



کمنتین کصیحتن

Ministry of Health
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GUIDELINES ON INFECTION CONTROL RELATED TO TRADITIONAL AND COMPLEMENTARY MEDICINE PRACTICES

Traditional & Complementary Medicine Unit

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I. Introduction

The use of traditional and complementary (alternative) medicine (TCM) has expanded globally and has gained popularity. In the local context, the use is widespread particularly amongst the indigenous ethnic cultures and groups, with Malay TCM practices dominating the TCM scene, followed by Chinese practices and other practices particularly with the increasing popularity of wellness services such as those provided by health and beauty establishments. The majority of clients/patients utilizing TCM services also seek conventional medicine in the treatment of their ailments.

With the tremendous expansion in the use of TCM globally and locally, and the wide ranging types of services and practices which exists even within the various ethnic cultures and groups, hence it is extremely difficult to outline individually what the safety and efficacy of these traditional procedure-based therapies as well as medicines that is being offered. These have raised concerns for both health authorities and the public particularly the side effects of the unhygienic environment where treatments were offered as well as the actual procedures and medicines given with risks of TCM practitioners (TCMP) as well as patients getting infected.

Hence, bearing in mind the diverse nature of TCM, this document will basically outline generic guidance on hygiene and infection control in TCM settings, with additional specific guidance particularly on practices that do involve invasive procedure based treatments such as acupuncture and wet cupping.

2. Types of Infection

Infections in TCM settings can be transmitted, to patient or vice-versa to the TCMP, by:

- i. Blood borne infections-where there is a possibility of contact with blood and bodily fluids
- ii. Air-borne infections-breathing in air contaminated with pathogens
- iii. Contact-skin contact during procedures

Acupuncture refers to “needling” and “moxibustion”. It produces preventive and therapeutic effects by applying pressure, inserting needles into or burning moxa herb above various human body acupuncture points. Cupping therapy is an ancient form of alternative medicine in which a TCMP puts special cups on the skin for a few minutes to create suction and if involving blood withdrawal, it is termed wet cupping. People get it for many purposes, including to help with pain, inflammation, blood flow, relaxation and well-being, and as a type of deep-tissue massage. The cups are commonly made of glass, bamboo or silicone. Wet cupping creates a mild suction by leaving a cup in place for a few minutes, removes the cup and uses a small scalpel to make light, tiny cuts on the skin before doing a second suction to draw out a small quantity of blood.

The administration of acupuncture and wet cupping should ensure the attainment of maximum benefit, with the least possible harm. The transmission of blood borne pathogens or other microbial pathogens to TCM practitioners and patients due to unsafe practices is unacceptable.

Acupuncture practitioners and other personnel are at risk for exposure to blood borne pathogens, including hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV). The only sure method of preventing blood borne infections is abstinence from activities that involve the exchange of potentially infected body fluids. However, in the TCM practice setting, accidental contact with potentially contaminated blood or body fluids may be unavoidable. Nevertheless, strict observance of standard precautions can prevent infection from exposure, including blood borne pathogens such as HBV, HCV and HIV.

Furthermore, to avoid potential risk of infection, acupuncture and wet cupping TCMP should always be vigilant, maintain hand hygiene and environmental hygiene of the workplace, disinfect acupuncture sites and equipment appropriately, ensure aseptic techniques during the procedure, manage carefully and dispose of medical waste properly. The association of burns with any type of heat therapy, the possibility of skin infections, nausea or allergies associated with moxa therapy is less self-evident; however, infections

can be the result of burns that disrupt the normal function of the skin and subcutaneous barriers to infection, more so amongst patients with certain medical conditions such as diabetes. Hence, all TCM practices performing invasive procedures MUST use disposable prepackaged needles, guide tubes and sharps and have a sharps management policy.

Both TCMP and patients may get air-borne infections such as influenza and tuberculosis, particularly when exposed in close proximity and for prolonged and multiple sessions in an enclosed treatment room. TCMP, in particular, may get infections such as chickenpox or varicella, from skin contact while giving treatment to a patient who has a weeping varicella sore.

