

# Chronic Low Back Pain Assess and Manage



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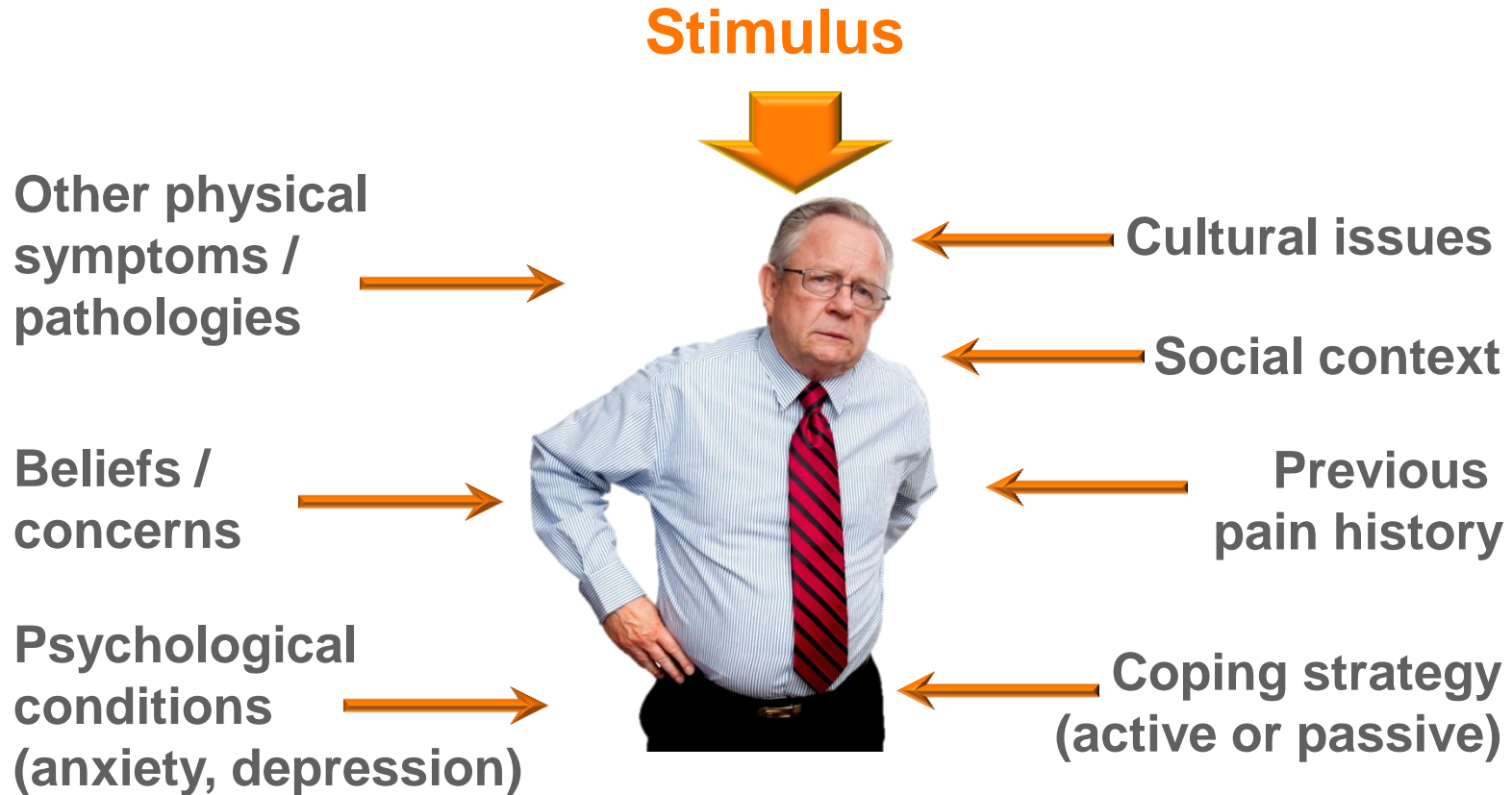




- General principles in managing chronic pain and back pain
- Assessing patients with chronic back pain
  - Conducting a physical examination
- Case study: 6-year history of chronic back pain
  - Biopsychosocial assessment
  - Multimodal pain management



