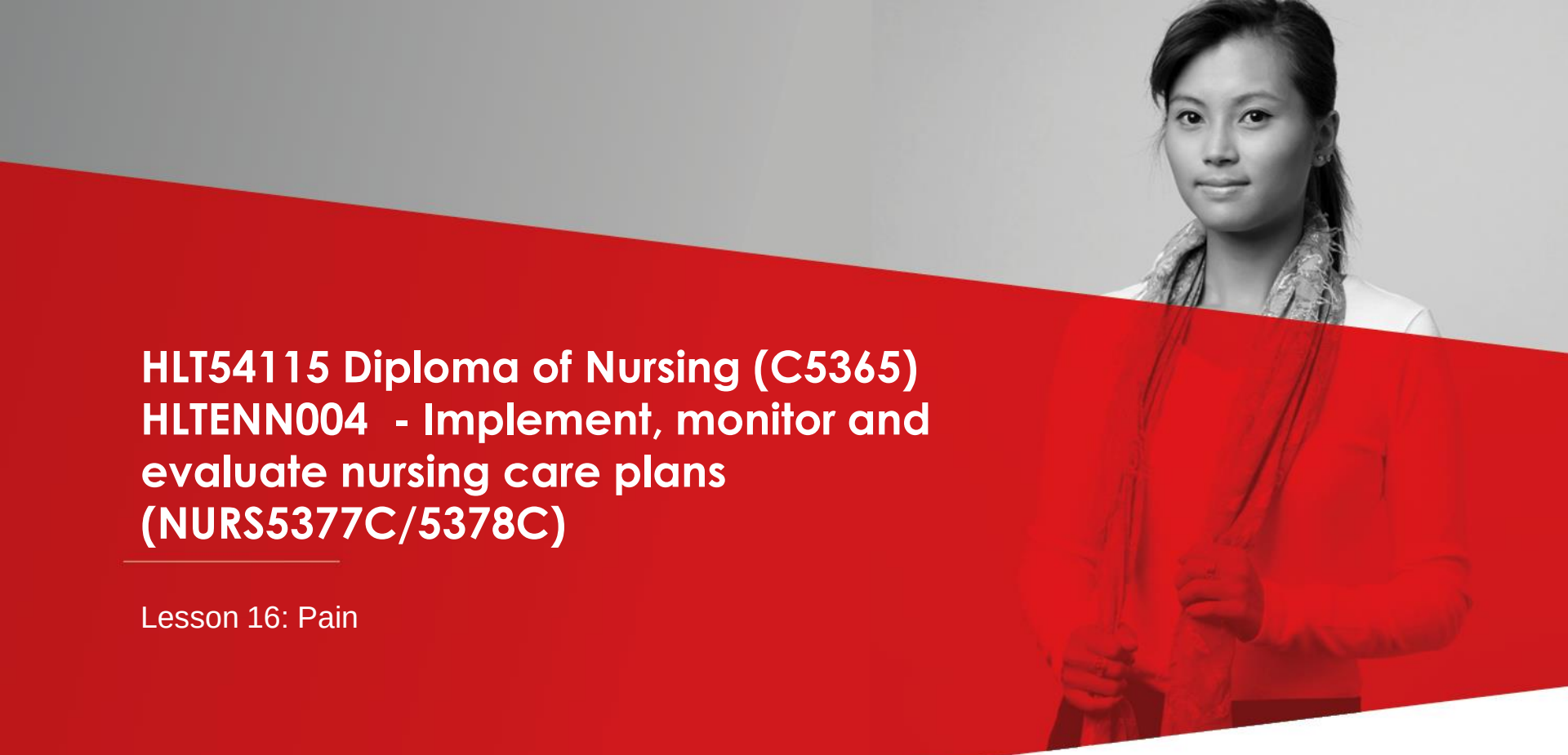

# HLT54115 Diploma of Nursing (C5365) HLTENN004 - Implement, monitor and evaluate nursing care plans (NURS5377C/5378C)

Lesson 16: Pain

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# Learning objectives

Describe different types of pain

Identify how to assess pain

Identify how to differentiate pain

Identify nursing interventions

State and discuss Nanda diagnosis

