

One to Five pages

General CNT Protocol

The following is a list of terms that are frequently used in this section of the manual.

Antiseptic (消毒) : Products designed to reduce the density of microbial life on living tissue, particularly on the skin of the patient or practitioner.

Aseptic techniques: Techniques for preventing infection during invasive procedures such as surgical operations, dressing wounds, or some laboratory procedures. Acupuncture is not an aseptic procedure because it is not performed in a manner that preserves the sterility of the acupuncturist's hands or the skin of the patient. Acupuncture is a clean rather than sterile procedure. That having been said, acupuncture needles must be kept in a sterile condition for use in CNT.

Clean field: The area that has been prepared to contain the equipment necessary for acupuncture in such a way as to protect the sterility of the needles. By extension, this includes not only the clean surface on which equipment will be placed, but also the patient's skin around prepared acupuncture points, and anything that touches the skin. (Note: A clean field is not the same as a sterile field.)

Clean technique: The use of techniques (such as antisepsis, disinfection, sterilization, hand washing, and isolation of sharps) designed to reduce the risk of infection of patients, practitioners, and office personnel by

reducing the number of pathogens, thereby reducing the chances for contact between the pathogens and the patients and personnel.

Contamination: The introduction of contaminating viruses, bacteria, or other organisms into or onto previously clean or sterile objects, rendering them unclean or non-sterile.

(render v. to express or present something in a particular way)

Disinfectants: The chemicals employed in disinfection. They should only be used on inanimate(adi.not living) objects, and are not to be confused with antiseptics that are applied to the body, Examples include hypochlorite(次氯酸盐) dilutions (n.稀释, 冲淡) such as bleach, and commercial disinfectants such as Staphene.

Disinfection: The use of chemicals and procedures designed to destroy or reduce the number of pathogens on inanimate objects such as equipment and clinic surfaces. It must be recognized that some bacteria, spores, and viruses may resist the often lethal effects of many chemicals.

Sterilization: The use of procedures that destroy all microbial life, including viruses. This is a rigid, uncompromising term. There is no such thing as partial sterility. In acupuncture, sterilization is required for all instruments that pierce the skin (needles, plum-blossom needles, seven-star hammers, and lancets) and insertion tubes.

BASIC PRINCIPLES

Clean needle technique (CNT) includes the following basic principles:

1. Always wash hands between patients, and before and after needling.
2. Always use sterile single-use needles and other instruments that may break the skin, such as seven-star hammers and lancets.
3. Always establish a clean field before performing acupuncture.
4. Always immediately isolate used needles and other sharps.

Besides the obvious necessity for sterile needles, lancets, and seven-star hammers, hand washing is the single most important action in preventing cross- infection. Hands should be washed with liquid soap under running water between patients, as well as before and after performing acupuncture, and whenever the practitioner s hands may have become contaminated with potentially infectious material. Potential sources of contamination include touching the hair, clothes, or unswabbed skin of the patient; paperwork; or any other unclean surface or object in the treatment environment. The main goal of universal precautions is the prevention of exposure and nosocomial disease.

In the event that it is impractical or impossible for the practitioner to wash her or his hands with soap and water, an alcohol-based hand disinfectant may be substituted. Alcohol-based hand disinfectants are effective for reducing the presence of potentially infectious agents but will not be effective in the event that the practitioner's hands are soiled (soil v to make something dirty,especially with waste from your body) .

When the practitioner's hands are soiled, washing hands with soap and

water remains the best way to remove contamination. For proper use of alcohol-based hand disinfectants, please see the manufacturer's instructions.

Contaminated needles are the greatest source of risk to the practitioner and patient. It is essential to minimize handling used needles during disposal. These basic principles will be discussed in the sections that follow. It is essential to be meticulous (adj. very careful about small details and always making sure that everything is done correctly 对细节十分注意的) in following all aspects of clean needle technique protocol and universal precautions. This includes the use of sterile needles, hand washing between treatments, and isolation of used sharps. Skin and mucous membrane contacts frequently can be prevented with the use of barrier precautions such as gloves, masks, gowns (n. 长袍), and goggles (护目镜) when necessary; however, the greatest risk of blood-borne pathogen transmission comes from needle stick injuries. Such accidents are not prevented by barriers but instead require strict adherence to CNT protocols by practitioners, including the immediate isolation of used sharps, the continuing recognition of the need to handle all patients as if they were potentially infectious, and the need to train all staff in clean needle protocols and universal precautions.

