

Course:	Acupuncture Techniques	Date:	10/01/07
Class #:	2	Prof:	Dr. Qiu

Applying CNT in Acupuncture Treatment

CNT-Apply in Treatment handout.

Everything in black is from Dr. Qiu's handouts. Blue represents notes I took supplementing the handout.

Establish a clean work area

- ◆ Running water
- ◆ Liquid soap, not bar soap!
- ◆ Single use disposable towels to dry hands
- ◆ Any material to be applied to the patient's skin needs to be clean.
- ◆ Sheets, pillowcases...use only one time then put in laundry
- ◆ Working surfaces should be cleaned at least once per day as well as when visibly contaminated.

Positioning patient

Put patient in a posture suitable to the acu-points you have selected for treatment. How patients hold arms when they lay helps determine position you use for them...some people lay with palms up, some face down with palms upward, some face down with hands on a support below their faces, etc.

Supine positions

- ◆ Points on frontal and facial regions
- ◆ Chest/abdomen
- ◆ Anterior or lateral aspects of lower extremities

Prone

- ◆ Occipital
- ◆ Neck
- ◆ Lumodorsal regions
- ◆ Posterior aspect of the lower extremities

Lateral Recumbent

- ◆ Lateral aspect of the body

Sitting

- ◆ Head, back, upper extremities

Good for patients who are overweight or very muscled in the neck. Head in face cradle for these people will cause creasing, collapse of neck into head, etc so you can't needle into some areas. Could also use a massage chair for this with good results. Some patients cannot lie down—extreme lower back pain for example. Or they may have stomach pain and can't lie on stomach, etc. And emotionally, this can be easier for some as it is less vulnerable.

Important to get time management right in order to do more than one side! Dr. Qiu likes to do prone positions first, then supine because most people don't sleep face down. If you do it in this order they can relax into the treatment.

Hand Washing

Most important single procedure for prevention of infection in health care setting.

When to wash hands:

- ◆ Before a treatment
- ◆ Immediately before acu procedures
- ◆ After they are in contact with blood/body fluids or obvious environmental contaminants
- ◆ Whenever hands become contaminated during treatment
- ◆ Between patients
- ◆ At the end of a treatment
- ◆ After removal of PPE

How to wash hands

- ◆ Wash entire surface of hands between fingers, around and under nails, up to above the wrist
- ◆ Lower hands so water/soap drains off fingertips as they are rinsed
- ◆ Soap and wash hands twice under running water for at least 10 seconds.
- ◆ Turn off tap with a clean disposable towel or use your elbow so your hands do not become soiled/contaminated by the handles.
[Use a disposable towel to open doors, turn doorknobs too!](#)
- ◆ Particular attention should be paid to fingernails, which should be kept short and clean.
- ◆ If no sink is available, alcohol based hand disinfectant, antiseptic cleaner or towelettes can be used for hand washing.
- ◆ If hands are contaminated after washing, the fingertips should be cleaned and swabbing with alcohol. You can also use an alcohol-based hand rub, germicidal scrub or antiseptic towelette is an acceptable substitute.
- ◆ Germicidal soap or alcohol based hand disinfectant should be used for immuno-compromised patients.

[\(Beware betadine scrubs! Some contain things that are allergens for some patients.\)](#)

Preparing site for insertion of needles

- ◆ Check that the skin areas to be treated are free of any cuts, wounds, or diseases
- ◆ Ensure that the part of the body to be treated is clean
 - Use 70% alcohol to prep patient's skin, not 90%
[\(90% which dries too fast to be of use in killing germs\).](#)
 - Iodophor, such as betadine followed by alcohol swab or benzylconium chloride is recommended for immuno-compromised patients.
 - Swab the point once in such a way that touches the area only once so as not to recontaminate the area.

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This can mean you do a single swipe of the area in one direction only or you can start in the center and spiral out in one direction only.

- The same swab may be used for points in the same general area.
Change swabs/cottonballs when you change areas (i.e., one limb to another, limb to trunk, etc.)
- The alcohol should be allowed to dry. Why?
 - To reduce discomfort on needling
 - To reduce possibility of infecting minute amounts of contaminants suspended in the alcohol
 - The longer the alcohol has to act, the more effective the antiseptic.

