

Course:	Acupuncture Techniques I	Date:	9/24/07
Class #:	1	Prof:	Yuxia Qiu

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Overview: needle insertion, angle, depths, manipulations, withdrawal, tonification and sedation, Treatment of acute conditions, first aid, needle shock, management of adverse reactions (acu shock, bleeding, pain, accidents), also prevention. Will cover infection control, safety, sterilization. CNT/ OSHA, HIPAA.

Stuff you will need:

- Needle cushion, stuffed with something soft. Orange, apple works too.
- Books:
 - *Clean needle Technique Manual for Acupuncturists*. National Acupuncture Foundation. 2005, 5th ed. (have it)
You will need to register for and pass the CNT exam after you take this class before you can intern in the clinic. Use the CNT manual for class for this exam! Will also need it for class 1-3.
 - *Chinese Acupuncture and Moxibustion*. Cheng, X. 1999, 2nd ed.
NCCAOM exams use this one. Will need it for class 4-11. Some descriptions of techniques in this book are confusing—will use supplemental hand outs to clarify.
 - Recommended: Eadrour Chen, 1995. *Cross sectional anatomy of acupoints*.
What's there when you needle a point: blood vessels, bones, muscles, nerves, etc.
- Traveling kit
 - ◆ Carrier
 - Hard-sided
 - Tight closure
 - Clean
 - ◆ Contents
 - One big Ziploc bag with
 - sharp container
 - plastic lined trash bag
 - Another big Ziploc bag with:
 - Clean paper towels or professional toweling (at least 1) in its own Ziploc bag
 - Clean or sterile cotton ball (25) in its own Ziploc bag
 - Alcohol swabs: 30 in its own Ziploc bag
 - Sterile needles: in its own Ziploc bag
 - 1 cun: 20
 - 1.5 cun: 20
 - Sterile gauze (2 × 2): 5 in its own Ziploc bag

- Rubber gloves: at least 1 pair in its own Ziploc bag
 - Tweezers or hemostat: at least 1 in its own Ziploc bag
- For 5th class: 3 cun needle.

Can only miss 1 class without grade letter drop since this is a practical hands-on course. 3 tardies or leave earlies = 1 absence.

Grading:

Quiz 1 (Class 4) = 30%. CNT manual, all.

Quiz 2 (Class 9) = 30%. Material from classes 4-8

Final = 40%. Comprehensive.

All needles need to be thrown into sharps container. Guide tubes and packaging to garbage. Anything non-sharp that is contaminated by blood or body fluids needs to go into biohazard waste container. You never empty nor reuse a sharps container—you toss it and get a new one. And NEVER try to pack it down and fit more in! That's how you get needle sticks and potentially deadly diseases like AIDS and Hep.

Clean Needle Technique

What's the point of this lecture? Prevention of infectious diseases. What's the other point? Scaring the crap out of you. No, not really. It's just that you need to know the risks associated with this profession before you start playing with sharp pointy things.

For thousands of years of acupuncture techniques have existed without our current standards of CNT, but techniques of cleanliness have always existed. They just change as our level of knowledge and understanding about how disease is spread changes. Regardless of the times and techniques that match them, the goal is to prevent the transmission of pathogens. Because acupuncture includes treatment of the body with needles, a huge concern is the possible blood borne transmission of pathogens. Current clean needle techniques focus on clean skin and disposable needles to prevent the spread of AIDS, hepatitis, and other blood related illnesses.

We use disposable needles both with and without guide tubes. What are guide tubes? They are plastic tubes cut slightly shorter than the needle which fits into them. You place the guide tube on the skin and tap the needle. This keeps the shaft of the needle straight, keeps them clean (because your fingers don't touch the shaft that will be inserted) and gives you a quick neat insert into the skin. These tubes were invented by a guild of blind japanese acupuncturists. Needles in America come packaged either in single packs with a guide tube provided for each needle or in multi-packs with 5 or 10 needles per pack and one guide tube provided for each pack. No matter how they are packaged, needles in America are predominantly of the disposable kind and so are the guide tubes.

In China some practitioners use disposable needles, but many use re-usable needles and use sterilization procedures (like you do for surgical instruments). The needles are used until they are no longer sharp and they are often used without guide tubes. Tubeless insertion takes a lot of practice and finger strength. This class focuses upon insertion with tubes, but eventually you will learn some tubeless insertion techniques in your education.

