes infected, it is difficult for the body to mount an immune response to the invading bacteria. Do not use press (semi-permanent) needles if there are obvious lesions on the ear or the patient has an immune deficiency disease.

## **MANAGEMENT OF ADVERSE REACTIONS IN ACUPUNCTURE**

### **PAINFUL TREATMENT**

If pain persists while the needle is inserted it should be removed. If pain persists following a treatment, the patient can be advised to apply heat or ice.

### **HAEMATOMA**

Care should be taken to avoid injuring blood vessels, however if bleeding does occur, apply pressure to the area with a cotton swab after the needle has been withdrawn. Ice can be used locally to minimize the bruising.

### **FAINTING**

This may be caused by nervous tension, hunger, fatigue, incorrect positioning, excessive stimulation of the needles or if the patient is autonomically labile. To avoid fainting explain the acupuncture procedure before treatment, treating the patient in a lying position may be preferable, don't insert too many needles and use minimal stimulation on the first treatment. If fainting occurs stop needling and remove all needles, make sure the patient is lying down and consider raising their legs, offer water, warm tea or something sweet to eat and reassure the patient. Symptoms should abate after resting.

### **STUCK NEEDLE**

A stuck needle may occur due to spasm of the local muscle after insertion of the needle, twisting the needle with too much amplitude or in only one direction causing the muscle fibres to bind, or if the patient alters their position whilst the needles are in-situ. To avoid, position the patient in a relaxed manner, avoid excessive twisting of the needle and avoid needling tendinous muscle tissue. If the needle is stuck due to over rotation, then rotate the needle in the opposite direction and remove. If it is stuck due to muscle tension, leave the needle in for a short period of time, relax the tissue around the needle with massage, ice massage or by inserting 1-2 needles around the stuck needle, then remove the needle.

### **BENT NEEDLE**

A bent needle may occur if the needle strikes hard tissue, there is a sudden change in the patient's posture, or strong contraction of the muscle occurs during trigger point needling. To prevent a bent needle occurring, insert the needle carefully with the patient in a comfortable position. If a bent needle occurs instruct the patient not to move, relax the local muscle and remove the needle slowly following the course of the bend.

### **BROKEN NEEDLE**

This may occur due to poor quality of the needle, strong muscle spasm, sudden movements by the patient when the needle is in place or by withdrawing a bent needle. The likelihood of a broken needle is very rare with the use of single use sterile needles as there is no metal fatigue from repeated use and autoclaving. The patient should be advised to remain calm to avoid the needle from going deeper. If the broken needle is exposed remove the broken section with tweezers, if it is not exposed press the tissue around the insertion site until the broken section is exposed and remove

with tweezers. If the needle can't be removed in the clinic, medical attention must be sought so that the needle can be removed surgically.

### **INFECTION**

The skin in the region to be needled should be inspected and if infection is suspected needling should be deferred and medical advice sought. Care should be taken when needling very thin or fragile skin due to the relative infection risk.

### **EXCESSIVE DROWSINESS**

A small percentage of patients may feel excessively relaxed and sleepy after acupuncture treatment. They should be advised not to drive until they have recovered. For patients that this occurs with, it is advisable not to leave the needles in for a significant amount of time or to over stimulate the needles.

### **PNEUMOTHORAX**

When needling around the thoracic region patients should be warned of the rare possibility of a pneumothorax. Care should be taken when needling GB 21 (upper trapezius) and any other points over the thoracic region which could inadvertently create a pneumothorax. Where possible angle the needle away from the underlying lungs and/or needle over bone or cartilaginous tissue. Practitioners must have attended adequate training programs to needle in the thoracic region. The symptoms and signs of a pneumothorax may include shortness of breath on exertion, chest pain, dry cough, and decreased breath sounds on auscultation. These symptoms may not occur until several hours after the treatment and patients need to be cautioned of this especially if they are going to be exposed to marked alterations in altitude such as flying or scuba diving. If a pneumothorax is suspected then the patient must be sent urgently for an x-ray and medical management.

