

COURSE NAME: Physiotherapy In orthopedics

COURSECODE : 746280

TITLE : Chapter I

NAME : Dr. Nagaraj s MPT (ortho).MIAP

DESIGNATION : Assistant professor

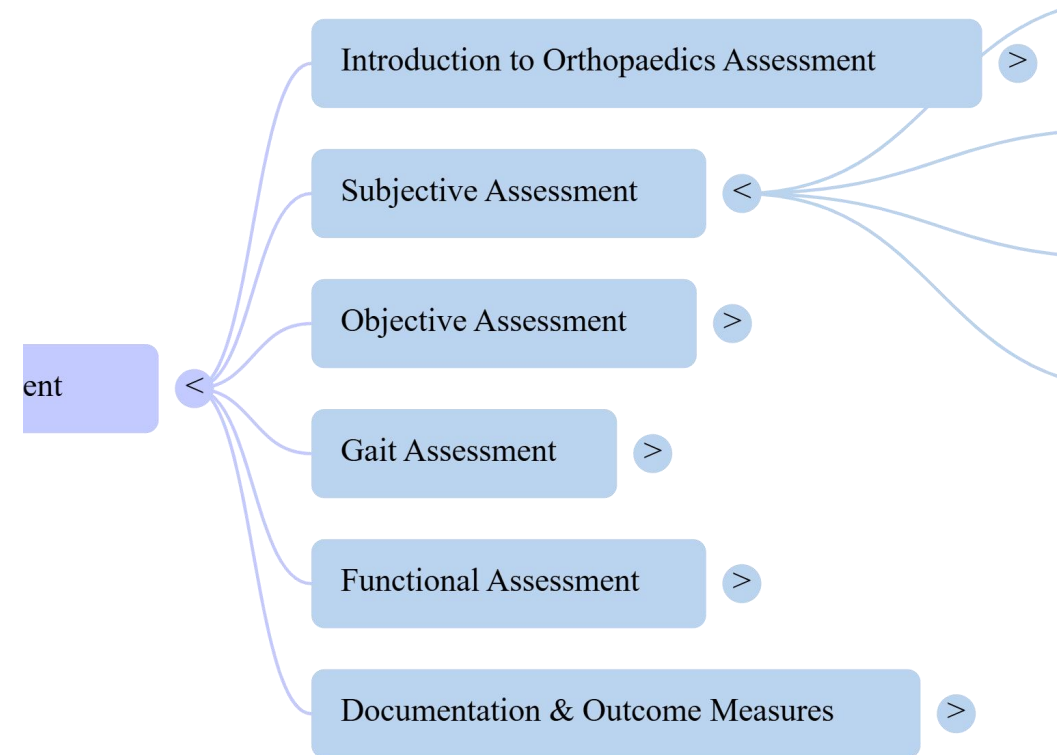
PT ASSESSMENT

Orthopaedics Assessment

A comprehensive process to evaluate bones, joints, muscles, and related structures.