# Factors contributing to the perception of pain<sup>1</sup>



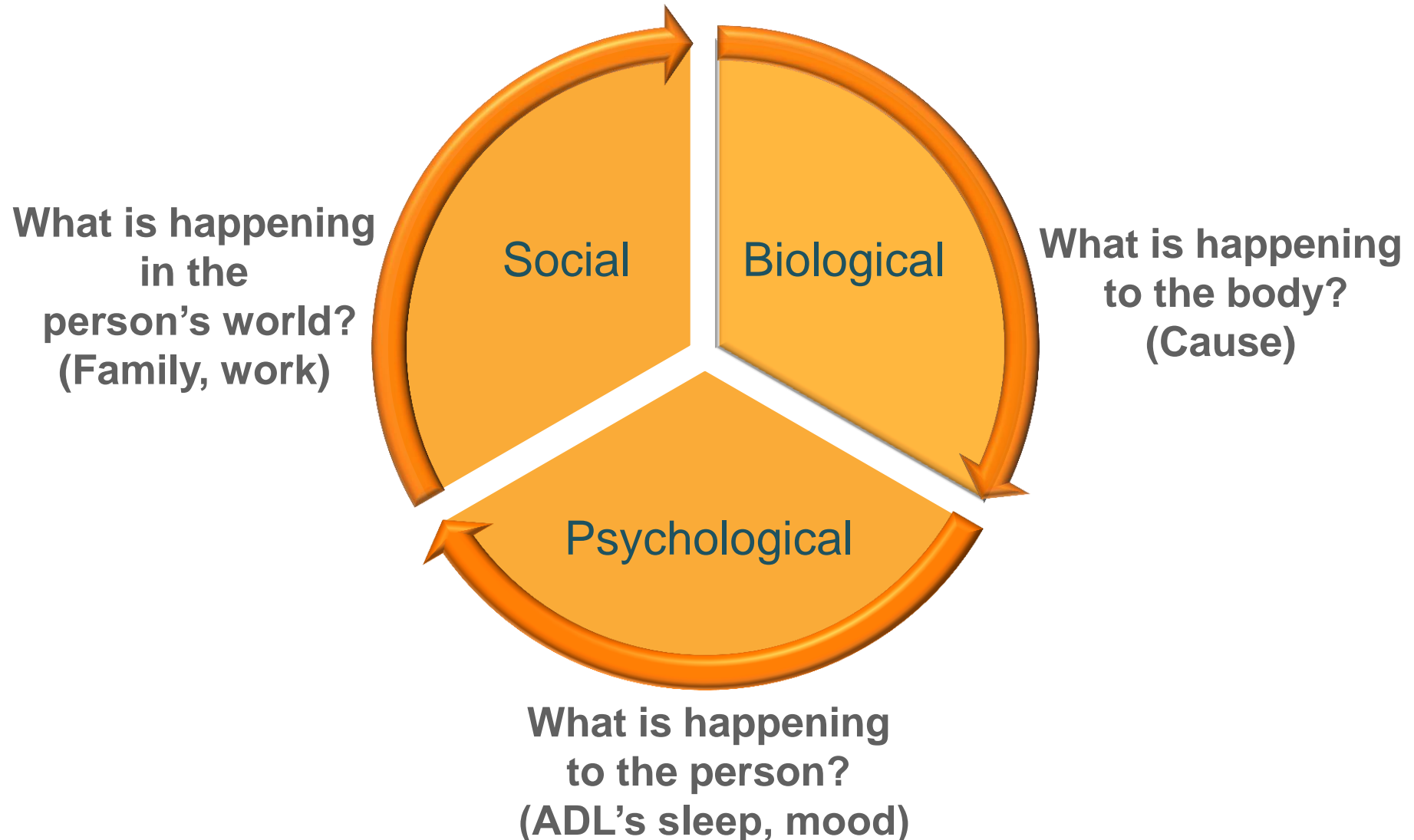
**Pain**

***Is a PERSONAL EXPERIENCE***

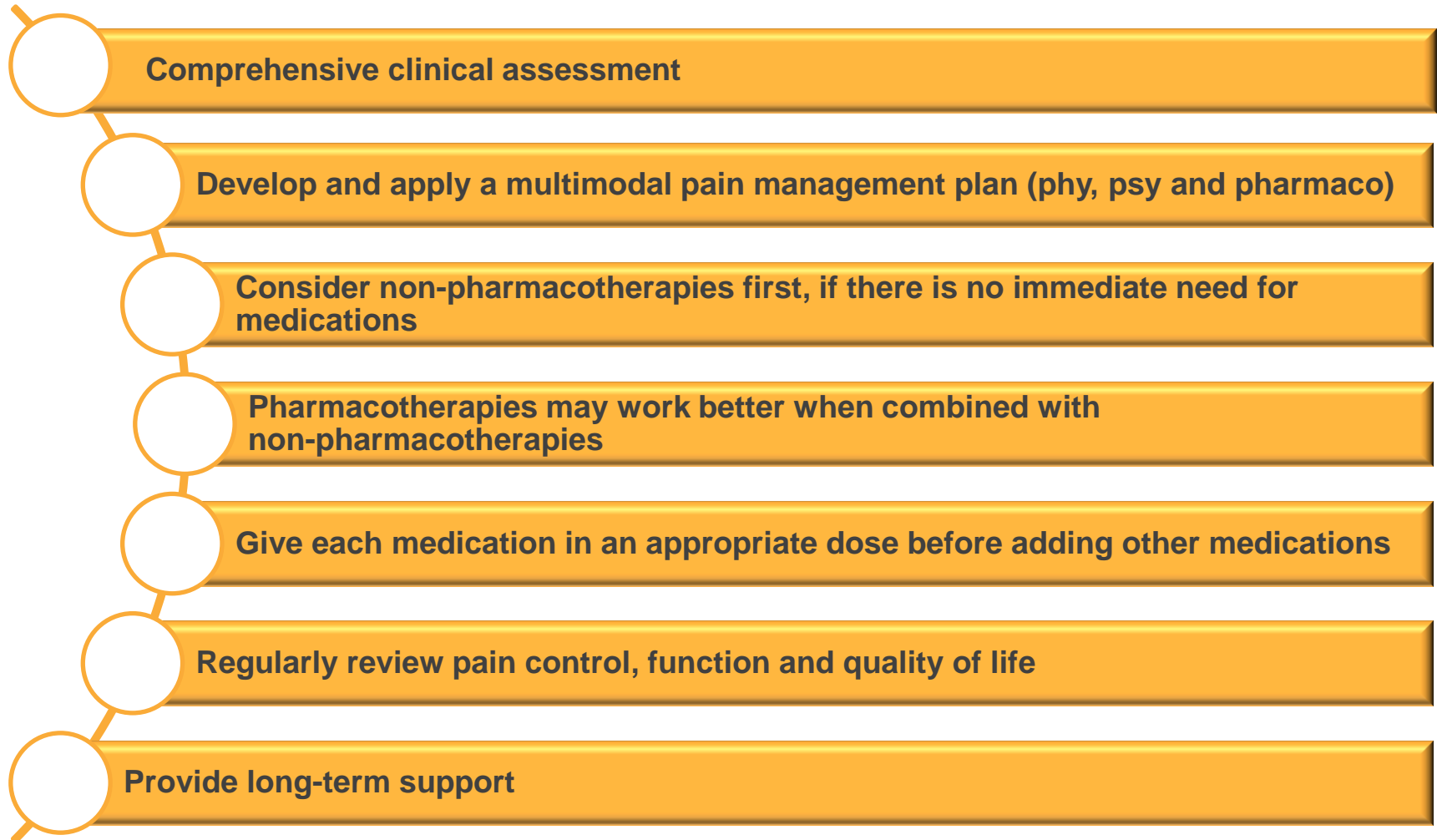
***What the patient says hurts***

***What must be treated***

# Biopsychosocial approach<sup>1</sup>



# Principles of chronic pain management<sup>1</sup>



# Appropriate opioid prescribing in moderate to severe chronic pain<sup>1-4</sup>



- Pharmacotherapy, including opioids, should only be used as part of a multimodal treatment approach
- Use in carefully selected patients and monitor regularly:
  - Moderate-severe chronic pain associated with a reduction in physical functioning and quality of life
  - Opioids should only be considered after an inadequate response to all conservative pharmacological and non-pharmacological treatment approaches
  - A comprehensive biopsychosocial assessment should occur before an opioid trial is initiated
  - The patient should be assessed as having a low risk of unsanctioned opioid use
- Use within a framework:
  - Of a trial (initial and ongoing)
  - To establish if pain is opioid responsive
  - As part of a multimodal pain management plan
  - With established functional goals
  - With a clear opioid cessation plan

1. Cohen ML, Wodak AD. Medicine Today 2010;11:10-18.

2. ANZCA Faculty of Pain Medicine. Principles regarding the use of opioid analgesics in patients with chronic non-cancer pain. 2010.

3. Chou R *et al.* J Pain 2009;10(2):113-130. 4. The Royal Australasian College of Physicians. Prescription Opioid Policy, 2009.



