

# PHYSICAL EXAMINATION- N Manolios

## RHEUMATOLOGY EXAMINATION

*Principles:* Make sure the patient is comfortable  
Expose the area for examination  
Do not hurt the patient  
Look, feel and then move- passive, active  
Examine what ever else is relevant to your findings.  
Look at the distribution of joint involvement

### 1. HANDS

**GENERAL:** Make patient comfortable  
Expose both hands up to the elbows  
Rest hands on pillows

#### **INSPECTION (Der 3 Ss)**

1. *Fore-arms* Deformities,  
Swelling, peau deorange,  
Skin- Colour , ecchymoses, thin, atrophic, loss of hair,  
Scars
2. *Wrists* Deformity  
Swelling  
Subluxation  
Styloid protuberence
3. *Back of hand-* Muscle wasting, skin, swellings, telangiectasia, bruising
4. *MCP joints* Subluxation, ulnar deviation  
Nodules, tophi,
5. *PIP joints* Deformities  
Swelling
6. *DIP joints*
7. *Nails-* Vasculitic infarcts, capillary loops  
Psoriatic changes- yellow discolourisation, subungual heaping,  
transverse ridges, pitting, onycholysis  
Splinter haemorrhages  
Clubbing

## *TURN HANDS OVER*

- 1      *Palm*            Wasting of thenar eminence to suggest carpal tunnel  
Palmer erythema  
Dupuytren's  
Contractures  
Telangiectasia  
Scars from previous surgery
2.      *Wrist*
3.      *Forearm*

## ***PALPATION***

Start with DIP joints. Then PIP, MCP, wrist and then elbow.

With each joint feel for heat, tenderness, swelling (determine if fluid, bone or other )

Feel for skin thickness. If present determine how far up the body it extends

Feel for synovial thickness at wrist

Feel for rheumatoid nodules at the back of the olecranon

## ***MOVEMENT***

Extend all fingers, make a fist. This will show the range of movements of most joints. It will exclude tendon ruptures.

Extend/Flex wrist

## ***FUNCTION***

Make a fist. Don't let me pull out your thumb. Key grip strength

Make a pinch with thumb and individual fingers. Don't let me pull them apart. Pinch strength

Squeeze my fingers. Grip strength

Can you undo your top button, write, eat. Etc

## ***NERVE INVOLVEMENT***

Check for median nerve- Tinels, Phalens sign. Examine for Ulnar nerve

## **EXAMINATION OF THE KNEE**

Exposure: The patient must be recumbent upon a couch . Not sitting over the couch.  
The whole length of the limb must be uncovered.  
*Eg* not good enough to roll up trousers.  
The normal knee must also be exposed for comparison

Inspection: Observation of the person and position of the injured limb  
Deformity  
Skin: Colour and texture eg. Bruising, redness  
Scars sinuses  
Swellings- Generalised (effusion; evident by loss of patellar recesses on either side of the patellar; bone, as in expanding tumour)  
Localised (osteophytes, exostoses, prepatellar bursitis, infrapatellar bursitis)

Palpation: Skin temperature  
Examination for presence of fluid within the joint:  
Patella tap  
Milking the fluid away from the medial recess and then watching it refill when pressure is applied over the lateral recess of the patella.  
Bone contours and soft tissue contours  
Look for point tenderness, swelling and ecchymosis  
Major landmarks to consider: patellar tendon, anterior tibial tubercle, the tibial plateau. patella, femoral condylar ridges, the joint margins, ligament insertion medially and laterally, Bakers cyst, tendon insertions

Movements: Active and passive against normal knee for comparison  
Flexion  
Extension  
?Pain on movement  
?crepitation on movement

Note: (1) Limitation of movement (locking) implies a torn meniscus or osteochondral loose body. Conversely a full pain free range of movement after injury effectively rules out significant meniscal injury

(2) Normal extension of knee is usually limited to 10 degrees. The ability to extend the knee to zero degrees or more suggest s hypermobility/ ligamentous laxity.

Stability: Testing for knee stability is perhaps the most critical part of the examination

The integrity of the four major ligaments should be tested in turn.