Pathogens and Acupuncture

There are natural body barriers against exogenous (externally introduced) pathogens such as:

- ☉ Intact skin
- ☉ Mucous membranes of the nose, throat, urethra, rectum
- ☉ Stomach acid
- ☉ Healthy cells in nose, lung
- ☉ Normal mucus, saliva

These are great barriers, but aren't bullet proof. Of course, you know that from watching crime shows and "House" on television. There are also an awful lot of ways which aren't so dramatic in which both you and your patients are at risk in your very own office. A few sources of potential infection are:

- ☉ Cut skin
- ☉ Wounds
- ☉ Contact transfer
- ☉ Hands
- ☉ Blood
- ☉ Saliva
- ☉ Other bodily secretions such as pus or plasma
- ☉ Dust
- ☉ Clothing
- ☉ Hair

Potential infection situations specifically applicable to acupuncture environments can include the following:

Autogenous Infections

In this scenario the patient is the source of their own infection. They carry the pathogen on their bodies. You, the acupuncturist, can transfer a pathogen from one area of the body to another by reusing a needle. Moral to the story: don't reuse needles ever, not even on same patient! An example might be a small area of fungal infection like tinea capitis (ringworm on the head) which could be spread to another area by using a needle or other acupuncture instrument (like a plum blossom or seven star needle) on the head and then on another area of the body.

Cross Infections

Patient → practitioner → patient

In this case the pathogens is acquired by patient from another person or from the environment. This includes blood or secretions from a surface (like an acupuncture table) to your hand and then to next patient. This is a huge uh-oh and the reason we wash our

hands compulsively and/or use alcohol scrubs. Hepatitis B Virus (HBV), for instance, can live at room temperature on a surface for up to a week! Holy sick people, Batman!

Blood Borne Pathogens

As mentioned in the example above, blood and fluids (such as sputum, vomit, semen, plasma, etc) carry pathogens. The most common are Hepatitis B (HBV) and C (HBC). These can be present in the blood or body fluids (whether they containing *visible* blood or blood in such small amounts you can't see it with your eyeballs). These can enter through non-intact skin or through mucous membranes. If you pick at your cuticles (like me), bite your finernails, have cracked skin, have tiny papercuts, etc. your natural skin barrier is compromised and you are at risk.

Never touch blood or any place there might be blood! Just because you can't see the tiny nicks in the surface of your fingers and hands doesn't mean they aren't there. Patients who have rashes, broken skin and the like are all dangerour for acupuncturists especially if your fingers and skin areas are not intact!

There is transmission potential for all of the above in this profession because:

- ☹ You are in potential contact with another person's blood or fluids rather often.
- ☹ You are working with various kinds of filiform (solid rather than hollow) needles – instruments designed to puncture the skin. It's extremely easy to poke yourself if you're not constantly vigilant. A "needle stick" is when you accidentally poke yourself or someone else with a contaminated needle. Most often it happens from patient to acupuncturist when you are removing needles. This is why careful practitioners will remove one needle and immediately put it into a proper disposal container before removing the next needle.

Not only is there an awful lot of paperwork if you accidentally experience a needle stick, but there are blood tests for both you and the patient and a whole bunch of worrying about whether you've just exposed yourself to hepatitis, AIDS or some other unknown badness. Not fun.

Hepatitis and HIV

Know: all Hepatitis days, times, transmissions, onsets, chronic or not, etc. See book, handouts. Know these charts! They were on my tests and they'll be on yours too. They were also in the CNT course written test.

This information comes from Dr. Qiu's handouts (circa Fall 2007) and from the 5th edition of the Clean Needle Technique manual. Your current information is sure to vary eventually. Remember these are my notes and are subject to error and mis-information due to ever-changing standards...

Hepatitis A (HAV)	Transmission: fecal/oral
	Incubation: 15-50 days
	Onset: abrupt
	Symptoms: mostly digestive such as abdominal discomfort, poor appetite, nausea, jaundice, fatigue.
	Chronic: no, never goes chronic
	Vaccine: no vaccine required
Hepatitis B (HBV)	Transmission: Bloodborne pathogen. (Warning Will Robinson! <i>Virus can survive 1 week in dried blood!</i>)
	Incubation: 50-180 days
	Onset: Insidious/gradual.
	Symptoms: It is mild and flu-like at first, gradually progressing to poor appetite or appetite loss, abdominal pain, joint pain or rash. Accompanied by chills and diarrhea. Lasts 2-6 weeks. Extreme fatigue and depression for several months.
	Chronic: yes, potential for this. <ul style="list-style-type: none"> ☉ 5-10% of people who get it get a chronic infection. ☉ 30% of all people who get it are symptom free!!! ☉ 70% recover fully, but are infections for 3+ months!! Liver cancer can be common after this.
	Vaccine: available and recommended
	Note: This disease responds well to TCM treatment. Herbal is best, acu helps with relaxation and energy levels. Definitely improves prognosis. Important: you often do now know that ppl have this. <i>Treat all patients as if they are infected!!!</i>
Hepatitis C (HCV)	Transmission: Blood borne pathogen
	Incubation: 20-90 days
	Onset: Insidious/gradual
	Symptoms: anorexia, nausea, vomit, jaundice
	Chronic: yes, potential for this. 50% of patients become chronic
	Vaccine: No vaccine available
	Note: Many people infected with HCV, any who don't know it. 40-60% of

