ASAP

Australian Society of Acupuncture Physiotherapists

GUIDELINES for SAFE ACUPUNCTURE and DRY NEEDLING PRACTICE

June 2018

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FORWARD

This document is designed to be used as a guide to safe practice by physiotherapists and other allied health practitioners practicing acupuncture and dry needling in Australia. Acupuncture practice in this document covers various styles of needling modalities including Traditional or East Asian Medicine based Acupuncture, Western, Segmental or Medical Acupuncture and Dry Needling. Underpinning these guidelines is a risk management framework.

These guidelines are based on the Australian Commission on Safety and Quality of Health Care Australian Guidelines for the prevention and control of infection in healthcare, NHMRC (2010). These Australian Guidelines are not prescriptive, rather take a risk management approach. These guidelines act to assist and direct the therapist to identify risks and to take adequate precautions for the identified risk.

By no means are ASAP guidelines intended to replace the Australian Guidelines, rather they are put forward as a compliment, and to direct therapists to aspects of the Australian Guidelines that are particularly pertinent to acupuncture. Section one of the guidelines refers to issues specific to acupuncture. Section two of the guidelines refers to the general guidelines of infection control.

In the development of these guidelines, a review of other various National, State, Territory and International Clinical Educators Guide for the Prevention and Control of Infection in Health Care. NHMRC (2010)guidelines was conducted. The key documents consulted are outlined below with links so that the user can consult documents directly.

1. The minimum standards set by the International Acupuncture Association of Physical Therapists (IAAPT) Guidelines for Safe Acupuncture and Dry Needling (2016).
2. Australian Commission on Safety and Quality in Healthcare - Australian Guidelines for the Prevention and Control of Infection in Health Care. NHMRC (2010)
3. National Health and Medical Research Council's Australian Immunisation Handbook 10th Edition (2015)
4. AHPRA Chinese Medicine Registration Board Infection Control Guidelines
5. NSW Guidelines
6. QLD Guidelines
7. NT Guidelines
8. ACT Guidelines
9. SA Guidelines
10. TAS Guidelines
11. WA Guidelines

Leigh McCutcheon, Paula Raymond-Yacoub and Tristan Chai updated and reviewed this document in June 2018. Prior to this Paula Raymond-Yacoub and Leigh McCutcheon updated and reviewed this document in April 2013. The first version of this document (2007) was produced by an ASAP working party featured on the following page.

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AACMA – Australian Acupuncture and Chinese Medicine Association
ADNG – APA Acupuncture and Dry Needling Group
APA – Australian Physiotherapy Association
ASAP – Australian Society of Acupuncture Physiotherapists
SPA – Sports Physiotherapy Australia
MPA – Musculoskeletal Physiotherapy Australia

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APA – Australian Physiotherapy Association

ASAP – Australian Society of Acupuncture Physiotherapists

SPA – Sports Physiotherapy Australia

PAANZ – Physiotherapy Acupuncture Association of New Zealand

MPA – Musculoskeletal Physiotherapy Australia

NZSP – New Zealand Society of Physiotherapists

GG – Gerontology Group

ANZAOP – Australia/New Zealand Academy of Orofacial Pain

ADNG – APA Acupuncture and Dry Needling Group

SECTION ONE

INTRODUCTION

Physiotherapists and other allied health practitioners may practice acupuncture under any of the following paradigms; Traditional Acupuncture[1], Western Acupuncture[2] or Dry Needling[3]. Utilisation of any style of needling must be within the individual's scope of practice and should include a diagnosis based on clinical reasoning and be part of an overall management approach. In these guidelines Acupuncture and Dry Needling are defined as follows:

Traditional Acupuncture: Utilisation of meridian or extra points based on an East Asian Medicine (EAM) approach which includes diagnosis and clinical reasoning using various EAM assessment methods and theoretical constructs.

Western / Medical Acupuncture: Western / Medical acupuncture utilises meridian points but applies it to western reasoning with particular consideration to neurophysiology and anatomy. It does not utilise any EAM assessment methods or paradigms.

Dry Needling: Needling to altered or dysfunctional tissue, to improve or restore function. This may include (but is not limited to) needling of myofascial trigger points, periosteum and soft tissues.

TRAINING STANDARDS

Any attempt to establish training standards is to ensure public safety. Although acupuncture and DN are very safe if practiced sensibly, there have been documented fatalities (Ernst 2010) as well as other serious (non fatal) adverse effects such as pneumothorax or local or systemic infections. It is incumbent on the therapist to ensure the training they have received meets with these or comparable standards.
Within Physiotherapy, the ASAP suggests these recommendations regarding introductory training.

- The training standard should depend on the paradigm being employed.
- The training standards should be in line with internationals standards.
- Training should be underpinned by a competency based frame work.
- These standards should form the basis from which indemnity insurers provide cover, which is presently the case in Australia.

- Traditional EAM Acupuncture Training Standard;

The current APA Integrative Acupuncture Level 1 course is an **80 hour** program that includes self directed components and face to face teaching (48 hours). The APA has run introductory Traditional Acupuncture courses since 1979. Courses that are comparable or of longer duration would meet this required standard. Any training should include documented competency based assessment.

- Dry Needling (DN) or Western Acupuncture Training Standard;

A two day course is considered adequate as a basic introduction. A **16 hour** minimum training for dry needling or western acupuncture is based on the fact that the clinical reasoning underpinning dry needling and western acupuncture does not differ from the anatomical and neurophysiology knowledge that allied health therapists already possess. Such courses must have at least **12 hours** of practical face to face training as this is considered a minimum for sufficient training, in light of the inherent risk associated with skin penetration, especially if needling in the neck and thorax regions is taught at an introductory level. Any training should include documented competency based assessment.

- Continuing Professional Development (CPD)

Following the minimum training requirements therapists are recommended to complete a minimum of **8 hours** of continuing professional development (CPD) in acupuncture or dry needling every two years to remain competent in this field of practice.

