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Volume 2

2nd Edition

Principles & Practice of NURSING

Senior Nursing Procedures






As per the revised INC Syllabus

Sister Cecy Correia

JAYPEE

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CHAPTER 1

Health Assessment

CHAPTER OUTLINE

- Definition
  - Four Types of Assessment
  - Frameworks of Health Assessment
  - Conducting a Health Assessment
- General Principles
  - Indication for Health Assessment
- Techniques/Methods of Examination and Assessment
  - Purpose
  - Equipment
- Methods
  - Inspection
    - For Inspection
  - Palpation
- Points to be Noted
  - Percussion
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  - Examining the Cranial Nerves
  - Many Clinical Use a 5-Point Scale Rate
  - Examining the Reflexes
  - Alterations
  - Altered Level of Consciousness
- The Role of a Nurse
- Function

INTRODUCTION

- Health assessment is vital and essential in any healthcare setting.
- Nurse will get reliable and important information in detail about client's physical and mental status.
- The nurse can observe vital signs, through TPR, BP, check height, weight, and circumferences.
- She can observe skin, head, eyes, and do head-to-toe observation.
- This can be done by using the techniques such as inspection, palpation, percussion, auscultation, and collect all necessary and important data of adult health assessment.

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DEFINITION

Physical assessment is defined as complete assessment of client's physical and mental status.

Four Types of Assessment

1. Comprehensive health assessment
2. Ongoing partial assessment
3. A focused assessment
4. An emergency assessment

Frameworks of Health Assessment

- Functional health framework
- Head-to-toe framework
- Body system framework

Conducting a Health Assessment

- Nurse has to review general information
- Consider patient's culture
- Prepare aptly patient
- Prepare the conducive atmosphere
- Proper organize and document
- Introduce the patient
- Take health history (in health history collect the information of biographic data, chief-complains, present health history, past health history, etc.).

GENERAL PRINCIPLES

- Caring for the client to get active cooperation, an accurate history is the foundation on which data are collected. It will depend on the information available in the client's record.
- Spend time with client to gather detailed information about what client feels, thinks and knows about, will help to prevent time consuming errors and misunderstanding later.
- Skill in interviewing.
- The client must feel that his concerns are being heard and dealt with sensitivity.
- Make client comfortable. Explain who you are and why you are there, your facial expression, body movement, and tone of voice are pleasant, do not be in hurry and convey the attitude of sensitive listeners, so that the client feels free to express thoughts and feelings. Make client realize that this is done for his benefits.
- Purpose of information is to eliminate confusion.
- *Interviewing techniques:* Begin explaining, I am going to ask you many questions about your body that will help in understanding your present problems.

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- *Components:* Identifying information; chief complains, history of present illness; past medical history; family history, review of systems, personal and social history, all this will help a nurse to get data.

Indication for Health Assessment

- On admission
- Before and after diagnosis and therapeutic procedure
- On discharge
- On follow-up
- Health camps

TECHNIQUES/METHODS OF EXAMINATION AND ASSESSMENT

- Inspection
- Palpation
- Percussion
- Auscultation

Purpose

- It gives baseline information data regarding client health status at the time of hospitalization.
- To detect disease in its early stage.
- To determine the cause and extent of disease.
- To understand condition of disease, any improvement or regression.
- It determines the nature of the treatment or nursing care needed for the client.
- To safeguard the client and his family by noting the early stages signs especially in case of communicable disease.
- To contribute to the medical research.
- To find out whether the person is medically fit or not for a particular task.

Equipment (Figs. 1.1 and 1.2)

- Cotton applicator stick
- Flashlight
- Otoscope and ophthalmoscope
- Reflex hammer
- Safety pin
- Blood pressure instrument
- Stethoscope
- Thermometer
- Tongue blade
- Tuning fork
- Additional items may include disposable gloves and lubricant for rectal examination and speculum for examination of female pelvis.