3. Environmental hygiene of the workplace

- a. The size of the room should be adequate to allow for the type of treatment to be given and must abide to any prevailing requirements such as those from the Authority on Building and Construction Industry (ABCi), Ministry of Home Affairs and Ministry of Religious Affairs.
- b. The workplace for TCM should be clean, dry, well-ventilated and well-lit (adjustable lighting can be incorporated).
- c. A designated working area, such as a table covered with a sterile towel, on which sterile equipment should be placed, must be available appropriate for treatment provided by the practice. This equipment (including trays of needles, cotton wool balls and sticks, and 70% alcohol) should be covered with a sterile towel until needed for use.
- d. There must be sufficient facilities for hand hygiene in the facility, preferably a washbasin should be available in each treatment room, complete with handsoap, drying towel and alcohol rub.
- e. All working surfaces should be smooth and impervious so that they could be cleaned and disinfected thoroughly.
- f. To keep the linen clean, soiled linen should be replaced immediately. Another option is to cover the treatment bed with single-use paper towel.

- g. Appropriate disinfectants should be chosen for environmental cleansing and disinfection. For details regarding use of bleach, please refer to Appendix I.

4. General TCMP personal hygiene

- a. TCMP are recommended not to work if they are unwell such as having respiratory illness; however if it is unavoidable that they are required to work, they must don a surgical mask throughout the treatment session, replacing with a new one when the mask is soiled or wet.
- b. Similarly, if a patient being treated has respiratory infection, the TCMP should encourage the patient to don on a surgical mask, while explaining the need to prevent the TCMP being infected, or advice for patient to come for the treatment when he/she is better.
- c. TCMP should use their working cloths i.e. not personal clothing while at work and in the facility.
- d. Hand hygiene should be performed in the following situations (Appendix III):
 - 1. Before touching a patient
 - 2. Before a clean/ aseptic procedure
 - 3. After body fluid exposure risk
 - 4. After touching a patient
 - 5. After touching patient surroundings

5. General Preparation of clients

- a. Thoroughly review the client's information and pay attention to the potential risk factors:
 - i. Medical history: skin infection, infectious disease (e.g. viral hepatitis, HIV infection), chronic illness (e.g. diabetes mellitus, renal disease, epilepsy), cancer and bleeding tendency
 - ii. Drug history: steroid or anticoagulant, e.g. warfarin

- iii. Allergy history: drugs, alcohol or metal allergy
- b. Advise clients to observe good personal hygiene. If deemed necessary, advise them to have shower or wash hair (applicable for clients who require acupuncture on the scalp) before consultation.
- c. Advise clients to wear mask if they have respiratory symptoms such as cough or sore throat.
- d. If in the professional view of the TCMP that there is a significant risk of client transmitting acute infection to TCMP, the TCMP must advise the patient to come for the treatment when he/she has recovered from the acute infection.

6. Additional preparation for TCMP at risk of exposure to bodily fluids including acupuncture and wet cupping

- a. Alcohol-based hand rub or alcohol pads should be available at the working place or in the pocket of working clothes.
- b. All cuts or breaks on hands or fingers should be covered with water-proof dressing.
- c. Fingernails should be trimmed short: artificial fingernails are not permitted.
- d. TCMP should not perform invasive procedure if suffering from hand infection.
- e. Strictly observe hand hygiene before and after any procedure.
- f. Clean hands with liquid soap and water when visibly soiled or likely contaminated with blood or body fluid. Steps are as follows:
 - 1. Wet hands under running water.
 - 2. Apply liquid soap and rub hands together to make a soapy lather.
 - 3. Away from the running water, rub the palms, back of hands, between fingers, backs of fingers, thumbs, finger tips and wrists (Appendix IV). Do this for at least 20 seconds.
 - 4. Rinse hands thoroughly under running water.
 - 5. Dry hands thoroughly with a clean cotton towel, a paper towel or a hand dryer.
 - 6. The cleaned hands should not touch the water tap directly again.

- g. When hands are not visibly soiled, hand hygiene could be performed by using 70-80% alcohol-based hand rub. Steps are as follows:
 - 1. Apply a palmful of alcohol-based hand rub and cover all surfaces of the hands.
 - 2. Rub the palms, back of hands, between fingers, back of fingers, thumbs, finger tops and wrists (Appendix IV).
 - 3. Rub for at least 20 seconds until the hands are dry.
- h. Gloves should be worn whenever TCMP may be exposed to blood, mucous membranes, broken skin or other potentially infectious materials. E.g. when releasing cup pressure during wet cupping. Gloves should not be used for more than one client.
- i. Eye protection is recommended when there is a risk of bodily fluids entering the eyes e.g. when releasing cup pressure during wet cupping.
- j. Hand hygiene can never be replaced by wearing gloves.
- k. Hand hygiene should be performed before putting on and after taking off gloves.

