



לגעת בכאב **Touching the pain**

החברה הישראלית לרפואת שריר שלד  
The Israeli Society of Musculoskeletal Medicine



# History taking and physical examination in Myofascial Pain

Tool box approach



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# Case study #1

- 63 year old male
- Self employed all round handyman
- 5 months of pain in his lateral and posterior right knee
- The pain started after a day of heavy roofing work
- In the morning- the knee is stiff and very painful
- During the day- the knee eases up and functions well
- Flexion of the knee- causes severe pain
- No locking or swelling of the knee
- Analgesic medications (NSAIDs, Tramadol) - have not been helpful
- Visual Analogue Scale (VAS) for pain in the morning 7/10
- Visual Analogue Scale (VAS) for pain during the day 1-2/10
- The patient continues to work, climb ladders etc.



# The Diagnostic Process-History

Onset



Quality



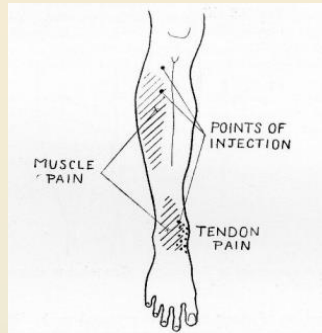
Timing



Provoke



Radiation



Palliate



Severity

How severe is your pain?

---

No pain Worst pain imaginable

**O**nset

**P**rovoke, **P**alliate

**Q**uality

**R**adiation

**S**everity

**T**iming

# Case #1 Physical examination



What are we looking for in the physical examination?