- Reporting of Serious Adverse Events

Reporting of serious adverse events associated with Acupuncture or DN should be made immediately as applicable to your professional insurer. Your employing body may have further requirements of notification of adverse events.

- The use of sterile disposable needles is essential. It would be difficult to defend the use of reusable 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 reusable needles.
- Touching the shaft of the needle should be avoided during treatment.
- Do not mark the skin with pen and needle into the marked area in order to not tattoo the patient.
- Only therapists trained in acupuncture and dry needling should insert or removal needles.
- Needles used in needle trays should be kept in introducer tubes and should be discarded at the end of the treatment.
- Once the sterile pack has been opened and needles have been removed from the outer sterile packet, the needles need to be discarded at the end of the consult.
- Never use sterile guide tubes beyond the single treatment session for the individual patient.
- Therapists should confine their use of acupuncture and DN to treatment of conditions within the scope of professional practice for which they have training and experience.
- Scope of practice;

  Acupuncture and DN is accepted as being within the scope of physiotherapy as long as you are treating conditions that fall within the capacity of a physiotherapist.
- Personal scope of practice;

  Working within your personal scope of practice means that you should ensure that you are working safely and competently within your personal scope of practice. This means that you must ensure you have the skills, knowledge and abilities required to carry out your role as a physiotherapist. It also implies that you identify the areas that you need to further develop in order to be competent in your practice. For example, physiotherapists learning advanced techniques in vulnerable regions, such as the thoracic region, must learn techniques from a competent teaching source to be acting within their scope of practice and to prospectively be covered by their professional indemnity insurer.
- Whilst Acupuncture and DN lies within the scope of physiotherapy and therefore under the title of Physiotherapist, the title of Acupuncturist can only be used if physiotherapists are endorsed by the Physiotherapy Board of Australia under Section 97 of the Health Practitioners Regulation National Law Act 2009 or if they are endorsed directly by the Chinese Medicine Board of Australia.
- Further training is essential, if physiotherapists wish to extend the scope of acupuncture and DN. This is particularly pertinent for any needling in the trunk, thorax or head/ cervical regions, the pelvic region and the deep compartment of the legs.
- Physiotherapists should only implement needle insertion techniques after attending a **two day introductory** training course, which should comprise a minimum of **12 practical contact hours** if on line or self directed learning modules are to be used. Complete and comprehensive safety guidelines for physiotherapists should be included in the initial pre-learning structure of any course in Acupuncture and DN that physiotherapists partake. This forms the basis for professional indemnity insurance for physiotherapists to commence needling therapies in Australia.

- Therapists should be aware of current National, State and/or Territory infection control guidelines.
- Therapists should keep clearly documented records describing the acupuncture or DN procedure. Warnings given and informed consent should be noted.
- In Australia it is legislated that for medical treatment of a child less than 18 years of age a parents or guardians consent should be gained. In NSW however a child can consent to medical treatment from the age of 14 and in South Australia from the age of 16. However, in Australia, there exists legislative provisions and common law principles that recognise the developing competency of adolescents to make decisions regarding their own medical treatment. As a result, parents and their teenage children in this country hold concurrent rights to consent to the child's treatment. Therefore it may be pertinent to document both the parents and the child's consent, especially if the child is in the 14-18 year age group. It is advisable for parents to be present for at least the first treatment.
- Warnings and consent should include contraindications and precautions and possible adverse outcomes. Verbal or written consent rather than implied consent should be considered for Acupuncture or DN. In Australia since Roger vs Whitaker (1993) the standard of consent has included the following considerations;
    - the diagnosis or the most likely diagnosis based on available data
    - the recommended treatment and what the treatment involves
    - the risks of the treatment and possible adverse effects or compilations
    - the patient should have adequate time to consider the information and make an informed decision without any coercion or sense of pressure
    - as appropriate discuss any alternatives to the treatment and their benefits and risks
    - address the risks of not having treatment and the options to defer treatment
    - the patient has the right to withdraw their consent to treatment at any time
    - the patient should give consent and agree before you actually perform a treatment or examination
    - any changes to the patients health and presentation and/or any changes or additions to treatment after the initial consent has been given, requires further consent
- Therapists should comply with the management of adverse event guidelines as outlined in this guide.
- Therapists should comply with the hygiene requirements as outlined in the *Australian Guidelines (2010).* Therapists should be aware of any further hygiene requirements of employers (e.g. hospital department guidelines).
- Needling away from clinical rooms;
    - when attending a home visit or sporting venue ensure the patient is safely positioned for the treatment
    - ensure the skin is clean
    - an adequate sharps bin and needling kit for possible adverse reactions and clean practice should be available
    - if travelling in aircrafts needles need to be stowed with checked in baggage and not taken onto the plane as carry on
- Therapists should comply with the waste disposal guidelines for needles or bodily fluids as outlined in the *Australian Guidelines (2010).* Therapists should be aware of additional requirements for waste disposal of

needles or bodily fluids as set by local governing bodies.

- Therapists should recognize and comply with the additional guidelines for ancillary modalities such as: moxibustion, cupping and spooning, auricular needles, press needles, beads and plum blossom needles.
- The therapist 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. For example if a patient is left in a room or cubicle unattended it is pertinent to leave a bell for them to alert the therapist if required.
- Therapists need to manage the risk of "needle stick" injury. Sharps bins should be close at hand. Any needles used during a treatment session should be disposed of without delay.

- The patient should be provided with an explanation of the proposed treatment and what it entails. This explanation may include:
    - The procedure of the needle insertion into the skin
    - That sterile, single use, disposable needles are used
    - A brief explanation of how the type of Acupuncture or DN that is being implemented works
    - The use of additional stimulation of the needle, such as manual stimulation, electrical stimulation or *moxa*
    - The possibility of transient symptoms during and/or after the treatment, such as fatigue, light headedness or temporary aggravation of the symptoms
    - Any advice following the treatment that may be pertinent for the individual patient, such as care with driving long distances after any needling treatment
    - The expected post needling soreness associated trigger point DN or pecking of various pathophysiological conditions.