7. Aseptic acupuncture and bleeding techniques

- a. All needles, guide tubes and lancets MUST be of the disposable type and sharps containers and biological hazard plastic bags (appropriate for practice) must be available in the treatment rooms.
- b. TCMP performing acupuncture and wet cupping should perform hand hygiene before the procedure to prevent infections.
- c. Prepare the skin prior to acupuncture or lancing skin: Use swab with 70-80% alcohol or povidone-iodine or chlorhexidine-in-alcohol to disinfect the penetration site by scrubbing in a rotary motion starting at the centre of the site. Do not bleed in an area of active skin lesions.
- d. When using alcohol for disinfection, allow the alcohol to evaporate before insertion of acupuncture needles or lancing skin.
- e. Before touching disinfected skin, TCMP should ensure their hands have been disinfected.

- f. Acupuncture practitioners should hold the handle of the needle so as to avoid touching the shaft of the needle that will penetrate into the skin. If grasping of the needle shaft is required, adequate disinfection should be done first. Similarly, for wet cupping, avoid touching the pointed end of the lancet.
- g. Use a dry cotton ball or gauze to 'close the point.' Never use a bare finger to cover the skin where a needle has been removed. After removal of all needles after acupuncture, review and count against the insertion record to make sure that the number of needles removed is the same as inserted. Any missing needle should be recovered.
- h. Needles after removal and used lancets should be discarded immediately into a sharps box and are disposed as clinical waste.
- i. Clean the site of the punctures with an appropriate skin cleanser. If necessary, stop any bleeding through the use of appropriate pressure, using cotton or sterile gauze. Clean up any bleeding that has occurred. Discard the extravagated blood in the biohazard trash.

8. Clinical waste disposal

- a. Used disposable needles or sharps should be disposed directly into a sharps box labelled with clinical waste:
 - 1. The sharps box should be sealed when it is 3/4 full.
 - 2. Sealed sharps boxes should be put into a red plastic bag, securely tied, labelled as clinical waste and are either to be collected by a licensed collector for incineration or sent by another staff member who has been trained on handling of sharps containers to an incineration facility.
- b. Wastes with small volume of body fluids or blood stains can be disposed as domestic garbage. Dressings or wastes soaked with or containing large volume of body fluids or blood should be disposed in a biological hazard plastic bag, labelled as clinical waste, and are collected by a licensed collector for incineration.

- c. If sealed sharp containers or bags are to be kept within the premise, a dedicated room/area must be assigned to store the sealed sharp containers or bags and must be kept locked at all times prior to disposal.
- d. Disposal records of clinical waste ideally should be kept for 12 months.

9. Prevention and management of infection at acupuncture or bleeding sites

- a. Local blisters or burns may occur after moxibustion, cuppings or after heat based treatment modalities. If the burn is a very small first degree burn, run cool water over the burn (never ice), and then apply sterile gauze, secured to the skin with medical tape. Over-the-counter burn creams may also be used as per the package directions. If the skin blisters, they should be covered with sterile dressing to prevent infection.
- b. If the penetrated sites develop redness, abscess or signs of infection, appropriate management should be offered including advising patient to seek medical attention.
- c. Manager to review overall infection control and aseptic techniques of the TCMP who attended to the client.

10. Prevention and management of sharps injury in TCMP

- a. Before commencing jobs, prospective TCMP workers are advised to check their hepatitis B immune status. For non-immune workers, they are advised to receive hepatitis B vaccinations for their protection.
- b. When being injured by used sharp instruments, the TCMP should:
 - 1. Clean the wound under running water immediately. Then, disinfect the wound and cover it with dressing.
 - 2. Perform risk assessment by checking the HBV, HCV and HIV status of the blood source. In case of doubt, immediately consult the nearest health facility for further management.