Discuss care plans

# Pain

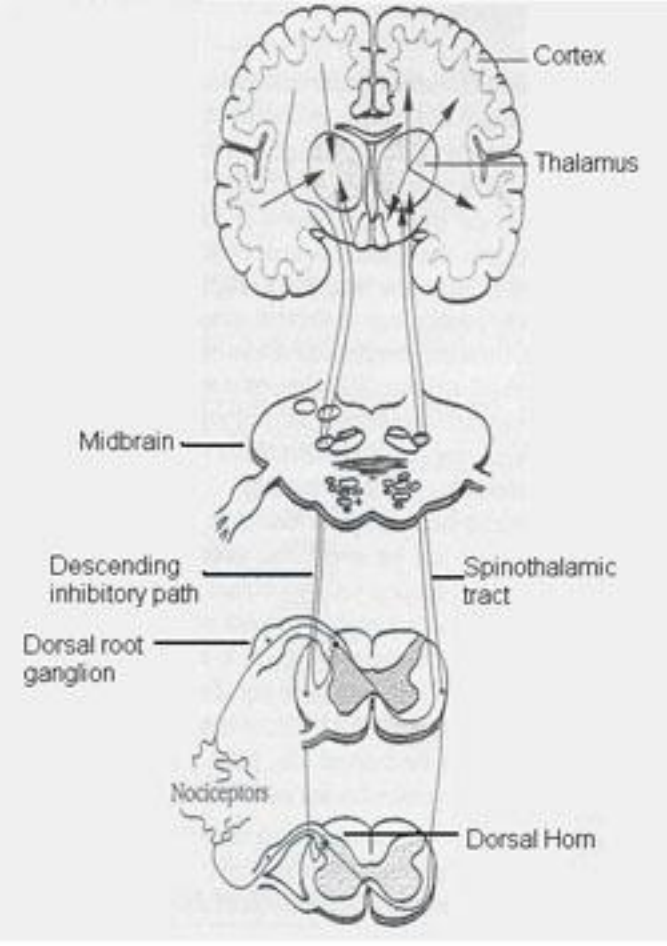
- Is a subjective unpleasant sensory or emotional disturbance associated with actual or potential damage
- Pain is an individual perspective and can be influenced by many external factors
- One person's interpretation of pain can be markedly different to another's, due to many factors such as past experiences, environment, culture, emotional state, stress and hormones

