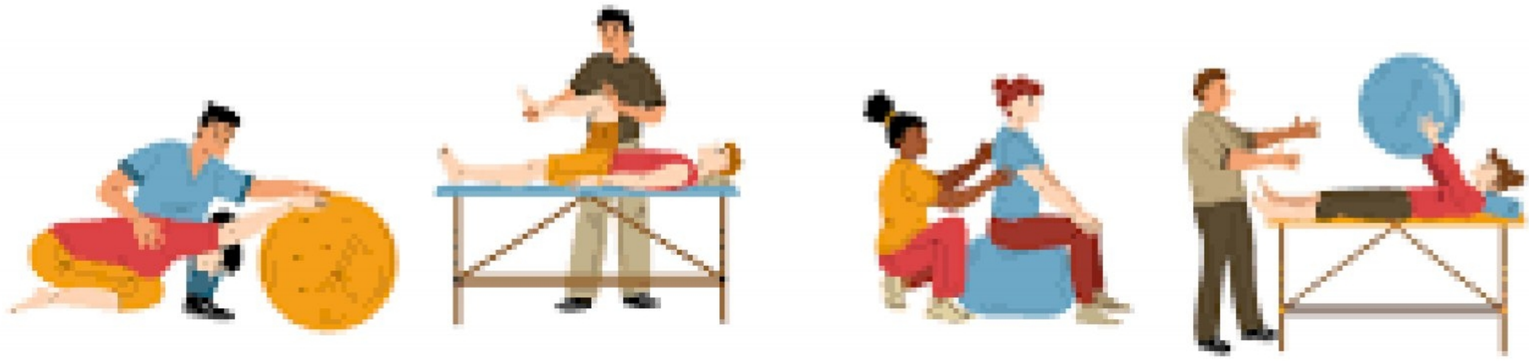
مدخل في العلاج الطبيعي

قسم تقنيات العلاج الطبيعي

المرحلة الأولى

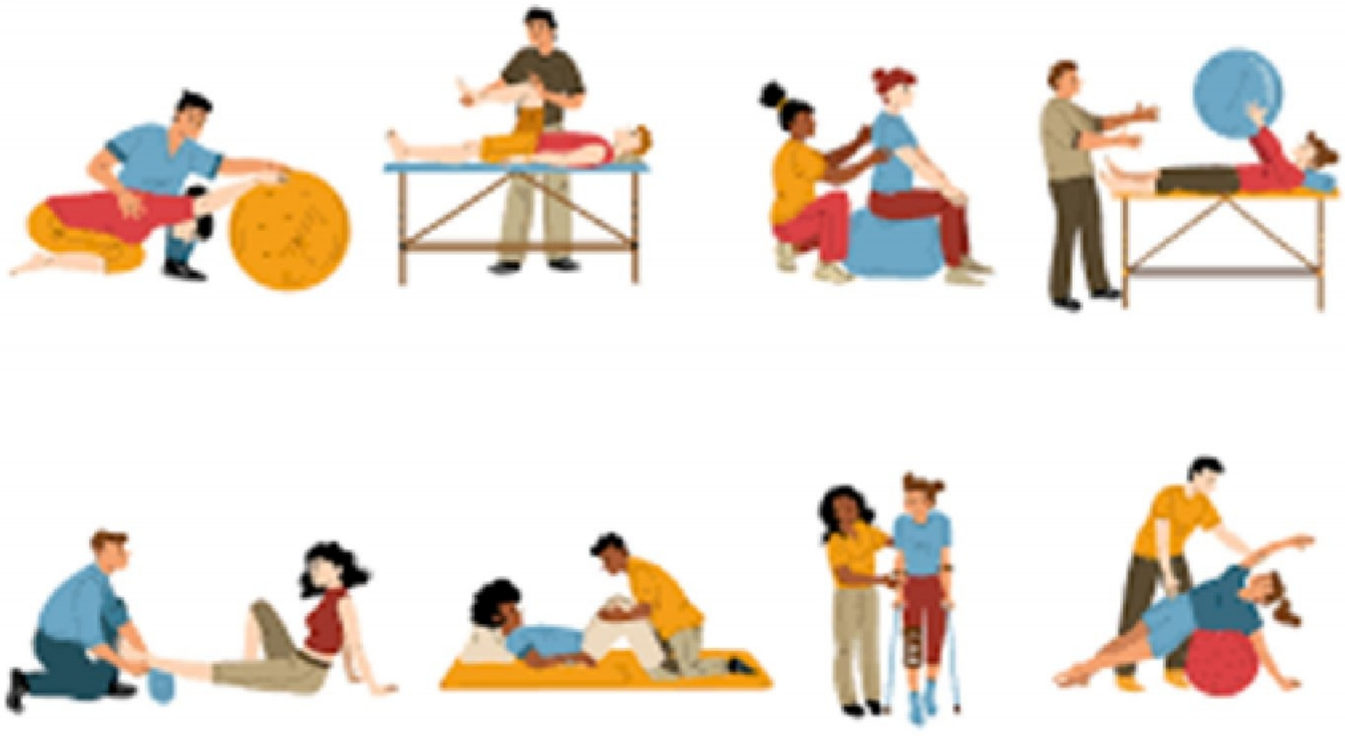
د. إبراهيم كاظم

Physical therapy (Physiotherapy)
History of physiotherapy.