	<p>liver patients have it for example. HCV responds well to TCM treatment. Herbs are more effective than acupuncture for liver problems. <i>Treat all patients as if they are infected!!!</i></p>
Hepatitis D (HDV)	<p>Does not exist without HBV being concurrent. Incubation, transmission, and onset are unknown. No vaccine.</p>
Hepatitis E (HEV)	<p>Transmission: Fecal and oral</p>
	<p>Incubation: 15-60 days</p>
	<p>Onset: Abrupt</p>
	<p>Symptoms: fever, malaise, nausea, poor appetite, jaundice.</p>
	<p>Chronic: no, never becomes chronic</p>
	<p>Vaccine: none available</p>
	<p>Notes: Cleanliness is the best prevention</p> <p>Rare in the U.S. More common in poor hygiene areas, developing countries, etc. Seen in Mexico, India, China, Africa, etc.</p>
HIV	<p>Transmission: Blood borne pathogen (includes semen, vaginal secretions)</p>
	<p>Incubation: up to 15 years</p>
	<p>Onset: Insidious – can be asymptomatic, but can still transmit the virus</p>
	<p>Symptoms: Initial infection can be like mono: 2-4 weeks with flu-like symptoms. Spontaneous resolution of symptoms, some have no symptoms at all. Later: fever, malaise, body aches, wasting (night sweating, weight loss, diarrhea). Complications include HIV encephalopathy, myelopathy, peripheral neuropathy, dementia with memory loss, apathy, depression, motor dysfunction, death. Open to opportunistic infections and neoplastic disorders. TB, herpes, staph, hepatitis are common as well. Pneumonia is a frequent cause of death.</p>
	<p>Chronic: well, yeah.</p>
	<p>Vaccine: None so far</p>
	<p>Notes: <i>Cannot be transmitted by handshakes, touching, hugging, holding hands, casual contact.</i> Just don't touch exposed wounds, mucus, blood. Most commonly seen in gay males, IV drug users, sex workers, transfusion recipients, those practicing unsafe sex, transplacental transmission, health care workers. May need to wear mask and gloves for HIV patients for both their safety and yours. <i>Risk for HIV is less than Hep B.</i></p>

Use universal precautions (see 5th edition book, p 51-53)

1. Treat all blood/body fluids as if they are contaminated.
Treat used gloves and needles the same way. Pretend they are contaminated because they just might be. Remember that many patients of some of the above disease are symptom free and may not even know they have a disease. Or they may know and just won't tell you.
2. Wash your hands often!
3. Use PPE (personal protective equipment), in all situations in which you might be at risk for exposure. Wash your hands before you put them on and after you take them off!
PPE includes:
 - a. Your lab coat
This keeps blood and fluids and even shed viruses off of your clothing. It's kind of like wearing an apron when you're cooking so you don't get food and grease splattered on your clothing. You don't really want blood, fluids or other pathogens clinging on to your street clothes where you can carry them home with you, ya know? This is why we wear them in clinic, keep them buttoned up, and take them off before we leave clinic. That said, there has been some debate lately about whether or not to wear that clinic coat. . . these standards too may be changing.
 - b. Latex/nitrile gloves
 - c. Face shields
Less common in acupuncture unless you work in a hospital and/or do a lot of bleeding techniques. But it's a good bet you'll see dentists and other kinds of docs wearing them.
 - d. CPR mouth barriers
When you take your CPR class before you go into clinic you'll learn about these. They're cheap and a lot of EMTs and ER workers (anyone who sees patients who just might need CPR actually) keep them close
 - e. Goggles
Keeps other people's fluids out of your eyes.
 - f. Aprons
More common in laboratory situations.
 - g. Masks (esp if you are sick)
You'll see this more in flu season, worn by practitioners who have a cold/sore throat, or by people who are healthy but don't *want* to get sick during flu season!
4. Use of standard sterilization and disinfection measures as well as infectious waste disposal procedures.

