

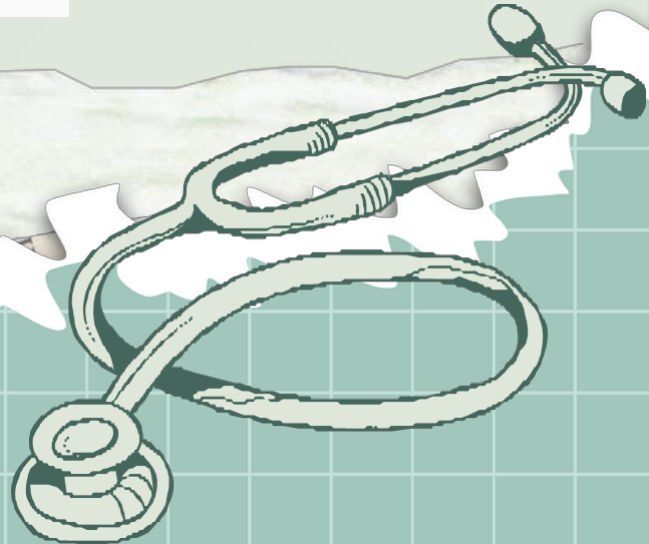


Clinical Skills 1

Title: clinical procedures

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Clinical Skills 1

Hand washing

When must we perform Hand hygiene?

- Immediately **before** every patient contact
- After** touching anything in the bed space area i.e. within the bed curtain area

What are the products that we can use to perform good hand hygiene?

1-Liquid Soap:

Will remove most micro-organisms but not all



2-Hibiscrub:

Will remove most micro-organisms.

Contains an antimicrobial agent which, with continual use, has a cumulative effect, Will remove organic matter from the hands (could cause damage to the hands if used many times)





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3-Spirigel:

Quick and easy way to decontaminate socially clean hands, 99% effective in thirty seconds

Important note: When can't we use spirigel?

- 1) If hands are visibly soiled
- 2) If you have dealt with organic matter, e.g. Body fluids
- 3) In cases of Clostridium Difficile associated diarrhea or viral diarrhea and vomiting

We should use water and Hibiscrub in these cases





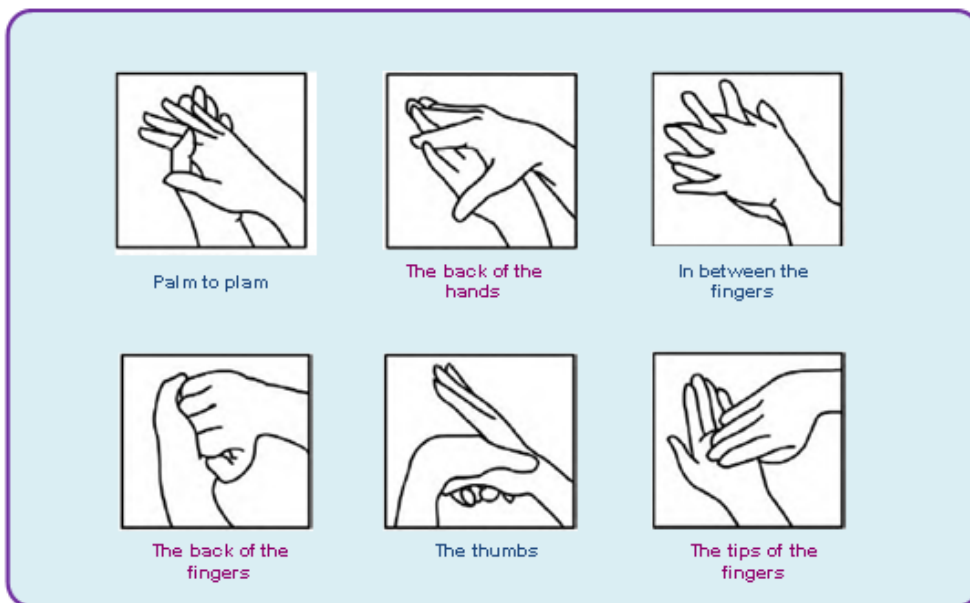
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❖ **important steps to wash our hands:**

After applying water to hands and putting enough soap to cover our hands we should do these 6 steps to wash our hands

After that we should not close the water with our clean hands, but we should use our elbow, or the towel that we dried our hands with.

The 6 Steps of Hand Washing



❖ **Very important notes**

1. Nails should be kept short (nail extensions are not allowed)
2. Avoid wearing rings with ridges or stones. (wedding ring is the only thing allowed)
3. Remove wrist watches and wrist jewelry.
4. If you are wearing long sleeves roll them up before hand washing and at all times in clinical areas.
5. Tuck in ties/no tie or bow tie, tie hair back (there should not be anything swinging from your clothes or hair)
6. Nail brushes are not used for routine hand hygiene
7. Hands must be wet before applying the recommended amount of soap and water and rinsed thoroughly before drying