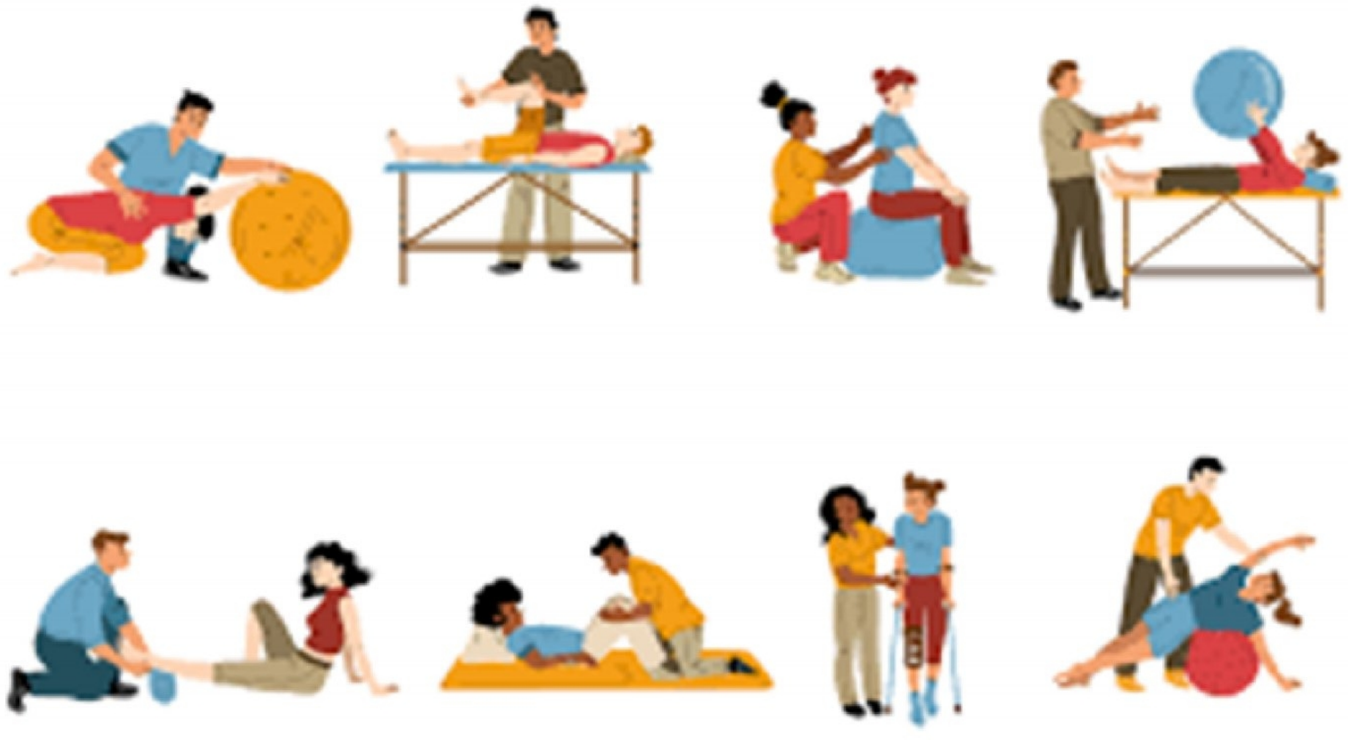
Physical therapy (Physiotherapy)
History of physiotherapy.

PT is a conservative science of the treatment and management after the clinical diagnosis of the diseases for **restoration of target system efficiencies, and pain management**



Physical therapy (Physiotherapy)
History of physiotherapy.

Clinical applications in the restoration, maintenance, and promotion of optimal physical function.



Physical therapy (Physiotherapy)
History of physiotherapy.

physiotherapy was rooted in 460 B.C. when the physicians like **Hippocrates and later Galenus** who may be believed to have been the first practitioners of physical

Physical therapy (Physiotherapy)
History of physiotherapy.

The **first use of the word physiotherapy** is found in German Language as the word “Physiotherapie” in 1851 by a military physician **Dr.Lorenz Gleich**.

Physical therapy (Physiotherapy)
History of physiotherapy.

Physiotherapists were given official **registration** by Sweden's National Board of Health and Welfare in 1887 which was then followed by other countries.

The word "Physiotherapy" was coined by an English physician Dr.Edward Playter in the **Montreal Medical Journal** in 1894 (after 43 years of t
"Ph

Physical therapy (Physiotherapy)
History of physiotherapy.

in 1914 in United States, **Reed College in Portland,** Oregon, graduated “reconstruction aides”.9

The establishment of the **modern physical therapy** is thought to be in Britain towards the end of the 19th century.

Physical therapy (Physiotherapy)
History of physiotherapy.

It was promoted further during the Polio outbreak of 1916 and during the First World War when the women were working with the injured soldiers.

Physical therapy (Physiotherapy)
History of physiotherapy.

Primarily in the 1940s the treatment consisted of exercise, massage, and traction but later in the early 1950s the **Manipulative procedures** to the spine and extremity joints **began to be practiced** especially in the **British Commonwealth countries**, in the early 1950s

Physiotherapy
BASIC TERMINOLOGY

Scientists and healthcare professionals use a common language of special terms when referring to body structures and their functions

DIRECTIONAL TERM	DEFINITION	EXAMPLE OF USE
Superior	Above or higher in position; toward the head.	The Shoulder is superior to the hand.
Inferior	Below or lower in position; toward the feet.	The hand is inferior to the Shoulder.
Anterior	Nearer to or at the front of the body.	The Patella is anterior to the Knee joint.
Posterior	Nearer to or at the back of the body.	The Knee joint is posterior to the Patella

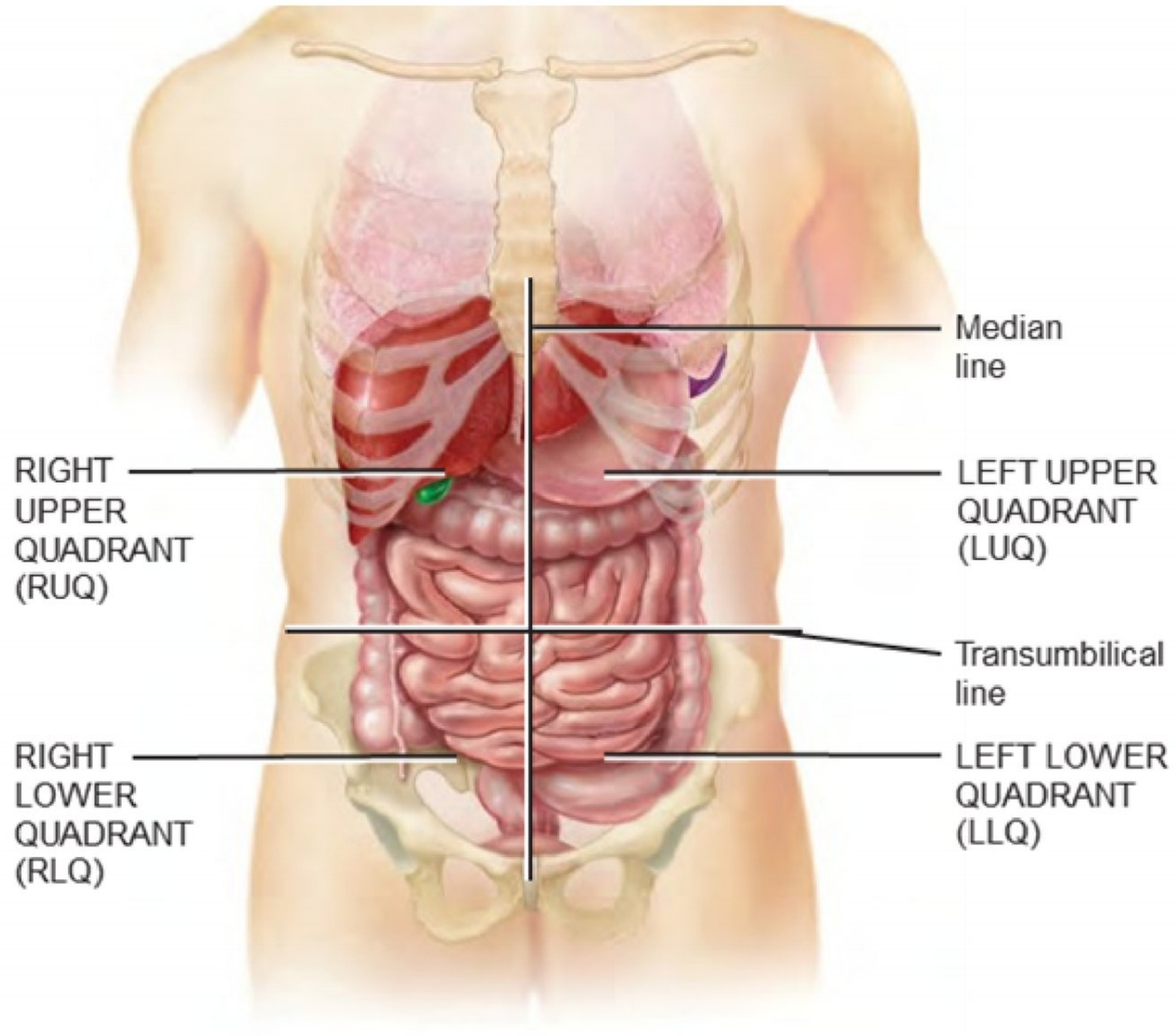
DIRECTIONAL TERM	DEFINITION	EXAMPLE OF USE
Ventral	Relating to (toward the belly side of the body; (synonymously anterior.)	The intestines are ventral to the vertebral column.
Dorsal	Relating to (toward the back side of the body; (synonymously posterior.)	The kidneys are dorsal to the stomach.
Medial	Nearer to the midline	The ulna is medial to the radius.
Lateral	Farther from the midline.	The lungs are lateral to the heart.