Note:

- ☹ Always check for tears and defects in your equipment. Remove and replace any that are defective, broken, torn.
- ☹ Used needles should always be placed in sharps containers, even in your travel kit (small sharps containers are made just for this purpose).

Bloody cotton balls:

In this class you will probably be told to dispose of cotton balls with blood on them by putting them into sharps containers. That's what Dr. Qiu told us anyhow. I strongly recommend you do not argue this point with Dr. Qiu!

That said, Will Morris asked us why the heck we were doing that and filling up his sharps containers thus costing the school more money. He told us that the California standard for this (which is more stringent than federal standards) was to place bloody cotton balls or gauze pads into sharps waste containers *only* if they are so soaked that they would drop if you squeezed them.

5. Get recommended testing.

Health care workers should be tested for TB, HBV, HCV, and HIV infection prior to treating.

- a. Get tested *yearly* for TB
- b. Get tested every *6 months* if you work in inner city clinics with AIDS and drug patients.

What if you get tested and find you are infected -- can you still treat?

Maybe. Depends on expert opinions of review panel including your physician. You also must notify your patients if you are infected.

CNT protocols

Definitions (all of these are covered in your CNT book)

- ☉ Sterilization: **destroys** all microbials including viruses.
- ☉ Contamination: introduce disease causing agents int/onto previously clean or sterile objects. Includes touching the needle shaft or cleaning hands then touching something else (pts clothing, your own, your hair, scratching, etc.)
- ☉ Aseptic technique
Prevents infection during invasive procedure. Example: cleaning with alcohol.
- ☉ Antiseptic: **reduces the density** of microbials on **living tissues**, particularly on skin of practitioner and patient.
Example: antibacterial gels
For test: alcohol swabs
- ☉ Disinfection: **destroy** or **reduce** number of pathogens on **inanimate objects** thru the use of bleach, etc.
- ☉ Clean field
This is a clean surface on which all sterile (still packaged items) and clean items rest. A clean field also includes the acupuncture points and the skin around them which you will be needling.

Basic principles of CNT

Clean techniques include all of the above plus what's in the book.

1. Wash your hands between patients.
It is generally also considered ok to use alcohol hand scrub when you are in an environment in which you cannot wash your hands.
2. Use sterile needles
That generally means disposable, but you might end up in an environment in which you use sterilized reusable needles. Rare, but it happens.
3. Establish a clean field
(More on that in just a while)
4. Wash hands just prior to needle insertion
If you touched anything non-clean/sterile since you washed your hands between patients...and chances are excellent that you did (i.e. adjusted your glasses, touched your nose, scratched an itch, shook someone's hand, used a pen) ...wash 'em again. Or use an alcohol scrub.
5. Isolate used needles.
Dr. Qiu recommend: remove one needle and immediately put it into a sharps container (either big one or portable one).
6. Dress/Lab coat:
Lab coat should always be buttoned.
Avoid large jewelry, jewelry with intricate patterns (which traps germs), loose clothing (which tends to drag across the needles you already put in and drags across contaminated areas and then across the clean areas), and anything else floppy that might cross contaminate.
Most acu's don't wear jewelry
7. Personal care
Take care of yourself, balance your life so you are healthy. If you are healthy and preventative and emotions are good, you can be a good doc. Your energy affects your patients!!!

(Cat's opinion: And this is incredibly hard when you're in school. Takes even more effort to take care of yourself now. Stay sane and healthy even if that means you have to back off of the 3 and 1/3 years they say it takes to get through school. Owing more to the feds is better than getting out of school quickly, forgetting 75% of what you were supposed to learn, and ending up sick or crazy!)
8. Get tested for the major stuff frequently.

Equipment recommends

Needles

- ◆ Sterile
- ◆ Solid (filiform)
- ◆ Packaging must be appropriate. Check for leakage, tears, punctures.
Some packages have multiple needles. Note: these are far cheaper than the individually packaged ones and it's what you will use most often in clinic. The downside of that is they generally come 10 to a pack, so you might end up wasting some when you're practicing. The moral to this story: use individually packaged ones now for practice, but when you get into clinic plan on buying them in the multi-packs.
- ◆ Note that NEEDLES EXPIRE!
- ◆ Remove needles from pkg in such a way that they remain sterile!!!!

Guide tubes

- ◆ Need a sterile one for each patient!
Can use one guide tube per patient with multiple needles. When you switch patients you must switch guide tubes.
- ◆ Note: multiple needle packs = cheaper (as previously noted). You *can* split between patients if you have a new sterile guide tube for the next patient(s) and can keep the needles sterile.