Medial ligament If ligament is torn, the joint space will open up as pressure is applied . If the ligament is sprained it will cause pain on pressure.

Lateral ligament

Anterior cruciate ligament

Posterior ligament. Knee flexed at 90 degrees, foot fixed on the couch , sit lightly on the foot, glide the tibia on the femur. Excessive glide (>1cm) in one or other direction indicates damage to the corresponding cruciate ligament

Power: Tested against resistance  
Flexion  
Extension

OTHER Rotation Tests eg McMurrays test. Important only when a torn meniscus is suspected. The tibia is rotated on the femur with the knee in various positions of flexion and extension. Listen and feel for a click. Not advised in acute situation

Stance and gait

*Examine hips and lumbar spine if knee examination normal, to exclude possibility of referred pain eg from hip, sciatica*

General examination. The local symptom may be only one manifestation of a widespread disease

## **THE SPINE**

**History.** Pain in the back is one of the commonest symptoms encountered in practise. Like pain anywhere else the following questions about pain should be asked.

*Site*

*Duration*

*Character:* Sharp, dull, constant, throbbing, colicky

*Radiation.* Back of legs, front of legs, buttocks-termed sciatica. If pain radiates into the lower limb its character and exact distribution must be ascertained. If pain is severe and radiates in a well-defined course, it suggests nerve entrapment of the lumbar or sacral plexus. On the other hand, if it takes a form of a diffuse ache, ill defined in its distribution, it is more likely to be “referred” originating in a disordered joint or ligament.

*Onset.* How did it come on eg slowly, suddenly,

*Offset:* Still present, gradually

*Relieving factors:* rest, lying flat, walking, medications,

*Aggravating factors:* walking, coughing, standing

*Associated symptoms* eg Unable to pass urine, night sweats, fevers. Special attention should be paid to the onset of the symptoms, whether they are periodic or constant, whether they are getting worse or better, relieving factors and aggravating factors. The precise location and character should be determined. The patient should ask what he attributes the symptoms to eg a fall, unaccustomed lifting

## **EXAMINATION OF BACK AND NEUROLOGICAL SURVEY OF LOWER LIMB**

The patient should be stripped completely except for underpants and in women a brassiere.

*(Patient standing)*

***Inspection***

Deformities

Skin, colour, texture, soft tissue contours

Scars,  
Sinuses

***Palpation***

Bone contours  
Soft tissue, muscle spasm  
Local tenderness

***Movement***

Forward flexion; Schobers test  
Extension  
Lateral flexion (R) and (L)  
Rotation

***Other***

Chest expansion  
S-I joint- Lateral compression of pelvis ?pain

***(Patient recumbent)***

Palpation of iliac fossa examine for abscess, masses  
Straight leg raising test  
Neurological examination of lower limb

## **CLASSIFICATION OF SPINE DISORDERS**

<b>CONGENITAL ABNORMALITIES</b>	Lumbar and sacral variations Hemivertebrae Spina bifida
<b>DEFORMITIES</b>	Scoliosis Kyphosis Lordosis
<b>INFECTIONS OF BONE</b>	Tuberculosis of the thoracic or lumbar spine Pyogenic infection of the thoracic or lumbar spine
<b>ARTHRITIS OF THE SPINAL JOINTS</b>	Rheumatoid arthritis Osteoarthritis Seronegative spondyloarthropathies (Ankylosing spondylitis)
<b>OSTEOCHONDRITIS</b>	Scheuermann's vertebral osteochondritis Calve's vertebral osteochondritis
<b>MECHANICAL DERANGEMENTS</b>	Prolapsed lumbar intervertebral disc Acute lumbago Spondylolysis Spondylolisthesis
<b>TUMOURS</b>	Tumours in relation to the spinal column, spinal cord, or nerve roots Other tumours of the trunk. Think of secondaries
<b>CHRONIC STRAINS</b>	Chronic lower lumbar ligamentous strain Coccydynia
<b>MISCELLANEOUS</b>	Fibrositis Senile osteoporosis
<b>DISORDERS OF THE SACRO-ILIAC JOINTS</b>	Ankylosing spondylitis Other forms of arthritis Sacro-iliac ligamentous strain Insufficiency fractures