DIRECTIONAL TERM	DEFINITION	EXAMPLE OF USE
Inter-mediate	Between two structures.	The transverse colon is intermediate to the ascending colon and descending colon.
Ipsi-lateral	On the same side of the body's midline as another structure.	The gallbladder and ascending colon are ipsilateral.
Contra-lateral	On the opposite side of the body's midline from another structure.	The ascending and descending colons are contralateral.

DIRECTIONAL TERM	DEFINITION	EXAMPLE OF USE
Proximal	Nearer to the attachment of a limb to the trunk; nearer to the origination of a structure.	The humerus (arm bone) is proximal to the radius.
Distal	Farther from the attachment of a limb to the trunk; farther from the origination of a structure.	The phalanges (finger bones) are distal to the carpals (wrist bones).

DIRECTIONAL TERM	DEFINITION	EXAMPLE OF USE
Superficial	Toward or on the surface of the body.	The ribs are superficial to the lungs.
Deep	Away from the surface of the body.	The ribs are deep to the skin of the chest and back.
External	Toward the outside of a structure. (Is typically used when describing relationships of individual organs.)	The visceral pleura is on the external surface of the lungs.
Internal	Toward the inside of a structure. (Is typically used when describing relationships of individual organs.)	The mucosa forms the internal lining of the stomach .

The names of the abdominopelvic quadrants are **right upper quadrant (RUQ)**, **left upper quadrant (LUQ)**, **right lower quadrant (RLQ)**, and **left lower quadrant (LLQ)**.



Anterior view

Physiotherapy
BASIC TERMINOLOGY

General PT Terms and Definitions

Orthopedic: a specialty that focuses on treating disorders of the musculoskeletal system which is primarily made up of bones, muscles, ligaments, and joints.

Neurologic: a specialty that focuses on treating disorders of the nervous system (the brain, nerves, spinal cord, and more).

Physiotherapy
BASIC TERMINOLOGY

Movements & Positions

Abduction (Away): movement of a limb out to the side, away from the body, specifically away from midline (ex: like making a snow angel).

Adduction (Toward): movement of a limb towards the body, specifically towards midline.

Physiotherapy
BASIC TERMINOLOGY

Movements & Positions

Extension: straightening or "unbending" of a body part, such as when you straighten your elbow and rest your arm at your side (clinically, extension increases the joint angle measured between two bones).

Flexion: "bending" of a body part, such as lifting your hand to your mouth by bending at the elbow joint (clinically, flexion decreases the joint angle measured between two bones).

Physiotherapy
BASIC TERMINOLOGY

Movements & Positions

Range of Motion: the ability of a joint to move over a given distance (measured in degrees) and in a particular direction (ex: flexion or extension).

Passive Range of Motion: when a PT or special device moves your joints or limbs for you without your effort or help.

Physiotherapy
BASIC TERMINOLOGY

Movements & Positions

Active Assisted Range of Motion: when you contract your muscles along with a PT or device that is also assisting with the movement.

Active Range of Motion: when you move your joints without help from anyone or anything.

Physiotherapy
BASIC TERMINOLOGY

Movements & Positions

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Physiotherapy
BASIC TERMINOLOGY

Movements & Positions

Internal rotation: rotation of a joint in the direction towards the body (ex: reaching your hands into your back pants pocket or folding your arms across your chest is done by internally rotating at the shoulder joints).

External rotation: rotation of a joint in the direction away from the body (ex: raising your arms in the shape of a football goal post or bringing your hands out to the side to hold a jump rope is done by externally rotating at the

Physiotherapy
BASIC TERMINOLOGY

Movements & Positions

Hypermobility: the ability of a joint to move ***beyond*** the typical range or demonstrate excessive motion.

Hypomobility: a decrease in the ability of a joint to move ***within*** its typical range (ex: when a muscle is too tight, structural changes such as with arthritis, or other joint restrictions that don't allow typical movement to occur).