Palpating points

- ◆ It is acceptable clean technique to touch the acupuncture point after cleaning the skin, as long as the hands have not been contaminated.
- ◆ Before picking up the needle or palpating the point, hands should be washed again if they have been contaminated since the last handwashing.

Using sterile needles

- ◆ It is *critical* that shaft maintains sterility prior to insertion!
- ◆ When opening needle packet, make sure shaft doesn't touch part of pkt that was touched by fingers when opening!
- ◆ Needle insertion and manipulation must be performed without your bare hands coming into contact with shaft!
 - If needle shaft must be supported, use a sterile gauze pad or cotton ball.
Remember: anything you touch with fingers is no longer sterile! Use the still-sterile inside of the pad.

Cat's notes from having treated in clinic: you generally need to support longer needles like 3 cun or 5 cun needles when you're first needling and before you learn how to insert these puppies without the shaft of the needle bowing. One thing you might try is to save a sterile 1 cun guide tube back and use it for support rather than the gauze pad. Just slip it over the shaft of the needle and let it drop down to the skin. You can then support the shaft of the needle by holding onto that short guide tube.

Should you try this in Qiu's class? No way! Do what she tells you to and don't deviate or she'll let you know about it in front of your whole class. Just file this tip away for future reference when you have to needle deep tissues like for sciatica pain.

Using guide tubes

- ◆ Guide tubes should be sterile at the beginning of each treatment on each patient.
 - It is considered acceptable to use the tube repeatedly on the same patient.
(But be sure to use a new sterile guide tube for each patient.)

- ◆ If you are using a guide tube (i.e., not needling free hand), drop the needle into the tube handle first.
- ◆ If guide tubes are used, they should be placed *on the clean field* between uses. (NOT on any sterile areas such as back in the multi-pack! Why? Because your fingers have touched the outside.)

Using gloves

The use of gloves is strongly recommended in the following instances:

- ◆ During procedures such as bleeding where there is a greater risk of contact with larger amounts of blood.
- ◆ When working with patients who have open lesions or weeping exudates from their skin.
- ◆ When the practitioner has cuts, abrasions, chapped skin, hang nails, or broken cuticles on his/her hand and the lesions are location in a location where they pose a hazard.
- ◆ When palpating or needling in mouth or genital area. (It's rare to do this – the cleaning procedures are the same.)
- ◆ Use gloves for blood work, for HIV patients with open skin or with HIV bleeding symptoms.
- ◆ Glove “No’s”:

 - It is not necessary to glove up for routine acupuncture practice unless there is significant bleeding.
 - Gloving will not stop direct puncture injuries
 - Gloves present a barrier only to blood and other potentially infectious fluids.
 - Only proper handling of contaminated needles will prevent needlestick accidents.
 - Gloves don't work if they are not intact!

- ◆ Ensure the gloves are protective
 - Disposable gloves should be replaced:
 - As soon as practical when contaminated
 - As soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised

Managing used instruments

- ◆ Used needles should be isolated until they are sterilized or discarded.
- ◆ Replace any sharps container when it is $\frac{3}{4}$ full.
- ◆ Needle spills
 - Use gloves and hemostats/tweezers to recover them.
 - Clean spill area with soap/water
 - Wipe exposed surfaces with germicide such as bleach (10% bleach solution works).
 - All materials used in clean-up job should be discarded with double wrap (and placed into a biohazard container)
 - Wash hands!

Bleeding during cupping

Not so common, but make sure borders of the cup are smooth, not sharp.