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8. If hands are not rinsed or dried adequately there is a potential for skin damage to occur
9. The use of gloves is not a substitute for hand hygiene (you should wash your hands even if you are wearing gloves)
10. Keep your hands healthy; cover any cuts with a water proof dressing
11. Gloved hands should not be washed or cleaned with alcohol hand-rubs
12. Barrier Nursing: Look for barrier nursing signs; leave notes outside; wear apron, gloves and wash hands, speak to the nurse for advice

**CHECK WITH NURSE
BEFORE ENTERING**



In addition to Routine Practices:

<input type="checkbox"/> Contact precautions	<input type="checkbox"/> Droplet precautions	<input type="checkbox"/> Airborne precautions	<input type="checkbox"/> Droplet and contact precautions
<input checked="" type="checkbox"/> Hand hygiene (15 seconds before entering and exiting room)	<input type="checkbox"/> Immune persons only		
<input type="checkbox"/> Gown	<input type="checkbox"/> Dedicated equipment		
<input type="checkbox"/> Gloves	<input type="checkbox"/> Negative pressure room (door closed)		
<input type="checkbox"/> Mask: _____ PCM 2000 _____ N95	<input type="checkbox"/> Additional Environmental Cleaning: _____		
<input type="checkbox"/> Protective eyewear (eyeglasses not adequate)			

 Sunnybrook
HEALTH SCIENCES CENTRE

Steps before examine patient

- **Introduce yourself**
- **Gain consent and co-operation** (ask the patient if it is okay to examine him)
- **Perform hand hygiene**
- **Roll up sleeves, remove watch**
- **Provide privacy**



Clinical Skills 1

Vital signs

- Heart rate (pulse)
- Respiratory rate
- Temperature
- Blood Pressure

Pulses

❖ where are the sites where we can feel the pulse?

1. **Radial artery:** lies at the base of the thumb proximal to the 'bracelet' of wrist skin creases
2. **Brachial artery:** lies in the antecubital fossa medial to the biceps tendon.
3. **Carotid artery:** lies in the neck next to the thyroid cartilage
4. **Femoral artery:** felt in the groin below the inguinal ligament.
5. **Popliteal artery:** lies between the heads of the gastrocnemius
6. **Posterior tibial artery:** felt right down behind the medial malleolus.
7. **Dorsalis pedis artery:** felt between the heads of the first and second metatarsals.



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1) Radial pulse:

- Palpate the radial pulse with the pads of your fingers on the flexor surface of the wrist laterally
- Partially flexing the patient's wrist may help you feel the pulse
- Compare the pulses in both arms





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2) Brachial pulse:

- Flex the patient's elbow slightly, and with the thumb of your opposite hand palpate the artery just medial to the biceps tendon at the antecubital crease
- The brachial artery can also be felt higher in the arm in the groove between the biceps and triceps muscles.





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3) Carotid pulse:

- place your index and middle fingers on your neck to the lateral of your trachea at the level of thyroid cartilage



4) femoral pulse

- The common femoral artery emerges into the upper thigh from beneath the inguinal ligament one-third of the distance from the pubis to the anterior superior iliac spine.
- It is best palpated with the examiner standing on the ipsilateral side of the patient and the fingertips of the examining hand pressed firmly into the groin





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5) Popliteal pulse:

- The popliteal artery passes vertically through the deep portion of the popliteal space just lateral to the midplane
- It may be difficult or impossible to palpate in obese or very muscular individuals.
- Generally this pulse is felt most conveniently with the patient in the supine position and the examiner's hands encircling and supporting the knee from each side.
- The pulse is detected by pressing deeply into the popliteal space with the supporting fingertips. Since complete relaxation of the muscles is essential to this examination, the patient should be instructed to let the leg "go limp" and to allow the examiner to provide all the support needed





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6) Posterior tibialis pulse

- The posterior tibial artery lies just posterior the medial malleolus
- It can be felt most readily by curling the fingers of the examiner hand anteriorly around the ankle, indenting the soft tissues in the space between the medial malleolus and the Achilles tendon, above the calcaneus
- The thumb is applied to the opposite side of the ankle in a grasping fashion to provide stability.
- Again, obesity or edema may prevent successful detection of the pulse at the location





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7) dorsalis pedis pulse

- Is examined with the patient in the recumbent position and the ankle relaxed
- The examiner stands at the foot of the examining table and places the fingertips transversely across the dorsum of the forefoot near the ankle.
- The artery usually lies near the center of the long axis of the foot, lateral to the extensor hallucis tendon but it may aberrant in location and often requires some searching.
- This pulse is congenitally absent in approximately 10% of individuals.





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❖ On what should we comment when examining the pulses?

1) **rate:** number of beats per minute

• <60: bradycardia

• >100: tachycardia

2) **rhythm:** either regular or irregular

3) **volume:** force of the pulse (weak, strong)

Record the pulse on to the observation chart and report any abnormal results to the doctor/nurse in charge

Leave clinical area tidy and perform hand hygiene

Normal pulse rate: 60 – 100 beats per minute, regular rhythm



Clinical Skills 1

Respiratory rate

- ❖ **Important note:** Be aware that if a patient is aware that you are checking their respiratory rate, their breathing pattern may change.

If possible, record respirations while the patient is unaware. Palpate radial artery as if taking the pulse to prevent patient knowing respiratory rate is being assessed.