# Chronic back pain: management principles<sup>1</sup>



**Many cases have no recognisable cause (degenerative disc, mechanical, MSK)**

**Underlying systemic disease is rare**

**Psychosocial issues are often contributory and clinically relevant**

**Careful history and physical examination are invaluable**

**Defer diagnostic studies for specific indications**

**Specialist referral: underlying disease, progressive neurological dysfunction, lack of response**

**Patient education is critical to successful management**





## Discussion point:



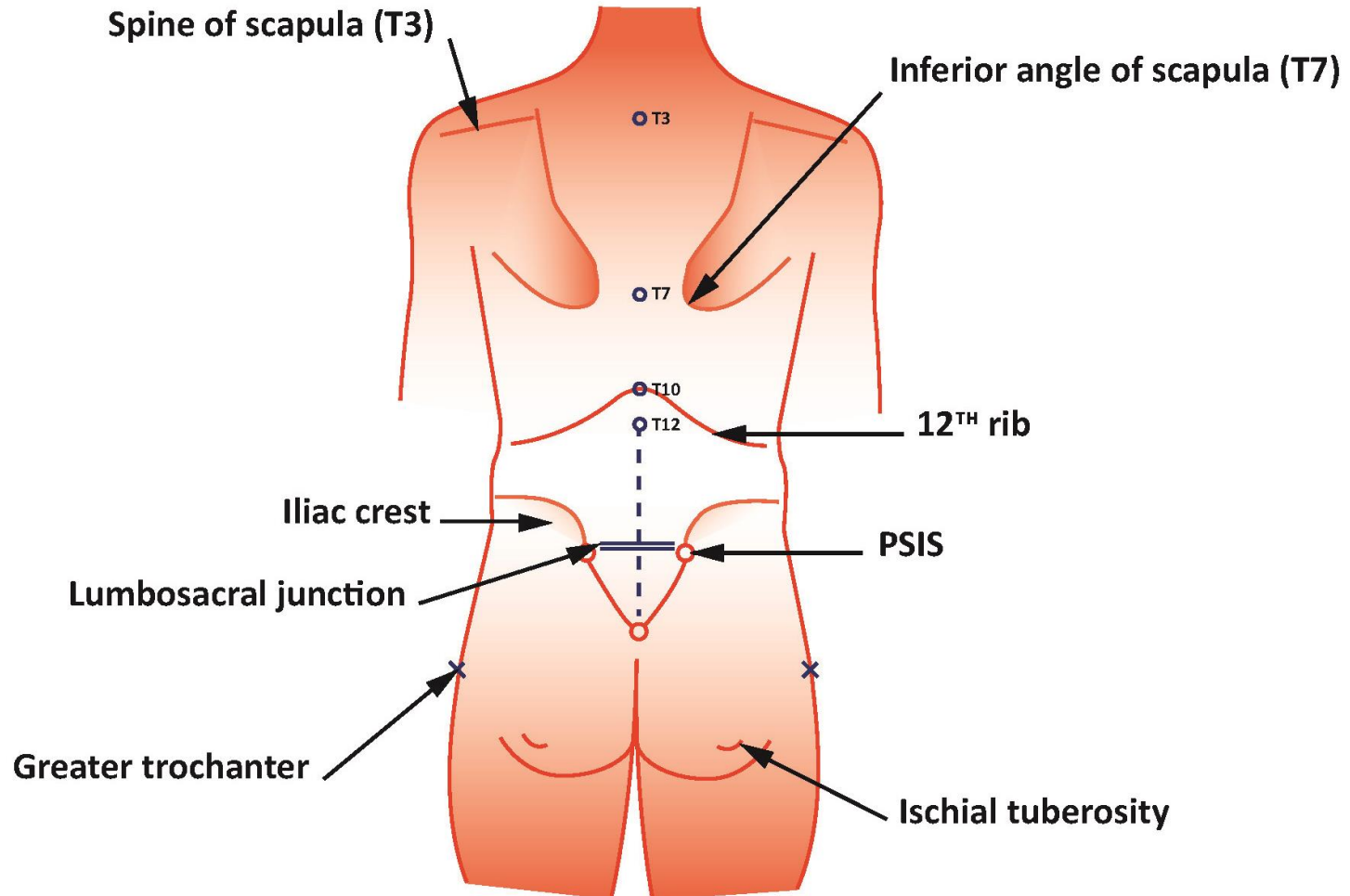
- *Ideally, when does the assessment of a patient with back pain begin?*