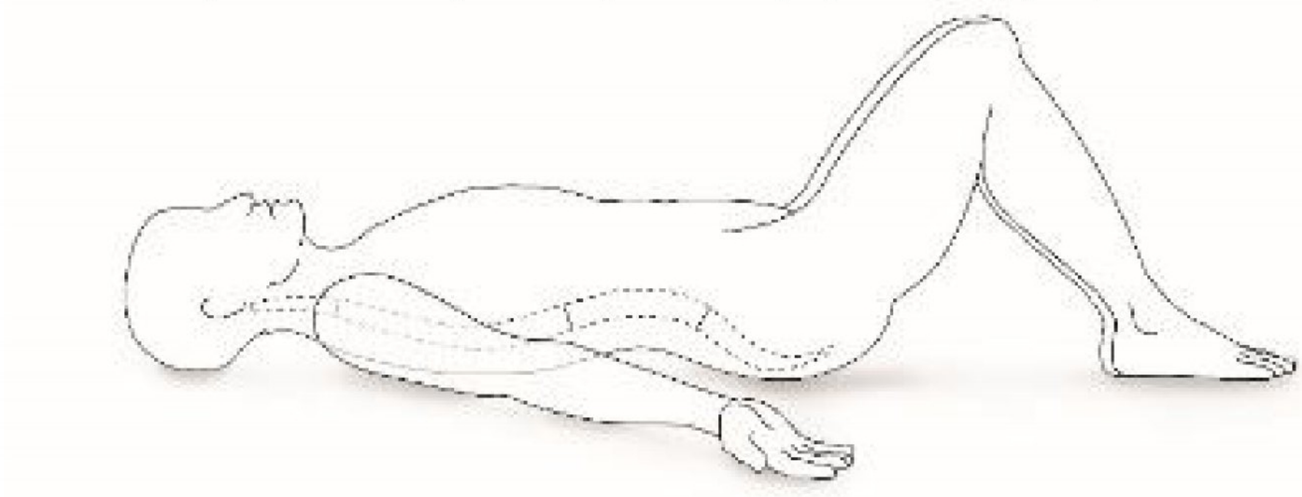
Physiotherapy
BASIC TERMINOLOGY

Movements & Positions

Supine: laying on your back (face up).

Prone: laying on your stomach (face down).

Hook Lying: laying on your back with



Physiotherapy
BASIC TERMINOLOGY

Muscle Strengthening & Flexibility

Isometric: movement that is performed by contracting the muscle while holding still or pressing against something stable, such as a wall or table (ex: quad set, glute set).

Concentric: when a muscle contracts while it is shortening (ex: performing a bicep curl causes the bicep muscle to shorten and you

Physiotherapy
BASIC TERMINOLOGY

Muscle Strengthening & Flexibility

Eccentric: when a muscle contracts while it is lengthening, typically to control movement with the force of gravity (ex: the lowering phase of a bicep curl, or the step down phase of going down stairs).

Progressive Overload: gradually increasing the weight, repetitions, volume, or intensity of your workout so that your muscles adapt and increase in strength/endurance capabilities.

Physiotherapy
BASIC TERMINOLOGY

Muscle Strengthening & Flexibility

Muscle Flexibility: how limber, or free a muscle is to move allowing joints the ability to move throughout their typical range of motion unrestricted.

Muscle Tone: typically most relevant with patients who have neurological diagnoses, the amount of tension on a muscle or its resistance to movement

Physiotherapy
BASIC TERMINOLOGY

Muscle Strengthening & Flexibility

Increased Tone: increased resistance to movement that can result in stiffness and difficulty moving through a full range of motion.

Decreased Tone: decreased resistance to movement that can result in decreased joint stability and muscle atrophy/loss of strength.

Physiotherapy
BASIC TERMINOLOGY

Muscle Strengthening & Flexibility

Increased Tone: increased resistance to movement that can result in stiffness and difficulty moving through a full range of motion.

Decreased Tone: decreased resistance to movement that can result in decreased joint stability and muscle atrophy/loss of strength.

Physiotherapy
BASIC TERMINOLOGY

Gait & Balance

Gait: the way in which you walk.

Balance: the ability to maintain your body, specifically your center of mass, within your base of support.

Base of Support: where your body makes contact with the surface below you (ex: your feet on the ground).

Physiotherapy
BASIC TERMINOLOGY

Gait & Balance

Motor Control: how you initiate, facilitate, and control intentional movement (involves how the nervous system and the musculoskeletal system work together to create purposeful movement).

Instability: often used when describing an unsteady gait or when referring to balance; refers to difficulty in maintaining balance, coordination, or control of the body that may result in falls.

Physiotherapy
BASIC TERMINOLOGY

Gait & Balance

Weight Shifting: transferring your weight from one side of your body to the other (can be side to side, forward and backward, diagonal).

Rehab Protocol: a specific timeline that outlines the appropriate progression of movement and exercises typically after a given surgery or injury for safe and optimal recovery.

Physiotherapy
BASIC TERMINOLOGY

Gait & Balance

Weight Bearing: accepting body weight through your extremities (can be legs or arms depending on the position but most commonly refers to standing positions).

Weight Bearing Status: the amount of body weight you are allowed to bear through a given body part (typically your legs) after a surgery.

Physiotherapy
BASIC TERMINOLOGY

Gait & Balance

Non-weight Bearing: you are not allowed to put any weight on a given extremity (ex: if your right leg is non weight bearing you cannot stand on it or ambulate without the use of an assistive device to keep the leg hovering above the ground).

Physiotherapy
BASIC TERMINOLOGY

Gait & Balance

Partial Weight Bearing: a specified amount of weight you are allowed to bear through an extremity that is not full weight bearing (ex: 50% weight bearing indicates you are only allowed to bear half of your body weight through the injured extremity, often using an assistive device to help offload the weight).

Physiotherapy
BASIC TERMINOLOGY

Gait & Balance

Weight Bearing As Tolerated: you are allowed to bear weight through a given extremity as much as you are able to tolerate without specific restriction.

Physiotherapy
BASIC TERMINOLOGY

Body Structures

Ligament: tissue that connects a bone to another bone.

Tendon: tissue that connects a muscle to a bone.

Joint: where two or more bones meet in the body and where movement occurs.

Physiotherapy
BASIC TERMINOLOGY

Body Structures

Sprain: an injury to a ligament.

Strain: an injury to a muscle or muscle tendon.

Vertebrae: the bones that make up the spinal column and run vertically down the back.

Physiotherapy
BASIC TERMINOLOGY

Body Structures

Cervical Spine: the part of your spine that makes up your neck and consists of 7 cervical vertebrae.

Thoracic Spine: the part of your spine that makes up your upper back and consists of 12 thoracic vertebrae.

Physiotherapy
BASIC TERMINOLOGY

Gait & Balance

Lumbar Spine: the part of your spine that makes up your lower back and consists of 5 lumbar vertebrae.

Scoliosis: when the spine curves in a sideways direction.