- Since April 2016 patients who wish to donate blood to the Australian Red Cross blood bank should be aware to alert staff that they have had acupuncture and DN with a registered health practitioner using sterile, single use disposable needles. This enables a patient to donate blood 24 hours after an acupuncture and DN treatment.
- In Australia medical misadventures often settle out of court and are not publically reported, however when considering worldwide documentation of medical misadventures or significant adverse reactions reported in the research literature, which includes countries that have mandatory reporting, significant adverse reactions from acupuncture and dry needling are rare to remote.

1. PROHIBITED AREAS

The are a number of so called prohibited areas for using acupuncture techniques include nipples, the umbilicus and the external genitalia. It is questionable if these sites pose a risk to patients but are culturally inappropriate. The scalp areas of infants (before the frontanelles have closed) must not be needled, as this poses a major risk.

2. HIGH RISK AREAS

The following are points which are close to vulnerable structures and so require extra consideration and/or caution. Specific training is required to needle in high risk areas.

- GB21 (trapezius), BL 11, LU 1 and any other point in the thorax due to the relative risk of pneumothorax.
- Muscles in the thorax which require additional care and competency based training prior to applying in practice include upper, mid and lower trapezius, rhomboids, levator scapulae, serratus anterior, thoracic erector spinae including spinalis, longisimus and ioliocostalis thorasis, the thoracic transversospinalis group which includes semispinalis, multifidus and rotatores, pectoralis major and minor, sternalis, subclavius and the upper portions of the lumbar and abdominal musculature that attach to the lower ribs.
- Needling in this region should be shallow and oblique **and/or** away from lung tissue **and/or** over bone or cartilage.
- Needling of the diaphragm and intercostals are not considered to be standard safe practice.
- Superiorly the lung field extends 2-3 cm above clavicular line. As GB 21/ upper trapezius is one of the points which is more commonly associated with pneumothorax, extra care and adequate training is required to needle this point.
- Anterioro-laterally the lung extends to rib 6 mid clavicular line and to rib 8 mid axillary line.
- The pleura extends two ribs below i.e. the 8th rib at the mid-clavicular line and down to rib 10-12 laterally (mid-axillary line).
- Posteriorly the lung extends to the 10th rib, and the pleura down to 12th rib, at the lateral border of the thoracolumbar erector spinae.
- Research has shown that that the lung pleura can be pierced by needling perpendicularly 10-20mm parasternally on the mid clavicular line and 15-20mm in the parascapular zone.
- Eye orbit points including BL 1, ST 1 and Ex Pt. (*qiu hou*) are generally considered to be contraindicated for therapists unless they are applying a non insertion technique.
- Neck points including CV 22 (anterior neck), LI 18 (lateral neck over the major vessels), SI 17 (over the baroreceptors), ST 9 (over the carotid) GV 15 (over the spinal cord), and GV 16 (over the brain stem). Any needling in the sub-occipital region, including BL10 and GB 20, the occipital attachment of upper tapezius, semispinalis capitus, splenus capitus, longissimus capitus should be contained to a safe depth and it may be pertinent to avoid needling below the occiput and to angle the needle in a cephalic direction when needling over the occiput as a measure to avoid the vertebra artery and brainstem. Extreme care should be taken if needling in the anterior triangle of the neck and depths should be shallow to avoid vulnerable structures. Needling of the anterior scalene is not considered standard practice and if considered should be performed with ultrasound guidance. Whilst there has been recent international interest in needling of

longus colli it is considered to be not safe practice due to the fascial connections of the carotids which also may bifurcate as low as C5 and due to the close proximity of the thyroid and its associated vessels and sympathetic ganglia and their associated fascial connections to the prevertebral layer of the deep anterior cervical fascia.

- CV 17 (over the sternum) and SI 11 (over the infrascapular fossa) should be needled superficially and/or obliquely due to congenital foramen that are present in up to 4% of individuals. Additionally it should be noted that the sternal notch varies significantly with 5 different types noted and thus it should not be assumed that bone underlies the supraspinatus in the fossa.
- Advanced training and care should be taken when needling into into the deep compartment of the leg, particularly needling of tibialias posterior. Due to the close vicinity of the posterior tibial and peroneal vessels and the possibility of compartment syndrome, it may be advisable not to use a pecking technique unless a Doppler ultrasound is utilised.
- With acupuncture or dry needling that involves needling of pelvic musculature for the treatment of conditions associated with men's or women's health, care should be taken in regards to depths and vulnerable organs and it may be pertinent to use an ultrasound guided technique when needling. Additional consent considerations should be considered.
- Therapists should not be needling into vulnerable regions without advanced training. Training should be at a level that if any medical misadventure was to occur the source of the training would be sound.
- Extra care should be taken when needling *Ah Shi* (tender points) points close to vulnerable structures
- Avoid vulnerable pathological sites including varicose veins, acutely inflamed areas, areas of unhealthy tissue or infected tissue.
- Avoid limbs affected by or at risk of lymphoedema. Japanese acupuncture, using non-insertion techniques may be utilized in this case. Regions where lymph nodes have been removed remain at risk indefinitely, for example this is the usual case post lumpectomy or mastectomy as lymph's associated with the affected region will have been removed.
- Avoid needling directly into breast tissue. This is particularly pertinent when dry needling muscles such as pectoralis major or minor. Japanese acupuncture, using non-insertion techniques may be utilized in this case.
- Care when needling between the spinous processes of vertebrae or over the nerve roots (Governing Vessel, HTJ 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 creating infection or inflammatory perineural cysts do not puncture deeply in this region.
- ST 21 which lies over the gall bladder on the right should be needled superficially and/or obliquely.
- All abdominal organs, including the bowel, kidney, liver, spleen, intestines and urinary bladder are potentially at risk, when needling directly over the organs. The risk is greater with anatomical variance or enlarged organs. Safe needling depths should be individually considered. Care should be taken when needling the abdominal muscles, quadratus lumborum or the erector spinae. Needling of the ilaicus superior to the inguinal canal is questionable as a needling technique and should only be attempted with ultrasound guidance due to the close proximity of the iliac vessels and the bowel as safe needling windows can be as low as 2mm.
- Needling in the obese population can be problematic if anatomical landmarks are not clearly palpable. It is

not advisable to needle deeply to reach muscular tissue or other anatomical structures if the anatomy is unclear.