# The Diagnostic Process-Examination

Appearance,  
Asymmetry



## ARTN

**A**symmetry

**A**pppearance

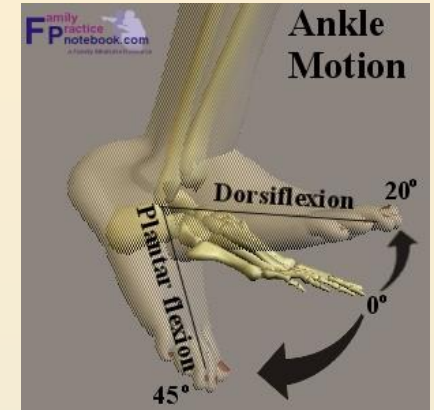
**R**ange of Motion

**T**ouch

**T**issue Texture Abnormality

**N**eurology

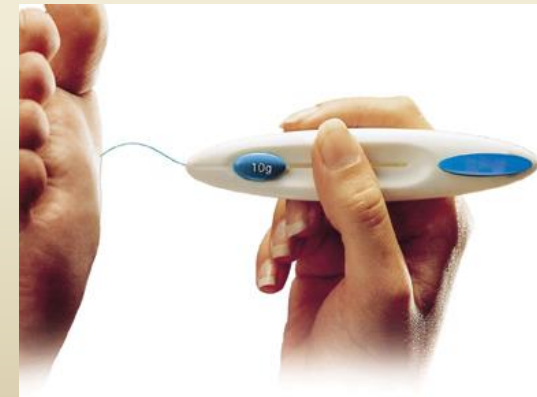
Range of Motion



Touch,  
Tissue Texture Abnormality



Neurology

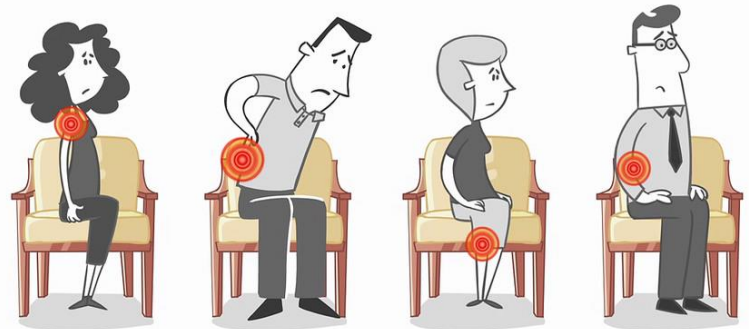


# The diagnostic process a process of refinement

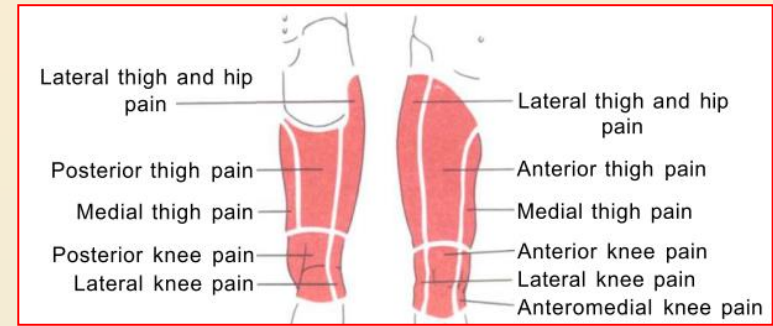
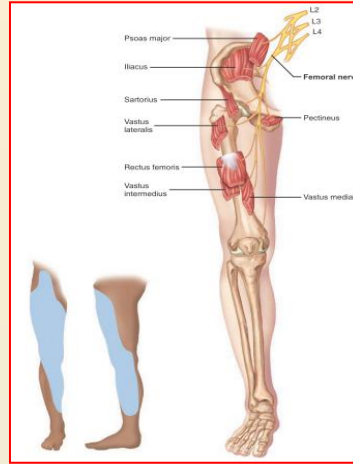
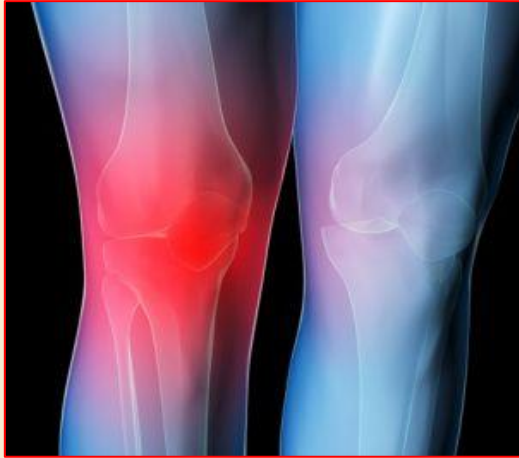
## An analogy from the study of back pain

1. Local signs of disease, injury or structural damage?
2. Indications of systemic disorders?
3. Referred pain?
  - a. Neurological
  - b. Somatic referred

 Waiting Room



# Focused Physical Examination



## Pain generating tissue

Characteristics of Examination

- ☐ swelling
- ☐ redness
- ☐ heat
- ☐ pain
- ☐ loss of function

## Pain emanating from tissue of nervous origin

Characteristics of Examination

- ☐ allodynia
- ☐ hyperesthesia
- ☐ hypoesthesia
- ☐ hyperalgesia

## Somatic referred pain

Characteristics of Examination  
mainly in muscle

- ☐ taut bands
- ☐ trigger points
- ☐ limited range of motion
- ☐ pain reproduction pattern

# Our Diagnostic Tool-box



## Specific History

**O**nset  
**P**rovoke, **P**alliate  
**Q**uality  
**R**adiation  
**S**everity  
**T**iming

## General History

## The Red Flags

**P**resentation Age <20, >55  
**V**iolent Trauma  
**C**onstant non-mechanical pain  
**P**revious history  
    Cancer, Steroids, Drugs, HIV  
**S**ystemically unwell  
**S**tructural deformity,  
**W**idespread Neurology

## Focused Examination

**A**pppearance  
**R**ange of Motion  
**T**ouch, **T**enderness  
**N**eurology





# Back to our patient

- 63 year old male

## Specific history

5 months of postero-lateral knee pain

Worse in the morning

Easing during work hours

Severe during knee flexion

## Red flags and general history

Nothing of clinical relevance

**Knee pain with  
no knee findings?**

## Physical examination

- Appearance: No swelling or deformity or redness
- Range of motion: knee extension normal. Flexion to 70° due to severe knee pain
- Tissue texture and touch: No tenderness around knee structures, no local heat, muscle tenderness?
- Neurological examination: normal