Physiotherapy
BASIC TERMINOLOGY

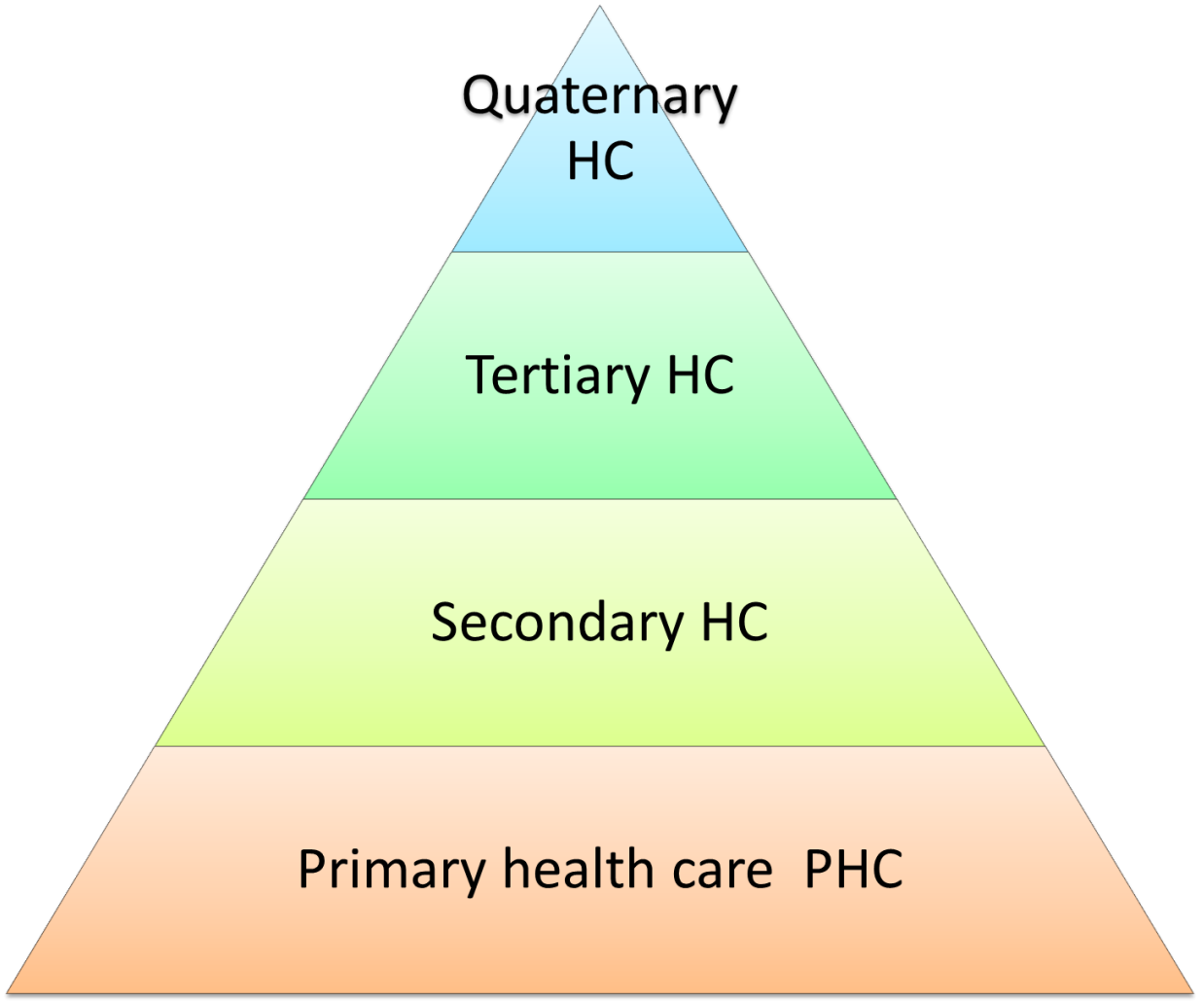
Body Structures

Kyphosis: an outward curve of the spine (excessive kyphosis results in an excessively round upper back).

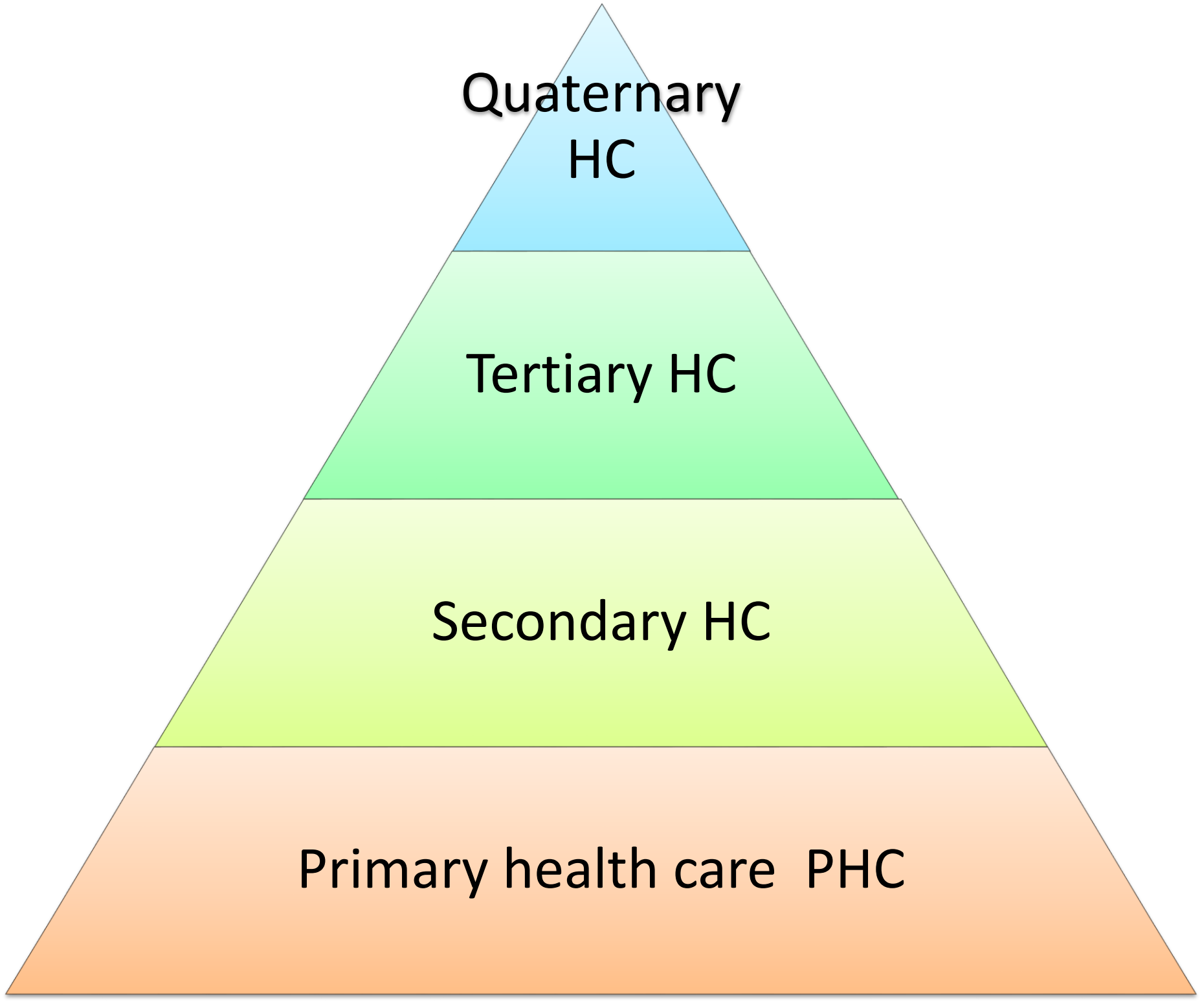
Lordosis: an inward curve of the spine (see the above image and note the cervical and lumbar spine both demonstrate lordosis).

