11.1 The purpose of physiotherapy

arthritis	التهاب المفاصل	Assess	يقيم	Athlete	رياضي
disability	شلل	Elderly	كبار السن	encourage	الحث على
Evaluation	تقييم	Injury	إصابة	mobility	امكانية التنقل
Osteoporosis	هشاشة العظام	physiotherapist	اخصائي علاج الطبيعي	Physiotherapy	علاج طبيعي
Pregnant	حامل	premature babies	مولود مبكر	Prevent	يمنع
purpose	غاية	Stroke	سكتة دماغية	Surgery	عملية

physiotherapy (physical therapy)

helps to improve movement and function of the body when someone is affected by an injury, illness or disability.

It can help to move properly again & encourage some activities and lifestyle changes to help prevent further injury & improve overall health

people use physiotherapy			
premature babies	pregnant women	athletes	elderly people
Heart disease patients	stroke patients	patients after major surgery	children with physical developmental disease

Purpose of physiotherapy :	
To avoid surgery	
To improve balance and prevent falls	exercises or walking aids
To improve mobility	stretching and strengthening exercises help
To manage age-related issues 	(More risk falling) (get older= balance decrease)
To manage women's health	pregnancy bowel and bladder control physiotherapy
To recover from a stroke	strengthen weakened parts of body & improve ability to complete daily activities to regain independence
To recover from sports injury 	
To reduce or stop pain 	improve muscles and joint function

healthcare professionals in physiotherapy

physiotherapist

most referred is physiotherapist by a doctor than seek treatment by patients themselves (physiotherapists found in hospitals and physiotherapy clinics)

physiotherapist help people affected by injury illness or disability through movement and exercise manual therapy education and advice

physiotherapists assess physically a patient and create a treatment plan followed by re-training someone how to walk & help someone to get use wheelchairs

patients and families and communities need to be **educated on how to prevent injuries and help people lead healthy lifestyles**

If I visit a physiotherapist

- Complete a physical exam medical history & evaluation of posture movement flexibility muscle and joint performance for patient (استكمال فحص بدني التاريخ الطبي وتقييم مرونة حركة العضلات وأداء المفاصل)
- Set a diagnosis plan of care and set short-term and long-term goals of physiotherapy treatment
- Physiotherapy treatment based on the physiotherapist's evaluation diagnosis and plan of care
- Self-care advice to the patient

11.2 Physiotherapy treatment

acupuncture	علاج بالابر
Ankle	كاحل
Joints tissue	انسجة مفاصل
limbs	أطراف
Weightlifting	رفع الاثقال

Passive therapy allows something to happen to patients without taking action from them (done to the patient) (علاج طبيعي يتم دون أي فعل من المريض)

physiotherapist therapy techniques

massage - manipulation acupuncture - ultrasound - hot & ice packs - laser - electrical nerve simulation

If patient cannot move limbs on his own **physiotherapist will help him to move his body**

improve blood flow to the injured area & provide sensory activation to the limb

Active therapy

when patient is actively involved in treatment (**doing actual joint and muscle movement by patient)**

improve muscles become stronger by doing physical movement like exercise bike or treadmill

weightlifting and balance exercises it's important for who condition require balance practice

patient should take responsibility for their actions to see positive result

Role of passive and active therapy in recovery

passive techniques should use at **beginning of treatment** when the **patient is still in a lot of pain**

It help the joints tissue and muscles to be stronger so patient can move freely & help manage pain

can be done before active therapy

active when **muscles and joints move with low discomfort** and after active done properly is very effective to treat physical injuries

both of active and passive can given in one treatment

11.3 Physiotherapy for medical conditions

asthma	ربو
Blood clots	جلطات دم
Bronchitis	التهاب شعبي
cardio-respiratory	علاج مرضى القلب والجهاز التنفسي
Complications chest infection	مضاعفات التهاب الصدر
cystic fibrosis	تليف كيسي
Disorder	اضطراب
Emphysema	انتفاخ الرئة
fractures	كسور
Heart attack	نوبة قلبية
hypertension	ارتفاع ضغط الدم
Ligaments	اربطة
Lung	رئة
mucus	بلغم
Musculoskeletal	جهاز عضلي هيكلي
neurology	علم اعصاب
Posture	وضعية
Rehabilitation	اعادة تأهيل
sprain	التواء
Tendons	اوتار