### **NEEDLING OVER THE SPINAL CORD**

Care should be taken when needling between the spinous processes of vertebrae or over the nerve roots (Governing Vessel or the inner Bladder channel). The distance from the skin to the spinal cord or the roots of the spinal nerves varies from 25 to 45 mm in different individuals. The spinal cord terminates around the L1 to L2 level of the vertebral column. To avoid infection do not puncture deeply in this region.

### **NEEDLING OVER ABDOMINAL ORGANS**

All abdominal organs, including the kidney, liver, spleen, intestines and urinary bladder are potentially at risk, when needling directly over organs. The risk is greater with anatomical variance or enlarged organs. Do not needle deeply over organs.

### **MISCARRIAGE**

Take care when needling pregnant women, especially in the first trimester when miscarriage may be more common due to chance and a causal connection may be assumed. Avoid needling over the abdomen. Points to be avoided during pregnancy include LI 4, SP6, BL 60, BL 67 and LV 3. Needle GB 21 with caution. Avoid prolonged needling or strong stimulation during pregnancy.

### **NEEDLE STICK INJURY**

Needle stick injury occurs when the therapist is inadvertently pricked by the needle after it has been withdrawn from the patient. If this does occur, wash well around the site of penetration, encourage bleeding and have blood tests for Hepatitis B and C and HIV/AIDS. The patient may also be requested to have the same blood analysis performed. If the patient is HIV positive the physiotherapist should urgently seek medical advice concerning anti-viral medications. All practitioners should consider being vaccinated for Hepatitis B. Only therapists trained in acupuncture or dry needling techniques are permitted to remove needles from a patient.

### **HAND WASHING & GLOVES**

Hands should be washed before needling a patient for at least 30-60 seconds. Soap or alcohol based hand rub (ABHR) may be used. When using ABHR the manufacturer's guidelines should be followed. Hand moisturisers should be at regular intervals to help maintain the physiotherapist's skin condition.

Cuts, abrasions or lesions on the skin of the therapist are a possible source of pathogens and should be covered by water resistant occlusive dressing or disposable latex or nitrile gloves should be worn.

In the absence of skin lesions the choice of wearing gloves lies with the physiotherapist. Wearing gloves may protect against direct contact with blood and can decrease the risk of infection should a needle stick injury occur. It is however acknowledged that various forms of acupuncture needling requires the ability of the physiotherapist to feel the reaction of the tissue that is being needled and gloves may inhibit the ability to do this. Reactions to latex gloves have been reported by health care workers. Additionally the risk of contacting blood is considered minimal in acupuncture procedures. As the risk of blood contact occurs only when needles are removed physiotherapists may consider wearing gloves when removing needles. Alternatively when dry needling physiotherapists may consider wearing a glove on their non-dominant hand.

Hands should also be washed after needling a patient or after removal of gloves.

NOTE: In some Australian states or territories laws concerning skin penetration may require the therapists to glove when needling.

### **SKIN PREPARATION**

No skin preparation is usually required unless needling into an area that is particularly susceptible to infection, such as a joint or bursa. Swab with an alcohol wipe and allow to dry for at least 1-2 minutes or use Betadine (iodine) to pre-swab the area. If the patient's skin does not appear clean (e.g. if they have been working outdoors or walking on the beach) you may request the patient to wash their skin prior to administering the acupuncture treatment.

NOTE: In some Australian states or territories laws concerning skin penetration may require swabbing prior to needling.

## **HYGIENE REQUIREMENTS**

- Physiotherapists must ensure that hands and nails are clean prior to giving treatment.
- Hands should be washed with soap and water for at least 30-60 seconds before and after every treatment.
- Cuts, abrasions or lesions on the skin of the therapist are a possible source of pathogens and should be covered by a water resistant occlusive dressing or disposable gloves worn.
- The patient's skin in area to be needled must also be clean. If the patients does not present with clean skin, the area to be needled may be cleaned with soap and water, or by using isopropyl alcohol skin wipe.

The **ABOVE** procedures will disinfect skin, which is sufficient for Acupuncture procedures, and is the required **MINIMUM STANDARD**.