levels of healthcare (HC)

There are various levels of health care practice within the broader health system, described as a pyramidal structure, representing increasing degrees of specialization and technical sophistication, generally with increasing costs of care.

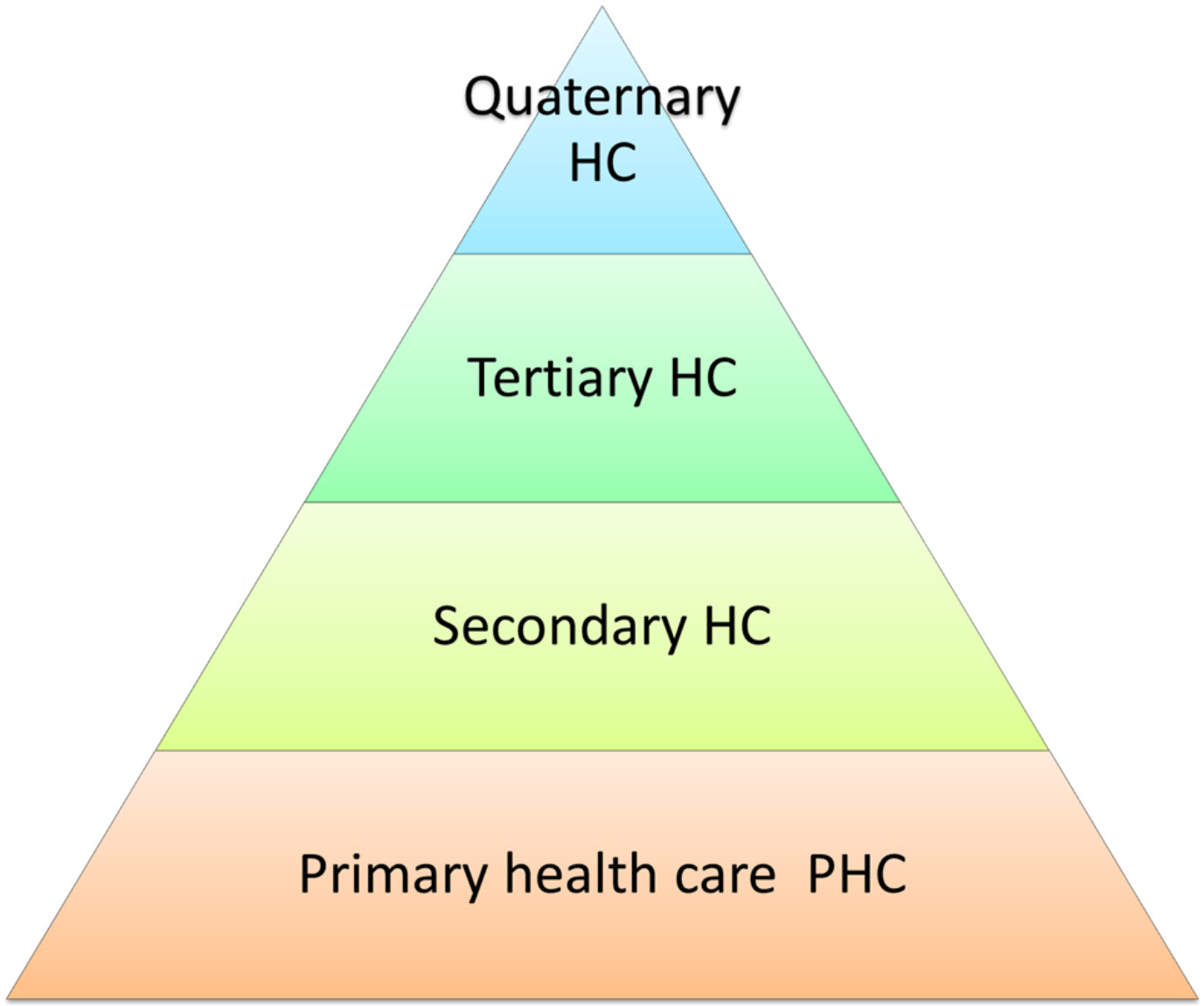


levels of healthcare (HC)