Precautions are the same for hepatitis and AIDS as well as for other diseases that might be transmitted by needlestick accidents. Health care

workers are advised to develop standard and habitual procedures for all patients that provide the necessary protection against the transmission of potentially infectious agents.

HAND WASHING

According to the CDC, hand washing is the single most important procedure for preventing infection in a health care setting 背景. Hand washing has been shown to eliminate or markedly reduce pathogenic organisms on the skin. Hand washing includes the steps outlined below:

1. Gather the equipment needed to wash hands: paper towels, soap, and running water. Liquid soap is recommended due to the risk of contamination when using bar soap.
2. Roll up long sleeves; remove watch and jewelry, if applicable. A plain ring like a wedding band is acceptable, but bulky jewelry or rings with stones or intricate work should be removed. (Jewelry can harbor infectious agents in crevices that are not easily accessible.)
3. Wet the soap and hands thoroughly.
4. Rub the soap to make lather 泡沫.
5. Wash the entire surface of the hands between the fingers, around and under the fingernails and up to above the wrist.
6. Run water over the hands again to clean them.
7. Lower the hands so that water and soap drain off the fingertips as they are thoroughly rinsed.

8. Turn off the tap with a towel or use an elbow so that hands do not become soiled , Do not dry hands with the towel used to turn off the tap.
9. Dry the hands carefully using a clean paper towel or shake the hands dry in the air.

There are two types of infectious agents on the skin: resident and transient. Transient agents include those that are picked up from one patient and possibly carried to another. Soap is adequate for cleansing the surface of the skin of this type of infectious agent. Resident agents, which lodge deeper in the skin, present additional risk for an immunocompromised patient and germicidal soap or an alcohol-based hand disinfectant should be used. Therefore, it is strongly recommended that antimicrobial products be used for washing before and after treating patients who are severely immunocompromised (e.g., those with HIV or who are undergoing chemotherapy or dialysis)

It is strongly recommended that acupuncturists always wash their hands

1. Immediately before the acupuncture procedure
2. After contact with blood or body fluids or obvious environmental contaminants.
3. At the end of a treatment.^{32,33}

Hand washing with soap and running water is the most effective form of hand-washing. However, when there is no sink 水槽 available,

practitioners may use an alcohol-based hand disinfectant. An alcohol-based hand disinfectant can de-germ hands in less than 30 seconds and enhance killing of transient hand flora without the use of running water, soap, and hand-drying facilities.³⁴ Studies have shown that clinicians find them convenient, accessible, and less irritating to the skin.³⁵ The CDC has also accepted the use of antiseptic hand cleansers or towelettes.³⁶

The necessity of hand washing between patients and the use of universal precautions reflects the importance of treating all patients as if they were carriers of hepatitis or HIV. Beyond this, the need to wash the hands is based on whether the hands become contaminated during the course of treatment. Practitioners must wash their hands between patients, before and after inserting needles, and after contact with potentially infectious body fluids.

Sources of contamination include body fluids such as blood and saliva 唾液, vaginal secretions, and fecal 粪便的 contamination, and fluids from open lesions. Body fluids may contain bacteria such as Staphylococcus 葡萄球菌 species, and viruses associated with hepatitis and HIV/AIDS. It is absolutely imperative (adj. extremely important and needing to be done or dealt with immediately) that potentially infectious fluids not be transferred from one person to another through the acupuncture provider's hands, or from the patient to the practitioner and/or other members of the

clinic staff. This is most effectively done by carefully washing hands whenever needed , Hand washing should also take place before and after answering the phone, whenever the practitioner touches her or his face or hair, eats, or engages in any other non-clinical activity.

The CDC recommends hand washing under the following circumstance:

1. When hands are visibly dirty or contaminated.(Wash with soap and water)
2. If hands are not visibly soiled. (Wash with soap and water or use an alcohol- based disinfectant.)
3. Before contact with patients.
4. After contact with patients intact skin.
5. After contact with fluids or patient's dressing.
6. After removing gloves.
7. Before and after eating.

Six to Ten pages

Seven-Star or Plum-Blossom Needle

Seven-star and plum-blossom needles must be sterile. Either the whole device must be a single use and disposable device, or the head portion that contacts the patient's skin must be sterile and disposable. Do not attempt to sterilize, disinfect, or reuse these device. Each seven-star hammer should be used on one region of the body only.