## **SKIN STERILISATION**

Skin sterilisation is recommended for patients who have a deficiency in their immune system, or when needling into a joint space (e.g. shoulder, knee).

- A sterilising solution such as 2% iodine in 70% alcohol should be used and left on the skin to dry for a minimum time of two minutes. (for those allergic to iodine, chlorhexadine in alcohol is suitable).
- Immuno-compromised patients include those with malignancies, autoimmune problems such as S.L.E, AIDS or R.A. and those on immune suppressive drugs e.g. organ transplant recipients. These groups of people can get an infection from a much smaller number of infectious agents than those with an intact immune system. Disinfection may not remove enough organisms to prevent infection, hence their skin needs to be sterilised.

The background to this policy is that in a normal healthy person a certain amount of infectious agents (bacteria, viruses) have to be introduced to the host's system before the body's defences are overwhelmed and an infection takes place. To reduce the number of bacteria or viruses below this infective agent is to **disinfect**. To completely remove all forms of life from the skin is to **sterilise**.

## **EAR STERILISATION**

The ear consists of a cartilage structure covered by skin. While the skin has a normal nerve and vascular presence, the cartilage is largely devoid of these. Consequently, if an infective agent is introduced in the cartilage, infection may ensue because of the inability of the tissue to mount a response mediated via the blood vessels and nerves.

This makes attention to skin sterilisation very important - even more important if “semi-permanent” press needles are to be used.

- When using “semi-permanent” needles it is suggested that the skin is prepared in the usual way, using a 2% solution of iodine in 70% alcohol, and the needle covered and held in place by plastic skin (flexible collodion). This reduces the chances of getting infection around the needle site with time.
- After the needle has been removed, if the site looks red and inflamed, then the application of an antibiotic ointment (e.g. Mupirocin), twice daily, may reduce the likelihood of any local infection.
- If the ear appears to be infected, and is not responding rapidly to topical ointment, then medical advice and treatment should be sought.

### **HYGIENE ESSENTIALS**

1. Use only sterile, disposable needles.
2. Wash your hands thoroughly with soap and water before needling every patient.
3. Cleanse the skin of the recipient if necessary.
4. Use 2% iodine in 70% alcohol and leave for two minutes before needling only if complete sterilisation is required. This is recommended for immuno-compromised patients or joint penetration.
5. Dispose of needles carefully in a “sharps container”. Therapists need to avoid “needle stick” injury as they are the ones at risk!

## **WASTE DISPOSAL ADVISE FOR NEEDLES OR BODILY FLUIDS**

- The treatment area should be clean, private if possible and have washing facilities near at hand.
- Wet surfaces should be disinfected regularly.
- All discarded needles must be disposed of in a sharps box clearly marked “Medical Sharps Waste”. These should either be incinerated via a needle collection service or a biological waste disposal contractor, or disposed of according to the Local Health Authority’s’ protocol/policies.
- **The use of disposable needles is essential.** It would be difficult to defend the use of re-usable or re-sterilised needles in a case of acupuncture induced infection. All the major infections reported in the acupuncture literature, including HIV, but more frequently, Hepatitis B, have resulted from errors in sterilisation of re-usable needles.
- Care must be taken to avoid contact with the patient’s blood, should bleeding occur. A dry cotton wool ball should be used to absorb it and disposed of into an appropriate container marked “Contaminated Material” and disposed of by incineration or according to Local Health Authority practice.
- Linen contaminated with blood or other body fluids should be treated with Hypochlorite solution (Bleach) before laundering.