# Observing the patient<sup>1</sup>

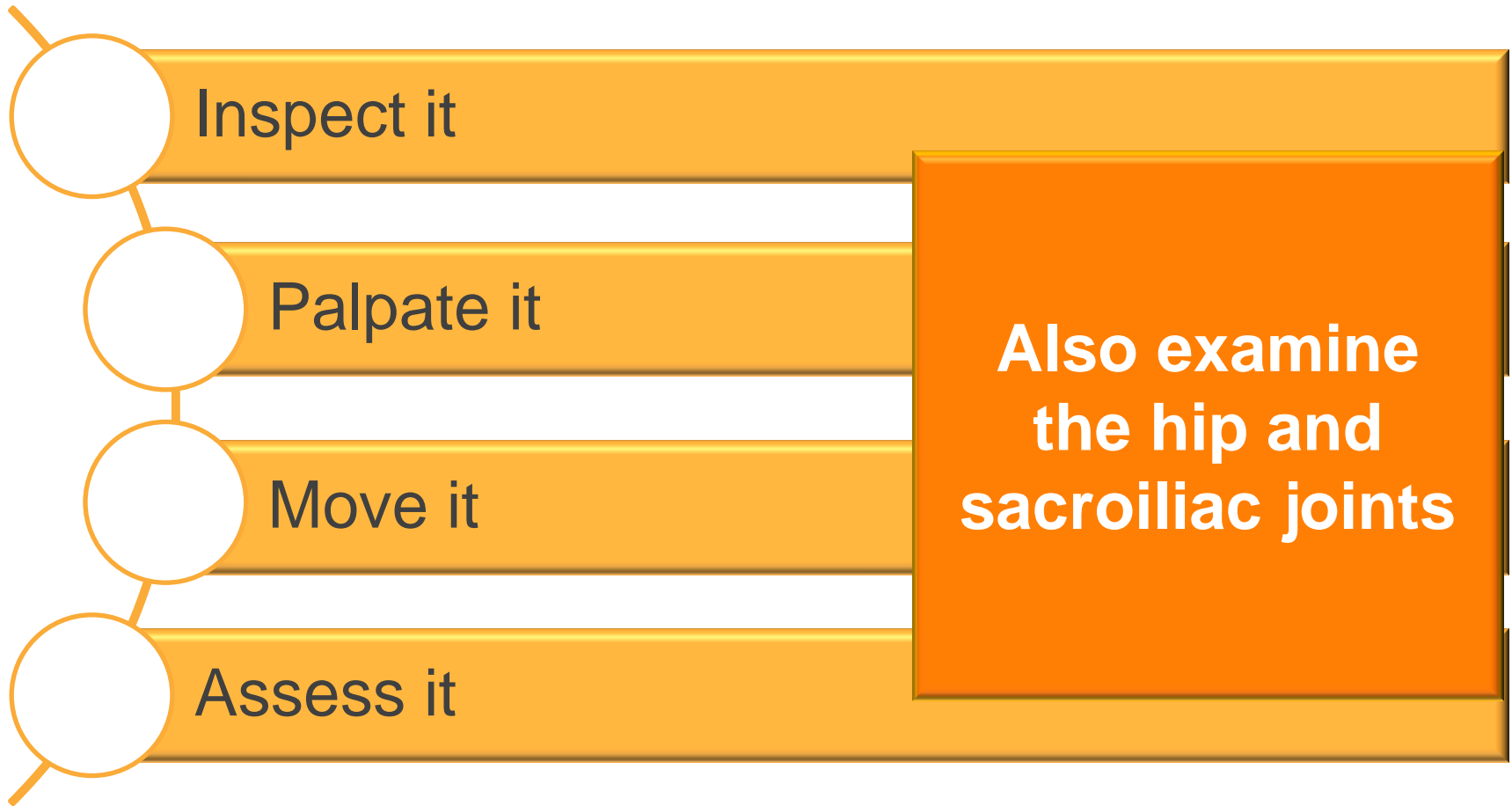


- In the waiting room
- Watching the patient's gait and general demeanour as they enter the consulting room

# Surface anatomy landmarks<sup>1</sup>



# Back examination



# Pain assessment tools



## Pain assessment

- **Pain scales**
  - Numeric rating scale 0-10, verbal descriptors
- **Brief Pain Inventory (BPI)**
  - Resident's Verbal Brief Pain Inventory (as used in Aged Care facilities)
- **Abbey pain scale**
  - For dementia and non-communicative patients

## Psychosocial assessment

- **Örebro Musculoskeletal Pain Screening Questionnaire (ÖMPSQ)**
- **Mood and anxiety scales** (e.g. Goldberg depression and anxiety scales, Hospital Anxiety and Depression Scale [HADS])