# On the definitions and physiology of local pain, referred pain, and neurological referred pain

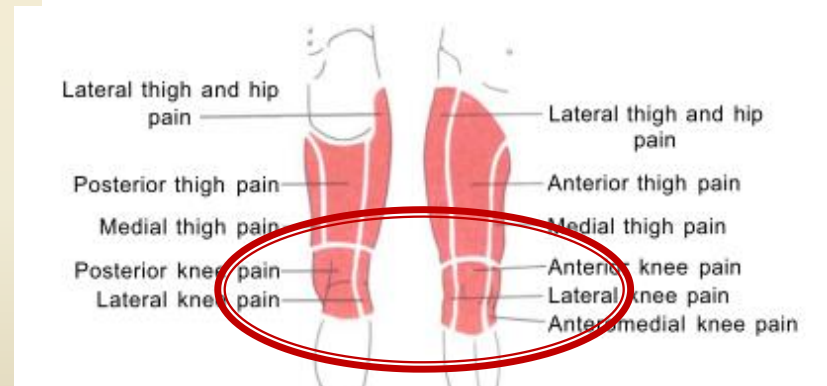
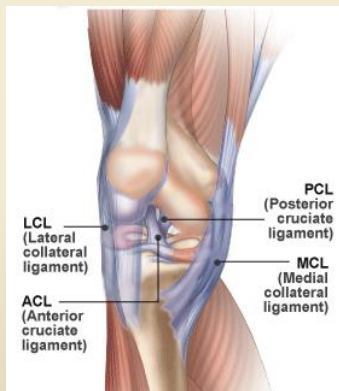
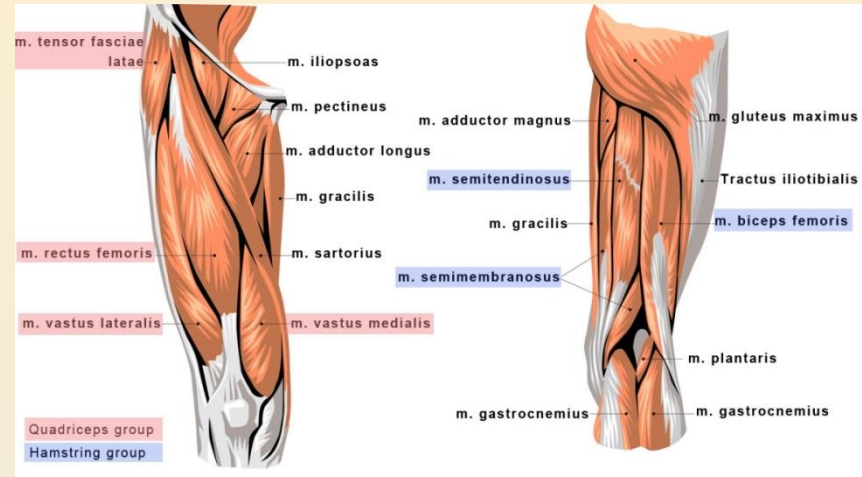
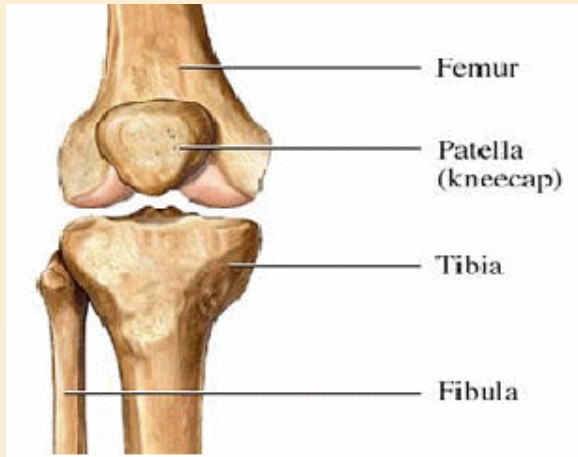
**Nociceptive pain:** noxious stimulation of structures in the area of complaint

**Somatic referred pain:** noxious stimulation of structures can produce referred pain to or from the area of complaint

**Radicular and Neurological pain:** pain evoked by ectopic discharges emanating from a dorsal root, its' ganglion or a peripheral nerve