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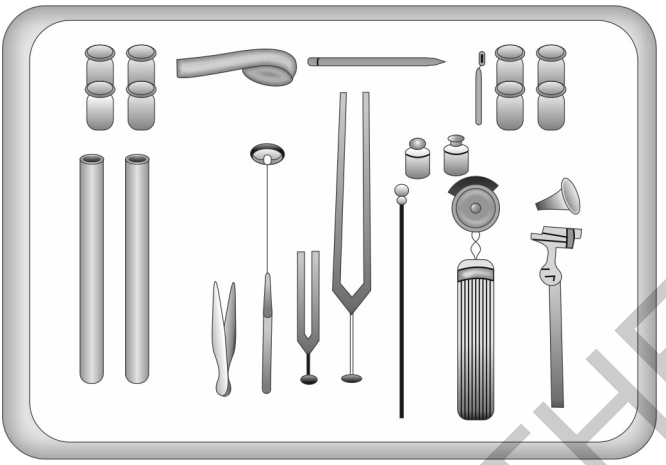
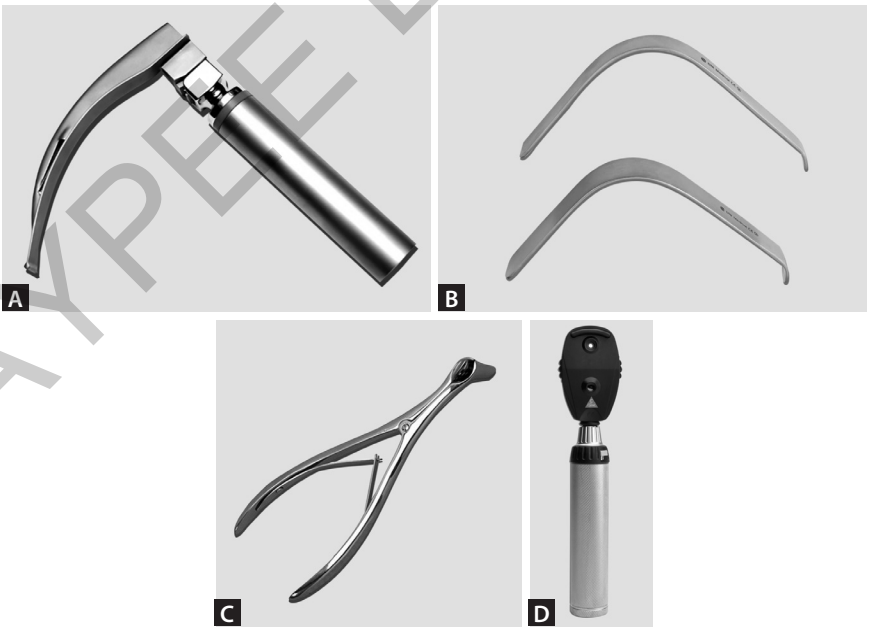


Fig. 1.1: Central nervous system, examination tray.



Figs. 1.2A to D: (A) Laryngoscope; (B) Tongue depressor; (C) Nasal speculum; and (D) Ophthalmoscope.

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METHODS

Inspection

It is a systematic visual examination of the client. It reveals any temporary eruption on skin, rash, *soar*, color, size, shape, contour, or symmetry of the body parts, any signs of distress, facial expression and mood, body size, grooming, hygiene.

Requisites for Inspection

- Good lighting and exposure are essential
- Inspect each area for size, shape, color, symmetry and proposition, and find out any deviation from normal
- Use additional lights for examining body cavities, e.g., oral
- Use sense of olfaction along with visual to detect abnormalities, e.g., bad breath indicates unhygienic mouth condition, smell significant to diabetic acidosis.