- Therapists must never needle through clothing and in certain regions it may be pertinent to use additional thought regarding relative aseptic technique, for example needling in the buttock or perineal regions or the axilla where additional swabbing / asepsis should be considered.

3. PREGNANCY

- Acupuncture should be used with caution on pregnant patients.
- Systematic reviews support the use of acupuncture for lumbar and pelvic girdle pain during pregnancy.
- Recent research indicates acupuncture has been associated with minor adverse complaints rather than severe adverse outcomes in pregnant women when needled in the second and third trimesters.
- The upper and lower lumbar spine, pelvic and sacral areas should be needled with care.
- Strong electro-acupuncture and over simulation 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 treatment as there is a risk that a miscarriage may be attributed to treatment.
- Historically there was reasoned to be a risk of miscarriage particularly in the first trimester.
- Historically acupuncture points that were reasoned to be avoided include LI 4, GB 21, SP 6, BL 60, BL 67 and LV 3, points over the abdomen, ear points for the endocrine and the genitor-urinary system as well as scalp points targeting the genital area, and the foot motor sensory areas. It should be noted that despite significant research there is no scientific evidence to support this concern.
- Historically certain points are indicated at the latter stages of pregnancy to turn the baby (BL 67) or to induce labour when past the due date and induction is being recommended (LI 4, LV 3, SP 6).

4. DIABETES

- Diabetic patients may have poor peripheral circulation and slower healing rates which are associated with increased risk of infection.
- Additional care should be taken when needling diabetics and needling in the periphery is relatively contra-indicated.
- Vigorous needling styles, such as pecking techniques, pose increased risks and are relatively contra-indicated.

5. PACEMAKERS AND IMPLANTABLE CARDIOVERTER DEFRIBULATOR (ICD)

- Patients with pacemakers or ICDs should not receive electro-acupuncture.

6. CONFUSED PATIENTS

- The patient must be able to consent to the proposed treatment.

- If the patient appears disoriented or confused then acupuncture treatment is not advisable.

7. CHILDREN

- Parental consent must be gained when treating children under the age of 18.
- Consider gaining consent from both the parent and the child, especially if the child is in the 14-18 year age group.
- It is advisable that parents are present during the first treatment, until the child is settled.
- In Australia it is legislated that for medical treatment of a child less than 18 years of age a parents or guardians consent should be gained. In NSW however a child can consent to medical treatment from the age of 14 and in South Australia from the age of 16. However, in Australia, there exists legislative provisions and common law principles that recognise the developing competency of adolescents to make decisions regarding their own medical treatment. As a result, parents and their teenage children in this country hold concurrent rights to consent to the child's treatment. Therefore it may be pertinent to document both the parents and the child's consent, especially if the child is in the 14-18 year age group.

8. BLEEDING DISORDERS, ANTICOAGULANTS, ANTIPLATELET AND THROMBIN INHIBITORS

- Naturally occurring hemorrhagic diseases (e.g. Haemophilia, Von Willebrands), require lighter stimulation and smaller gauge needles.
- Patients on high levels of blood thinning medications such as Warfrin, Plavix, Clexane, Pradaxa, Xarelto or Eliquis pose risks. Finer gauge needles are recommended and it is advisable to apply pressure to the site of insertion after withdrawing the needle.
- The extra risk of needling over a major artery must be assessed.
- Avoid needling into joints to minimise the risk of haemarthrosis.
- Do not use a pecking or fenestration techniques on patients with a bleeding disorder or on anti-coagulants.
- Additional consent should be sought prior to treatment explaining the potential risk of a bleed or bruise.

9. CANCER

- Cancer patients may be on immunosuppressants, therefore present a greater risk of infection. Chemotherapy also presents a situation where the immune system is compromised.
- Meta-analysis and Cochrane review support the use of acupuncture for pain relief, and acupuncture has shown to be more beneficial than TENS.
- Systematic reviews indicate that acupuncture may produce beneficial results when combined with medication for chemotherapy induced nausea.
- Additional care with skin preparation should be taken when treating cancer patients.
- Needling should be avoided in areas associated with lymphoedema, or in areas which pose a risk for potential lymphoedema.
- It may be pertinent to assess the patient's blood platelet and white cell count to be aware of immune risk when assessing the suitability for needling.

10. ACUTE IMMUNE DISORDERS

- Patients with acute immunological disorders (e.g. acute states of rheumatoid arthritis, psoriatic arthritis, systemic lupus erythema (SLE) or irritable bowel syndrome) have an increased risk of infection. Care should be taken when needling such patients with increased universal precautions used.
- Lichen planus and psoriasis may be propagated by acupuncture or dry needling. Koebner's lesions may present as early as 3 days post treatment but could occur up to 10-20 days post treatment and can occur in up to 50% of psoriatic patients. The risk of Koebner's need to be addressed with the patient prior to treatment.

