

<b>Category</b>	<b>Systolic</b>	<b>Diastolic</b>
Normal	<130	<85
High Normal	130-139	85-89
Mild Hypertension	140-159	90-99
Moderate Hypertension	160-179	100-109
Severe Hypertension	180-209	110-119
Crisis Hypertension	>210	>120

prehypertension

Stage 1

Stage 2

## **Pain Assessment : The 5th Vital Signs**

**Pain is unpleasant sensory and emotional experience associated with actual or potential tissue damage.**

### **Sources of Pain : -**

- 1- Visceral Pain (Kidney , Stomach) .**
- 2- Deep Somatic Pain (Blood vessel, Joint tendon, Bone, Muscle) .**
- 3- Cutaneous Pain (Subcutaneous injury, Burn) .**
- 4- Referred Pain (MI) .**

### **Types of Pain : -**

- 1. Acute Pain .**
- 2. Chronic Pain .**

## **Subjective Data : -**

### **1) Initial Pain Assessment :**

- 1-Location .**
- 2- Duration .**
- 3- Quality (burning – stabbing) .**
- 4- Intensity .**
- 5- Aggravating .**
- 6- Relieving Factors .**
- 7- Expressing Pain .**
- 8- Effects of pain that impairs function .**

### **2) Pain Assessment Tools : -**

- Pain rating scale (0 – 10) .**
- Descriptor scale (Mild , Modem) .**
- Original instructions.**

## **Objective Data : -**

- 1. The Joints : Passive range of motion .**
- 2. The Muscles and Skin (swelling , mass) .**
- 3. The Abdomen (size , symmetry) .**
- 4. Nonverbal Behaviors Pain .**

# General Survey Measurement

## Vital Signs

### Objective Data :-

#### 1- The general survey :-

##### a) Physical appearance :-

Age – Level of consciousness – Skin color – Facial features .

##### b) Body structure :-

Stature – Nutrition – Symmetry – Posture – Position – Body build contour .

##### c) Mobility :-

Gait – Range of motion .

##### d) Behavior :-

Facial expression – mood & affect – Speech – Dress – Personal hygiene .

#### 2- Measurement :-

Weight – Height – Skinfold thickness

# Physical Assessment

- There are four techniques to use in performing physical assessment:
- 1. **Inspection** 2. **Palpation** 3. **Percussion** 4. **Auscultation**
- In abdomen ex. which is Inspect – Auscultation – Percuss – Palpate.
- **Inspection**
  - Use vision, hearing & smell
  - Always first look for symmetry
  - Use good lighting
  - Use good exposure
- **Palpation**
  - Touch & feel with hands to determine:
  - Texture – use fingertips (roughness, smoothness).
  - Temperature – use back of hand (warm, hot, cold).
  - Moisture (dry, wet, or moist).
  - Organ location and size
  - Consistency of structure (solid, fluid, filled)
  - Slow and systematic
  - Light to deep (Deep = 2-3cm deep; Light = 1 cm deep)
  - Light palpation (tenderness)
  - Deep palpation (abdominal organs/masses)

## Different parts of the hands for assessing different factors :

- 1- Fingertips – fine tactile discrimination as of skin texture, swelling, pulsation, and determining presence of lumps .
- 2- A grasping action of the fingers and thumb – to detect the position, shape, and consistency of an organ or mass
- 3- The dorsa (backs) of hands and fingers – best for determine temp. because the skin here is thinner than on the palms .
- 4- Base of fingers (metacarpophalangeal joints) or ulnar surface of the hand- best for vibration .

## Types of palpation :-

- 1) Light palpation ..
- 2) Deep palpation .
- 3) Bimanual palpation

## Principles for Accurate Palpation

- Examiner finger nails should be short.
- Use sensitive part of the hand.
- Light Palpation precedes deep palpation.
- Start with light then deep palpation
- Tender area are palpated last
- Tell client to take slow deep breath to enhance muscle relaxation.
- Examine condition of the abdominal organs
- Depressed areas must be approximately “2cm”
- Assess turgor of skin measured by lightly grasping the body part with finger tips.



## Percussion

Tap a portion of the body to elicit tenderness that varies with the density of underlying structures.

Percussion denotes location, size and density of underlying structures, percussion requires dexterity براعه.

### Types of Percussion :-

1- Direct (immediate) : involving striking the body surface directly with one or two fingers

2- Blunt : used to detected tenderness over organs (e.g. kidneys) .

3- Indirect (mediate) : by tapping produce sound or tone that varies with density of the underlying structure .

Use a quick & sharp stroke

## Description of sounds

Sound produced by the body is characterized by intensity, frequency, duration and quality.

**Intensity, or loudness**, associated with physiologic so spectrum as opposed to the single-frequency sounds that we associate with music or the tuning fork.

**Duration** relates to the time elapsed from the beginning of the sound till the end of the sound.

**Quality** of sound relates to overtones that allow one to distinguish between different sounds is low; thus, the use of the stethoscope is needed.

**Frequency**, or pitch, of physiologic sound is in reality “noise” in that most sounds consist of a frequency.



## Five percussion sounds produced in different body regions

1. **Resonant** – normal lung
2. **Hyper resonant**: it's a louder and lower pitched than resonant sounds. Normally heard in children and very thin adults , and abnormally in emphysema
3. **Tympany** : A hollow drum-like sound produced when a gas-containing cavity is tapped sharply. Tympany is heard if the chest contains free air (pneumothorax) or the abdomen is distended with gas air filled (stomach)
4. **Dull** or thud like sounds are normally heard over dense areas such as the heart or liver. Dullness replaces resonance when fluid replaces air-containing lung tissues, such as occurs with pneumonia, pleural effusions, or tumors
5. **Flat**: shown in no air areas such as thigh muscle, bone and tumor

### Percussion sounds

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



## Auscultation

To listen for various breath, heart, and bowel sounds”

1. Direct auscultation – sounds are audible without stethoscope
2. Indirect auscultation – uses stethoscope

Listening to body sounds

Movement of air (lungs)

Blood flow (heart)

Fluid & gas movement (bowels)

Remember the sound changes in the abdomen...

by stethoscope

Describe sound characteristics (frequency, pitch intensity, duration, quality)

**Flat diaphragm** picks up high-pitched respiratory sounds best ,normal bowel ,heart sound.

**Bell** picks up low pitched sounds such as heart murmurs.

## Instrumentation used in assessment

Instruments, or “equipment's” used during physical assessment should be readily accessible, clean, in proper working order.

- **Ophthalmoscope:** "lighted instrument for visualization of the eye".



- **Otoscope:** for examination of the ear.



- **Snellen eye chart:** used as a screening test for vision.



- **Nasal speculum:** used for assessment of the nose.



- **Vaginal speculum:** examination of the vaginal canal and cervix.



- **Tuning fork:** for testing auditory function and vibratory perception.



- **Percussion hammer:** “reflex hammer” used to test reflexes and determine tissue density.