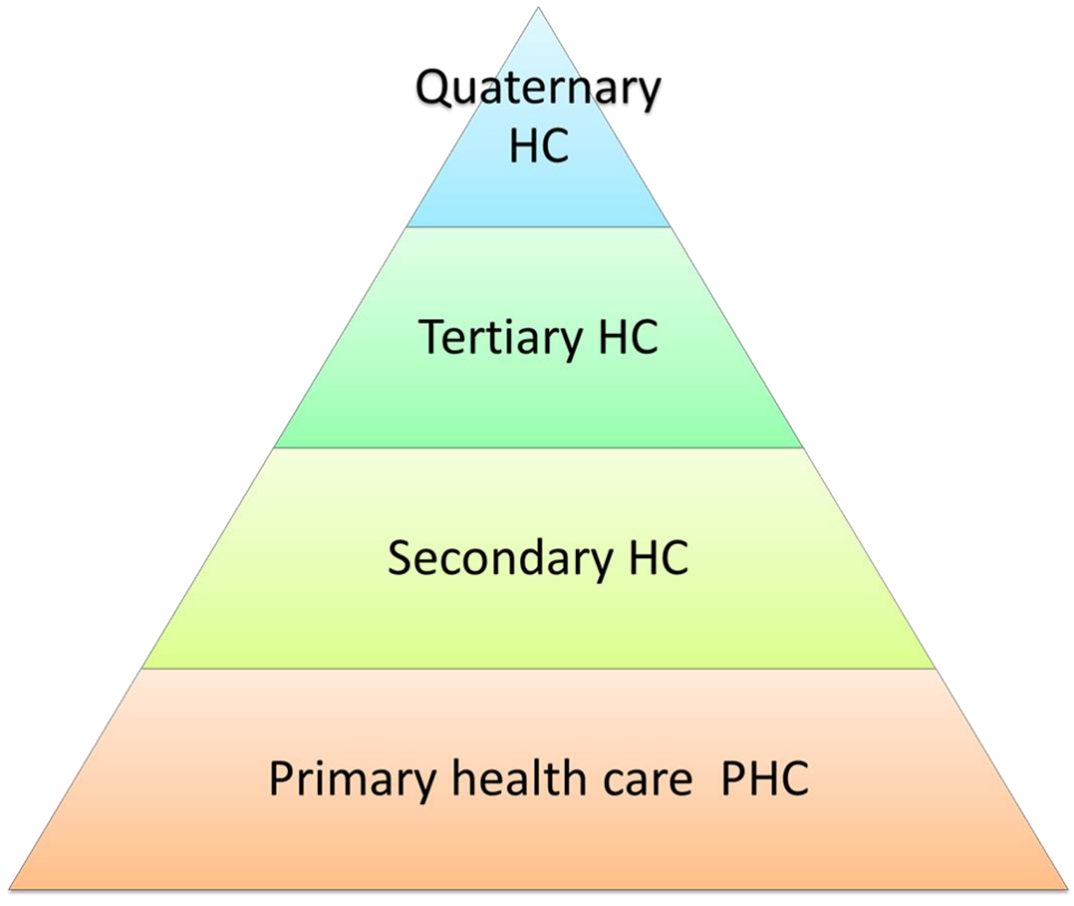
levels of healthcare (HC)

Four levels of healthcare known as ***primary, secondary, tertiary and quaternary care*** refer to the complexity and severity of health challenges that are addressed, as well as the nature of the patient-provider relationship.



levels of healthcare (HC)

The ***greatest number*** of patients are seen at the ***first level of primary care*** that is typically their first contact with the healthcare system, with *diminishing* numbers of patients seen as they are *filtered out of this first level into higher levels* of specialised care at secondary, tertiary and now even quaternary care.



levels of healthcare (HC)

The healthcare providers who are part of these four levels of healthcare, *together* provide medical services such as *evaluation, diagnostics, provision of treatment or onward referrals to the next level* of care based on the specific health needs.

levels of healthcare (HC)

Primary health care :-.

Generally the first level of care that patients receive when they have medical needs and society approach that includes health promotion, disease prevention, treatment, rehabilitation and palliative care.

levels of healthcare (HC)

Primary health care :-

In most cases for patients this means being *seen by a primary care physician (general practitioner or family physician),* or sometime a *wide range of other health care professionals* including a pharmacist, **physiotherapist**, speech and language therapist…etc., depending on the specific health care system within your country.

levels of healthcare (HC)

Secondary Health Care:-

It is the *specialist treatment* and support provided by doctors and other health professionals for *patients who have been referred to them usually from Primary health ca.* for specific expert care, most often provided in hospitals.

levels of healthcare (HC)

Secondary Health Care:-

It may include *planned operations*, specialist clinics such as cardiology or renal clinics, *or rehabilitation services such as physiotherapy.*

levels of healthcare (HC)

Secondary Health Care:-

It may include *planned operations*, specialist clinics such as cardiology or renal clinics, *or rehabilitation services such as physiotherapy.*

levels of healthcare (HC)

Tertiary Health Care:-

Referral for tertiary care services can come from both primary and secondary care health professionals and care is generally provided as an *inpatient based service, although there are elements of care that can also be performed on an outpatient basis.*

levels of healthcare (HC)

Tertiary Health Care:-

Examples of tertiary care services *include specialist rehabilitation,* cancer management, neurosurgery, cardiac surgery, transplant services, plastic surgery, treatment for severe burns, advanced neonatology services, palliative, and other complex medical and surgical interventions.

levels of healthcare (HC)

Quaternary Health Care:-

Quaternary care has been defined as an *extension of tertiary care in reference to advanced levels of medicine* which are highly specialised, and usually only offered in a very limited number of ***national or international*** centers.

levels of healthcare (HC)

Quaternary Health Care:-

Given the complexity or rarity in conditions of patients attending quaternary centers *longer hospital stays and increased mortality* may also be seen at this level of care.

Team approach and rehabilitation services.

PHYSICIAN • CERTIFIED NURSE ASSISTANT • PSYCHIATRIST • REGISTERED NURSE • DIETITIAN
PHYSICAL THERAPIST • CASE MANAGER • PHARMACIST • OCCUPATIONAL THERAPIST • WOUND CARE NURSE
SPEECH LANGUAGE PATHOLOGIST • RESPIRATORY THERAPIST • CHARGE NURSE • THERAPY ASSISTANTS

Team approach and rehabilitation services.

Team approach: – is a model involving a *team of professionals* with complementary backgrounds and skills working together toward common *goals*.

Team approach assuring quality of ***outcomes*** and quality of work ***environment***.

Team approach and rehabilitation services.

A rehabilitation program:-

is specifically designed for each person depending on the injury, disorder, or illness.

Team approach and rehabilitation services.

Five core professions offer rehabilitation services:

1. physical and rehabilitation medicine.
2. rehabilitation nursing.
3. Physiotherapy.
4. prosthetics and orthotics.
5. occupational therapy.

supported by many other rehabilitation professiona ds of the indivi

Team approach and rehabilitation services.

Five core professions offer rehabilitation services:

1. **physical and rehabilitation medicine.**

A healthcare provider who **evaluates and treats** rehabilitation patients, **usually the team leader**, and responsible for **coordinating** patient care services.

Team approach and rehabilitation services.

Five core professions offer rehabilitation services:

1. physical and rehabilitation medicine.
2. rehabilitation nursing.

A nurse who specializes in rehabilitative care and assists the patient in achieving maximum independence.

The focus is on medical care, prevention of complications, and patient and family education.

Team approach and rehabilitation services.

Five core professions offer rehabilitation services:

1. physical and rehabilitation medicine.
2. rehabilitation nursing.
3. Physiotherapy.