11. EXTERNAL INFECTIOUS PATHOGENS

- Methicillin sensitive staphylococcus aureus and Methicillin resistive staphylococcus aureus (MRSA) and the relative risk of infection should be considered prior to needling as the patient or the therapist may be MRSA positive. Septic arthritis, abscess formation, joint destruction, paraplegia, necrotising fasciitis and multi-organ failure have all been associated with remote incidences of infection associated with acupuncture or dry needling.
- A single practitioner with MRSA not following universal precautions may infect multiple patients.
- Betadine or Chlorhexidine should be used in immune compromised patients or when needling into infection sensitive regions (such as joints or bursa) and 'clean' needling techniques should always be adhered to.
- When Betadine or Chlorhexidine is utilized it should always be allowed to dry prior to needling, which usually takes up to 2 minutes.

12. ACUPUNCTURE AND DRY NEEDLING MYCOBACTERIOSIS

- Although exceptionally rare atypical microbatceria, such as Mycobacteria abscessus, can be transmittented from the environment to patients via contaminated equipment, such as unclean cotton balls/swabs or towels, hot packs from a water heating hydrocollator, re-use of personal needles, or in individuals with skin colonized with mycobacteria re-using needles at multiple sites.
- Aseptic technique should be practiced, with the level of aseptic practice altering dependant on the risk assessment of the individual patient.
- Linen should be stored in a clean dry place that prevents contamination by moisture.

13. INCOMPETENT HEART VALVE OR VALVE REPLACEMENTS

- Patients with an incompetent heart valve or valve replacement have an increased risk of infection. It may be pertinent to seek advice, consent or antibiotic prescription from the patient's general practitioner or cardiac specialist.
- The routine use of Betadine or Chlorhexidine must be adhered to if acupuncture or dry needling treatment

is to be implemented in order to prevent endocarditis.

- Indwelling press needles or intradermals should not be used. Ear beads should be used with extreme caution with adequate consent gain from the patient prir to their use.

14. INTERNAL FIXATION OR JOINT REPLACEMENT

- Needling into an artificial joint is a **CONTRAINDICATION** due to the risk of infection. Needling around an internal fixation device poses some relative risk.
- When needling a patient with internal fixation devices (eg screws, plates, K wires) or joint replacements the individual's health status and the risks and benefits of needling should be considered. New varying strains of MRSA pose issues for individuals with internal 'hardware' and systemic infections can pose a risk.

15. ORAL CORTICOSTEROIDS

- Oral corticosteroids are a relative precaution when performing acupuncture and DN. Long term use of corticosterioids are associated with an increased risk of infection.

16. METAL ALLERGY

- Patients allergic to metals, may have a reaction to needles. The primary allergies are to nickel or chromium.
- A wheal and flare reaction, which is distinctly different to the vasodilatation which commonly occurs with 'good responders' to acupuncture and dry needling, and a subsequent 'hive effect' occurs from metal allergies and a discolouration of the skin may result (particularly if needles are left in situ).

17. UNSTABLE EPILEPSY

- Patients with epilepsy, especially unstable epilepsy, should be needled with care.
- Patient positioning should be considered. A side lying position may be preferable.
- The number of needles should be limited.
- The use of strong points and stimulation needs to be moderated.
- Epileptic patients should not be left unattended during needling treatments and during the treatment they should not be position in a vulnerable position should in case an epileptic fit occurs.
- The duration of retention should be considered.

18. 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.

19. MEDICATIONS

- Due to acupuncture's effect on the autonomic system patients may have reactions that effect their current medications and 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 therapist to consider this possibility and it may be prudent to discuss this with the patient.
- It may be advisable to cease acupuncture or dry needling if medications are being revised.
- Long term steroids may affect the skin and suppress the immune system.

20. NEUROPRAXIA

- Neuropraxia has been reported in the medical misadventure literature in cases involving the common peroneal nerve and radial nerve. Neuropraxia associated with acupuncture or dry needling is extremely rare to remote.
- In particular extra care must be taken if utilsing needling techniques that involve pecking or fenestration or during Electro-acupuncture.

ADDITIONAL GUIDELINES

NEEDLING VIA ULTRASOUND GUIDED TECHNIQUE

- In vulnerable areas which would normally be prohibited real-time ultrasound +/- doppler ultrasound may be utilized.
- The infection risks of needling in conjunction with ultrasound use must be considered.
- If needling via an ultrasound guided approach steps need to be taken to assure relative aseptic technique including the use of aqueous chlorhexadine irrigation solution and sterile single use auquasonic gel. Normal ultrasound gel is not sufficient in terms of asepsis.
- Gloves should be worn for needling via an ultrasonic technique.
- The head of the ultrasound should be prepared by covering it with a sterile glove, sheath or condom to ensure relative asepsis if the transducer head is to become in contact with the needling environment. Patient latex allergy should be considered.
- Ultrasound transducers must undergo high-level disinfection (DHL) using a TGA-approved instrument grade disinfection method following the manufacturer's instructions for use.
- These guidelines are in line with the Australian College for Infection Prevention and Control (ACIPC) and Australian Society for Ultrasound in Medicine (ASUM).

ELECTROACUPUNCTURE (EA)

- Patients with heart pacemakers or implantable cardioverter defibrillator (IDC) should not receive EA.
- Extra care must be taken if patients have bleeding disorders or are on anticoagulant 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 to prevent polarisation of the needles due to electrolysis. The unit used must be battery (not mains) operated.
- Use needles suitable to EA, if plastic they must be the type designed for EA.

MOXIBUSTION

- It is essential to assess heat perception sensitivity before starting.
- Caution in hirsute (hair covered) areas of the body.
- Avoid moxibustion on broken or damaged skin.
- Apply extra care with children or frail patients.
- Where possible shield the skin with a protective guard to protect against burns when applying needle head moxibustion.

CUPPING AND SPOONING/GUA SHA

- Cups, scraping spoons and other equipment which have come into contact with blood or non-intact skin are critical items should not be reprocessed. Blood exposure may occur for example when cups are applied following the use of a dermal hammer or acupuncture on the same area. These contaminated items should

be treated as single use items and be disposed of.