11. Disinfection / sterilization and storage of instruments and equipment

- a. Use pre-packaged, disposable sterile acupuncture needles, guide tubes and lancets at all times.
- b. Check the expiry dates of sterile items before use and make sure the packages are intact.
- c. Package should be opened just before use to prevent contamination.
- d. Unopened sterile items, e.g. alcohol pads, sterile needles, sterile cotton wool balls and sterile cotton wool sticks, etc. should be stored in cabinets and their expiry dates should be checked regularly. Already opened items should be used as soon as possible.
- e. Non-disposable items with patient contact, such as cuppings, scraping plates, dressing cylinders, sterile containers and forceps, should be cleaned and disinfected after each use.
- f. Reusable items should be processed according to the principles of “Cleansing before disinfection”. Note that since cupping does not require sterile equipment as nothing enters or breaks the skin, hence, used cups must be clean and disinfected, but need not be sterile. After use on a patient, cups must be cleaned of any lubricants or biological materials, disinfected in a dilution of hypochlorite (bleach), or another appropriate disinfectant, and then rinsed with water or cleaned with soap and water and dried before reuse.
- g. Items should be cleansed in designated sinks.
- h. Re-usable special needles should be strictly disinfected to meet sterility standard (Appendix II).
- i. Both sterilized and disinfected items should be stored properly to prevent contamination.
- j. Storage areas should be maintained clean, well ventilated and dry to prevent growth of bacteria or fungi.

Appendix I: Use of bleach

Among household disinfectants, bleach is strong and effective. Its major ingredient is sodium hypochlorite. It is able to destroy bacteria, fungi and viruses. Thus, diluted bleach is recommended for environmental disinfection.

However, bleach irritates mucous membranes, skin and airway. It decomposes under heat or light and reacts easily with other chemicals. Therefore, caution should be exercised during its use. Improper use of bleach not only reduces its effectiveness in disinfection but may also lead to accidents. Overuse of bleach will pollute the environment and disturb ecological balance.

- a) All non-metallic surfaces such as tables, desks, chairs and beds should be wiped with “1 in 99 diluted household bleach” by mixing 1 part of household bleach (containing 5.25% sodium hypochlorite) with 99 parts of water.
- b) 70-80% alcohol should be used for disinfecting metallic surfaces as bleach will corrode metal.
- c) Gloves should be worn for handling items contaminated with vomitus, excreta or body fluid.
 1. Use disposable strong absorbents to perform preliminary cleansing.
 2. Then, disinfect the surface with “1 in 49 diluted household bleach” by mixing 1 part of household bleach with 49 parts of water, allow the bleach on the surface for 15 to 30 minutes before rinsing with water.
 3. Items with rough and uneven surfaces are difficult to wipe, if possible, immersion cleaning will be more effective. These items should be soaked in bleach for a bit longer, at least 30 minutes. Then, rinse with water.
- d) Gloves should be worn for handling blood stains. When there is a pool of blood, use disposable strong absorbents to perform preliminary cleansing. Then, disinfect the surface with “1 in 4 diluted household bleach” by mixing 1 part of household bleach with 4 parts of water. Allow the bleach on the surface for 10 minutes before rinsing with water.
- e) Environmental cleansing during communicable disease outbreak in the community:
 1. Use higher concentration of bleach for environmental cleansing. For routine cleansing, “1 in 99 diluted household bleach” is used. During an

outbreak, “1 in 49 diluted household bleach” is used by mixing 1 part of household bleach with 49 parts of water.

2. Increase the frequency of environmental cleansing.
3. Pay special attention to toilets, kitchen and frequently-touched surfaces such as light switches, door handles and rail.

Methods to prepare diluted bleach and points to note when using bleach:

- a) Make all necessary items, cleansing tools and personal protective equipment ready, such as bleach, water, large and small measuring cups, rubber gloves, plastic aprons, goggles, brushes, mops, towels and buckets.
- b) Open windows to ensure good ventilation while diluting or using bleach, so as to reduce irritation to respiratory tract.
- c) Caution of bleach splashes during the dilution process. Operators should put on personal protection equipment (gloves, plastic aprons and goggles) to protect their mucous membranes and skin.
- d) Bleach should be diluted with cold water since hot water will decompose the bleach and make it lose efficacy.
- e) For bleach containing 5.25% sodium hypochlorite, the diluting methods are as follow:
 1. Prepare 1 in 99 diluted household bleach for usual cleansing by mixing 10 ml bleach with 990 ml water (total 1000 ml).
 2. Prepare 1 in 49 diluted household bleach for disinfecting items contaminated with vomitus, excreta and secretions by mixing 20ml bleach with 980 ml water (total 1000 ml).
 3. Prepare 1 in 4 diluted household bleach for disinfecting items contaminated with blood by mixing 20 ml bleach with 80 ml water (total 100 ml).
 4. Adjust the required amount of bleach if the available bleach is not exactly containing 5.25% sodium hypochlorite.
 5. For example, when the currently available bleach contains only 5% sodium hypochlorite, first calculate the multiplier of the required amount of bleach. Dividing 5.25% by 5% (the concentration of the currently available bleach) gets the multiplier of 1.05. If 1 in 99 diluted

household bleach is needed, multiplying 1.05 by 10 ml gets 10.5 ml which is the required amount for 5% bleach.