- ❖ On what should we comment when examining the respiratory rate?

1. **Rate:** the normal rate for an adult at rest is 12-20 breaths per minute (we should count for one minute)

a. <12: Bradyapnea

b. >20: Tachypnea

2. **Depth:** is the volume of air moving in and out with each respiration.

The normal tidal volume for an adult is about 500ml and should be constant with each breath.

A spirometer can be used to measure the precise amount

3. **Pattern:** changes in the pattern of respiration are often found in disorders of the respiratory control center.

Some causes for a change in pattern are anxiety, ketoacidosis, extreme exertion, fear, fever and midbrain lesions



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Temperature

- ❖ Important note: The normal body temperature of a person varies depending on gender, recent activity, food and fluid consumption, time of day, and, in women, the stage of the menstrual cycle.
- ❖ Normal body temperature can range from **36.5 degrees to 37.2** degrees C for a healthy adult.
- < 36.5 : Hypothermia
- > 37.2 : Hyperthermia

- ❖ What are the ways of measuring body's temperature?
 1. **Orally**. Temperature can be taken by mouth using either the classic glass thermometer, or the more modern digital thermometers that use an electronic probe to measure body temperature.
Note: we should make sure that the patient did not drink any cold or hot drinks before the examination
 2. **Rectally**. Temperatures taken rectally (using a glass or digital thermometer) tend to be 0.5 to 0.7 degrees F higher than when taken by mouth.
 3. **Axillary**. Temperatures can be taken under the arm using a glass or digital thermometer. Temperatures taken by this route tend to be 0.3 to 0.4 degrees F lower than those temperatures taken by mouth.
Note: we usually use this method for children
 4. **By ear**. A special thermometer can quickly measure the temperature of the ear drum, which reflects the body's core temperature (the temperature of the internal organs).
 5. **By skin**. A special thermometer can quickly measure the temperature of the skin on the forehead.



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Blood pressure

What are the equipment that we need to examine the blood pressure?

- 1) stethoscope
- 2) sphygmomanometer



What are the steps of examining patient's blood pressure? (very important)

- 1) Introduce self,
 - 2) gain consent and co-operation
 - 3) Perform hand hygiene, roll up sleeves, and remove watch
 - 4) Ask patient if they have had any tea, coffee, been smoking or exercised in the last half an hour (very important)
 - 5) Assess which arm would be the most suitable (i.e. presence of dialysis fistula, PICC line, residual arm paresthesia or edema)
 - 6) Choose correct sized cuff and place it on correctly ensuring the cuff is placed 2-3 cm above the antecubital fossa
 - 7) Correct position of arm :antecubital fossa in line with heart, arm slightly flexed and well supported on table or pillow
- Also make sure that the patient is sitting, with straight back, legs not crossed and reaching the floor
- 8) Inflate cuff and note when pulse can no longer be felt then release cuff



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9) Place stethoscope over the brachial artery on the medial aspect of the antecubital fossa using diaphragm side

10) Inflate cuff to 20-30 mmHg above level noted previously and drop the dial/pressure gauge slowly no faster than 2-3mmHg per second

11) Listen and record correctly Korotkoff sounds.

The appearance of audible sounds is called the 1st Korotkoff sound and the pressure at which it appears on the sphygmomanometer is called the systolic pressure

12) Listen then for the disappearance of sounds. This is the 5th Korotkoff sound.

The pressure at which they disappear on the sphygmomanometer is the diastolic pressure

13) Record blood pressure as the systolic value over the diastolic value to the nearest 2mmHg

14) Record the blood pressure

15) Leave clinical area tidy and perform hand hygiene

❖ Note Normal blood pressure: Depends upon age and gender of patient

• >140/90 mmHg: Hypertension

• < 90/60 mmHg: Hypotension



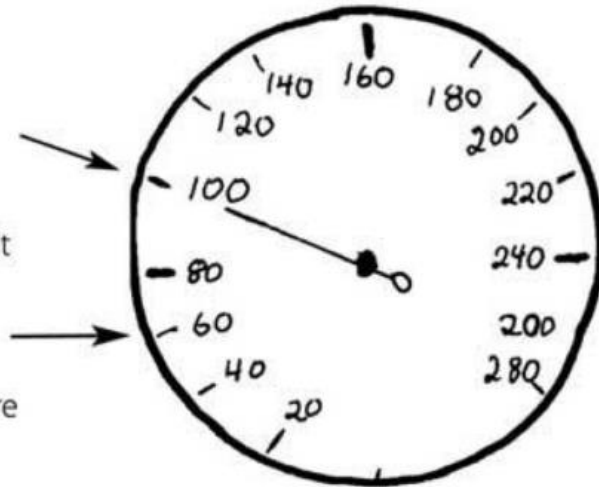


Clinical Skills

If you start to hear a pulse here,

and then cannot hear it anymore when the needle is here,

then the blood pressure is: 100/60.



The pressure of blood in the vessels when the heart beats:
systolic pressure

The pressure between beats when the heart relaxes:
diastolic pressure

less than
120/80 mmHg

millimeters of mercury