- ◆ Gather your gloves and cleaning materials
- ◆ Put on gloves
- ◆ Remove cups, taking care to prevent fluids from spreading/splashing
Remove it in such a way that you catch fluids. Actually, blood tends to congeal quickly when you do this, so it's not as hard as it sounds.
- ◆ Stop bleeding through the use of appropriate pressure
Paper towels or cottonballs are fine for this.
- ◆ Clean up any bleeding that has occurred
- ◆ Immediately isolate the cups
- ◆ Handle/dispose of all cleaning materials used in the cleaning process in biohazardous waste containers.
- ◆ Sterilize the cups using a double sterilization procedure w/chemical disinfectants
- ◆ **Disposable, plastic or rubber cupping devices that can't be sterilized should be used on only one patient!**

Cleaning blood or body fluid spills

- ◆ Wear disposable, waterproof gloves
- ◆ Clean the spill once with soap and water
- ◆ Wipe all exposed surfaces with a germicide.
- ◆ All materials used in the clean-up job should be discarded in double wrapping.
- ◆ Wash your hands at the end of the cleanup.

There is a standard emergency spill kit: gloves, fluid controller/solidifier to absorb blood (which is a powder you put on blood), little scoop thing for the solidified blood, germicidal disposable wipe that stays in place for a certain number of minutes, hand cleansing wipes, biohazard bag. There also caps, shoe covers, face mask, gown.

Disposal of biohazardous waste.

- ◆ Biohazardous waste includes:
 - Any solid waste or liquid waste that may present a threat of infection to humans
 - Discarded sharps (used needles)
 - Human blood
 - Clinic waste such as table paper or cotton balls that contain human blood
 - Body fluids
 - Non-liquid human tissue and body parts
 - Human blood products
 - Laboratory disease-causing agents
- ◆ Biohazardous waste, except sharps, must be packaged in impermeable, red, polyethylene or polypropylene bags, and sealed.
- ◆ Discarded sharps must be separated from all other waste and placed in leak-resistant, rigid, puncture-resistant containers.
(i.e., sharps containers)

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- ◆ All containers must be properly labeled.

Use biohazard bags, then transfer to biohazard containers. Sharps containers can go in the biohaz containers too. Most biohaz and sharps containers are commercially made, but if you use an alternative solution, label it! Seal it when complete, put it into biohazard containers.

CNT Working in Public Health handout

Public health settings include

- ◆ Detox clinics
- ◆ AIDS clinics
- ◆ TB clinics
- ◆ Institutions such as jails, public hospitals, community centers

Characteristics of public health settings

- ◆ Have group treatment rooms where several clients sit and receive ear or body acupuncture
- ◆ Many of those rooms do not have sinks in them.
- ◆ Many of these settings aim at treating persons who are drug-and/or alcohol-addicted and who present with related and frequently multiple health and social problems such as TB, HIV infection, mental illness, homelessness, hunger or malnutrition, poverty, etc. These individuals frequently present with a long history of illness and debilitated immune system.

Special requirement about CNT in public health settings

- ◆ Handwashing
 - Wash hands with soap and water before and after work shifts
 - Wash hands with soap and water or alcohol based/germicidal hand rub immediately prior to performing any acupuncture
 - Wash hands with soap and water between treatments as often as possible. An alcohol based hand rub, antiseptic towelette or germicidal hand scrub should be used provided that only the needles, sterile pkgs and other materials needed for treatment were touched.
 - Wash hands immediately with soap and water after contact with blood or a break in the clean field between or during treatment.
 - Wear gloves when there is a biohazard spill.
- ◆ Choice of instruments
 - Disposable needles recommended!
- ◆ Positioning the patient
 - When patient is sitting up (which is often the only option), make sure that patient is comfortable.
- ◆ Removing needles
 - It is critical to carry an impervious container so that the needles can be disposed of immediately.
 - Count the needles used
 - Check chairs and surrounding areas for fallen needles before, during, after each session.

- Instruct clients not to handle needles if the needles fall out or after removing them.
- Check for bleeding that may have occurred.

NADA protocol

NADA protocols are specified treatments used for addiction to drugs, alcohol and smoking. As a matter of fact, they're used for stop-smoking a lot. You use them often in public clinics. (*And you are required to do some community clinics during your internship at AOMA, so this is important stuff.*) There is often only one room in public health settings where several clients sit and receive treatment. It's also pretty common to find that these settings don't have sinks for you to wash your hands in. Another commonality: patients here will have multiple disorders in addition to their need for addiction treatments. The upshot of all this is that it's hard to maintain clean needle techniques in these settings, so you really need to pay attention to what is touching what and what might be contaminated.