## **MANAGEMENT OF BLOOD AND BODILY FLUIDS SPILLS**

**Large blood and bodily fluid spills are unlikely in acupuncture practice however if a spill occurs then it is recommended to;**

1. Wear personal protective equipment. Heavy duty utility gloves are advised.
2. Absorb the spill with dry disposable paper towels. Since most disinfectants are less active, or even ineffective, in the presence of high concentrations of protein as are found in blood or serum, the bulk of the spilled liquid should be absorbed prior to disinfection.
3. Confine waste in a disposable waterproof bag.
4. Clean the spill site with detergent and water, rinse and dry.
5. Disinfect the spill site using a chlorine-generating disinfectant if bare skin will contact the spill site or if it a difficult to clean surface in the clinical area.
6. Surfaces that cannot be cleaned (in carpet) adequately may need replacement.
7. Disinfectants should be left in contact with the surface for 10 minutes.
8. Sodium hypochlorite solutions must be freshly prepared.
9. Sodium hypochlorite may be irritating to skin therefore protective gloves must be worn.
10. Sodium hypochlorite may corrode metal and damage other surfaces.

11. Liquid household bleach usually contains 4-5% available chlorine, diluted with tap water 1:100 gives 5000 ppm approximately which will inactivate Hepatitis B in 10 minutes and HIV virus in 2 minutes.
12. Flood the spill site or wipe down the spill site with disposable towels soaked in disinfectant to make the site “glistening wet”.
13. Absorb the disinfectant solution with disposable materials. Alternatively, the disinfectant may be permitted to dry.
14. Rinse the spill site with water to remove any noxious chemicals or odours. Dry the spill site to prevent slipping or further spills.
15. Materials used to absorb spillage should be placed in impermeable waste bags and disposed of appropriately.

## **GUIDELINES BIBLIOGRAPHY**

APA Acupuncture Position Statement. (2002). Clinical management: Acupuncture & other forms of skin penetration. *Australian Physiotherapy Association*.

APC (2005). National Infection Control Guidelines for Podiatrists. *Australian Podiatry Council and Podiatrists Registration Boards*.

Australian Immunisation Handbook 8<sup>th</sup> Edition (2003). *National Health and Medical Research Council*.

Bang, M.S., & Lim, S.H. (2005). Paraplegia caused by spinal infection after acupuncture. *Spinal Cord*, 44(4), 258-259.

Baldry, P.E. (2005). *Acupuncture, Trigger Points and Musculoskeletal Pain. Third Edition*. Edinburgh: Elsevier Churchill Livingstone.

Bensoussan, A., Myers, S.P., & Carlton, A.L. (2000). Risks associated with the practice of traditional Chinese medicine: An Australian study. *Archives of family medicine*, 9, 1071-1078.

Berthelot, P., Dietmann, J., Fascia, P., Ros, A., Mallaval, F.O., Lucht, F., pozzetto, B. & Grattard, F. (2006). Bacterial contamination of nonsterile disposable gloves before use. *American Journal of Infection Control*, 34(3), 128-130.

Burford-Mason, A. (2003). Acupuncture and adverse effects. *Canadian Family Physician*, 49, 1588.

Campbell A, Macglashan J. (2005). Acupuncture-induced galactorrhoea - a case report. *Acupuncture in Medicine*, 23(3),146.

Cheng, T.O. (2000). Cardiac tamponade following acupuncture [comment]. *Chest*, 118(6),1836-1837.

Chung, A., Bui, L., & Mills, E. (2003). Adverse effects of acupuncture: which are clinically significant? *Canadian Family Physician*, 49, 985-989.

Cook, H.A., Cimiotti, J.P., Della-Latta, P., Saiman, L., & Larson, E.L. (2007). Antimicrobial resistance patterns of colonizing flora on nurses' hands in the neonatal intensive care unit. *American Journal of Infection Control*, 35(4), 231-236.

Ernst, G., Strzyz, H., Hagmeister, H. (2003). Incidence of adverse effects during acupuncture therapy - a multicentre survey. *Complementary Therapies in Medicine*, 11(2), 93-97.

Ernst, E., White, A.R. (2000). Acupuncture may be associated with serious adverse events. *British Medical Journal*, 320(7233), 513-514.

Filshie, J. (2001). Safety aspects of acupuncture in palliative care. *Acupuncture in Medicine*, 19 (2), 117-122.

Filshie, J., & Cummings, M. (1999). *Western Medical Acupuncture*. 31-59. In: Ernst E, White A, editors. *Acupuncture: A Scientific Appraisal*. Oxford: Butterworth Heinemann.