## Opioid-specific tools

### Opioid risk assessment

- **Opioid Risk Tool (ORT)**
- **DIRE score**

### Consent and rules of prescribing

- **Opioid treatment agreements/contracts (Patient consent)**

### Ongoing review

- **6 As – Opioid therapy monitoring tool**
- **Bowel Function Index (BFI)**

# Conducting a musculoskeletal examination of the spine





# CASE STUDY

# Case study



- John, 54-year-old bank manager
- 6-year history of chronic low back pain
- Primarily managing his condition with physiotherapy and tramadol
- No co-morbidities
- Reports his back is deteriorating and he is having difficulty managing normal activities



# History: initial acute back pain



- 1<sup>st</sup> episode
- 10 years ago - home renovations
- Two lifting and twisting events
- Low back pain and distally radiating to right leg
- Treatment:
  - Remained active
  - Simple analgesics
  - Graduated return to work
    - Work environment was supportive
- Pain progressively improved (over 8 weeks)

# History: the following year



- Return of pain in the lumbosacral region
- No radiating leg pain
- Treatment
  - Remained active
  - Paracetamol and NSAIDs
- Pain resolved over three months

# History: chronic low back pain



- 6 years ago gradual onset of chronic low back pain
  - Initially the pain was activity-related and settled with rest
- 4 years ago
  - Back pain became more constant
- John has not been pain free for the past 2 years

# History: previous investigations



- X-ray (4 years ago)
  - “Degenerative changes” at L4/5 and L5/S1
- MRI (18 months ago)
  - Disc space narrowing at L4/5 and L5/S1 levels
  - Moderate to marked degenerative changes
  - No nerve root compression

# Pain management: past 2 years



- Paracetamol, NSAIDs (including celecoxib)
  - Minimal pain relief
- Paracetamol/codeine (500/30mg)
  - Not tolerated due to ongoing constipation
- Current therapy
  - Tramadol Controlled release (SR) 200mg 12-hourly
    - Initially effective
    - No longer provides adequate pain relief
  - Physiotherapy (local treatments e.g. massage/TENS)
    - Sporadic use
    - Provides short-term benefit
  - Heat packs

# John's pain (PQRST)



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**P**rovoking  
factors

General activity, prolonged standing, sitting,  
walking

**Q**uality

Severe, aching pain

**R**egion,  
**R**adiation

Across lumbosacral region, radiating to the hips  
and proximal thighs

**S**everity

At rest: 4-5/10

With activity: up to 7/10

Periodic exacerbations: 8-9/10 → sick leave

**T**iming

Pain becomes more severe as the day progresses  
Pain often disturbs his sleep



# John's back examination



- Reduced range of motion in lumbar spine
  - Reduced by 30% in flexion, extension 10 degrees
  - Quadrant testing (facet joints) negative
- Straight leg raising
  - Negative for neural tension
  - Elicits posterior thigh pain (tight hamstrings bilaterally)
  - Femoral stretch test negative
- Lumbar spinal assessment
  - Moderate tenderness L4/5 and L5/S1 levels
- Lower limb neurological assessment
  - Reduced right ankle reflex
  - No lower limb weakness or paraesthesia
- Hips are normal
- Other information: No bowel or bladder disturbance

# John's psychosocial assessment



- Yellow flag assessment:
  - Some catastrophising, “the pain is killing me”, “brittle back”
  - Passive attitude towards therapy, “I need you to fix my back for me”
- Psychological assessment:
  - Frustrated with his situation
  - Not clinically depressed, no anxiety disorder
- Functional (social) assessment:
  - Reduced walking, sitting and standing tolerance
  - Requires frequent positional changes due to pain
  - Reduced ability to drive, undertake normal activities and socialise
  - Independent in personal care
  - Takes sick leave when the pain is exacerbated
    - 17 sick days in the past six months



- *How would you adjust John's pain management plan?*

# John's pain management plan



- Renewed focus on physiotherapy and exercise
  - Retrain the multifidus and transverse abdominus muscles<sup>1</sup>
- Discuss the role of an occupational therapist
  - To review and adjust John's work environment
  - John decides to think about this before committing to this intervention
- Recommend a self-help book
  - "Manage Your Pain"
- Assess suitability of an opioid trial

# Universal precautions in pain medicine: steps before starting an opioid trial<sup>1,2</sup>



## 1. Diagnosis with appropriate differential

- Treatable cause?
- Co-morbid conditions e.g. psychological illness?