**Radiculopathy:** neurological state in which conduction is blocked along a spinal nerve or its roots

# What and where is the Pain Generating Tissue?



# Myofascial Causes of Knee Pain

## Lateral Knee Pain

Vastus Lateralis



## Posterior Knee Pain

Gastrocnemius/Soleus

Hamstrings

Popliteus

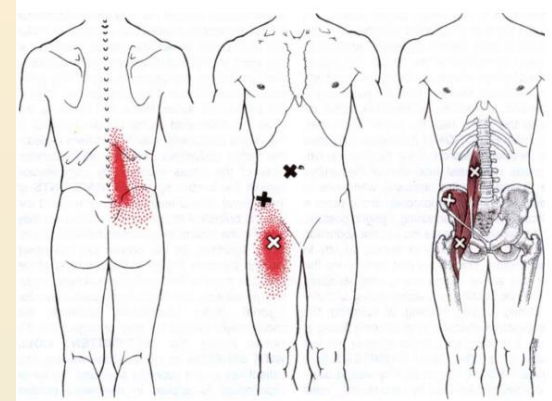
Plantaris



# The Myofascial tool box



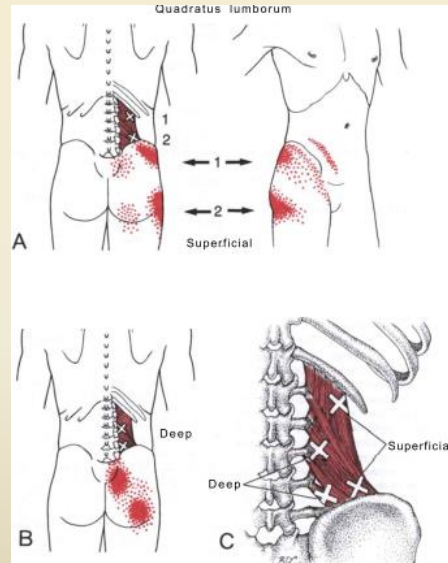
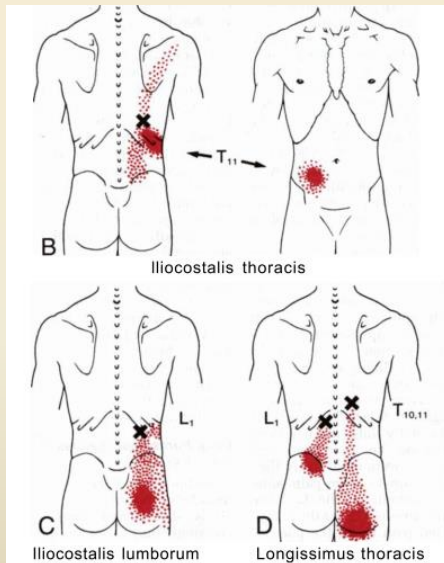
## Muscle Pain Patterns



Every muscle has a characteristic pain pattern

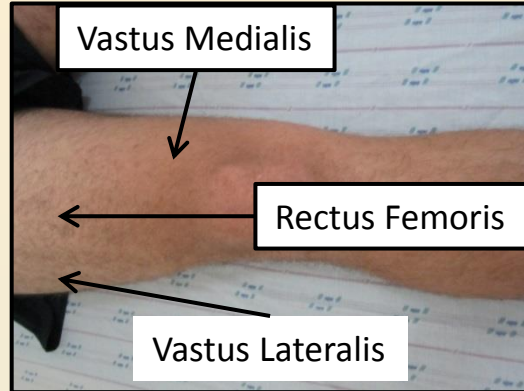
The pain pattern is revealed by careful history taking

Confirmation of specific muscle involvement is made by physical examination

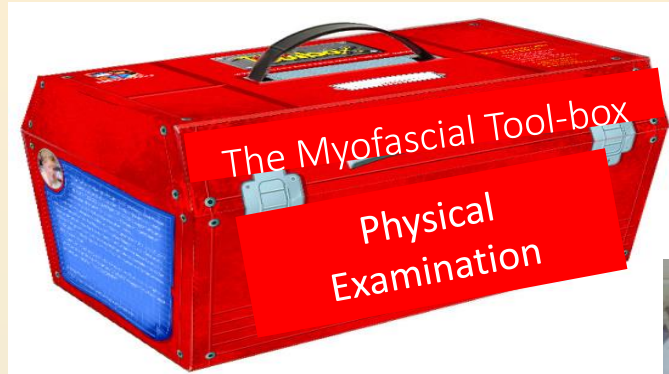




# The Myofascial tool box



Identify the muscles-  
surface anatomy



Palpate for tenderness-  
trigger points



Provocative testing

# Myofascial Pain Definition

- Regional muscle pain syndrome accompanied by Trigger Points (TrP)
- TrP- hyperirritable spot within a taut band of skeletal muscle or muscle fascia
  - characteristic referral pain patterns
  - painful on compression
  - tenderness and autonomic phenomena