Palpation

- It is the technique in which the examiner feels with his finger or both hands by touch.
- It is feeling the body or a part with hands to note size and position of the organ.
- Hands and fingers are sensitive tools and can assess temperature, turgor, texture, moisture, vibrations, size, position, consisting mass, and fluid.
- The dorsum surface of fingers is used to measure temperature, blamer surface for texture shape, fluid size, consistency and pulsation vibration is palpated with palm.

POINTS TO BE NOTED

1. Client should be relaxed and comfortable, observe nonverbal signs of discomfort.
2. Palpation should be done with warm hands with short fingernails and a gentle approach.
3. Palpation should be done slowly and gently.
4. For light palpation, hand is depressed about 1 cm
5. Various palpations can be done with parts of hands as depicted in the following Table.

Part of hands	***Types of palpation***
Fingertip	To assess texture, shape, size, consistency and palpation
Dorsum of hand	To assess temperature
Palm of hand	Assess vibration pinching of fingers

Percussion

It means tapping with fingers. Its sound indicates whether the underlying tissues are solid or filled with air or fluid.

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Various Sounds on Percussion

- **Resonance**: A low-pitched and loud sound heard over normal lung tissues.
- **Hyper-resonance**: Very loud low-pitch sound heard over normal finger than resonance and is booming quality signifies emphysema (accumulation of air).
- **Tympani**: A drum-like sound heard over the air-filled tissues such as gastric air bubble.
- **Dull**: A medium-pitched sound with a medium duration without resonance heard over solid tissues such as heart, liver.
- **Flat**: A high-pitched sound without a resonance over complete solid tissues such as hand and thigh.

Sound	*Intensity*	*Pitch*	*Length*	*Quality*	*Example of origin*
Resonance (heard over part air and part solid)	Loud	Low	Long	Hollow	Normal lung
Hyper-resonance (heard over mostly air)	Very loud	Low	Long	Booming	Lung with emphysema
Tympany (heard over air)	Loud	High	Moderate	Drum like	Puffed-out cheek, gastric bubble
Dullness (heard over more solid tissue)	Medium	Medium	Moderate	Thud like	Diaphragm, pleural effusion
Flatness (heard over very dense tissue)	Soft	High	Short	Flat	Muscle bone, thigh

Methods of Percussion

- **Direct**: Striking the body surface directly with one or two fingers, e.g., ascetic thrill.
- **Indirect**: Placing the middle finger of the nondominant hand firmly against body an striking the distal joints of nondominant finger with the middle fingers of the dominant hand.

Auscultation

- It is the process of listening sound that is generated within the body with the help of stethoscope.
- The heart and blood vessels are auscultator for moving air (breathe sounds), abdomen is auscultator for movement of gastrointestinal contents (blood sounds) with it, we come to know the frequency, loudness, quality, and duration of sound.

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Manipulation

It is moving of a part of the body to note its flexibility; limitation of movement is discovered by this method.

Equipment	
Sphygmomanometer	To measure BP
Stethoscope	To listen body sounds
Fetoscope	To listen fetal heart sounds
TPR tray	To assess vital signs
Tongue depressor	To examine mouth and throat
Pharyngeal retractor	To examine pharynx
Laryngoscope	To examine larynx
Tape measure	To measure height, circumference of head, and abdominal girth
Flash light	To visualize any part
Weighing machine	To check the weight
Ophthalmoscope	To examine inner eye
Otoscope	To examine the ear
Tuning fork	To test the hearing
Nasal speculum	To examine the nostril
Percussion hammer, safety pin, cotton wool	To test reflexes cold and hot water in the tubes
Vaginal speculum	To examine the genitals of women
Proctoscope	To examine the rectum
Gloves	To control cross infection
Sterile specimen bottle slices cotton applicators	To collect specimen if any

PREPARATION OF THE CLIENT

- Keep the client clean
- Shave the necessary, empty the bladder and bowel
- Keep the clients in a comfortable position loosen the garments and change into the hospital clothes. Wrap the client with extra sheet and expose only needed areas.