treatments : help to speed up time needed to recovery & reduce chance of needing surgery for some patients

do extra training or gain extra experience or qualifications in treating 1 or more area to become an expert

areas of physiotherapy		
musculoskeletal	cardio-respiratory	neurology

musculoskeletal system includes **muscles and bones**

area of physiotherapy deals with conditions :			
Arthritis	Back pain	Posture problems	Reduced mobility (movement
Sport injuries	Sprains	Tennis elbow	Workplace injuries

musculoskeletal pain caused by injury 1 or more of :

Bones Joints Muscles Tendons Ligaments Nerves

injuries happen from: falls, car accidents, fractures, sprains, sudden movements or dislocations

rehabilitation : training and therapy after illness or injury & after surgery.

Physiotherapists assess the patient and create a treatment plan based on the patient's needs.

treatment exercise plan and advice

number of treatments needed depending on how soon patient recovers

Cardio-respiratory : treating diseases and injuries in heart & lungs

cardio respiratory conditions			
Asthma	Bronchitis	Emphysema	Cystic fibrosis
Hypertension	Heart attack	Heart or lung injury/surgery	

physiotherapist does an in-depth assessment for each patient then **provide treatment plan based on the needs and ability of patient**

Physiotherapy include	help with
Breathing and circulation exercises	prevent complications chest infection
Coughing and breathing strategies	coughing and manage shortness of breath
Deep breathing exercises	increase lung volume
Individual exercises	control breathing patterns and build strength
Mobility assistance	move safely in bed, sit up, and walk
Percussion process	clearing mucus from lungs

rehabilitation treatment :	
deep breathing exercises	prevent lungs infection
sitting and standing exercises	prevent blood clots
some fitness exercises	help with mobility

Neurology treatments of patients who have damage to their central nervous system (CNS) messages (how to react and move) from brain cannot reach some parts of the body

damage caused by disorders which affect brain spinal cord and nerves

aims to improve message pathways that the brain struggling use or to form new pathways through repetitive actions and exercises

patients experience :

loss of balance difficulty walking loss of hand loss of arm loss of leg loss of foot

aims to increase quality of life of people with above condition through physical movements

11.4 The principles of proper body mechanics

arched / curved	متقوس
Bend	انحناء
Discomfort	عدم ارتياح
ease	يسهل
Lift	رفع
pillow	وسادة
Strain	اجهاد
Twist	التفاف

Body mechanics : ways you move in daily life as holds the body when sit & stand (posture) & lift & carry.

Poor body mechanics often cause of injury and back problems

proper mechanics allows to do activities without using a lot of energy and reduces risk of injuries

learning the principles of body mechanics will reduce of back problems & discomfort as get older

body mechanics can apply to :

posture when eating **&** holding phone **&** brushing teeth **&** sitting

good posture: spine not curved forwards and not arched backwards.

being aware of posture always (using good body mechanics)

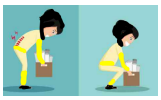
Standing: All standing work bending lifting carrying and reaching can put strain on you back

change position will revive stress on your spine& helps increase circulation &decrease muscles tiredness

stretching exercises can help ease muscle tightness

check posture if it correctly

Lean on a solid support help tiredness during long period of standing



lifting object **put** most **stress in lower back**

move directly in front of object and put your feet flat on floor and shoulders are apart

bend knees and move load towards chest & the same when put it down

avoid bending and twisting at same time instead face object and bend at knees not back

Avoid overreaching & standing on tiptoes it can place strain on back and neck

Don't lift from a twisted or sideways position

Sitting

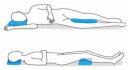
Sit at back of seat while leave small space between back of knee and seat of chair

Place feet flat on floor with knees bent at 90 degrees

Put shoulders back & lift your chest

lift your chin until it's level & relax mouth

sitting for long period in correct position will become uncomfortable to reduce stress on your spine

Sleeping on a firm mattress 

Avoid sleeping on stomach or with head on oversized pillow it causes back to arch and put stress on spine

side and back are best position

place pillow between knees for side sleeping or behind knees for back sleeping it keep spine in correct position & ease stress on lower back

pillow allows keep your head in line with rest of your body not benefit use a lot of pillows while sleeping