# Back to our patient –Myofascial pain

63 year old male

## Specific history

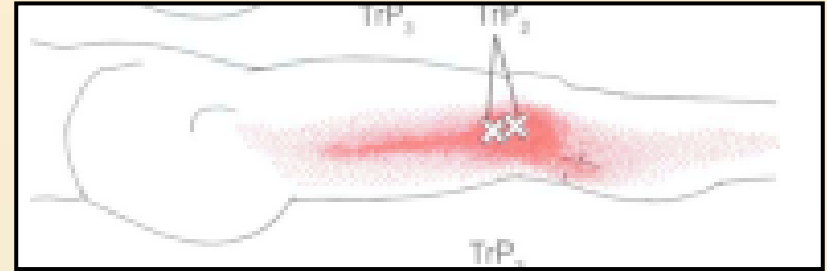
- 5 months of postero-lateral knee pain
- Worse in the morning
- Easing during work hours
- Severe during knee flexion

## Red flags and general history

- Nothing of clinical relevance

## Physical examination

- Decreased range of motion- knee flexion
- No knee tenderness,
- Normal neurology



## Myofascial history

- Severe pain in morning, eases during the day
- Radiates to lateral knee area.

## Physical examination

- Tender trigger points in the right
- Vastus lateralis muscle

**Myofascial Pain Syndrome**  
**Rt Vastus Lateralis**

# Case study #2

60 year old female, teacher

## Specific history

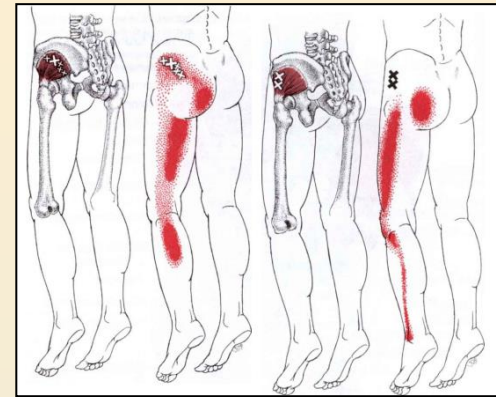
- 4 months ago low back pain radiating to left leg. Weak bladder.
- Hospitalized in orthopedics, IV steroids.
- CT L4-5 disc protrusion left side

## General history & red flags

- No clinical relevance

## Physical examination

Normal neurology



## Myofascial history

- Pain improved but cannot sleep on left side.
- Pain over left trochanteric area

## Physical examination

Tender trigger points (TrPs) in the left

Gluteus minimus muscle

Lidocaine 0.5% injection into muscle TrPs completely eliminated the pain

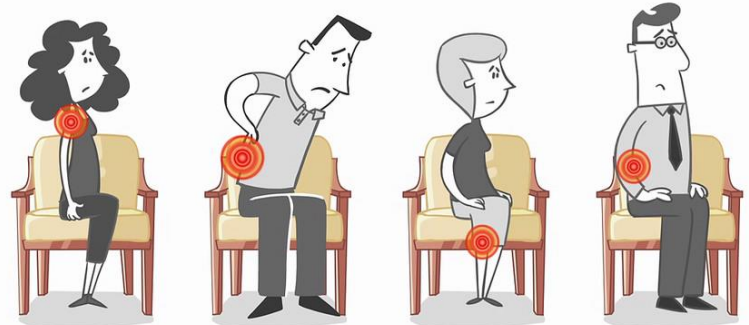
**Myofascial Pain Syndrome**  
**Gluteus minimus**

# The diagnostic process a process of refinement

## An analogy from the study of back pain

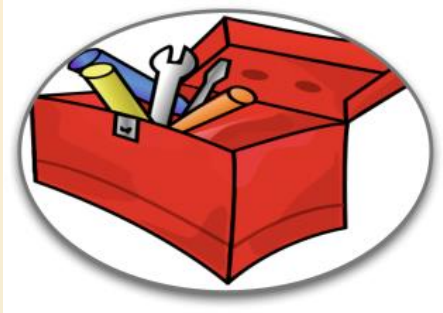
1. Local signs of disease, injury or structural damage?
2. Indications of systemic disorders?
3. Referred pain?
  - a. Neurological
  - b. Somatic referred