Mental Preparation

- The client is quiet new to the hospital situation and may be anxious.
- Explain the procedure to gain confidence and cooperation.
- As far as possible the nurse should remain with a female client.

Maintain Privacy

- Separate room with doors closed
- Drape client
- Relatives are not allowed.

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- As far as possible natural light should be available
- There should be adequate light.
- Comfortable bed to maintain a special examination table
- Different areas assessed, different positions given, symptoms observed.

Types of Reliable Information

- Date and time
- Client's name, address, phone, race, religion, birth, age
- Name of referring practitioner
- Insurance data
- Clinic record is valuable source
- To allow him to describe his own problems and expectations
- To identify the overriding problems for which client is seeking help
- Chronic condition client has many problems focus
- Identify client's feeling of fear, anxiety
- Ask what reason client have come to hospital
- How long the problem has been present?
- Write down what client says
- Describe a symptom or problem that may be a clue to future diagnosis
- Client's present condition
- History of present illness will vary with each case
- Pain sharp, dull, knife-like
- Location of symptoms, intensity, epigastric pain after meals
- Aggravating or alleviating factors
- Date onset of problem accurately
- Describe character of symptoms and weather they are changed overtime
- Note onset, duration, fever, chills
- Ask if previous treatment obtained
- Organize information for recording or presentation
- Past medical history, ask sleeping patterns, appetite, activities
- Any acute infectious diseases
- Operation
- Previous hospitalization, major illness, injuries, allergies, psychiatric history
- In personal, social history
- Ability to cope present life situation
- Patterns, habits
- Consumption of alcohol, tobacco
- Home condition, mental status, nature of family relationships
- Economic condition, source of income, health insurance, Medicare
- House own, rented, occupation, employment, and working condition
- Exposure to noise, pollution, tension, stress, etc.
- Health problems should occur through the lifecycle—focus infancy, childhood, adolescence, adulthood, and older age
- Immunization status, nutrition
- How would you describe your general health?

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- Has your weight been stable over the past 5 years?
- Family history to show any familial tendency or hereditary
- Determine what sort of condition a family is in and how this affects the client, e.g., asthma, epilepsy, mental illness, obesity, hemophilia, sickle cell
- Working hours, job satisfaction, religion
- Is there anything you would like to tell me or what do you think is the matter with you?

Medical Examination

- Includes height and weight
- Waist circumference to determine the patient's height and weight.
- Use a measuring stick or tape **(Fig. 1.3)**.

OBSERVATION

General Appearance and Nutritional Status

Each systemwise, eye, ear, nose, throat, teeth, typhoid, lymph nodes, cardiovascular system, respiratory system; gastrointestinal system; urinary system; skeletal system; nervous system; skin, pulse rate, blood pressure.

It is Important to Know if there is any Condition, which Tends to Occur in Your Family

- **Skin**: Rash, itching, change in pigmentation or texture, sweating, condition of nail, hair growth, and distribution.
- **Skeletal**: Stiffness of joints, pain, deformity, restriction of motion, swelling, redness, heat, any daily activities that is difficult to perform
- **Head**: Headache, dizziness, syncope, head injury
- **Eye**: Vision, pain, diplopic, photophobia, blind spots, itching, burning, discharge, glaucoma, cataract, lenses worn, infection
- **Ear**: Hearing difficulty, earache, discharge, tinnitus, vertigo

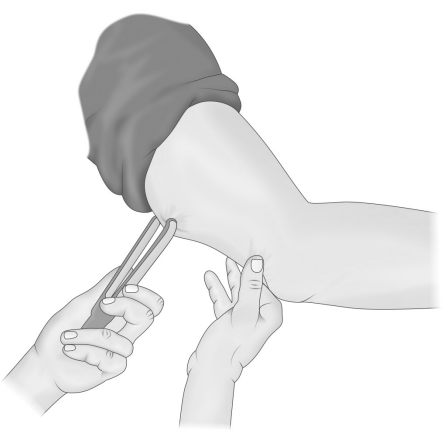


Fig. 1.3: Physical examination—Skin fold measurement.

