



# The Hearing Aid Podcasts



## Episode 7 Show Notes Pain Management

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## Learning Outcomes

### Knowledge:

- To be able to describe the different types of pain and how pain is felt
- To understand that pain response has an emotional component
- To understand of the methods of action of the common analgesics

### Skills:

- To know when to use different tools for assessing pain (i.e Abbey)
- To assess for signs of pain during routine care or assessment.

### Attitudes:

- To appreciate your own role in pain assessment and management
- To consider pain as a cause of agitation in those with cognitive impairment

## Definitions:

Formal / Scientific Definition:

Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage and pain is always a subjective experience.

*[Pain definition From International Association for the Study of Pain \(IASP\)](#)*



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## Practical Definition:

Pain does not necessarily have to be associated with an acute / sudden injury as the word often conjures up. In older people it's especially important to think of pain in the chronic situation also. Arthritis for example causes tissue damage but not a sudden new pain - the damage is long term and the pain may develop over the longer time period also.

## Key Points from Discussion

Think about the cause of the pain and not just managing it

Pain in older people (especially those with cognitive impairment) often goes underreported and under managed.

Pain is a sensation sensed by nerve fibers. There are two type of these faster ones and slower ones. Importantly pain fibers can be stimulated by mechanical stimuli (such as heat or pressure) or chemical stimuli (such as those released when there is cell damage). The balance between these two will determine the way the pain feels - but again it's subjective so your feeling may be different to mine.

The pain signals are then sent up to the thalamus in the brain via the dorsal root column in the spinal cord. In the brain where the emotional response to the pain is made.

Example:. burning your finger - you pull it away before you think about it - that's the pain reflex response and has no central involvement, but then later you remember it is hot and don't do that again - that is a higher cortical / learning response to pain).

Pain can be modulated in a number of ways:

- 1) Gate theory - mixing the alpha and C signals - ie. rubbing reduces the signals going up the spine.
- 2) Endogenous opioids (released in exercise)
- 3) Signals coming down from the brain

This episode focuses on pain killing medication (analgesia) but there are other ways of managing pain - using the three modulation strategies above (eg. TENS machine, hot / cold therapy, pain management CBT etc).

[Here is a really good review of pain and how we feel pain](#)



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## Types of Pain

Pain can be formed by a number of different mechanisms - we talk through the ones we feel are important:

- 1) **Inflammation** of the nerves, e.g., temporal neuritis.
- 2) **Injury** to the nerves and nerve endings with scar formation, e.g., surgical damage or disk prolapse.
- 3) **Nerve** pain eg or peripheral neuropathy invasion by cancer, e.g., brachial plexopathy.
- 4) Injury to the structures in the spinal cord, thalamus, or cortical areas that process pain information, which can lead to intractable pain; deafferentation, e.g., spinal trauma.
- 5) Abnormal activity in the nerve circuits that is perceived as pain, e.g., phantom pain with cortical reorganization.
- 6) **Psychological** - links into the emotional responses we have to pain - may make it harder to treat

## Medications

We recommend working your way up the well know WHO analgesic ladder

[WHO Analgesic ladder](#)

### **Paracetamol**

Generally safe - 4 x day dosing.

Lower dose in patients' whose weight is <50kg

- Paracetamol does not suppress the severe inflammation of rheumatoid arthritis and acute gout but does inhibit the lesser inflammation resulting from extraction of teeth and is also active in a variety of inflammatory tests in experimental animals.
  - Paracetamol, NSAIDs and selective COX-2 inhibitors all have central and peripheral effects. As is the case with the NSAIDs, including the selective COX-2 inhibitors, the analgesic effects of paracetamol are reduced by inhibitors of many endogenous neurotransmitter systems including serotonergic, opioid and cannabinoid systems.

[Paracetamol Pharmacology article](#)

### **NSAIDs- Non-steroidal anti-inflammatory drugs**

Generally best to avoid these in older people - have side effects - GI upset (including bleeding), may worsen asthma and can cause renal failure.

But...they have a valuable anti-inflammatory effect.

[Ibuprofen Pharmacology article](#)



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## Weak Opioids

### Codeine and Dihydrocodeine

Both are pro-drugs and split down into a number of active metabolites  
Have opioid side effects (See below)

## Strong Opioids

Morphine

- Morphine acts on Mu receptors produce analgesia by actions at several levels of the nervous system, in particular, inhibition of neurotransmitter release from the primary afferent terminals in the spinal cord and activation of descending inhibitory controls in the midbrain.

[Morphine pharmacology](#)

- Side effects:
  - Constipation, confusion, addiction, respiratory depression, sedation, rash - histamine release - not an allergy!, nausea.
  - People may build tolerance to the opiates over time
  - Some side effects may reduce as tolerance develops.

Buprenorphine - available as a patch - is a partial agonist / antagonist of opioid receptors

Fentanyl - also available as a patch - very strong so doses very small

Oxycodone - may be safer in renal failure

Tramadol - a synthetic opiate - has lots of side effects as it acts on many types of receptors.

[Strategies to Manage the Adverse Effects of Oral Morphine: An Evidence Based Report.](#)  
[Cherny et al. Journal of Clinical Oncology 2001](#)

There are a number of means of assessing the subjective feeling that is pain.

Common means are the:

1-5 or 1-10 Likert style scale

Faces with differing expressions for pain levels

Visual analogue scale (a line where you make a mark as to how bad the pain is)

In Dementia there are a number of pain scales (eg. Abbey) - these are described in the article below.

[Pain assessment scales in dementia](#)

## **Curriculum Mapping:**

This episode covers the following areas (n.b not all areas are covered in detail in this single episode):

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Curriculum	Area	
NHS Knowledge Skills Framework	Suitable to support staff at the following levels: <ul style="list-style-type: none"> <li>● Personal and People Development: Levels 1-3</li> <li>● Service Improvement: Level 1 - 2</li> </ul>	
Foundation curriculum	<b>Section</b> 7.5 8.4	<b>Title</b> Safe Prescribing Manages pain
Core Medical Training	Team working and patient safety Clinical Examination Abdominal pain Chest pain Falls Management of patients requiring palliative and end of life care Management of long term conditions and promoting self-care	
GPVTS program	Section 3.05 - Managing older adults <ul style="list-style-type: none"> <li>● Core Competence: Managing medical complexity</li> <li>● Core Competence: Working with colleagues and in teams</li> <li>● Core Competence: Practising holistically and promoting health</li> </ul> Section 3.20 - Care of people with musculoskeletal problems	
ANP (Draws from KSF)	Section 7.12 Section 7.25	

## Feedback

We will add feedback to this as we receive it! The website will have the most up to date version always available: [www.thehearingaidpodcasts.org.uk/mdtea](http://www.thehearingaidpodcasts.org.uk/mdtea)

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