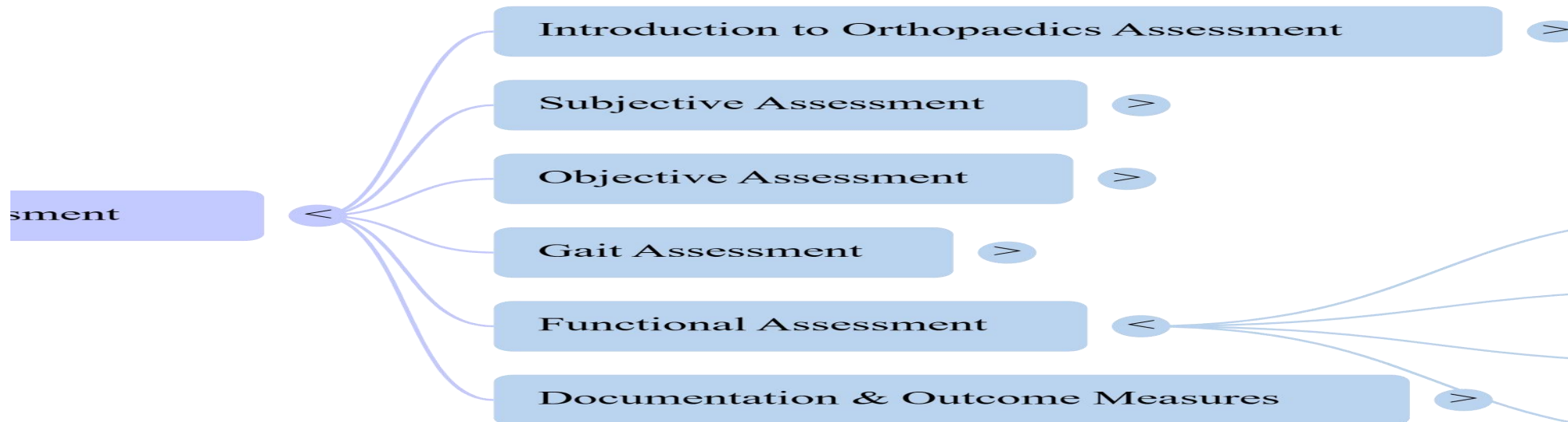
Introduction to Orthopaedics Assessment

Orthopedic assessment helps identify structural or functional impairments in the musculoskeletal system.



Subjective Assessment: Overview

Subjective assessment gathers patient information through interview before physical examination.



History Taking Components

- ✓ Chief Complaint:
- ✓ History of Present Illness:
- ✓ Past Medical History:
- ✓ Occupation:
- ✓ Lifestyle:

Pain Assessment (PQRST)

- Side: Right /Left
- Site : Region
- Nature: (pinpricking/dull ache/throbbing/sharp/nagging/cramping)
- Onset: (Sudden/ gradual)
- Timing pattern: (Acute/Subacute/Chronic)
- Aggravating factor:
- Reliving factor:
- Pain score: (VAS/NPRS)