Girou, E., Loyeau, S., Legrand, P., Oppein, F., & Brun-Buisson, C. (2002). Efficiency of handrubbing with alcohol based solution versus standard handwashing with antiseptic soap: randomized clinical trial. *BMJ*, 325(7360), 362-367.

Grabowska, C., Squire, C., MacRae, E., & Robinson, N. (2003). Provision of acupuncture in a university health centre - a clinical audit. *Complementary Therapies in Nursing and Midwifery*, 9(1),14-19.

Grove, G.L., Zerweck, C.R., Heilman, J.M., & Pyrek, J.D. (2001). Methods for evaluating changes in skin condition due to the effects of antimicrobial hand cleansers: Two studies comparing a new waterless chlorhexidine preparation with a conventional water-applied product. *American Journal of Infection Control*, 29(6), 361-369.

Ha, K.Y., & Kim, Y.H. (2003). Chronic inflammatory granuloma mimics clinical manifestations of lumbar spinal stenosis after acupuncture: a case report. *Spine*, 28(11), 217-220.

Hemsworth, S. (2000). Intramuscular (IM) injection technique. *Paediatric nursing*, 12(9), 17-20.

Hoffman, P. (2001). Skin Disinfection and Acupuncture. *Acupuncture in Medicine*, 19 (2), 112-116.

IAAPT (2003). Standards of safe acupuncture practice by physiotherapists. *International Acupuncture Association of Physical Therapists*.

Infection Control Guidelines. (2004). *Australian Department of Health and Aging*.

Jawahar, D., Elapavaluru, S., & Leo, P.J. (1999). Pneumothorax secondary to acupuncture. *American Journal of Emergency Medicine*, 17(3), 310.

Johnston, G.A., & English, J.S. (2007). The alcohol hand rub: a good soap substitute? *British journal of Dermatology*, 157(1), 1-3.

Jungbauer, F.H.W., Van Der Harst, J.J., Groothoff, J.W., & Coenraads, P.J. (2004). Skin protection in nursing work: promoting the use of gloves and hand alcohol. *Contact Dermatitis*, 51(3), 135-140.

Kampf, G., & Ostermeyer, C. (2002). Intra-laboratory reproducibility of the hand hygiene reference procedures of EN 1499 (hygienic handwash) and EN 1500 (hygienic hand disinfection). *Journal of Hospital Infection*, 52(3), 219-224.

Kao, C.L., & Chang, J.P. (2002). Pseudoaneurysm of the popliteal artery: a rare sequela of acupuncture. *Texas Heart Institute Journal*, 29(2), 126-129.

Kataoka, H. (1997). Cardiac tamponade caused by penetration of an acupuncture needle into the right ventricle. *Journal of Thoracic and Cardiovascular Surgery*, 114(4), 674-676.

Kelsey, J.H. (1998). Pneumothorax following acupuncture is a generally recognized complication seen by many emergency physicians [comment]. *Journal of Emergency Medicine*, 16(2), 224-225.

Kirchgatterer, A., Schwartz, c.D., Holler, E., Punzengruber, C., Hartl, P., & Eber, B. (2000). Cardiac temponade following acupuncture. *Chest*, 117, 1510-1511.

Korniewicz, R.N., Garzon, R.N., Seltzer, R.N., Kennedy, R.N., & Feinleib, M.D. (2001). Implementing a nonlatex surgical glove study in the OR. *AORN Journal*, 73(2), 435-445.

Korniewics, D.M., El-Masri, M., Broyles, J.M., Martin, C.D., & O'Connell, K.P. (2002). Performance of latex and nonlatex medical examination gloves during simulated use. *American Journal of Infection Control*, 30(2), 133-138.

Korniewics, D.M., El-Masri, M., Broyles, J.M., Martin, C.D., & O'Connell, K.P. (2003). A laboratory-based study to assess the performance of surgical gloves. *AORN Journal*, 77(4), 772-779.