 Waiting Room





# The Musculoskeletal Tool Box



## Local Signs of disease injury or structural defects :

- cancer
- infections
- infiltrations
- fractures
- deformities

## Systemic disorders:

- arthropathies
- rheumatic

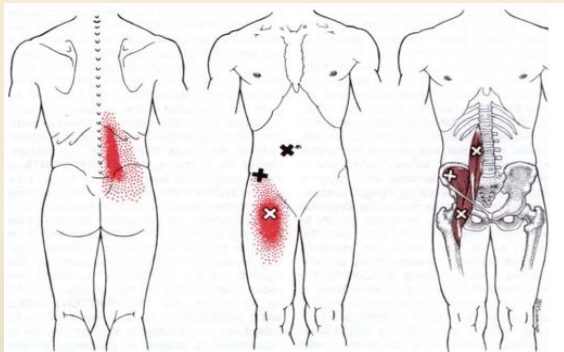
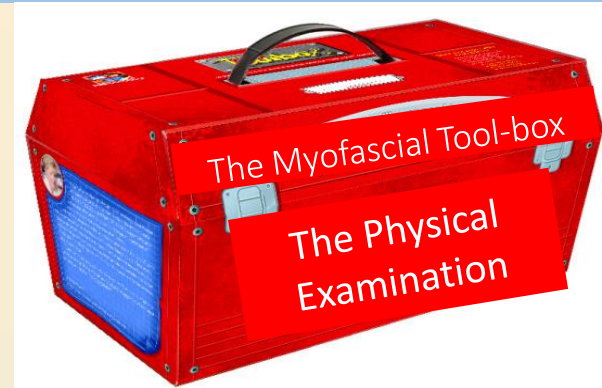
## Nerve involvement:

- nerve root dysfunction
- peripheral nerve impingement
- neurogenic inflammation

## Somatic Referred:

- Muscle
- Soft tissue

# The Myofascial Tool Box



Specific history and pain patterns

## Trigger points

Tenderness  
Limited RoM  
Weakness  
Autonomic signs



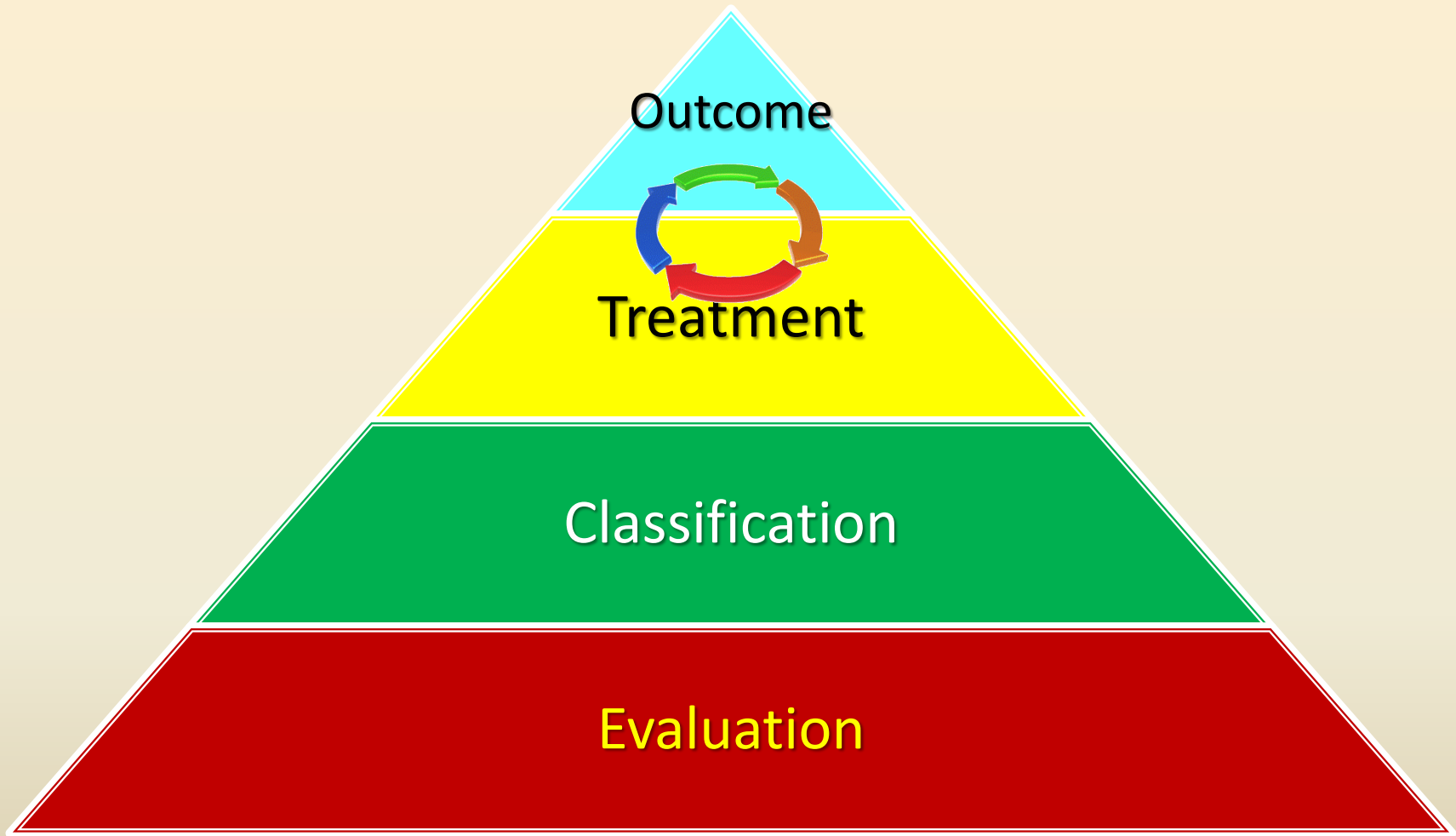
# **Mechanism derived, anatomical-physiological, Pain Management**