The handwashing procedures are basically the same as before...you'll just have to leave the room to wash if you want to do it in a sink! Regardless of how far away that sink is, you must clean your hands between patients!

Needle sticks and needle spills in a public setting:

There's a much higher risk of needle sticks and spills in a public health setting. People will shift around in their chairs more than when they are laying on a treatment table in the clinic at school, they'll read magazines, scratch, etc because they are more upright and awake. That means it's more likely that needles will fall out. And in this setting they seem to like to pick the dang things up too. Caution them against this and hope for the best.

Removal of needles in a public setting:

Always count the needles when you put them in and account for them all when you remove them. Look for anything that fell. Note on the chart how many needles you put in, how many you discarded/removed. There's a spot for this on the student clinic AOMA charts.

Remember that if you carry a small sharps container (rather than carting each needle to the big sharps container on the wall) when you remove the needles, you *must wash your hands afterwards* before you touch the next patient!

Ear bleeding:

The NADA protocol, which again you will use a lot in public clinics, has a 5 needle treatment you use in the ears. (This is auricular acupuncture, for the record). Always check to see if those points are bleeding after you remove the needles. These are very shallow spots with a ton of tiny blood vessels in 'em so they tend to bleed easily. Use a cotton ball and press for several seconds until the bleeding stops. Don't forget your precautions about blood. It probably won't bleed a lot, but if so, snap on a glove before you press with the cottonball or paper towel.

CNT Sterilizing Instruments handout

Protocol for Sterilizing Instruments

You really need to know this stuff. Your instructor will most likely tell you what needs to be emphasized. I've highlighted material I remember being on the test, but don't just rely on my highlights!

Choosing the appropriate sterilization method and equipment

- ◆ Appropriate sterilization of acupuncture needles
(Applies to the reusable/nondisposable type, not the single use type we use in clinic.)
 - Autoclave
 - 250 degrees F, 15 lbs of pressure for 30 minutes
 - The pressure *must be released quickly at the end of the sterilization cycle*. Sudden drop in pressure breaks down cell walls of resistant spores, is essential to the sterilization process.
 - If equipment is submerged in water being heated under pressure, is **does not get sterilized!**
 - Dry heat
 - 2 hours, 338 degrees Fahrenheit.
 - Chemical sporicides sterilant
 - Ethylene oxide
- ◆ **Unacceptable** procedures for sterilization
 - Boiling water
 - Alcohol
 - Pressure cookers

Classification and types of chemical disinfectants

- ◆ CDCP:
 - High level disinfectants
 - Intermediate level
 - Low level
- ◆ EPA
 - Sporicides
 - General disinfectants
 - Hospital disinfectants
 - Sanitizers
- ◆ Types of disinfectants
 - Dilutions of sodium hypochlorite (household bleach) solutions
 - Lysol: intermediate or low-level disinfectant
 - **70% alcohol: intermediate-level disinfectant**
- ◆ Labeling of disinfectants
 - What solution is
 - When it was mixed
 - Concentration

Double Sterilization procedure

1. Preliminary sterilization

- Used needles and other contaminated equipment should have a preliminary sterilization immediately after use, without cleaning or handling in any way.
- It is recommended that instruments are soaked in chemical disinfectant for the preliminary sterilization.
- Autoclave is *not* recommended for this step!
(Why? If contaminants are on equipment/needle this “cooks on” and still isn’t sterile even if autoclaved.)

2. Cleaning and inspection after the first sterilization

- Gloves should be worn during this procedure
- Instruments should be soaked in water to loosen any material that may remain, then wiped carefully and rinsed thoroughly. The cleaning itself will not kill infectious agents, but it is necessary to physically remove organic material such as blood or other body tissue prior to the final sterilization.
- Inspect the needle to determine if it is defective.
(After many uses and sterilization they tend to get bends, pitting, cracking, etc. Drag the needle thru cottonball and see if it catches any of the fibers and you’ll know. A needle in good shape will slide right through and won’t grab any of the cottonball fibers.)
- Discard any defective or damaged needles.
- Needles to be reused may be stored and packaged for final sterilization and storage.
(You use stainless steel needle trays with lids with a layer of gauze in the bottom. Needles are poked obliquely into gauze pad. The whole needle tray is autoclaved with the lid off or loosened so steam can get to needles and sterilize. You can’t autoclave them with the needles laying in the bottom of the tray because the part touching the tray won’t be sterile.)