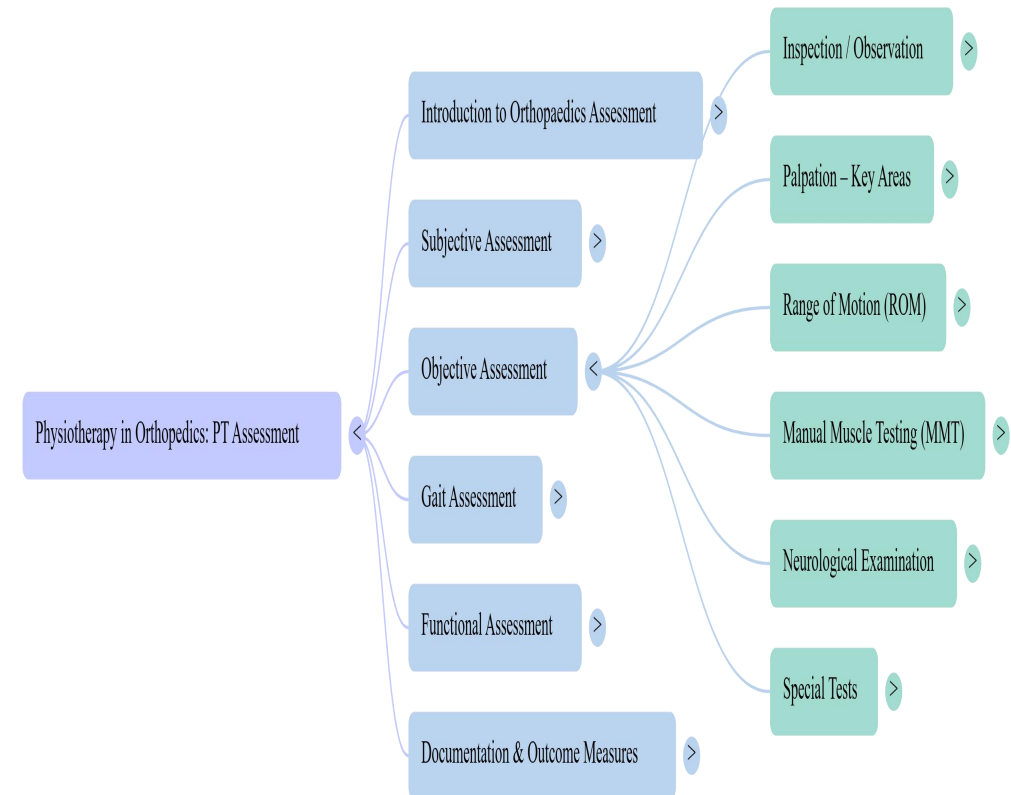
Red Flags to Identify

- ❖ Unexplained weight loss
- ❖ night pain
- ❖ cancer history
- ❖ severe trauma
- ❖ bowel/bladder changes

Objective Assessment: Overview

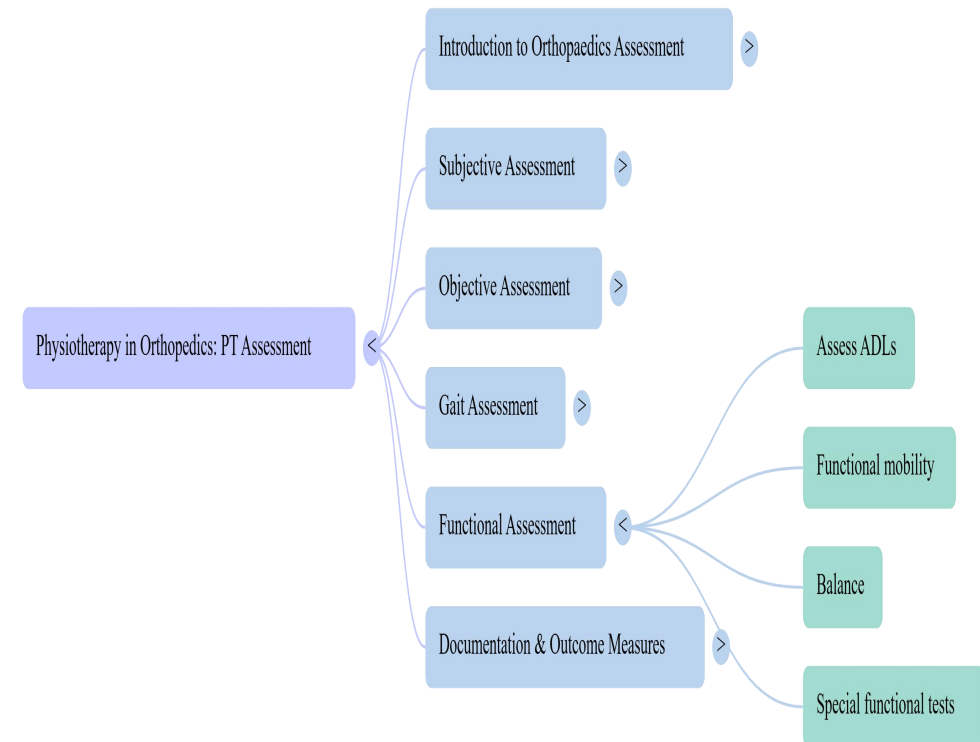
Objective assessment includes

- Inspection
- Palpation
- ROM
- MMT
- Neurological tests
- Special tests.



Observation / Inspection

- Posture
- Swelling
- Deformity
- Scars
- muscle wasting
- gait



Palpation – Key Areas

- Soft tissue
- Bone joint line palpation
- Temperature
- Tenderness
- Spasm

Range of Motion (ROM) Assessment

Active, Passive and Resisted ROM using goniometer.