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- **Nose**: Sense of smell, frequency of cold, obstruction, epistaxis, postnasal discharge, sinus pain

Olfaction	*Odors*	*Cause*
Oral cavity	Alcohol	Ingestion of alcohol
Urine	Ammonia	Urinary tract infection
Skin	Body odor	Poor hygiene
Wound site	Foul smelling	Wound abscess
Vomits	Foul smelling	Bowel obstruction
Rectal area	Foul smelling	Fecal incontinent
Stool		Malabsorption, plion syndrome
Oral cavity	Halitosis	Poor dental hygiene, diabetic acidosis
Skin	Stale urine	Urine acidosis
Draining wound	Sweat heavy thing odor	Pseudomonas infection
Cast body part	Musty odor	Infection inside cast
Tracheotomy mucous membrane	Foul smelling	Infection of bronchial tree

- **Teeth**: Pain, bleeding, abscess, extractions, dentures, dental hygiene practices
- **Mouth and tongue**: Soreness of tongue or buccal, mucosa, ulcers, swelling
- **Throat**: Sore throat, tonsillitis, hoarseness, dysphasia
- **Neck**: Pain, stiffness, swelling, enlarge glands, or lymph nodes
- **Endocrine**: Goiter, thyroid tenderness, tremors, weakness, tolerance of heat and cold, change in skin, muscle cramps, polyuria, polydipsia, polyphagia, hormone therapy
- **Respiratory**: Pain in the chest, dyspnea, wheezing, cough, sputum
- Night sweats
- Exposure to tuberculosis
- **Hematological**: Anemia tendency to view, thrombosis, thrombophlebitis, any known abnormalities of the blood cells
- **Appetite and digestion**: Intolerance to food, regurgitation, heart burn, nausea, vomiting, hematemesis
- **Bowel**: Diarrhea, flatulence, hemorrhoids, jaundice, history of ulcer, gall stones, polyps, tumors
- Puberty onset, voice change, onset of menses, dysmenorrheal, pregnancy, contraceptives use
- **Mental status**: Orientation to time, place, person
- How client views himself.

PERIPHERAL CIRCULATION

Extremities Palpation

Findings in absence of peripheral pulses indicate peripheral vascular diseases.

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Palpate the skin over the tibia for edema by squeezing the skin for 30 to 60 seconds.

- *Physical assessment* or the physical examination is an integral part of nursing assessment.
- The physical examination is usually performed after the health history is taken. In actual practice, all relevant body systems are tested.
- A "complete" physical examination is not a "routine" many of the elements are selectively addressed as a function of the individual's particular problem.
- The process of physical examination has four fundamental processes are employed in the physical examination: Inspection, palpation, percussion, and auscultation.

PHYSICAL EXAMINATION APPROACH

- The examination is carried out in a well-ventilated, warm area.
- The patient is undressed and draped appropriately and only areas to be examined exposed.
- Patient's physical and psychological comfort is considered at all times.
- Expose the part to be examined drape the rest
- Observe head to foot of each client, e.g., skin, head and neck, thorax and lungs, breasts, cardiovascular system, abdomen, rectum, genitalia, neurological system, and musculoskeletal system
- Consider anatomy and possible abnormalities
- Compare finding off one side to other
- Encourage cooperation by explaining procedure

Technique

Quality of sound, pitch, duration, and intensity done with middle finger of right hand (**Figs. 1.4 to 1.6**).

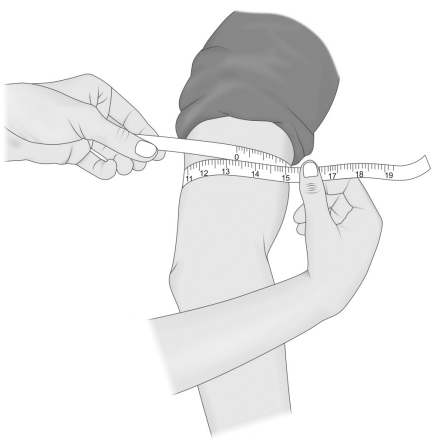


Fig. 1.4: Arm circumference.