1. Anamnesis: define the scope of the problem
  2. Physical Examination: refining the diagnosis
  3. Assessment: The heart of the case
  4. Plan: Implementation and follow-up
-

# Good Clinical Medicine

1. Take a good history
  2. Perform a good physical examination
  3. Make your diagnosis  
and differential diagnosis
  4. Decide on supplementary tests
  5. Define your plan  
diagnostic  
therapeutic
-

# What treatment ?



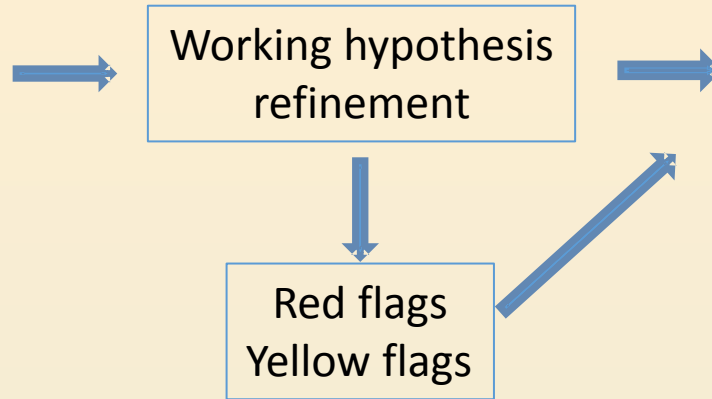


## Pain Anamnesis

## The Pain Diagnostic Process

## ART-N-A

**O**nset  
**P**rovoke, **P**alliate  
**Q**uality  
**R**adiation  
**S**everity  
**T**iming



**SOAP Assessment**

**S**ubjective  
**O**bjective  
**A**ssessment  
**P**lan

**A**symmetry  
**A**pppearance  
**R**ange of Motion  
**T**ouch  
**T**issue Texture Abnormality  
**N**eurology  
**A**ccessory Tests

Assessment

**D**iagnosis  
**D**ifferential diagnosis

Plan

**T**herapeutic  
**D**iagnostic

# Diagnostic Pain Algorithm

- Subjective

Onset of pain  
Palliative, Provocative factors  
Quality of the pain  
Radiation and localization  
Severity  
Timing

- Objective

Appearance, Asymmetry  
Range of Motion  
Touch, Tissue Texture  
Neurological

- Assessment

DDx, Diagnostic Tests,  
Discussion

- Plan

- Diagnostic  
- Therapeutic  
manual therapy  
drug therapy  
other intervention/s

Active (screening)  
Passive

- Intracapsular
- Tissue barrier

Resisted

- Extra-capsular
- Strength testing

End-Feel

Layers

- Skin
- Subcutaneous
- Myofascial

Isometric contraction  
Muscle Strength  
Sensory  
Tendon Reflexes