S.NO	JOINT	RIGHT		LEFT	
	MOVEMENT	AROM(PAINFREE)	PROM(PAINFUL)	AROM(PAINFREE)	PROM(PAINFUL)
1	FLEXION				
2	EXTENTION				
3	ABDUCTION				
4	ADDUCTION				
5	MEDIAL ROTATION				
6	LATERAL ROTATION				

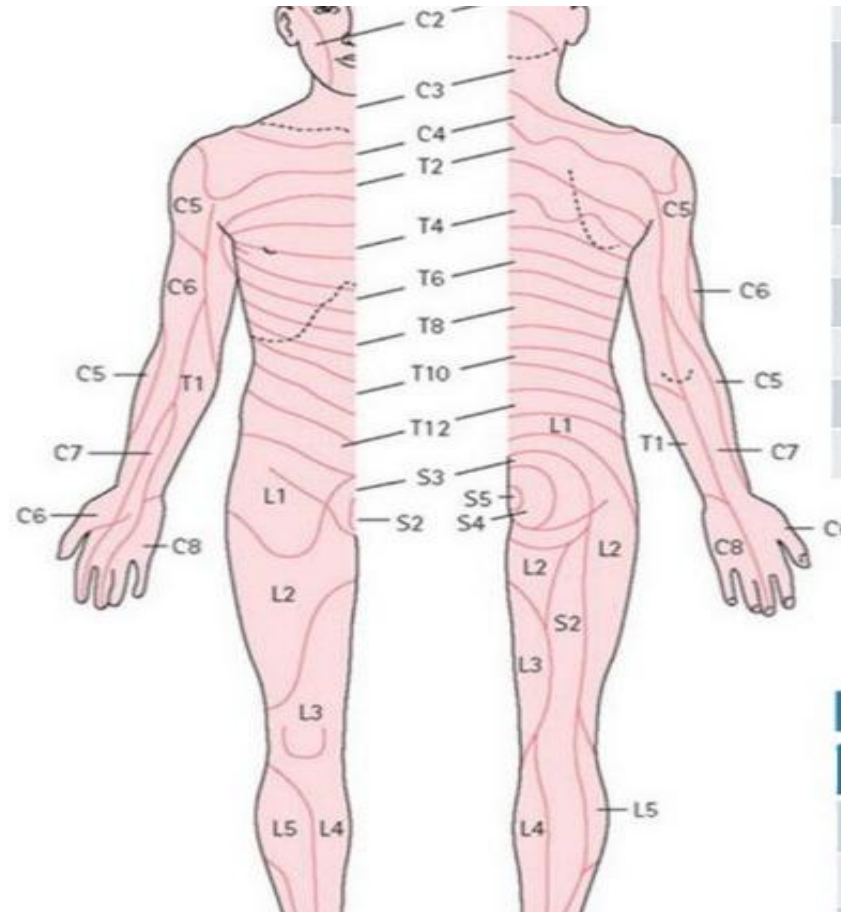
Manual Muscle Testing (MMT)

Assess muscle strength using Grade 0-5 scale. (MRC Grading)

S.NO	MUSCLES	RIGHT	LEFT
1	FLEXORS		
2	EXTENSORS		
3	ABDUCTORS		
4	ADDUCTORS		
5	MEDIAL ROTATORS		
6	LATERAL ROTATORS		

Neurological Examination

- ❖ Dermatomes
- ❖ Myotomes
- ❖ Reflexes
- ❖ Sensory
- ❖ Motor testing.