- Consider the relatively low cost of these items compared to the costs of implementing a documented sterilisation process which complies with Australian Standards AS/NZ 4187 and AS/NZS 4815. Treating these items as a disposable cost effectively reduces a significant potential source of infection.
- Where a sterilisation process is in place (which complies with Australian Standards AS/NZ 4187 and AS/NZS 4815) then these items may be reprocessed (NHMRC 2010, p 80-81).
- Exception: Cups, scraping spoons and other equipment which have been in contact with intact skin only are non-critical items and can be reprocessed by cleaning and/or disinfecting according to table B1.14 [NHMRC 2010, p 81].
- Can be difficult to apply 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 also occur. This risk should be explained when gaining consent.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 starting. 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 anticoagulant 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 an infection risk.

AURICULAR THERAPY

- Extra precautions must be taken with all ear acupuncture because the cartilage has a very poor / relatively avascular 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. In the medical literature there have been cases which have required surgical excision to remove the necrotic cartilage due to infection, bacterial endocarditis in patients with valvular heart disease and cases of septicemia have also been noted.
- Clean the ear with an alcohol swab or soap and water to remove dead cells/wax.
- In the case of press needles or 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 or 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 or 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 or 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.

DERMAL HAMMER

- Only single use disposable hammers are to be utilised and these should never be reprocessed. However where a sterilisation process is in place which complies with Australian Standards as outlined above, then these items could be reprocessed.

MANAGEMENT OF ADVERSE EVENTS

ACUPUNCTURE AND DRY NEEDLING 'KIT'

When performing acupuncture or dry needling a safety needling 'kit' should be available. The following should be considered for inclusion;

- Cotton wool/ swabs
- Micropore
- Tweezers
- Alcohol swabs, Betadine or Chlorhexidne
- Sharps Container
- Gloves (latex and/or nitrile)
- Lollies/ biscuits
- Stethoscope
- Consent Documents and/ or Policy and Procedures manual

DEPTH DIRECTION AND DANGER

When needling adequate depth in terms of safety and anatomical structures should be considered. Angle of inclination affects perpendicular depth of needling;

50mm at 60^0 = 43.3mm perp	30mm at 60^0 = 26mm perp
50mm at 45^0 = 35.4mm perp	30mm at 45^0 = 21.2mm perp
50mm at 30^0 = 25mm perp	30mm at 30^0 = 15mm perp
50mm at 20^0 = 17.1mm perp	30mm at 20^0 = 10.3mm perp

PAIN DURING TREATMENT

If excessive pain persists while the needle is inserted it should be removed and if pain persists when the needle is inserted which is not consistent with de Qi or trigger point referred pain (eg sharp shooting pain or parasthesia) the needle 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 minimise the bruising. If there is a risk of contacting blood then glove/s should be worn.

VASOVAGAL SYNCOPE

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 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 needle may bend if it 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 this, insert the needle carefully with the patient in a comfortable position. Needles may also bend when they are left insitu and at times the patient is not even aware that it has bent. If the needle does bend instruct the patient not to move, relax the local muscle and remove the needle slowly following the course of the line 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 remove in the clinic, medical attention must be sought so that the needle can be removed surgically. If this was to occur it is suggested to draw a circle around the insertion site to assist medical personal.

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. If needles are to be left in-situ, such as with press needles or extradermal needles, infection risk needs to be considered and discussed with the patient. Sweating associated with humid climates can increase bacterial load and infection risk, necessitating a decreased time span for the needles being left in-situ.

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 recommended that needle retention time is reduced and to apply milder stimulation.

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. Such symptoms will commonly occur when the patient is walking away from the clinic. These symptoms may not occur until several hours after the treatment and patients need to be cautioned of this.

If a pneumothorax is suspected then the patient must be sent urgently for an x-ray and medical management. Auscultation may be performed but it does not hold high sensitivity or specificity when diagnosing a pneumothorax.

Therapists should consider any pre-existing risks which may affect the risk verse benefit assessment of a patient when needling around the thorax. This includes any co-commitent medical conditions such a lung cancer, emphysema or asthma where superficial needling techniques may be a preferred alternative. Alterations in altitude such as flying or scuba diving further complicates the risk of pneumothorax and this needs to be addressed when consenting the patient. Conversely it may be decided to avoid needling in the thoracic region if a patient will be flying or scuba diving in the near future. Pre-existing risks also includes considering the possibility of how a pneumothorax would affect the individual professionally (eg professional divers or pilots) or recreationally (eg diving or sky diving). Additional care considerations also exist when patients are travelling by air in the prospective future.

NEEDLE STICK INJURY

Only trained therapists are to remove needles from a patient. Practitioners who practice acupuncture or dry needling should consider vaccinations for Hepatitis B. Needle stick injury occurs when the needle inadvertently pricks, punctures, or scratches the skin.

If a needle stick injury does occur wash well around the site of penetration with soap and water or use an alcohol based hand rub if water and soap is not available. Do not squeeze or rub the affected area. Apply a sterile dressing as necessary and apply pressure through the dressing if the wound is still bleeding. Have blood tests for Hepatitis B and C and HIV/AIDS. The patient may also be requested to have the same blood analysis performed with information gained treated confidentially and the costs associated to be borne by the therapist. If the patient is known to be HIV positive therapist should urgently seek medical advice concerning anti-viral medication.

The WHO (2000) estimates that the risk of infection after exposure of a needle stick injury (including hollow bore needles) form an infected individual is up to 0.3% for HIV, 3% for Hep C and 30% for Hep B. It has been noted that the risk is greater from hollow bore needles.