Kung, Y., Chen, F., Hwang, S., Hsieh, J., & Lin, Y. (2005). Convulsive syncope: an unusual complication of acupuncture treatment in older patients. *The Journal of Alternative and Complementary Medicine*, 11(3), 535-7.

Lamar, P., Tillson, T., Scown, F., Grant, P., & Exton, J. (2007). Evidence-Based Recommendations for Hand Hygiene for Health care Workers. *Paper presented at The Physiotherapy Acupuncture Association NZ and The Medical Acupuncture Society of NZ Combined Conference, Auckland, 23<sup>rd</sup> & 24<sup>th</sup> June, 2007.*

- Laing, A.J., Mullett, H., Gilmore, M.F. (2002). Acupuncture-associated arthritis in a joint with an orthopaedic implant. *Journal of Infection*, 44(1), 43-44.
- Lao, L., Hamilton, G.R., Fu, J., & Berman, B.M. (2003). Is acupuncture safe: a systematic review of case reports. *Alternative Therapies in Health and Medicine*, 9(1), 72-83.
- Larson, E., & Bobo, L. (1992). Effective hand degerming in the presence of blood. *The Journal of Emergency Medicine*, 10(1), 7-11.
- Lau, S.M., Chou, C.T., & Huang, C.M. (1998). Unilateral sacroiliitis as an unusual complication of acupuncture. *Clinical Rheumatology*, 17(4), 357-358.
- Lau, E., Birnie, D., Lemery, R., Tang, A., & Green, M. (2005). Acupuncture triggering inappropriate ICD shocks. *Europace*, 7, 85-86.
- Lewith, G.T., & White P. (2003). Side effects associated with acupuncture and a sham treatment: perhaps we should take a closer look at what is really responsible? *The Journal of Alternative and Complementary Medicine*, 9(1), 16-19.
- MacPherson, H. (1999). Fatal and adverse events from acupuncture: allegation evidence and the implications [comment]. *The Journal of Alternative and Complementary Medicine*, 5(1), 47-56.
- MacPherson, H., Thomas, K. (2005). Short term reactions to acupuncture - a cross-sectional survey of patient reports. *Acupuncture in Medicine*, 2005, 23(3), 112-120.
- Macpherson, H., Thomas, K., Walters, S., & Fritter, M. (2001). A prospective survey of adverse events and treatment reactions following 34,000 consultations with professional acupuncturists. *Acupuncture in Medicine*, 19(2), 93-102.
- Macpherson, H., Thomas, K., Walters, S., & Fitter, M. (2001). The York acupuncture safety study: prospective survey of 34000 treatments by traditional acupuncturists. *British Medical Journal*, 323, 486-487.
- Matsumura, Y., Inui, M., & Tagawa, T. (1998). Peritemporomandibular abscess as a complication of acupuncture: a case report. *Journal of Oral and Maxillofacial Surgery*, 56(4), 495-499.
- McAdam, T.K., McLaughlin, R.E., & McNicholl, B. (2002). Are we getting the point? Needlestick injuries – an ongoing problem? *International Journal of STD & AIDS*, 13, 453-455.
- McCormick, R.D., Buchman, T.L., & Maki, D.G. (2000). Double-blind, randomized trial of scheduled use of a novel barrier cream and an oil-containing lotion for protecting the hands of health care workers. *American journal of Infection Control*, 28(4), 302-310.
- Mody, L., McNeil, S.A., Sun, R., Bradley, S.E., Kauffman. (2003). Introduction of a waterless alcohol-based hand rub in a long-term-care facility. *Infection Control and Hospital Epidemiology*, 24(3), 157-159.
- Murray, P.I., Aboteen, N. (2002). Complication of acupuncture in a patient with Behcet's disease. *British Journal of Ophthalmology*, 86(4), 476-477.
- Norheim, A.J., Fonnebo, V. (1996). Acupuncture adverse effects are more than occasional case reports: results from questionnaires among 1135 randomly selected doctors, and 197 acupuncturists. *Complementary Therapies in Medicine*, 4, 8-13.
- Norheim, A.J. & Fonnebo, V. (2000). A survey of acupuncture patients: results from a questionnaire among a random sample in the general population in Norway. *Complementary Therapies in Medicine*, 8(3), 187-192.