A therapist who helps ***restore function*** for patients with problems related to movement, muscle strength, exercise, and joint function

Team approach and rehabilitation services.

Five core professions offer rehabilitation services:

1. physical and rehabilitation medicine.
2. rehabilitation nursing.
3. Physiotherapy.
4. prosthetics and orthotics.

Orthotist. A healthcare professional who makes braces and splints used to strengthen or stabilize a part of the body.

Prosthetist. A healthcare professional who makes and fits artificial body parts, such as an artificial leg or arm.

Team approach and rehabilitation services.

Five core professions offer rehabilitation services:

1. physical and rehabilitation medicine.
2. rehabilitation nursing.
3. Physiotherapy.
4. prosthetics and orthotics.
5. occupational therapy.:- A therapist who helps ***restore function for patients*** with problems related to Activities of Daily Living ***(ADLs)*** including work, school, family, and community

physiotherapist role

Physiotherapists are key members of collaborative inter-professional teams due to their broad scope of practice

physiotherapist role

The physiotherapist roles include:

Physiotherapists basically are experts in problems with *joints, muscles and soft tissue* (back pain, neck pain, painful joints or sprains and strains).
In addition to it they paly many different roles in health and medical field.

physiotherapist roles

1. A members of Healthcare Teams.
2. Prevention and management.
3. Infection control:
4. Maternal and child health
5. Advocates
6. Educators and Mentors
7. Screeners:-
8. Lifestyle Conditions

physiotherapist role

1. As a members of Healthcare Teams can be cooperate with physician in:-
   a. Diagnosis by offer tests, request x-rays…etc.
   b. direct a patient to community-based activities.
   c. Refer the patient or advise them to self-refer.
   d. Discuss medication and may also prescribe son

physiotherapist role

1. **Healthcare Teams.**
2. **Prevention and management** of non-communicable diseases and lifestyle-related conditions (e.g. obesity, diabetes, heart disease).

physiotherapist role

1. A members of Healthcare Teams.
2. Prevention and management.
3. Infection control:

The Physiotherapy professionals must adhere and use the basic protective habits whenever they are in contact with the patient population.

physiotherapist role

1. A members of Healthcare Teams.
2. Prevention and management.
3. Infection control:
4. Maternal and child health

physiotherapy assists in **postpartum rehabilitation** and the overall emotional well-being of new mothers.
they can **improve body flexibility, muscle, urinary, and lifestyle functioning.**

physiotherapist role

1. A members of Healthcare Teams.
2. Prevention and management.
3. Infection control:
4. Maternal and child health
5. Advocates

physiotherapists' perception ability to engage in health promotion / education, and find variable levels of engagement.

physiotherapist role

1. A members of Healthcare Teams.
2. Prevention and management.
3. Infection control:
4. Maternal and child health
5. Advocates
6. Educators and Mentors

The role spans both academic and clinical fields, this applies equally to how we teach patients within our treatment rooms, physiotherapy students or anywhere along their career paths who are learning new information.

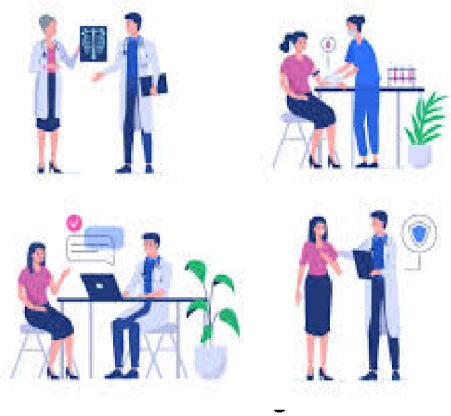
physiotherapist role

1. A members of Healthcare Teams.
2. Prevention and managemer
3. Infection control:
4. Maternal and child health
5. Advocates
6. Educators and Mentors
7. Screeners:-

The physiotherapist will help the patient's healthcare in detect any red flags identified will lead to emergency, or referral pathways to others medical field.

physiotherapist role

1. A members of Healthcare Teams.
2. Prevention and management.
3. Infection control:
4. Maternal and child health
5. Advocates
6. Educators and Mentors
7. Screeners:-
8. Lifestyle Conditions



Physiotherapist play an important r
Conditions

By promoting fitness and wellness and encouraging active living.

Disability prevention and principles of physiotherapy.

1. Impairments, Disabilities, and Handicaps.
2. Organization of physical therapy services (treatment and restoration).
3. Communication role in physiotherapy

Disability prevention and principles of physiotherapy.

- Physiotherapy is a form of healthcare that focuses on **restoring movement and function** to those whose mobility is limited by ageing, injury, disease, or disability.
- It is a holistic approach to health and wellbeing, with the aim of improving quality of life by aiding in recovery from injury and illness, as well as reducing pain and improving functional movement.

Disability prevention and principles of physiotherapy.

the rehabilitation team responsible for providing the necessary training, knowledge and skills to the person with an impairment to **optimize, enhance and maximize their independent function.**

Disability prevention and principles of physiotherapy.

Strategies for proper injury prevention and recovery such as:

1. Post operative rehabilitation.
2. Lifestyle modification.
3. Strength training.
4. Balance and proprioception training.
5. Proper warm-up and cool-down.

1- Impairments, Disabilities, and Handicaps

Impairment

any loss or abnormality of psychological, physiological or anatomical structure or function.

Disability

any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or **within the range considered normal for a human being**.

Handicap

a disadvantage for a given individual that limits or prevents the fulfillment of a role that is normal

2- organization of physical therapy services

Five ways physical therapy can help you achieve a faster, more effective, longer-lasting recovery:

1. It helps you regain strength and mobility.
2. It can help prevent further injury.
3. It helps you regain your balance and coordination.
4. It reduces inflammation and pain.
5. It prepares you for a successful return to activity.

3- communication role in physiotherapy.

Communication is a "two-way process of reaching mutual understanding, in which participants information, news, ideas and feelings but also create and share meaning.

3- communication role in physiotherapy.

Transferring of information can take the form of ***verbal communication*** such as speech and listening or ***non-verbal communication*** including body language, eye contact, gestures and expressions.

3- communication role in physiotherapy.

Effective clinical communication skills can improve health outcomes and are considered an *important aspect of high-quality healthcare.*

However, if it is used ***ineffectively*** it can have detrimental effects creating fear, confusion and anxiety in patients as well as encouraging resistance to lifestyle changes and healthy behaviors.

3- communication role in physiotherapy.

A physiotherapists clear explanation and expression of support could *lead to greater patient trust and understanding of treatment options.*

This in turn may facilitate patient adherence to recommended therapy, which in turn *improves the particular health outcome.*