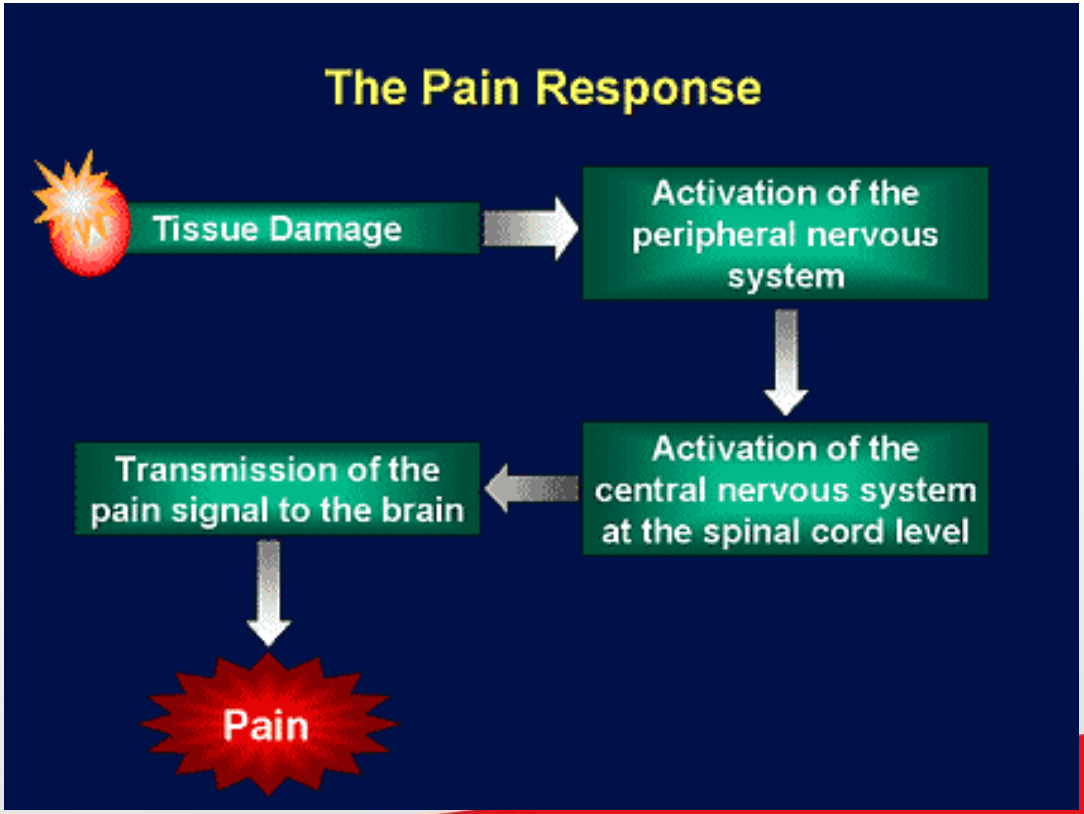
# Pathophysiology of pain

There are still many factors which are not well understood regarding pain, but the general understanding that is accepted is;

1. Stimuli occurs- triggers biochemical mediators (eg: prostaglandins, serotonin, substance P etc.) while ions move across cell membranes, both of which excite sensitive nociceptors-
2. Message spreads across neurotransmitters through to spinal level (dorsal horn) where it can be amplified or dampened and up spine to brain to be processed by pain center
3. Signals send back down via the same pathway to release chemicals to help relieve the pain
4. Person perceives this and shapes behavior

# Pathophysiology of pain



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# Why is this important?

- Different analgesia or stimuli works on different levels of the pain pathway.
- Some analgesics such as ibuprofen/ aspirin, work by blocking production of prostaglandin (in stage 1 while local anaesthetic decreases movements of ion
- In stage 2, opioids block release of neurotransmitters (especially substance P) stopping pain at the spinal cord level
- At stage 3, tricyclic antidepressants block reuptake of noradrenaline and serotonin or MNDA antagonists e.g. ketamine, help diminish signals of pain
- There are other analgesics which do not have a clear explanation of how it works, for example, how anti- convulsant's work on peripheral pain

# Consequences of pain

- Untreated or undertreated acute pain can go on to cause chronic pain
- Discomfort and psychological distress in patient
- Impairs healing
- Decreases immune system
- Sleep disorders
- Mood disorders
- Impacts future sensitivity to pain
- Can lead to decreased socialising
- Economic impact – burden on healthcare

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# Types of pain

- Acute
- Chronic- recurring or persisting over 6 months
- Somatic- originates in skin, muscle, bone or connective tissue
- Visceral- from organs or hollow viscera (structures that change shape depending on content such as stomach)

# Types of pain

- Neuropathic- from damaged or malfunctioning nerves
  - Peripheral neuropathic pain- damage or sensitisation or peripheral nerves
  - Central neuropathic pain- malfunctioning nerves in central nervous system
  - Sympathetically maintained pain- abnormal connections between pain fibres and the sympathetic nervous system
- Functional or psychogenic pain- unknown physical source attributed to psyche or emotions
- Phantom pain- pain sensation from removed body parts