Cupping Devices

Cupping is not a sterile procedure. Cups must be clean but need not be sterile. After use on a patient, cups must be disinfected in a dilution of hypochlorite (bleach) or other appropriate disinfectant and then cleaned with soap and water. In some hospitals, cups must be sterilized in an autoclave or other on-site sterilizer before using. Discuss this with the appropriate administrator at each hospital or multiple care clinic.

Glove

It is recommended that gloves be used when there is risk of contact with blood or other potentially infectious body fluids; i.e., gloves must be worn when the practitioner bleeds an acupuncture point using a lancet or acupuncture needle. However, the use of gloves is not necessary during routine acupuncture practice in the absence of significant bleeding. The decision by an acupuncturist regarding whether gloves should be used must be viewed within the context of current research regarding risk factors involved in transmission of HBV and HIV and how these risk factors relate to both patients and practitioners within an acupuncture practice.

In order' to protect the practitioner, the use of gloves is strongly recommended in the following instances:

1. During procedures such as bleeding where there is a greater risk of contact with larger amounts of blood.

2. When working with patients who have open lesions or weeping exudates from their skin.
3. When the practitioner has cuts, abrasions 擦伤, chapped skin 皸裂的皮肤, hang nails, or broken cuticles 指甲根部 on his or her hand that are located in a place where they pose a hazard.
4. When palpating or needling in the mouth or genital area.
5. When bleeding occurs in the course of routine acupuncture care.

In accord with OSHA requirements, it is strongly recommended that "disposable (single use) non-latex gloves (such as surgical or examination gloves) shall be replaced as soon as practical when contaminated, or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised. "

Preparing the Site for Insertion of a Needle

It is strongly recommended that practitioners check that the skin at each point location to be treated is free of any cuts, wounds, or diseases. Acupuncture needles should never be inserted through inflamed, irritated, diseased, or broken skin. Otherwise, infections can be carried directly into the body past the broken skin barrier. It is strongly recommended that practitioners ensure that the part of the body to be treated is clean. The areas to be needled should be cleaned with an alcohol-impregnated swab. If body parts (e.g., the feet) are grossly dirty, they should be washed first with soap and water, and then swabbed as needed with an alcohol swab.

According to the CDC, 70% isopropyl 异丙基 alcohol is adequate for preparing a patient's skin for procedures such as needle insertion. Isopropyl alcohol at a concentration above 70% is unacceptable because it evaporates too quickly to have an antiseptic effect. Other cleaning agents, if used, should also have adequate antiseptic properties. *(Please note that if a patient is allergic to alcohol, the use of Betadine would be an acceptable alternative.)*

Swab the points and allow the alcohol to dry. It is recommended that points be swabbed in a way that touches the area only once so as not to recontaminate the area. One technique is to swab points using a rotary scrubbing motion, spiraling out from the center. Another technique is to swab from one end of the area to another or in a wide "C" motion. The same swab may be used for points in the same general area, for example, for several points on the back or on a single extremity such as the left forearm. A new swab should be used when changing areas of the body, for example from points on the torso to points on the extremities, or if the swab begins to change color. The alcohol should be allowed to dry to reduce the potential for discomfort during needling.

Dealing with Needle Spills

If used needles are accidentally spilled, remember that they are contaminated and will in turn contaminate anything they touch. Use gloves and forceps for picking them up and, if there is a possibility of

dropping used needles on the practitioner' s clothing and contaminating it, a gown or impervious apron should be used. Then the spill area should be disinfected with a germicide since the HBV virus can survive on surfaces for more than one week at room temperature. Hypochlorite (bleach) at a 1:10 dilution or other commercial disinfectant can be used as the first-step cleanser, but since the organic material on the contaminated surface deactivates the cleanser, a second cleaning with bleach must still be done. All materials used in the clean-up job should be discarded in double wrapping. The last step is hand-washing. Ideally, sharps containers should be containers specifically constructed for holding medical sharps, with a positive closure and wall mounted where they cannot be knocked over and spilled. Sharps containers with medical waste must be disposed of according to local regulations. Ideally, a medical waste disposal firm should be contracted to transport filled sharps containers away from the clinic site. It is hazardous to transport filled sharps containers in your personal vehicle as these will pose an additional hazard to you, other victims, and emergency personnel in the event of a motor vehicle accident.