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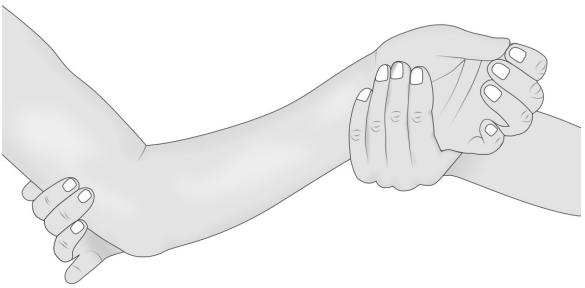


Fig. 1.5: Assessment of range of motion.

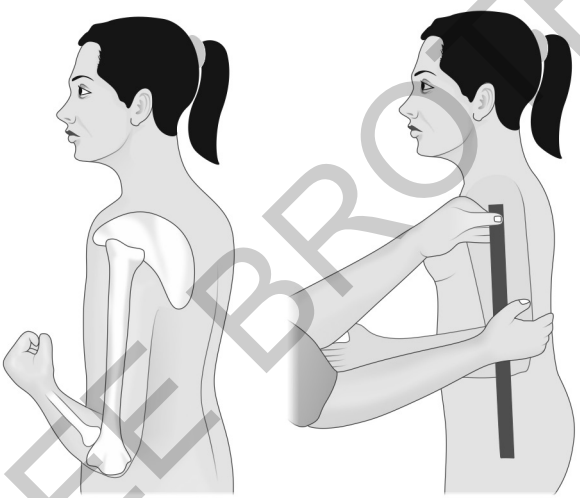


Fig. 1.6: Adult physical assessment.

- **Inspection** (the person looks sick; the person appears chronically ill, posture and stature, body movement; nutrition; speech pattern, body temperature)
- **Palpitation**: Murmurs, thrills
- **Percussion**: Dull sound, flatness, resonance
- Auscultation by use of stethoscope

Neurological examination, which includes a variety of tests, observations, e.g., cerebral function is abnormalities, which may cause disturbances in communication and intellectual functioning and in patterns of emotional behavior. Its assessment divided into five components:

1. Cerebral function
2. Cranial nerves
3. Motor system
4. Sensory system and
5. Reflexes

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Mental Status

- Begins by observing client's appearances and behavior
- Noting client's dress
- Grooming and personal hygiene
- Posture
- Gestures, movements
- Facial expression, which provides good information.
- The client's manner of speech and level of consciousness assessed
- Observe, is the client's speech clear and coherent?
- Is the client alert and responsive or drowsy and sumptuous?
- Assessing orientation to time and place
- Does the client know what day it is?
- What year it is?
- Is he aware of where he is?
- Is the capacity of immediate memory intact?
- **Intellectual function**: The average IQ can count backward from 100 or to subtract 7 from 100
- **Thought content:** Are the clients thoughts spontaneous, natural, clear, relevant, and coherent?
- **Emotional status**: Is he angry, irritable, fluctuates moods?
- **Perceptions**: Inability interprets or recognizes objects, e.g., client may see pencils but unable to know what it is called what to do with it.
- **Motor ability**: This is carried out by asking client to perform a skilled act, e.g., throws a ball, move a chair. Can he write his name or copy a simple figure that is drawn. Document the findings. Include assessment of muscle size, tone and strength, coordination, and balance.