# Qualifiers of pain

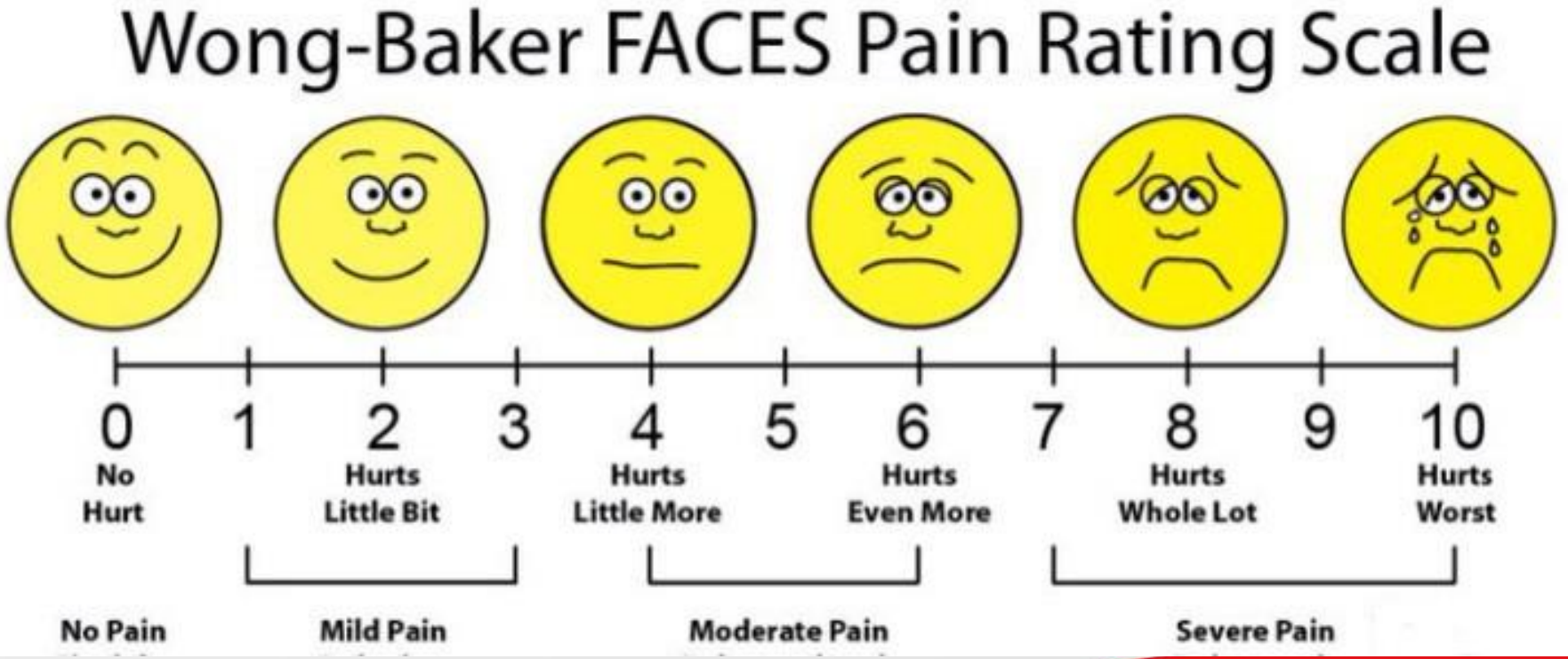
- Fast or slow pain- abrupt onset and cessation of pain vs. throbbing, burning or aching sensation
- Referred pain- when the brain confuses the message and pain is perceived to be elsewhere, e.g. chest pain felt in jaw
- Radiating pain- pain moves elsewhere from original site
- Severity- mild, moderate or severe
- Descriptors of pain- ache, dull, burning, stabbing, sharp, niggly, crampy, heavy, tightness, pressure, squeezing

# Assessment of pain

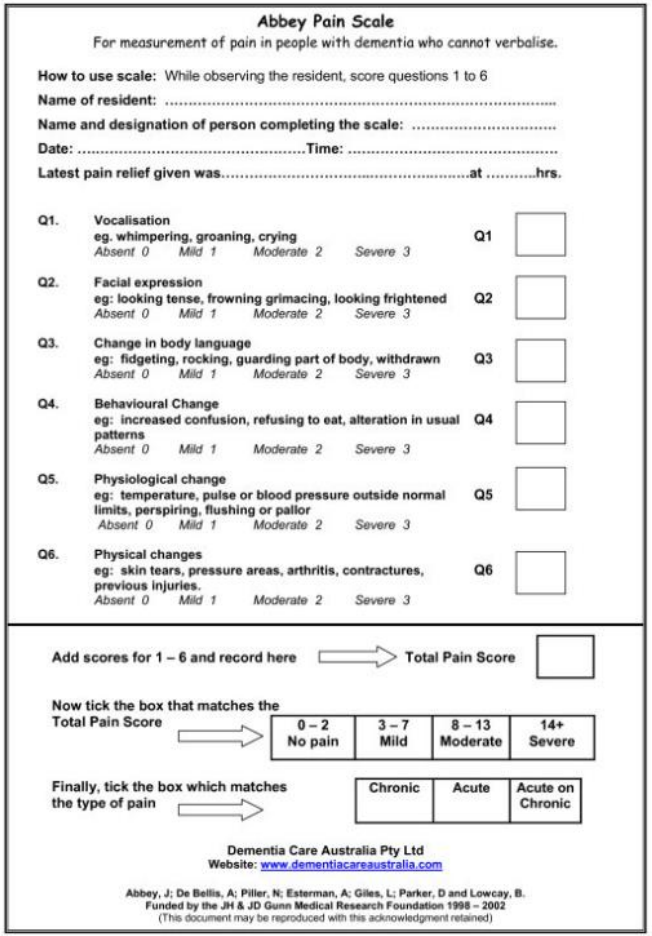
**TABLE 1: Features of the pain history—"PQRST"**

| | |
|---|---|
| P | Provocative factors, palliative factors |
| Q | Quality (characteristics) |
| R | Region, pattern of radiation, referral |
| S | Severity, intensity (use pain rating scales [Figure 2]) |
| T | Temporal factors: onset, duration, time to maximum intensity, frequency, daily variation |

# Assessment tools



# Assessment of pain



**Abbey Pain Scale**

For measurement of pain in people with dementia who cannot verbalise.