C6	Wrist Extension
C7	Wrist Flexion, Finger Extension
C8	Finger Flexion
T1	Finger Abduction
L1,2	Hip Abduction
L3,4	Knee Extension
L5, S1	Knee Flexion
L5	Great Toe Extension
S1	Great Toe Flexion

Root Values for Tendon Reflexes	
Root Value	Tendon Reflexes
C5	Biceps
C6	Brachioradialis

Special Tests – Purpose

To confirm or rule out specific musculoskeletal pathology

Upper Limb Key Special Tests

- Neer's sign- Impingement
- Hawkins-Kennedy- Subscapularis muscle involvement
- Cozen's test- Tennis elbow
- Phalen's- Median Nerve
- Tinel's sign- Nerve test

Lower Limb Key Special Tests

- ❖ Lachman test- ACL injury
- ❖ Anterior Drawer- ACL injury
- ❖ McMurray- Meniscal injury
- ❖ Thomas Test- Hip Flexor Tightness test
- ❖ Trendelenburg- Hip abductor tightness
- ❖ Feiss line- Flat foot
- ❖ Block test- hindfoot varus correction (Tibialis posterior muscle tightnes)

Spine Key Special Tests

- SLR- Lumbar disc prolapse identification test
- Slump Test- Nerve root compression test
- Adams Forward Bend Test- Spondylolisthesis test
- Fleche test- Ankylosing spondylitis
- Schober test- lumbar mobility test
- Pelvic compression test- SI joint dysfunction
- Spurling test- cervical nerve root compression positive test
- Adson test- thoracic outlet syndrome

Gait Assessment

Observe gait cycle

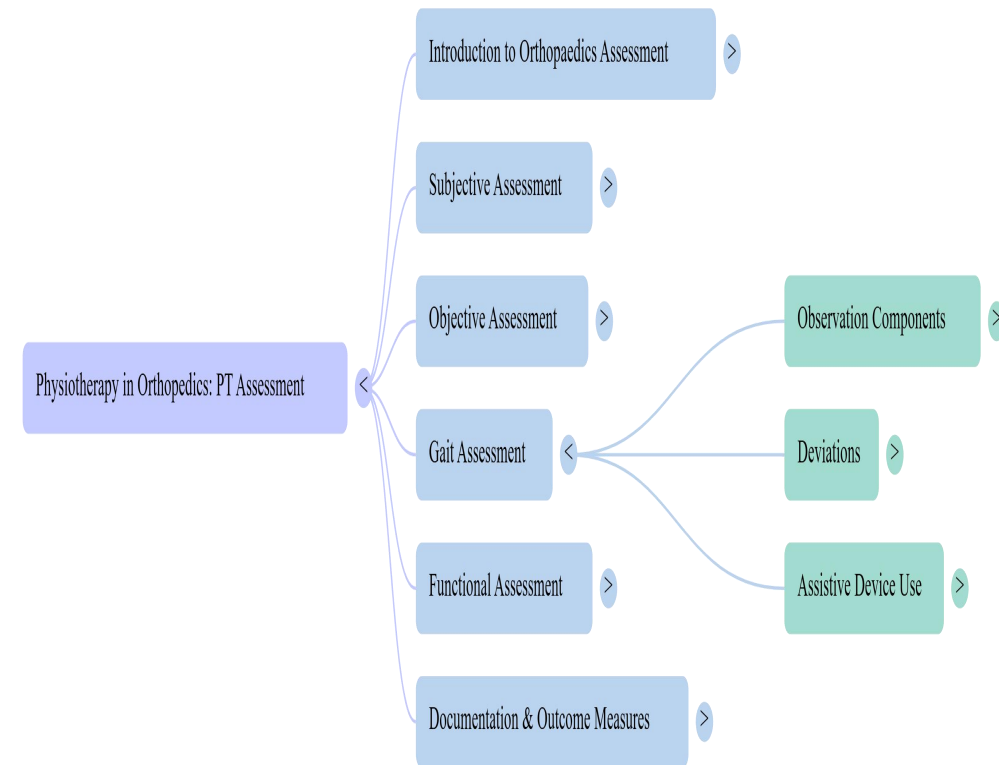
1. Step length-
2. stride length-
3. cadence-

Deviations

1. limb length discrepancy
2. deformity

Assistive device use.