Always have a cotton ball /swab ready when removing needles. Dispose of needles in a sharps container. Cotton balls/ swabs with blood on them need to be disposed of as biomedical waste if the blood is 'free flowing' or expressible. Never carry needles to a sharps container, rather have the sharps container within reach when withdrawing needles. Needle stick injuries may be associated with inadequate training or poor needling technique. The thumb, index and middle finger of the non-needling hand are at primarily risk. It has been suggested that double gloving the non needling hand provides additional clinical protection.

Reporting of a needle stick injury may include notification to the relevant professional indemnity insurer or employing body.

SECTION TWO

METHODS OF REDUCING THE SPREAD OF INFECTION

This section of the guidelines is based on the *Australian Guidelines* which were written from a care delivery perspective and are underpinned by a risk management framework. Understanding the modes of transmission of infectious organisms and knowing how and when to apply the basic principles of infection prevention and control, such as standard and transmission based precautions, is critical to the success of an infection control.

There are two levels of precautions and for most private practice or outpatient settings the standard precautions are what are universally applied. Where there is the presence of know infectious agents, then transmission based precautions need to be applied as required.

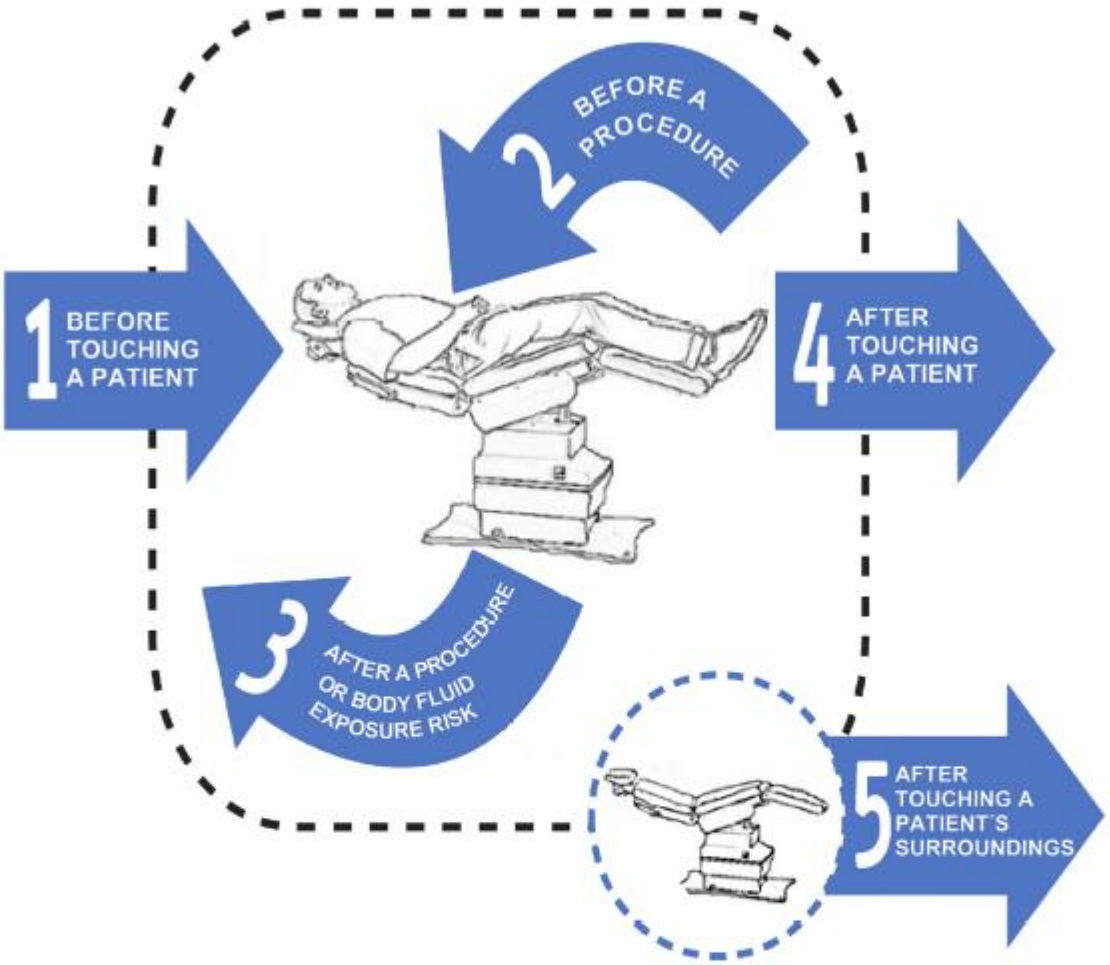
DEFINITION OF STANDARD PRECAUTIONS

Standard precautions refer to those work practices that are applied to everyone, regardless of their perceived or confirmed infectious status and ensure a basic level of infection prevention and control. Implementing standard precautions as a first-line approach to infection prevention and control in the healthcare environment minimises the risk of transmission of infectious agents from person to person, even in high-risk situations.

Standard precautions include:

- Hand hygiene, before and after every episode of patient contact as outlined in the 5 Moments for Hand Hygiene (see below)
- The use of personal protective equipment (PPE), in the acupuncture context may involve the use of gloves;
- The safe use and disposal of sharps;
- Routine environmental cleaning;
- Reprocessing of reusable medical equipment and instruments;
- Respiratory hygiene and cough etiquette;
- Aseptic non-touch technique;
- Waste management; and
- Appropriate handling of linen.