CLINICAL EXAMINATION

Examining the Cranial Nerves

- With eyes closed, the client identifies familiar odors, e.g., coffee, tea.
- Touch cotton on face, pain tested with sharper and dull end and his responses are incorrect, test with temperature sensation.
- Test tubes of cold and hot water used alternatively, observe smile, elevated eyebrows, frowns.
- Ability to discriminate salt and sugar test, the client made to walk across the room and observed posture and gait.
- The muscles are inspected, any evidence of atrophy, tension present in the muscles at rest, rigidity, flaccidity.

Muscles strength tested with ability to flex or extend the extremities against resistance.

Many Clinical Use a 5-Point Scale Rate

- 5 indicate full power of contraction
- 4 fair but not full strength

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- 3 just sufficient strength to overcome the force of gravity
- 2 indicate minimum contractile power
- 0 indicates no contraction

Balance and coordination: Heel-to-toe walking both forward and backward.

Examining the Reflexes

- Reflex hammer indirectly by striking the examiner thumb, which is firmly against the tendon, biceps, brachioradials, triceps, patellar, and ankle reflexes, abdominal reflexes, and Babinski response.
- A reflex hammer used to elicit deep tendon reflex. It requires a sound knowledge of the location of muscles and their tendon attachments, each tendon struck with equal force.
- *Biceps:* Place your right thumb on the patient's right biceps tendon located in the antecubital fossa, hold the hammer loosely, and strike your thumb with the least amount of pressure needed to elicit the reflex. Biceps reflex is striking the tendon of the flexed elbow.
- *Triceps:* In triceps, reflex arm is flexed at the elbow and positioned in front of the chest. Tendons have patient's hand his arm freely, while you support with nondominate hand, with the elbow flexed, strike the tendon directly using pointed end of the hammer.
- *Achilles:* Reflex support the foot in disinflation position, tap the Achilles tendon with hammer head, the foot should move downward in your hand
- *Quadriceps:* Reflexes checking with percussion hammer
- *Patellar reflex*: It is striking the patellar tendon just below the patella. The client may be sitting or lying position, ankle reflex, etc.

Alterations

- The nervous system of older adults undergoes many changes and it varies in degree as person ages. Diseases in the elderly often make it difficult to distinguish normal from abnormal changes due to structural changes muscle rigidity tremor, wresting loss of strength muscles, and slowness in movement. Number of neurological alteration occurs due to aging.
- Visual and hearing losses cause confusion, anxiety, disorientation, misinterpretation, and feeling of inadequacy. They feel cold more easily than heat, painful stimuli may decrease, and abdominal discomfort and chest pain require careful evaluation.
- Action of test buds decreases with age, smell, tactile, and mental alterations, change in mental status. The elderly client requires adequate time to receive and respond to stimuli, to learn, and to react.

Altered Level of Consciousness

- **Confused:** Disoriented to time, person, and place and has difficulty following commands, may be agitated or irreversible, may hallucinate.
- **Lethargic** in which speech and thought process slowed.
- **Obtunded**: Stays awake only with persistent stimulation

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- **Stuporous:** Response to painful stimuli and verbal responses is incomprehensible.
- **Comatose**: Does not response to environmental stimuli.
- Any sudden changes in clients' condition such as restlessness, confusion or increase drowsiness have neurological significance. It could be due to compression of brain, hematoma, edema, tumor, etc.

THE ROLE OF A NURSE

- The role of a nurse in the provision of health care is an ever-changing one.
- To facilitate the nursing process, nurses obtain the patient's history and perform physical examination. Her unique skills and knowledge to contribute to the resolution of patient problems.
- Health promotion goes beyond prevention to help people manage their health, live longer, and feel better.
- Nurses have played key roles in preventing in areas such as prenatal care, immunization, occupational health and safety, cardiac rehabilitation and education and public health, case finding, and early intervention.
- Nurses in all setting can meet health promotion needs of the clients, whether in hospital, clinic or homes.

FUNCTION

- Encouraging communication
- Remaining flexible
- Conveying empathy
- Reducing anxiety
- Cultural consideration
- Past life events related to health
- Education and occupation
- Gerontology consideration

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