**How to use scale:** While observing the resident, score questions 1 to 6

**Name of resident:** .....

**Name and designation of person completing the scale:** .....

**Date:** .....**Time:** .....

**Latest pain relief given was**.....**at** .....**hrs.**

**Q1.** **Vocalisation**
**eg. whimpering, groaning, crying** **Q1**
*Absent 0 Mild 1 Moderate 2 Severe 3*

**Q2.** **Facial expression**
**eg: looking tense, frowning grimacing, looking frightened** **Q2**
*Absent 0 Mild 1 Moderate 2 Severe 3*

**Q3.** **Change in body language**
**eg: fidgeting, rocking, guarding part of body, withdrawn** **Q3**
*Absent 0 Mild 1 Moderate 2 Severe 3*

**Q4.** **Behavioural Change**
**eg: increased confusion, refusing to eat, alteration in usual patterns** **Q4**
*Absent 0 Mild 1 Moderate 2 Severe 3*

**Q5.** **Physiological change**
**eg: temperature, pulse or blood pressure outside normal limits, perspiring, flushing or pallor** **Q5**
*Absent 0 Mild 1 Moderate 2 Severe 3*

**Q6.** **Physical changes**
**eg: skin tears, pressure areas, arthritis, contractures, previous injuries.** **Q6**
*Absent 0 Mild 1 Moderate 2 Severe 3*

**Add scores for 1 – 6 and record here** ⇨ **Total Pain Score**

**Now tick the box that matches the Total Pain Score** ⇨

| 0 – 2 No pain | 3 – 7 Mild | 8 – 13 Moderate | 14+ Severe |
|---|---|---|---|

**Finally, tick the box which matches the type of pain** ⇨

| Chronic | Acute | Acute on Chronic |
|---|---|---|

**Dementia Care Australia Pty Ltd**
**Website:** www.dementiacareaustralia.com

**Abbey, J; De Bellis, A; Piller, N; Esterman, A; Giles, L; Parker, D and Lowcay, B.**
**Funded by the JH & JD Gunn Medical Research Foundation 1998 – 2002**
(This document may be reproduced with this acknowledgment retained)

# Assessment of pain

Objective- look at behavior

- Guarding
- Grimacing
- Withdrawn
- Anxious
- Agitated
- Restless
- Limitation of activity

# Assessment of pain

Physiological manifestations are consistent with sympathetic fight or flight response:

- Increased heart rate
- Increased respiratory rate
- Shallow respirations
- Elevated blood pressure
- Dilated pupils
- Increased muscle tension
- Decreased gut motility
- Dry mouth

# Assessment of pain

Sympathetic nervous response is not always an accurate representation of pain as constant presence of pain results in the body compensating and regulating the response, therefore, especially in chronic pain, these markers may not be observed.

Other signs of chronic pain include:

- Sleeplessness
- Depression
- Exhaustion
- Aggression

# Influencers of pain

- Young- inability to verbalize or describe pain
- Gender- males may be conditioned to show “braveness”
- Culture- some cultures encouraged to verbalize pain whilst others are taught to contain it, pain may be believed to be a punishment
- Emotional state- emotional or physical exhaustion lowers pain tolerance, fear and anxiety heighten pain
- Environment- lack of privacy or atmosphere of tension
- Self image- personal belief may be that being stoic will result in others seeing them in a higher esteem
- Time of day- darkness and reduced sensory input (distraction) can increase perception of pain
- Previous pain- poor experiences of pain the past may alter perception

# Cultural differences

https://www.youtube.com/watch?v=Kz6BBuyWSE8

Class discussion-

What signs of pain could you see with the patients?

What other communication techniques could you use to assess the patient?

How else could you assess the patient?