- f) The required amount of bleach should be accurately measured by a measuring cup.
- g) After disinfected by bleach, articles should be rinsed thoroughly with water.
- h) The used cleaning tools should be soaked in diluted bleach for 30 minutes, and then rinsed thoroughly with water.
- i) Points to note when using bleach:
 - 1. Do not use bleach on metals, wool, nylon, silk, dyed fabric and painted surfaces.
 - 2. If bleach splashes into eye, immediately rinse with copious amount of water, and then consult a doctor.
 - 3. Bleach should not be used or mixed together with any detergent or acidic solution. Otherwise, its effectiveness of disinfection will be reduced and toxic gas will be produced which may cause accident. Therefore, whenever detergent has been used, rinse thoroughly with water before using bleach for disinfection.
 - 4. When exposed to sunlight, high concentrated bleach will liberate toxic gas. Thus, it should be stored in a shaded cool place which cannot be reached by children.
 - 5. Note the date of production when purchase as bleach (sodium hypochlorite) decomposes with time and loses its efficacy. Bleach recently manufactured is better. Over-stocking should be avoided.
 - 6. Diluted bleach should be used within 24 hours after preparation.

Appendix II: Disinfection-sterilization methods

1. Steam sterilization (Preferred):

- ☑ Special re-usable needles, e.g. silver needles and gold needles should be sterilized in an autoclave.
- ☑ Temperature should be maintained at 121°C for 15 minutes or at 134°C for 3 minutes.
- ☑ Autoclave should be well-maintained and used in accordance with the recommendations of the user manual.

2. Boiling disinfection:

- ☑ This method is suitable for non-invasive items which are made of glass or metal. First, put the equipment into water. The water level should be at least one inch above the items. Maintain boiling for 20 minutes after water reaches the boiling point to meet the standard of high level disinfection.

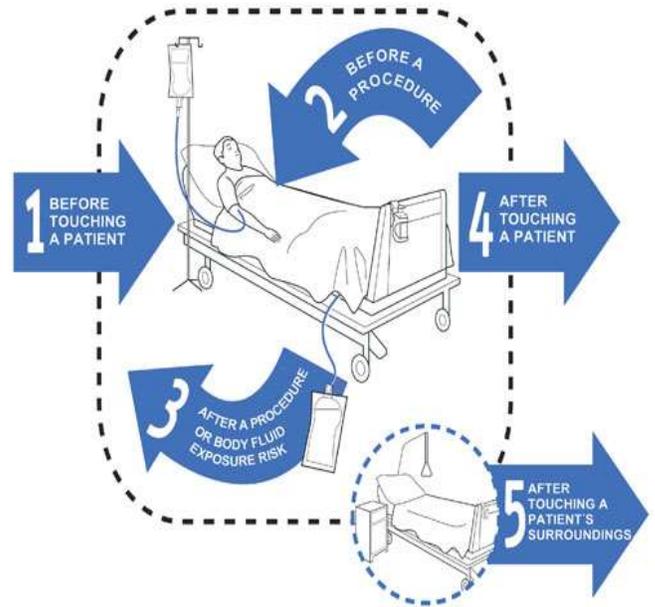
3. Chemical disinfection:

- ☑ This method is suitable for heat-sensitive items.
- ☑ Items should be dismantled or opened, and fully immersed in the solution.
- ☑ Check the expiry dates of disinfectants before use.
- ☑ Examples of metallic or glass items: cleanse the items first before immersing them into 70-80% alcohol (ethanol) for 10 minutes. After taking out, place in a dryer to blow dry or wipe dry with a clean towel.
- ☑ Examples of plastic or glass items: cleanse the items first before immersing them into the “1 in 99 diluted household bleach”. After 30 minutes, rinse thoroughly with water, then place in a dryer to blow dry or wipe dry with a clean towel.
- ☑ Chemical disinfectant should be changed every day.

Please note that among the above sterilization/disinfection methods, **steam sterilization is the only method** that can achieve the sterilization standard required in acupuncture needles.

Appendix III: WHO recommended five moments for hand hygiene

Your 5 Moments for Hand hygiene



1: BEFORE TOUCHING A PATIENT

When? Clean your hands before touching a patient when approaching him/her.

Why? To protect the patient against harmful germs carried on your hands.

2. BEFORE A PROCEDURE

When? Clean your hands immediately before performing a clean/aseptic procedure.