1. canes, walkers, crutches

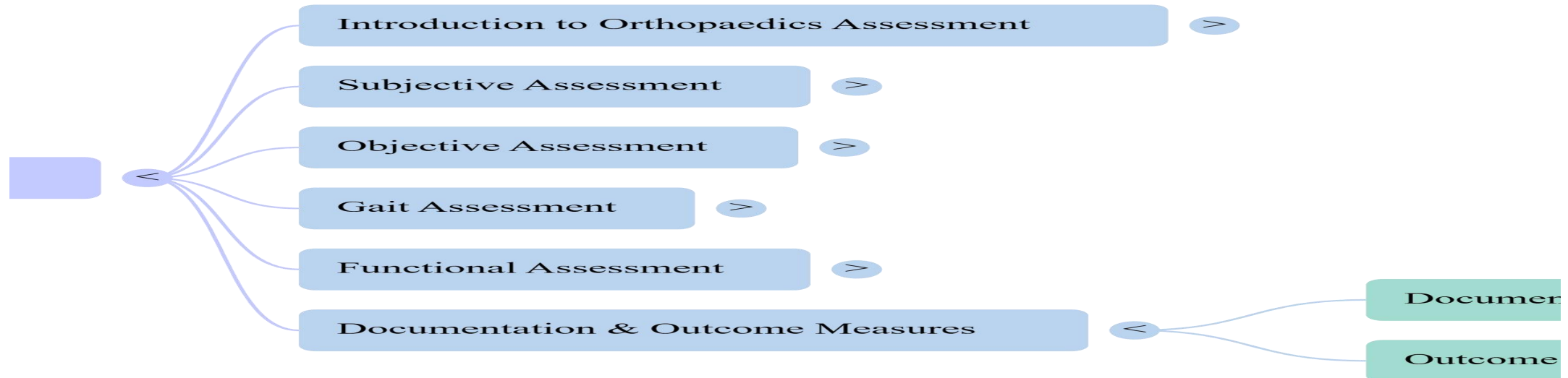


Functional Assessment

- ☐ Assess ADLs
- ☐ Functional mobility
- ☐ Balance
- ☐ Special functional tests.

Documentation & Outcome Measures

Use SOAP notes,
outcome scales like WOMAC, DASH,
Oswestry.



Summary

Orthopedic assessment integrates subjective + objective data to diagnose and plan treatment.

In class Assessment

TPS Activity 1: Pain Assessment

Question:

A patient reports shoulder pain for the last 3 weeks.

List any 3 PQRST questions you will ask.

Expected Answer:

P: What provokes/relieves the pain?

Q: What is the quality of pain? (sharp/dull/throbbing)

R: Does the pain radiate? Where?

S: Rate the pain on 0–10 scale

T: When did it start? Is it constant or intermittent?

TPS Activity 2: Red Flags

Question:

Why are night pain and unexplained weight loss considered red flags in orthopedic assessment?

Expected Answer:

They may indicate serious pathology such as infection, tumor, or systemic disease that needs urgent referral.

SPOT THE MISTAKE – With Answers

Activity:3

Question Slide Content (Students must find errors):

MMT grading:

Grade 0 – Full ROM against gravity

Grade 3 – No muscle contraction

Grade 5 – Full ROM with gravity eliminated

Answer (Corrected):

Grade 0 – No muscle contraction

Grade 3 – Full ROM against gravity

Grade 5 – Full ROM against gravity with full resistance

Activity -4

Question:

Identify the test and what condition it confirms.

(Insert image of Phalen's Test)



Answer:

Phalen's Test – Indicates Carpal Tunnel Syndrome (Median nerve compression).

THANK YOU???

Reference books

1. David magge (examination test)
2. John epinezar (physiotherapy treatment)
3. Maheswari (clinical orthopedics)