- Odsberg, A., Schill, U., & Haker, E. (2001). Acupuncture treatment: side effects and complications reported by Swedish physiotherapists. *Complementary Therapies in Medicine*, 9(1), 17-20.
- Origuchi, N., Komiyama, T., Ohyama, K., Wakabayashi, T., & Shigematsu, H. Infectious aneurysm formation after depot acupuncture. *European Journal of Vascular and Endovascular Surgery*, 20(2), 211-213.
- Park, J.H., Shin, H.J., Choo, S.J., Song, J.K., & Kim J.J. (2005). Successful removal of migrated acupuncture needles in a patient with cardiac tamponade by means of intraoperative transesophageal echocardiographic assistance. *Journal of Thoracic and Cardiovascular Surgery*, 130(1), 210-212.
- Patel, H.B., Fleming, G.J.P., & Burke, F.J.T. (2004). Puncture resistance and stiffness of nitrile and latex dental examination gloves. *British Dental Journal*, 196(11), 695-700.
- Pearce, L. (2002). To swab or not to swab – an exploration of opinion. *AACP Journal (Sept 2002 edition)*, 62-66.
- Peuker, E. (2004). Case report of tension pneumothorax related to acupuncture. *Acupuncture in Medicine*, 22(1), 40-43.
- Peuker, E., Gronemeyer, D. (2001). Rare but serious complications of acupuncture: traumatic lesions. *Acupuncture in Medicine*, 19(2), 103-108.
- Peuker, E.T., White, A., Ernst, E., Pera, F., & Filler, T.J. (1999) Traumatic complications of acupuncture : Therapists need to know human anatomy. *Archive of Family Medicine*, 8, 553-558.
- Practical Guide. (2007). Intramuscular injection. *Paediatric Nursing*, 19(2), 37.
- Rampes, H., & James, R. (1995). Complications of acupuncture. *Acupuncture in Medicine*, 13, 26-33.
- Rosted, P. (1997) Adverse reactions after acupuncture: A review. *Critical Reviews in Physical and Rehabilitation Medicine*, 9(3&4), 245-264.
- Russell-Fell, R.W. (2000). Avoiding problems: evidence-based selection of medical gloves. *British Journal of Nursing*, 9(3), 139-146.
- Sato, M., Katsumoto, H., Kawamura, K., Sugiyama, H., & Takahashi, T. (2003). Peroneal nerve palsy following acupuncture treatment: a case report. *Journal of Bone and Joint Surgery*, 85-A(5), 916-918.
- Saw, A., Kwan, M.K., & Sengupta, S. (2004). Necrotising fasciitis: a life-threatening complication of acupuncture in a patient with diabetes mellitus. *Singapore Medical Journal*, 45(4), 180-182.
- Schulman, D. (2004) A framework for classifying unpleasant responses to acupuncture. *Journal of Chinese Medicine*, 75, 10-14.
- Shah N, Hing C, Tucker K, Crawford R. (2002). Infected compartment syndrome after acupuncture. *Acupuncture in Medicine*, 20(2-3), 105-106.
- Standards of Practice for Acupuncture Health (Infectious Diseases) Regulations. (1990). *Chinese Medicine Registration Board of Victoria*.
- Tanner, J. (2006). Surgical gloves: perforation and protection. *The Journal of Perioperative Practice*, 16(3), 148-152.
- Trick, W.E., Vernon, M.O., Hayes, R.A., Nathan, C., Rice, T.W., Peterson, B.J., Segreti, Welbel, S.F., Solomon, S.L., & Weinstein, R.A. Impact of ring wearing on hand contamination and comparison of hand hygiene agents in a hospital. *Hand Hygiene in a Hospital*, 36(11), 1383-1390.
- Trick, W.E., & Weinstein, R.A. (2001). Hand hygiene for intensive care unit personnel: Rub it in. *Critical Care Medicine*, 29(5), 1083-1084.