## 2. Psychological assessment and risk of addictive disorders

- Including past and current personal and family history of prescribed or illicit drug and alcohol misuse

## 3. Informed consent

- Discuss the potential risks and benefits of opioid therapy

## 4. Agree on treatment with your patient

- Discuss expectations and obligations
- Opioid treatment agreement (contract)

## 5. Assess pain & function

- Pre-intervention (baseline) assessment of pain and function

1. Gourlay DL *et al.* Pain Med 2005;6(2):107-112.

2. Gourlay DL, Heit HA. Pain Med 2009;10 Suppl 2:S115-S123.

# John's suitability for an opioid trial



## 1. Diagnosis with appropriate differential

- Moderate to severe chronic low back pain associated with disc space narrowing and degenerative changes at L4/5, L5/S1

## 2. Psychological assessment and risk of addictive disorders

- No psychiatric comorbidities
- Need to assess history of addictive disorders

## 3. Informed consent

- Use opioid treatment agreement to facilitate discussion of potential risks and benefits

## 4. Agree on treatment with your patient

- Establish a set of functional goals for an opioid trial
- Plan a 4-6 week opioid trial<sup>1,2</sup>

## 5. Assess pain & function

- Assessment of pain and function completed

1. Graziotti PJ, Goucke CR. Med J Aust 1997;167:30-34.  
2. Cohen ML, Wodak AD. Medicine Today 2010;11(2):10-18.

# Opioid Risk Tool – ORT (3 = low risk)



Factor	Males	Females
<b>Family history of substance abuse</b>		
- Alcohol	<input type="checkbox"/> 3 points	<input type="checkbox"/> 1 point
- Illicit drugs (brother used illicit drugs in Uni) <span style="color: red;">✗</span>	<input type="checkbox"/> 3 points	<input type="checkbox"/> 2 points
- Prescription drugs	<input type="checkbox"/> 4 points	<input type="checkbox"/> 4 points
<b>Personal history of substance abuse</b>		
- Alcohol	<input type="checkbox"/> 3 points	<input type="checkbox"/> 3 points
- Illicit drugs	<input type="checkbox"/> 4 points	<input type="checkbox"/> 4 points
- Prescription drugs	<input type="checkbox"/> 5 points	<input type="checkbox"/> 5 points
<b>Aged between 16 and 45</b>	<input type="checkbox"/> 1 point	<input type="checkbox"/> 1 point
<b>History of preadolescent sexual abuse</b>	<input type="checkbox"/> 0 points	<input type="checkbox"/> 3 points
<b>Psychiatric disease</b>		
- Attention deficit disorder, obsessive-compulsive disorder, bipolar disorder, schizophrenia	<input type="checkbox"/> 2 points	<input type="checkbox"/> 2 points
- Depression	<input type="checkbox"/> 1 point	<input type="checkbox"/> 1 point

- Prescription Shopping Program hotline has no record of John in their database

# Opioid adverse effects



## Common

Dry mouth

Nausea, vomiting

Constipation

Dizziness

Drowsiness

Pruritus

Most of the common side effects, except constipation, tend to diminish with continued use

## Less common

Respiratory depression

Opioid-induced hyperalgesia

Hypogonadism/sexual dysfunction

Opioid abuse/addiction

Immune dysfunction

The prevalence of addiction and unsanctioned opioid use is not well defined, but it occurs often enough to be of considerable concern<sup>2</sup>

1. Chan BKB *et al.* Expert Opin Pharmacother 2011;12(5):705-720.  
2. Ballantyne JC, LaForge KS. Pain 2007;129:235-255.





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Improve sitting tolerance from 40 minutes to 60 minutes

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Improve walking tolerance from 30 minutes to 45 minutes

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Able to enjoy a movie or dinner without too much pain

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Reduce his need for sick leave due to back pain  
(from 3 days/month to  $\leq 1$  day/month)

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Reduce pain to more tolerable levels (e.g. worst pain 8-9 to 6, pain with activity from 7 to 5)

# Initiate controlled release (CR) oxycodone/naloxone



- Commence 6-week opioid trial with oxycodone/naloxone CR tablets
  - Initial dose 10/5mg q12h
- Continue with physiotherapy and exercise
- John commits to purchasing the recommended self-help book
- Review appointment in 7 days

# Week 1 review (6 As)



Activity	Sitting tolerance 45 minutes, walking tolerance 30 minutes Movie, dinner untested No sick leave this week
Analgesia	Worst pain from 8-9 to 7/10 Pain with activity from 7 to 6/10
Adverse effects	Headache on two days during the first week No change in his bowel habits
Aberrant behaviours	None observed
Affect	No change
Accurate records	Completed

John is taking a more active role in managing his pain and is not solely relying on opioid therapy e.g. he has purchased the self-help book, and has attended physiotherapy.