# Pain assessment

- Obtain medical history- could help you determine where the pain is coming from or contributing factors
- Ask about medication history- ask the patient what they normally take for pain, or how they manage their pain at home
- Ask the patient what they believe the pain is- this gives you insight, may allow you to recognize any misconceptions and provide an education experience
- Be realistic and manage your patients expectations- for eg; if patient has a broken leg and is awaiting surgery, explain that interventions may not completely get rid of pain but that the aim is to manage pain and keep the patient comfortable until the underlying problem can be fixed

# Physical assessment

Inspect the patient- do a full skin check and look for any signs of injury, scars or physical evidence that may be contributing to pain

Palpate- finding the exact site of pain is an important diagnostic tool

https://youtu.be/vr4kbkH82ZA

https://www.youtube.com/watch?v=XOefpxm38bc

(from 3 minutes)

# Nursing Interventions

Pharmacological-

- Paracetemol
- Non steroidal anti inflammatory (NSAIDS) aspirin, ibuprofen, indomethacin, piroxicam, ketorolac, celecobic
- Narcotics- codeine, tramadol, pethidine, oxycodone, morphine, fentanyl
- Anesthetics-  lignocaine, ketamine
- Antidepressants- amitriptyline, venlafaxine, fluoxetine
- Anticonvulsants- carbamazepine, gabapentin, pregabalin

Analgesic can be given orally, intramuscularly, sub cut, intravenous and epidural

# Nursing Interventions

Non pharmacological-

- Cognitive behavioral therapy
  - Relaxation- breathing techniques, mindfulness, meditation
  - Distraction- talking, television, phone, books, counting, music, poems, engaging in activities
  - Imagery- forming a mental image using imagination, such as imagining the pain leaving your body with every breath
  - Biofeedback- have person regain control over involuntary actions
  - https://www.youtube.com/watch?v=MZT0VIxqWHo

# Nursing Interventions

Heat- dilated blood vessels and increases blood flow, reduce level of nociceptor stimulation, reduce ischemia by muscle spasm or tension, reduce swelling and relieve pressure. (best for chronic pain)

Cold- causes vasoconstriction, prevent extravation from blood to tissues, follows by vasodilation. (best for acute pain)

Both modulate sensory input at dorsal horn (multiple sensory message trying to go through same point- can overwhelm message centre and therefore decrease interpretation of pain)

Transcutaneous electrical nerve stimulation (TENS)- application of electrodes to trigger points on skin to produce tingling or vibrating- different theories of how it works range from being a conduction block, helps release endorphins, acts as counterirritants or “flood the pain gate”


“buzzy bee” works similar to TENS used in

Paediatric nursing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# Nursing interventions

Massage- increase circulation, reduce muscle tension, relax individual. Alters individuals conscious awareness of pain. Essential oils and aromatherapy can also be beneficial

Change of positioning- relieve pressure, allow support, improve alignment, elevate limb

Reassure and alleviate tension- provide reassurance, explain possible outcomes, give justifications

Change environment- allow patient to feel comfortable to express pain with dignity and in privacy, have light, allow patient to feel some control over situation- have call bell available to them, have necessities in reach

Handle gently- do not be too quick or rough with patient, handle with care

Promote sleep and rest- try to encourage pt. to sleep and provide most comfortable environment to sleep in (reduce noise, help them relax, bring pillows, blankets)

Encourage fluids for headaches (if not being kept NBM)

# Nursing interventions

Apply dressing- certain dressings can help with healing, compression from crepe assists with pain/ swelling and covering injury can help psychologically

Immobilise- apply splint, sling or dressing to immobilise limb, provide pillows to splint for coughing

Reassess- with any measure implemented be sure to reassess patient to ensure that it is helping, report and document any concerns or changes.

# NANDA DX

What NANDA dx can be identified as a result of actual or perceived pain?

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# Case Study

46 year old Sally Jones has been admitted to your ward with abdominal pain for investigation. She has nil known allergies. Her past history includes: G3P2, ectopic pregnancy resulting in oophorectomy, overweight, pre- diabetes. She is not currently on any medication. Social history: currently going through a divorce which has been impacting her work situation. Lives at home with her 2 teenage children. One of her children is not doing well at school and she is worried about how the divorce is affecting them.

How would you assess Sally?

# Case study

What measures could you take to alleviate Sally’s pain?

What other factors could be influencing Sally’s interpretation of pain?

How would you develop a care plan for Sally?

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