3. Final Sterilization

- Chemical sterilants are not suitable for this procedure!
(You must use an autoclave or dry heat sterilization method.)

Packaging instruments for autoclave sterilization

◆ Packaging must be judged by 3 criteria

- Is it packaged in such a way that the steam or hot air has full access to each needle and other instruments during sterilization?
- Is all equipment fully protected from contamination once it is removed from sterilizer?
- Can single needles be removed without contaminating the remaining ones?
(I.e., you have to have enough room to pull the needle out without touching anything else.)

◆ Single-treatment packets are the safest system

◆ Covered trays:

- Needles should be placed obliquely or vertically into a bed of cotton or gauze, in a position that single needles can be removed w/o touching the shaft of a needle or interior of container.

- When tray is put into the sterilizer, the lid must also be placed in such a way that the container is not sealed. The steam or dry heat must get to all parts of the needle and any instruments in the autoclave/dry heat sterilizer.
- When sterilized material is dry, container should be closed. Tray can then be removed from sterilizer.
- **Sterilizing needles loose in the bottom of a tray is not acceptable!**
- ◆ Labeling packages for sterilization
 - Strongly recommended that all sterilized equipment is marked so as to distinguish it from equipment that has not been sterilized. Use autoclave indicator tape on the exterior of the container.

Lecture notes:

Sterilizing is the elimination of ALL microbial life on an inanimate object! Boiling water, alcohol and pressure cookers don't do the trick—they reduce, but don't eliminate. Autoclaves, dry heat, chemical sterilants are acceptable. With autoclaves, if anything is submerged in water, that won't get sterilized. Dry sterilizers use higher heat and require longer times due to lack of pressure release at the end of the procedure.

In clinic, use bleach, lysol, 70% alcohol as chemical disinfectants. Bleach solutions are 10% and are labeled with the % of the concentration as well as the date the solution was made. (Incidentally, 10% bleach works better at home for killing germs too...for some reason the full concentration isn't as effective.)

Double sterilization.

For non-disposable needles:

1. Put them into a disinfectant solution immediately after use.
2. Remove the needle/s from the disinfectant while wearing gloves and using tweezers to pick up the needle, then soak in water to loosen any materials that might remain.
3. Check the needle for damage, burrs, etc (using cotton –drag needle across cottonball). Discard all defective needles!
4. Prep a needle tray w/gauze, needles sticking up
5. Autoclave it

Packaging needles for sterilization—see slide 8.

Single packet is the safest—one packet of needles for one patient.

Gauze pad, needles inserted obliquely far enough apart that you don't need to touch another needle in order to remove one.

When you autoclave, lid of tray must be off so steam can get to the needles. Don't want needles to lie loosely on the bottom of the tray—won't get sterile.

Prior to sterilizing, you must mark the tray—this is patient X's tray because they have Hep C or whatever.

Loading the sterilizer—Slide 11

Making sure it got sterilized – Slide 12-14

Use bio indicators for most accurate results.

The kinds that change colors or melt in the tube determine whether temperature and pressure were right for sterilization, but aren't as accurate...doesn't really tell you if stuff is sterile.

Travel Protocol for Clean Needle Technique Demonstrated

This was Dr. Qiu's demonstration on how to do it for the CNT exam.

For CNT exam: the how to for the exam isn't exactly like it is in a clinic. But do it this way to pass the exam. You will show your id and you will need a *hard*-sided travel kit. You open and describe what is in the travel kit. Do NOT take it out and put it on the table! Bags should STAY in travel kit!

Set up instruments and equipment.

Important to say: *I have washed my hands for 10 seconds, twice, with running water.* (You say it verbally rather than doing it.)

