



มหาวิทยาลัยราชภัฏนครปฐม
Nakhon Pathom Rajabhat University



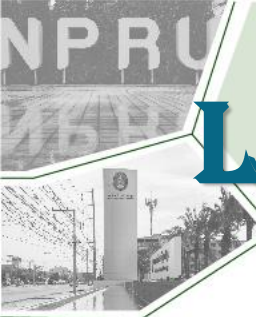
Unit III

Physical Examination



Wanpen Waelveerakup, RN, PhD
Ruffel Joy C. Manalo, RN, MAN
Faculty of Nursing
Nakhon Pathom Rajabhat University





LEARNING OBJECTIVES OF THE TOPIC



By the end of the topic students should be able to:-

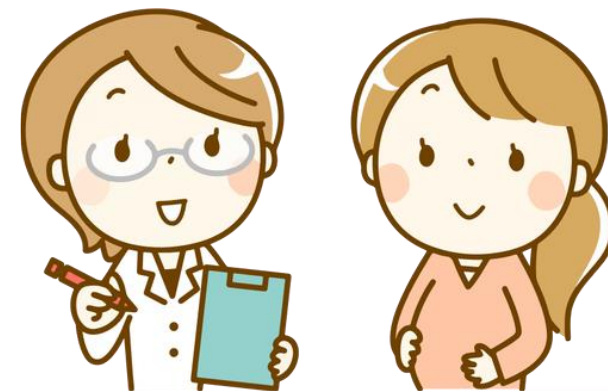
1. Define of physical examination.

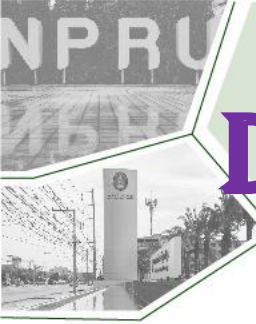
2. Describe how to perform the four techniques used in physical examination

SCOPE OF TOPIC

Define

Physical examination techniques

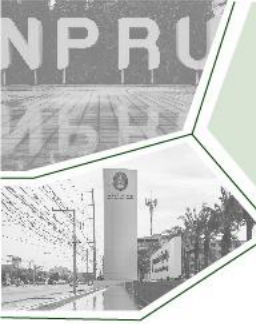




DEFINE OF PHYSICAL EXAMINATION

- Physical examination is a systematic data collection method that uses the senses of sight, hearing, smell and touch to detect health problems.
- A medical practitioner examines a patient for any possible medical signs or symptoms of a medical condition.
- Physical examination is defined as a complete assessment of a patient's physical and mental status.





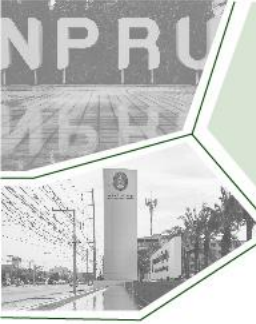
KEY WORDS OF PHYSICAL EXAMINATION

- Data collection method
- Examines a patient for any possible medical signs or symptoms of a medical condition.
- Patient's physical and mental status



• Physical examination means the data collection method for determining any possible medical signs or symptoms of a patient's physical and mental status.





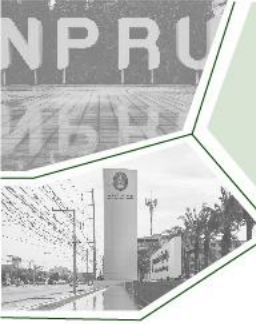
PHYSICAL EXAMINATION TECHNIQUES

1. Inspection (การดู)
2. Palpation (การคลำ)
3. Percussion (การเคาะ)
4. Auscultation (การฟัง)

Use your eye to see,
your finger to feel,
your ear to hear
and your noses to smell

To obtain valid information concerning the health
of the patient



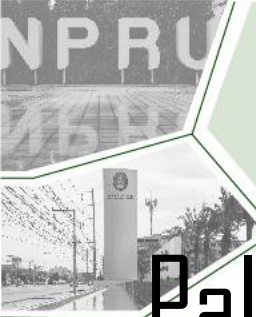


1. Inspection

Inspection involves using the senses of vision, smell, and hearing to observe and detect any normal or abnormal findings.