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HAND WASHING

Hand washing is one of the most problematic topics within a public

health or group treatment setting. It is not realistic to expect that the practitioner will wash his or her hands in a sink after each treatment due to the volume of patients to be treated, the time and logistics that would be required, and frequently, the lack of facilities for hand washing.

It is, however, strongly recommended by CDC that Practitioners:

1. Wash hands with soap and water on arrival and prior to leaving work, prior to eating, and after restroom use.
2. If hands are dirty with some organic matter such as blood, they must be washed with running water and either antimicrobial or non-antimicrobial soap.
3. An alcohol-based hand disinfectant or non-antimicrobial hand soap should be used between treatments, provided that only the needles, sterile packages, and other materials needed for the treatment were touched.
4. Hands must be decontaminated between patients.
5. Hands must be decontaminated after touching a patient's intact skin, as well as inanimate objects and medical devices near the patient.
6. An alcohol-based hand disinfectant or washing hands with non-antimicrobial soap and water must be done between patients.
7. Gloves should be available in the treatment area and should be worn when there is a biohazardous spill, such as significant bleeding from an auricular acupuncture point.

8. Practitioners should wash their hands immediately with soap and water after critical instances, such as contact with blood or a break in the clean field between or during treatments.
9. Practitioners must have hand disinfectant available to them at all times in the public health treatment environment.

Federal Standards and Guidelines

Summary of CDC's Universal Precaution Recommendations

1. All health care workers should adhere to universal precautions, including the appropriate use of hand washing , protective barriers, and care in the use and disposal of needles and other sharp instruments.
2. Hands should be washed before and after patient contact, and immediately if hands become contaminated with blood or other body fluids. Hands should also be washed after removing gloves.
3. Health care workers should comply with current guidelines for disinfection.
4. Instruments and other reusable equipment used in performing invasive procedures should be appropriately disinfected and sterilized as follows.
 - 4.1 .Equipment and devices that enter the patient's vascular system or other normally sterile areas of the body must be sterile.
 - 4.2 Equipment and devices that do not touch the patient or that only

touch intact skin of the patient need only be cleaned with a detergent or as indicated by the manufacturer.

5. Gloves should be worn whenever there is a possibility of contact with body fluids.
6. Body fluids to which universal precautions apply: blood, serum/plasma, semen vaginal secretions, cerebrospinal fluid, vitreous fluid 玻璃体, synovial fluid 滑膜, pleural fluid 胸水, pericardial fluid 胸包液, peritoneal fluid 腹膜液, amniotic fluid 羊膜液, and wound exudates 伤口分泌物.
7. Use universal precautions whenever there is the risk of exposure to potentially contaminated fluids such as blood, sweat, tears, sputum, saliva, nasal secretions, feces, urine, vomit, breast milk.
8. Health care workers who have exudative lesions or weeping dermatitis should refrain from all direct patient care and from handling patient-care equipment and devices used in performing invasive procedures.
9. Sharp objects represent the greatest risk for exposures. Contaminated needles should never be bent, clipped 修剪, or recapped 翻新. Immediately after use, contaminated sharp objects should be discarded into a puncture-resistant biohazard container **designed for this purpose**. Needle containers should never be overfilled; containers

should be sealed and discarded when two-thirds to three-quarters full.

10. Contaminated equipment that is reusable should be cleaned of visible organic material, placed in an impervious container, and placed in a designated place for decontamination and reprocessing.
11. Masks should be worn whenever there is a possibility of splashing or splattering of body fluids or with an active TB patient.
12. Gowns should be worn if possible contamination of exposed skin or clothing is likely.
13. Spills of blood or blood-containing body fluids should be cleaned up using a solution of bleach (sodium hypochlorite) and water in a 1:100 solution for smooth surfaces and 1:10 for porous surfaces. Diluted bleach solutions should be no more than 24 hours old.
14. Current data indicate that health care workers infected with HIV or HBV who perform invasive procedures that are not exposure-prone pose no risk provided they practice the recommended surgical or dental techniques and observe universal precautions, and follow recommendations for sterilization and disinfection.
15. Medical/surgical/dental organizations and institutions at which these procedures are performed should identify exposure-prone procedures.
16. To minimize the risks for exchange of body fluids during resuscitation procedures, pocket masks or mechanical ventilation devices should be readily available where these procedures are likely to be needed.