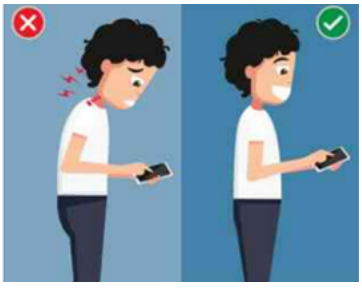
protect neck when using phone :

using phone cause back and neck problems

Don't use mobile for work can be done on computer

bring device up level or just a little below your face

use speaker function or headphones



11.5 Patient positioning, transfer and ambulation

ambulation	مشي بدون أدوات مساعدة	Bear weight	تحمل وزن	Blanket	بطانية
circulation	دورة دموية	Dizzy	دوخة	lying	استلقاء
Muscles	عضلات	Pressure	ضغط	thighs	فخذين

Bedsores: **under pressure from lying in bed or sitting in the wheelchair for long period of time**

use pillows and blankets as supportive devices very useful to move patient & change his position

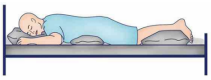
common bed positions

supine position 

lies flat on back with head facing up

supportive devices as pillows

comfort to recovery from surgery **commonly used for general examinations**

prone position 

lies on stomach with head to one side

small pillow at various places under body

for patient with breathing problems

Fowler's position 

semi-sitting position

top half of the bed at 45°

common for provide comfort and care

used to improve circulation, relax muscles of back and thighs & for difficulty breathing

patient transfer when moving patient from one flat surface to another.

patient should be able bear weight on one leg at least

type of patient transfer

stretcher to bed	bed to wheelchair	chair to wheelchair	toilet to wheelchair	wheelchair to bed & chair & toilet

Safely moving patients

use legs not back to lift a patient position your feet properly &lift without twisting

keep weight of patient close to your body it **safely lifts a heavier weight**

reaching :

avoid	twisting while reaching	reaching more than 40 cm in front of your body & keep your back locked in

Devices used to move patients

stretchers : transport patients in lying position from place to another

so many shapes and sizes

used by paramedics at scene of emergency & school & local sports complex in case of emergency

wheelchair : standard item of equipment

available in hospital & schools & sports facilities

slide sheets : most used pieces of equipment to transfer patients in healthcare

change position of patient who lying in bed without lifting him

for transfer to another bed

quite & simple to use

Patient ambulation some patients not very good at walking so healthcare professional must watch carefully to make sure they don't fall over

gait belt : simple device used to support during ambulation

reduce risk of injury for both patient & healthcare professional

buckles around waist healthcare can grab to help or move patient from sides

if patient doesn't need gait belt healthcare will use one hand to hold upper arm of the patient and other hand to hold patient's hand (مسك أعلى ذراع المريض وباليد الاخرى مسك يده)

patient who being ambulate can walk with footwear it will reduce risk of falling

if patient becomes **dizzy** or **feels unwell** **sit him down.**

11.6 The patient rehabilitation journey

stiffness	عدم القدرة على الانحناء

physiotherapy in hospital

inpatient physiotherapy treatment includes education advice exercises to maximise recovery

long lying on bed may cause: (stiffness , muscle tightness , reduced fitness)

physiotherapist in hospital (Improve muscle strength of the patient, joints movement)

Discharge from hospital 

no longer need inpatient care and can go home.

physiotherapist can decide if patient can continue rehabilitation from home **through reach some of a set goal**

Outpatient patients visit physiotherapist for few hours per week at clinic.

assess patient & look for improvements in their condition & carry out some passive therapy

require specialist equipment + provide rehabilitation activities for patient to do at home

allows patient to increase physical health while live in own homes then **continue normal daily activities after treatment ends**

Home-based physiotherapy given in patient's own home

for long-term illnesses or recovering from surgery at home

useful for physiotherapist to **see what equipment & furniture & set exercises** based on patient's home

Home modifications is change to structure allow easier access to move around

for long-term conditions improve quality of life at home

simple as add hand-rail & change shower, toilets, kitchen and home entrances