- *Would you adjust John's opioid dose this week?*

# CR oxycodone/naloxone dose remains unchanged



- John has made some progress
  - Sitting tolerance increased
  - No sick days
  - Decrease in pain severity
  - Attended physiotherapy
- John experienced some headaches
- Leave dose unchanged and assess in 7 days

# Week 2 review (6 As)



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Activity	Sitting tolerance 50 minutes, walking tolerance 30 minutes Enjoyed dinner with his wife at a restaurant No sick leave this week
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Analgesia	Worst pain no further improvement, rated 7/10 Pain with activity no further improvement, rated 6/10
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Adverse effects	No headaches this week Bowel function normal
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Aberrant behaviours	None observed
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Affect	Outlook on life is improving Annoyed that he is not progressing with walking ability
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Accurate records	Completed
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John has read the first chapter of the self-help book and attended physiotherapy this week. He is continuing to take a more active role in managing his pain and is not solely relying on opioid therapy.



- John has made some progress versus functionally based treatment goals
  - Small reduction in pain (no change in the past week)
  - John experienced no side effects in the past week
- Decide to increase oxycodone/naloxone CR to 15/7.5mg q12h (10/5mg + 5/2.5mg)
  - Assess in 7 days

# Week 6 review: end of opioid trial (6 As)



Activity	Sitting tolerance 55 minutes, walking tolerance 40 minutes Went to the movies with only minor discomfort 1 day of sick leave over the past 6 weeks
Analgesia	Worst pain reduced from 8-9 to 6/10 Pain with activity reduced from 7 to 5/10
Adverse effects	Medication is well tolerated
Aberrant behaviours	None observed. Pill count conducted and indicates appropriate use
Affect	Positive outlook
Accurate records	Completed

John continued implementing selected recommendations from the self-help book and attended physiotherapy, taking an active role in managing his pain.



# Time-limited opioid therapy



- John has had a positive response to opioid therapy being added to his pain management plan
- He consents to continuing opioids for a period of 3 months with monthly reviews
  - To further improve walking and sitting tolerance and
  - To reduce his sick days
- He agrees to trial reducing and stopping the opioid at the end of this period



## Pain management plan

- Regular exercise
- Physiotherapy fortnightly
- Continue self-help strategies
- Oxycodone/naloxone CR dose 15/7.5mg q12h
- Engage occupational therapist to assess and modify work environment

## Outcomes

- Sitting tolerance: 70 minutes
- Walking tolerance: 55 minutes
- Sick leave: 2 days in past 3 months
- Current pain is tolerable (no change in severity)
- No aberrant behaviours have emerged



- You raise the issue of reducing and stopping the opioid and John is hesitant, as “I am doing so well now”
- *How would you address this situation?*

# Overcoming resistance to stopping the opioid



- Reinforce the gains John has made
  - Improved physical condition and core strength
  - New skills and coping strategies to function even if there is some ongoing pain
- Explain that just as we started opioid therapy with a trial, we want to trial stopping the therapy
  - Plan is to gradually reduce the dose of the opioid and eventually stop opioid treatment
  - If he is not able to function, then treatment with an opioid analgesic will be reconsidered



## Protocol

- Reduce dose gradually<sup>1</sup>  
e.g. decrease daily  
oxycodone dose by 5mg  
per week
- Weekly reviews
  - Reinforce use of self-help  
coping strategies
  - Paracetamol if required

## Outcome (6 weeks later)

- CR oxycodone/naloxone  
ceased
- Paracetamol (1000mg  
QID) recommenced
- Continue regular exercise  
and physiotherapy
- Current level of pain is  
manageable



- Assessing back pain<sup>1</sup>
  - Careful history and physical examination are essential
  - Reserve diagnostic studies for specific indications
- Managing chronic back pain
  - Patient education (self-help resources) is critical<sup>1</sup>
  - Exercise/remaining active is a key component of a multimodal pain management plan<sup>1</sup>
- Opioid use:<sup>2</sup>
  - Reserved for patients who have not received an adequate response from conservative pharmacological and non-pharmacological treatment strategies
  - Time-limited trial basis with regular monitoring

1. Bhangle SD *et al.* Cleveland Clin J Med 2009;76(7):393-399.

2. McDonough M. Aust Prescr 2012;35:20-24.

# QUESTIONS

# THANK YOU

*Please complete evaluation forms*



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