5 Moments for HAND HYGIENE



1 BEFORE TOUCHING A PATIENT	When: Clean your hands before touching a patient and their immediate surroundings. Why: To protect the patient against acquiring harmful germs from the hands of the HCW.
2 BEFORE A PROCEDURE	When: Clean your hands immediately before a procedure. Why: To protect the patient from harmful germs (including their own) from entering their body during a procedure.
3 AFTER A PROCEDURE OR BODY FLUID EXPOSURE RISK	When: Clean your hands immediately after a procedure or body fluid exposure risk. Why: To protect the HCW and the healthcare surroundings from harmful patient germs.
4 AFTER TOUCHING A PATIENT	When: Clean your hands after touching a patient and their immediate surroundings. Why: To protect the HCW and the healthcare surroundings from harmful patient germs.
5 AFTER TOUCHING A PATIENT'S SURROUNDINGS	When: Clean your hands after touching any objects in a patient's surroundings when the patient has not been touched. Why: To protect the HCW and the healthcare surroundings from harmful patient germs.

Hand Hygiene Australia
www.hha.org.au

Adapted from
World Health Organization

HAND HYGIENE

This section of the guidelines has been based on Hand Hygiene Australia's document.
Therapists must ensure that hands and nails are clean prior to giving treatment.

- Hands should be washed with soap before needling a patient for at least 15 seconds particularly if there is contamination with grime or body fluids present.
- Alternatively an appropriate Anti Bacterial Hand Rub (ABHR) can be used.
- When selecting an ABHR product, HHA recommends a product that meets the EN1500 testing standard for bactericidal effect, the Product has Therapeutic Goods Administration (TGA) approval as a hand hygiene product.
- When using ABHR the manufacturer's guidelines should be followed.
- Hand moisturisers should be used at regular intervals to help maintain the therapist'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 gloves should be worn.
- According to the *Australian Guidelines* the use of gloves is not mandatory. However when there is an anticipated risk of contacting blood or other body fluids the gloves must be worn. Normally there is minimal risk of this in acupuncture. The risk is slightly higher when needles are removed. Therapists may consider wearing a glove on the hand holding the cotton ball, when removing needles.
- Some Australian states or territories laws concerning skin penetration may require the therapists to glove when needling. This may also be the case under some employer's guidelines.
- The research literature has indicated that the hand at risk is the non-needling hand and the digits at risk are the thumb and the first two fingers. If needling a patient with a known blood borne infective disease it would be pertinent to at least double glove the non-needling hand to ensure additional protection from blood borne pathogens.
- Hands should also be cleaned after needling a patient even if gloves are worn.
- The skin in area to be needled must also be clean. If the patients does not present with clean skin, the area should be cleaned with soap and water, or by using an isopropropyl alcohol skin wipe.
- Long finger nails present a risk, so nails must be kept short.

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. Skin preparation should also be considered in immunosuppressed individuals or in certain areas such as the buttocks or axilla.

If your risk assessment dictates swabbing use an alcohol wipe and allow to dry for at least 1-2 minutes, however Betadine (iodine) or Chlorhexidine to pre-swab the area provides greater antibacterial effect. A sterilising solution such as 2% iodine in 70% alcohol or Chlorhexidine if used it should be left on the skin to dry for a minimum of two minutes. Allergic reactions, such as rashes, have rarely been associated with iodine skin preparation, and alternatively Chlorhexidine is suitable. It should be noted that extremely rare Chlorhexidine allergic reactions have also been noted, with anaphylactic reactions occurring primarily in mucosal areas.

The skin surface should be clean and free of any emollients. 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.

Skin sterilisation is recommended for is recommended in the following:

- 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
- When needling into a joint space (e.g. shoulder, knee) or bursa.
- For those allergic to iodine, chlorhexadine in alcohol is suitable.

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 defenses are overwhelmed and an infection takes place. To reduce the number of bacteria or viruses below this infective agent is to disinfect and to create relative asepsis. To completely remove all forms of life from the skin is to sterilise.

WORK AREAS

- The treatment area should be clean, private if possible and have washing facilities near at hand.
- Wet surfaces should be disinfected regularly.
- Soiled linen should be washed in hot water (70-80^{o}C).
- Linen contaminated with blood or other body fluids should be treated with Hypochlorite solution (Bleach).

WASTE DISPOSAL

- Sharps containers must comply with AS4031 or AS/NZ 4261 must be located in the immediate proximity of each client receiving acupuncture.
- Sharps containers must be kept out of reach of children.
- Sharps containers must not be filled beyond three-quarters full [NHMRC 2010 p 63-64]
- Bins must be disposed of by a waste disposal contractor according to respective State, Territory or local government regulations.

MANAGEMENT OF BLOOD AND BODILY FLUIDS SPILLS

Cotton swabs/balls that have been in contact with blood are disposed of in a plastic bag lined clinical bin (unless they contain free flowing or expressible blood) and then disposed of in the usual manner. It should be noted that in dried blood HIV can survive for up to 24 hours and Hep B for up to one week.

For spot cleaning;

- Select appropriate Personal Protective Equipment (gloves)
- Wipe up spot immediately with a damp cloth, tissue or paper towel
- Discard contaminated materials
- Perform hand hygiene

Large blood and bodily fluid spills are unlikely in acupuncture practice however if a spill occurs from some cause then follow these guidelines;

- Wear personal protective equipment (PPE). Heavy duty utility gloves are advised.
- 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.
- Confine waste in a disposable waterproof bag.
- Clean the spill site with detergent and water, rinse and dry.
- 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.
- Surfaces that cannot be cleaned (in carpet) adequately may need replacement.
- Disinfectants should be left in contact with the surface for 10 minutes.
- Sodium hypochlorite solutions must be freshly prepared.
- Sodium hypochlorite may be irritating to skin therefore protective gloves must be worn.
- Sodium hypochlorite may corrode metal and damage other surfaces.
- 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.
- Flood the spill site or wipe down the spill site with disposable towels soaked in disinfectant to make the site "glistening wet".
- Absorb the disinfectant solution with disposable materials. Alternatively, the disinfectant may be permitted to dry.
- Rinse the spill site with water to remove any noxious chemicals or odours. Dry the spill site to prevent slipping or further spills.
- Materials used to absorb spillage should be placed in impermeable waste bags and disposed of appropriately.

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