- **Using eyes to observe gestures and various parts of the body from head to toes.**



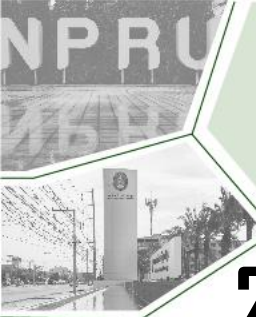


2. Palpation

Palpation consists of using parts of the hand to touch and feel for the following characteristics:

- texture (rough/smooth),
- temperature (warm/cold),
- moisture (dry/wet),
- mobility (fixed/movable/still/vibrating),
- consistency (soft/hard/fluid filled),
- strength of pulses (strong/ weak),
- size (small/medium/large),
- shape (well defined/irregular), and
- degree of tenderness (no tender/mild/moderate/severe)





2. Palpation ...3 sub techniques

2.1 Light palpation : gentle pressure, < 1 cm. deep

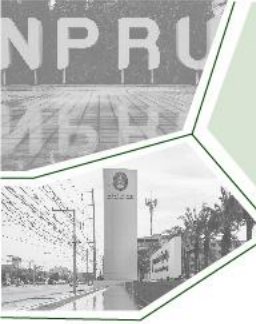
Light palpation:

To perform light palpation, place your dominant hand lightly on the surface of the structure.



Photo by Wanpen





2. Palpation ...3 sub techniques

2.2 Deep palpation : increased pressure, >1 cm deep

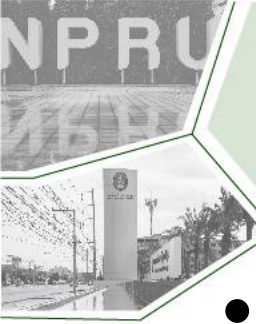
Deep palpation: With 1 hand
With 2 hands: bimanual palpation

To perform deep palpation, place your dominant hand on the skin surface and your non-dominant hand on top of your dominant hand to apply pressure. This allows you to feel very deep this organs or structures that are covered by thick muscle.



Photo by Wanpen





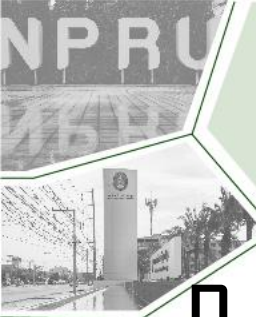
2. Palpation

- **Ballottement : Used to assess the rebound of a floating object**



Picture from <https://www.youtube.com/watch?v=opcQZgm6SSw>





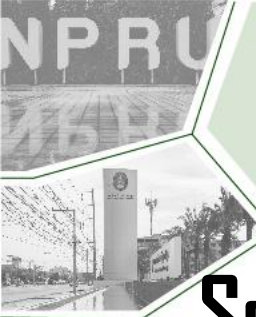
3. Percussion

- Percussion involves tapping body parts to produce sound waves.
- These sound waves or vibrations enable the underlying structures.



Photo by Wanpen





3. Percussion

Several types of sub techniques for performing percussion

* Direct percussion : Lightly tap body part directly with fingers or hand.

* Indirect or bimanual percussion : Tap finger(s) of dominant hand against finger of non-dominant hand, held against the body part.



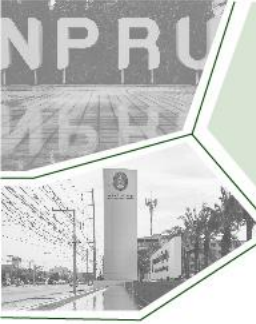
Photo by Wanpen

Then determines a hearing for a degree of sound propagates



Photo by Wanpen



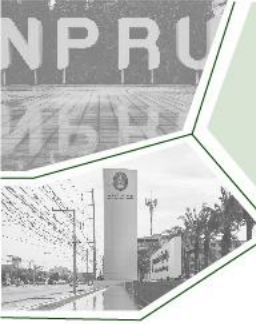


Characteristic tones from percussion



- The degree to which sound propagates is called **Resonance.**
- Percussion produces characteristic tones **Tympanic, Hyper-resonant, Resonant, Dull and Flat.**

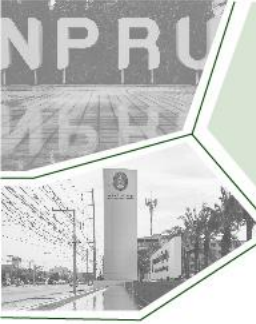




Tympanic

- Tympanic sounds are hollow, high, drumlike sounds.
- Tympani is normally heard over the stomach but is not a normal chest sound.
- Tympanic sounds heard over the chest indicate excessive air in the chest, such as may occur with **pneumothorax**.