When you set up the clean field towel, make sure it doesn't touch your clothes and that you pinch from dirty side, leaving cln side intact.

I note she never touches the stuff in the bags, but pours them out in a controlled manner, wiggling them out of the bag with her fingers on the outside of the ziplock.

I also note she has separated the needles into individuals instead of how they come in the box (perforated, but 5 to a "sheet"). My alcohol swabs come perforated in groups of 2. I note she has separated hers as well. Get out a minimum of 10 swabs.

Put everything in the center of the clean field. Don't stack items, though.

If anything lands outside of the clean field, don't use it.

If you goof, tell the examiner you goofed, and what the proper procedure would be.

(Also: before stocking or restocking your travel kit, clean your hands, clean the travel kit, clean hands again, then stock your kit so it's as clean as possible.)

When you finish with the clean and sterile items, get out your sharps container and the waste bag. If right handed, put it on the right, if left handed put it on the left. Why? Because you don't want to cross over a clean field with contaminated stuff you're about to discard! As for the waste bag, *don't* put your hand in the bag to make stand up! Many examiners don't like you doing that.

Don't include an antimicrobial hand cleaner for the test, and don't use the portable alcohol pumps either.

Next, clean your hands. Open 6-10 alcohol swabs and prep them for use. Don't do this over the clean field, but off to the side because you don't want to drip on the clean field. Tear 2 sides—making an L—open out so it sits up and swab doesn't wet the clean field. Put them near the bottom of the clean field. When you drop the waste into the waste bag, don't touch the edges of the bag!

III. Treatment: first needle insertion.

You do this in a sitting position. You will find a point on your leg—the thigh recommended so you can see what you are doing.

Do all prep first. Roll up your pants leg, adjust hair, whatever. Then clean your hands with an alcohol swab—*one swab per hand*.

Clean the point to be needled. Be sure to let it dry. Don't contaminate the clean site after swabbing.

IV. Instruction: Insert a 1" needle at least ¼ inch deep at 90 degree angle (if using a 1" needle, go in about 25% of needle shaft!), rotate needle clockwise 1 full turn.

Insert the needle, then drop the guide tube into the waste bag. Do the rotation using only the handle - don't touch the shaft with anything!

V. Remove needle, close insertion, dispose of used stuff.

Withdraw the needle without touching the shaft or insertion site with your hands. Apply pressure to site with a clean cottonball. Dispose of cotton then wash hands with water or alc swab. (In the test setting it's going to be the alcohol swab option.)

VI. Basically a repeat of step III.

VII. again with 1.5" needle.

VIII. close like in V.

IX. Packing it up.

Properly repack unused clean/sterile equip. Properly dispose of all unused exposed needles (i.e., in your sharps container.) Properly dispose of all trash in your trash bag. Finally, properly return clean and contam containers to travel kit.

You must state that you will go wash your hands. Wash hands under running water or with alc impreg swab.

Note:

There are slight variations between examiners. When you sign up to take the CNT exam it's an all-day event. The first part of the day is a repeat of the CNT portions of this class. During the lecture part the person doing the lecture will demonstrate how to properly do a CNT procedure as above. *This sets the standard for what you can do when you take the test yourself!*

Example: Dr. Qiu wants you to squeeze the cotton balls and alcohol swabs out of the bags without touching them. Dr. Shen conducted the lecture for the CNT class I took and said that if you just cleaned your hands it's fine to reach into the bag containing the swabs and cotton balls and pull them out by hand. That became the standard for the test I took.

...you can follow what they do or you can do what Dr Qiu does...that should be fine too.

If you contaminate your clean field (like get it wet), before you do anything else, acknowledge your mistake to the examiner and tell them what should have happened. They will probably give you a chance to correct and do again. If so, repack whatever isn't contaminated and set up another clean field.

If you flat out fail one step, you don't need to continue. You'll have to do it again. You get 2 tries during the CNT exam, but you basically have to go to the back of the line in order to do it again.

Does all of this scare the hell out of you? It's actually lots less stressful than taking the test during the techniques class! The CNT exam wasn't so bad at all except I was nervous as all get out. Practice a lot. You'll be fine.