Needle trays and gauze

- ◆ Use these for sterilizing reusable needles. There's a whole section in the book on this, about labeling, autoclaving, setting them up, etc. And by the way, you need to know the times for each method of sterilization as well as temperatures and pressure releasing and all that.

Plum blossom needles

- ◆ Sterilize after each treatment. Use only 1 plum blossom needle per patient. Some are disposable, some sterilizable. (By the way, I have found that I like the disposable plastic ones better than the metal ones that have the disposable heads.)

Cupping

- ◆ Glass cups
 - Clean them with soap and water to remove any tissue, fluid, blood, oil, etc. after you use them.
 - After that, soak them 10% bleach solution to sterilize them after use.
10% bleach solution loses potency after 24 hours, so you have to remix it daily.
 - Rinse and dry after soaking

Or you can wash with soap and water and then autoclave them. Assuming you have access to an autoclave, which would be really cool, but not many of us do.

Work surface

- ◆ Clean it daily with disinfectant

Clean field

- ◆ Whether you use professional towels or clean paper towels, only touch one side! Pinch the under side and open that way. Lay it down without touching the clean side at all, not even corners!
- ◆ The clean field is NOT sterile. It can hold sterile *wrapped/packaged* items, but once the packaging is open, the shaft of the needle cannot touch the clean field! If it does then that needle shaft is no longer sterile.
- ◆ When you put the cotton balls on the clean field, *don't touch the cotton balls*. Open the bag and move them with your fingers from the outside packaging.
- ◆ You should have the container of alcohol next to your clean field. It's best if it's the kind with the pump at the top so you can pump the thing with a cotton ball and soak the ball. Just don't let it drip on your clean field 'cuz that'll lose you points on the impending exam and renders your clean field not so clean.

Cleaning with Alcohol

First: Clean your hands

- ◆ Wash your hands with soap and water. Scrub and rinse for at least 20 seconds under running water.
- ◆ Soak a cotton ball with alcohol (or you can use pkg's alc swabs, one per hand)
 - Wipe palm side first and only wipe in one direction – tip downward - from fingertips to palm starting with thumb, moving over to pinkie
 - Wipe dorsal side next, same technique.
 - Wipe between fingers

Use new cotton ball as you feel it getting dry.
Don't resoak the same cotton ball!!!!

Second: Points on patient to be needled

- ◆ Soak a cotton ball (or use an alc swab)
- ◆ Wipe the point to be needled.
 - Wipe only in one direction.
 - –or- wipe in a circle, starting at the center and radiating out
- ◆ When the cotton ball starts to get dry, toss it and soak another.
Do not reuse!
- ◆ You can clean several spots with one swab, but as a rule, change cotton balls when you move from one limb to another, and when you move to the trunk.

- ◆ Let the point dry on it's own. The longer the alcohol stays on it, the more microbials it will kill. Avoid the temptation to fan it or blow on it! That gets it unclean again!
Only needle when the skin has dried!!!
 - ◆ If you think you need to palpate after cleaning, clean a larger area...or palpate and clean again.

Needling and Cleanliness

- ◆ Only touch the needle handle. You can manipulate the needle that way.
- ◆ Multi needle packs:
 - Open cleanly
 - Remove guide tube
 - Remove one needle by handle only, insert needles into tube with the handle going in first and the tip of the needle pointing out.
- ◆ Needle removal:
 - If it's tight, shake it to loosen or lift/press point.
 - Remove needle quickly, press with fresh cotton ball to close hole.
 - When all needles are removed *and accounted for* you can break down the clean field.

NOTE: some examiners want you to toss any unused cotton balls when you take the CNT test for certification. Toss the clean field cloth too. Close sharps containers carefully and tightly when you're done.

Dropped Needles

Put on gloves. Use tweezers or hemostats to retrieve it off of the floor and transfer it to a sharps container.

If it was an un-used needle, use your hemostats to pick it up. Now drop it into the sharps container. Now clean your hemostats with the 10% bleach solution just like you do for cups (above).

If it was a used needle you dropped, bummer. You now have to clean that spot. Put on some gloves and get your hemostats to pick the needle up from the floor. Put the needle into the sharps container. Use 10% bleach solution to clean your hemostats. Also use 10% bleach solution to clean the floor where the needle was (which is why it's better not to needle while on carpeted surfaces). Once everything is clean, take off your gloves and dispose of them in a biohazard container.