Why? To protect the patient against harmful germs, including the patient's own, from entering his/her body.

3. AFTER A PROCEDURE OR BODY FLUID EXPOSURE RISK

When? Clean your hands immediately after an exposure to risk to body fluids (and after glove removal).

Why? To protect yourself and the health-care environment from harmful patient germs.

4. AFTER TOUCHING A PATIENT

When? Clean your hands after touching a patient and her/his immediate surroundings, when leaving the patient's side.

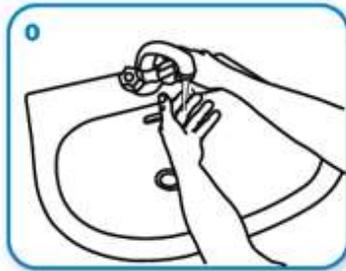
Why? To protect yourself and the health-care environment from harmful patient germs.

5. AFTER TOUCHING A PATIENT'S SURROUNDINGS

When? Clean your hands after touching any object or furniture in the patient's immediate surroundings, when leaving – even if the patient has not been touched.

Why? To protect yourself and health-care environment from harmful patient germs.

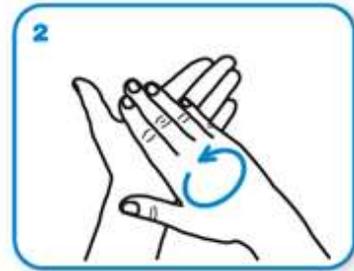
Appendix IV: Hand washing techniques



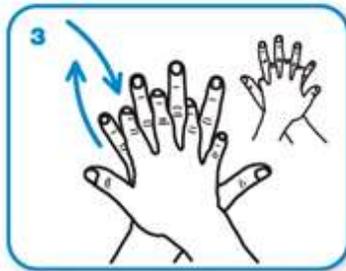
Wet hands with water



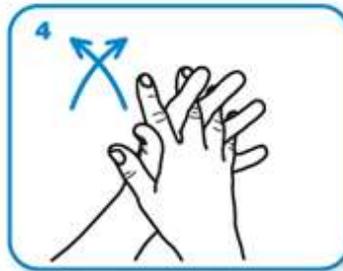
apply enough soap to cover all hand surfaces.



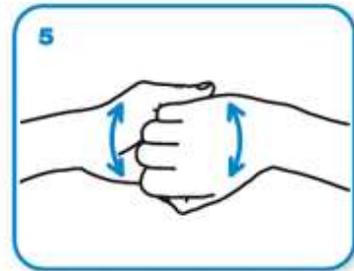
Rub hands palm to palm



right palm over left dorsum with interlaced fingers and vice versa



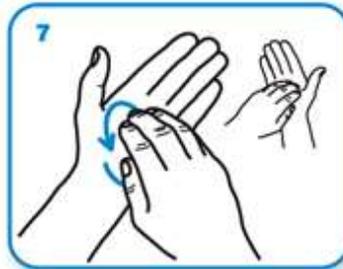
palm to palm with fingers interlaced



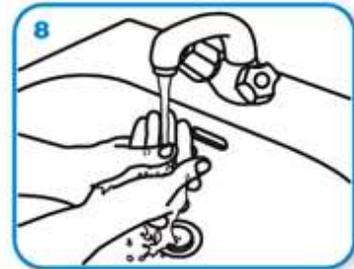
backs of fingers to opposing palms with fingers interlocked



rotational rubbing of left thumb clasped in right palm and vice versa



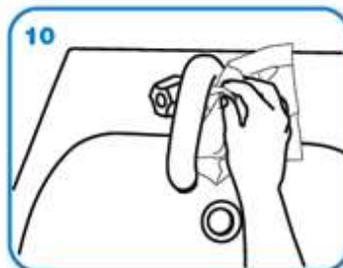
rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa.



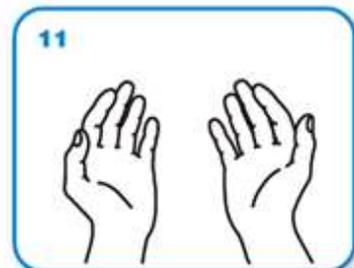
Rinse hands with water



dry thoroughly with a single use towel



use towel to turn off faucet



...and your hands are safe.

References

1. Clean needle technique (CNT) Review Course: Acupuncture Safety; Council of Colleges of Acupuncture and Oriental Medicine 2016
2. Guidelines on basic training and safety in acupuncture; WHO