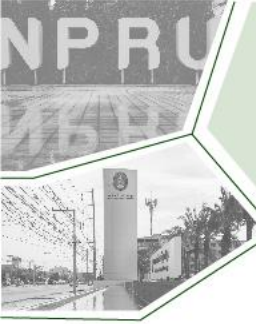


Resonant and Dull

- Resonant sounds are low pitched, hollow sounds heard over normal lungs tissue.
- A dull sound indicates the presence of a solid mass under the surface.

Dull sounds are normally heard over dense areas such as the heart or liver. Dullness replaces resonance when fluid or solid tissue replaces air-containing lung tissues, such as occurs with pneumonia, pleural effusions, or tumors.

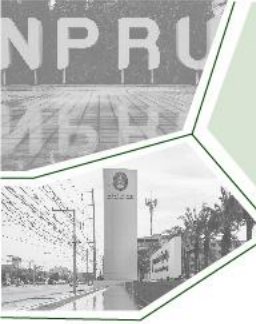




Characteristic tones from percussion

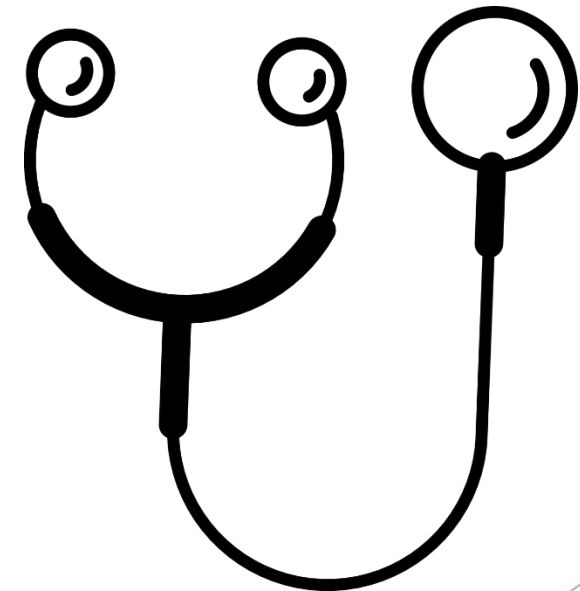
- Hyper resonant → Hyper Inflated Lungs Tissue
- Resonant → Normal Lungs Tissue
- Dullness, Dull → Liver
- Flatness, Flat → Bone

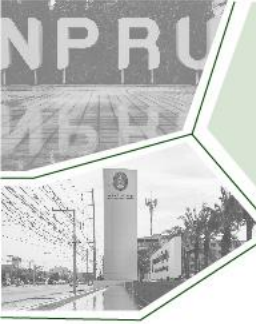




4. Auscultation

- **Listening to body sounds, movement of air or fluid**
- **Listen for sound intensity, pitch, duration, and frequency.**
- **Amplification of sounds with stethoscope**
- **Chestpiece has diaphragm and bell.**

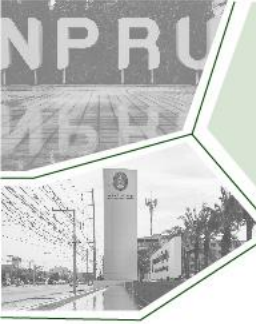




4. Auscultation

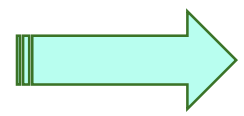
- Bell, rested lightly on skin, is **best for low-frequency sounds** (e.g., bruits, venous hums, third and fourth heart sounds); heavy pressure causes bell to function like a diaphragm.
- Diaphragm is **best for high-frequency sounds** (e.g., breath sounds, friction rubs, bowel sounds).
- Place warmed bell or diaphragm on exposed area.





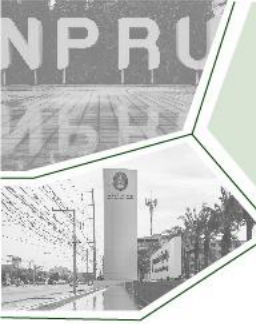
Topic Summary

- Physical examination is the process of examining the patient's body to determine the presence or absence of physical problems.
- The goal of the physical examination is to obtain valid information concerning the health of the patient.
- There are four techniques used in physical examination and these are;- inspection, palpation, percussion and auscultation.



Use your eye to see, your finger to feel,
your ear to hear and your noses to smell





Thank You!

มหาวิทยาลัยราชภัฏนครปฐม
Nakhon Pathom Rajabhat University



Wanpen Waelveerakup,

Email: wanpenw@webmail.npru.ac.th

Ruffel Joy C. Manalo,

Email: rjcm02071982@gmail.com