Uhm, M.S., Kim, Y.S., Suh, S.C., Kim, I., Ryu, S.H., Lee, J.W., & Moon, J.S. (2005). Acute pancreatitis induced by traditional acupuncture therapy. *European Journal of Gastroenterology and Hepatology*, 17(6), 675-677.

Vilke, G.M., Wulfert, E.A. (1997). Case reports of two patients with pneumothorax following acupuncture [comment]. *Journal of Emergency Medicine*, 15(2), 155-157.

Vincent, C. (2001). The safety of acupuncture: Acupuncture is in safe hands of competent practitioners. *British Medical Journal*, 323, 467-468.

Winnefeld, M., Richard, M.A., Drancourt, M., & Grob, J.J. (2000). Skin tolerance and effectiveness of two hand decontamination procedures in everyday hospital use. *British journal of Dermatology*, 143(3), 546-550.

Woo, P., Li, J., Tang, W., & Yuen, K. (2001). Acupuncture myobacteriosis. *New England Journal of Medicine*, 345 (11), 843.

Walsh, B. (2001) Control of infection in acupuncture. *Acupuncture in Medicine*, 19(2), 109-111.

White A. (2004) A cumulative review of the range and incidence of significant adverse events associated with acupuncture. *Acupuncture in Medicine*, 22(3), 122-133.

White, A. (2006). The safety of acupuncture – evidence from the UK. *Acupuncture in Medicine*, 24 (Suppl), S53-57.

White, A. (2004). A cumulative review of the range and incidence of significant adverse events associated with acupuncture. *Acupuncture in Medicine*, 22(3), 122-133.

White, A., Cummings, M., Hopwood, V., & MacPherson, H. (2001). Informed consent for acupuncture – an information leaflet developed by consensus. *Acupuncture in Medicine*, 19(2), 123-129.

White, A., Ernst, E. (1999). Learning from adverse events of acupuncture [comment]. *The Journal of Alternative and Complementary Medicine*, 5(5), 395-396.

White A, & Ernst E. (2001). Adverse events associated with acupuncture reported in 2000. *Acupuncture in Medicine*, 19(2), 136-137.

White, A., Hayhoe, S., Hart, A., & Ernst, E. (2001). Adverse reactions following acupuncture: prospective survey of 32000 consultations with doctors and physiotherapists. *British Medical Journal*, 323, 485-486.

White, A., Hayhoe, S., Hart, A., & Ernst, E. (2001). Survey of adverse events following acupuncture (SAFA): a prospective study of 32 000 consultations. *Acupuncture in Medicine*, 19(2), 84-92.

WHO (1999). Guidelines on basic training and safety in acupuncture. *World Health Organisation Traditional Medicine Unit*.

Willms, D. (1991). Possible complications of acupuncture. *The Western Journal of Medicine*, 154(6), 736-737.

Yamashita, H., Tsukayama, H., Tanno, Y., Nishijo, K. (1999). Adverse events in acupuncture and moxibustion treatment: a six-year survey at a national clinic in Japan. *The Journal of Alternative and Complementary Medicine*. 5(3), 229-236.

Yamashita, H., Tsukayama, H., Hori, N., Kimura, T., & Tanno, Y. (2000). Incidence of adverse reactions associated with acupuncture. *The Journal of Alternative and Complementary Medicine*, 6(4), 345-350.

Yamashita, Y., Masuyama, S., Otsuki, K., & Tsukayama, H. (2006). Safety of acupuncture for osteoarthritis of the knee – a review of randomised controlled trials, focusing on specific reactions to acupuncture. *Acupuncture in Medicine*, 24 (Suppl), S49-52.

Yamashita, H., Tsukayama, H., White, A.R., Tanno, Y., Sugishita, C., & Ernst, E. (2001). Systematic review of adverse events following acupuncture: the Japanese literature. *Complementary Therapies in Medicine*, 9(2), 98-104.

Zaglaniczny, K. (2001). Latex allergy: are you at risk? *AANA Journal*, 69(5), 413-424.