

# **Other Drugs for Pain Management in Older Adults**

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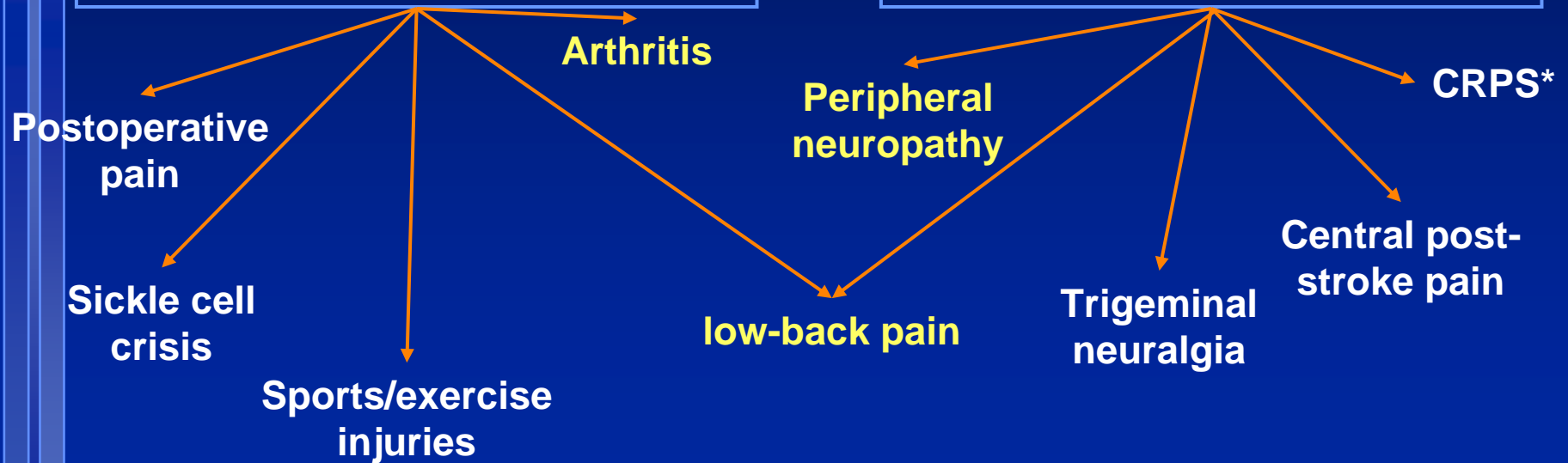
# Nociceptive vs. Neuropathic Pain

## Nociceptive pain

Related to pain reception and neural pathways in response to injury

## Neuropathic pain

Related to pathophysiology in the nervous system



\*Complex regional pain syndrome

# Myths and Misconceptions

- Myth

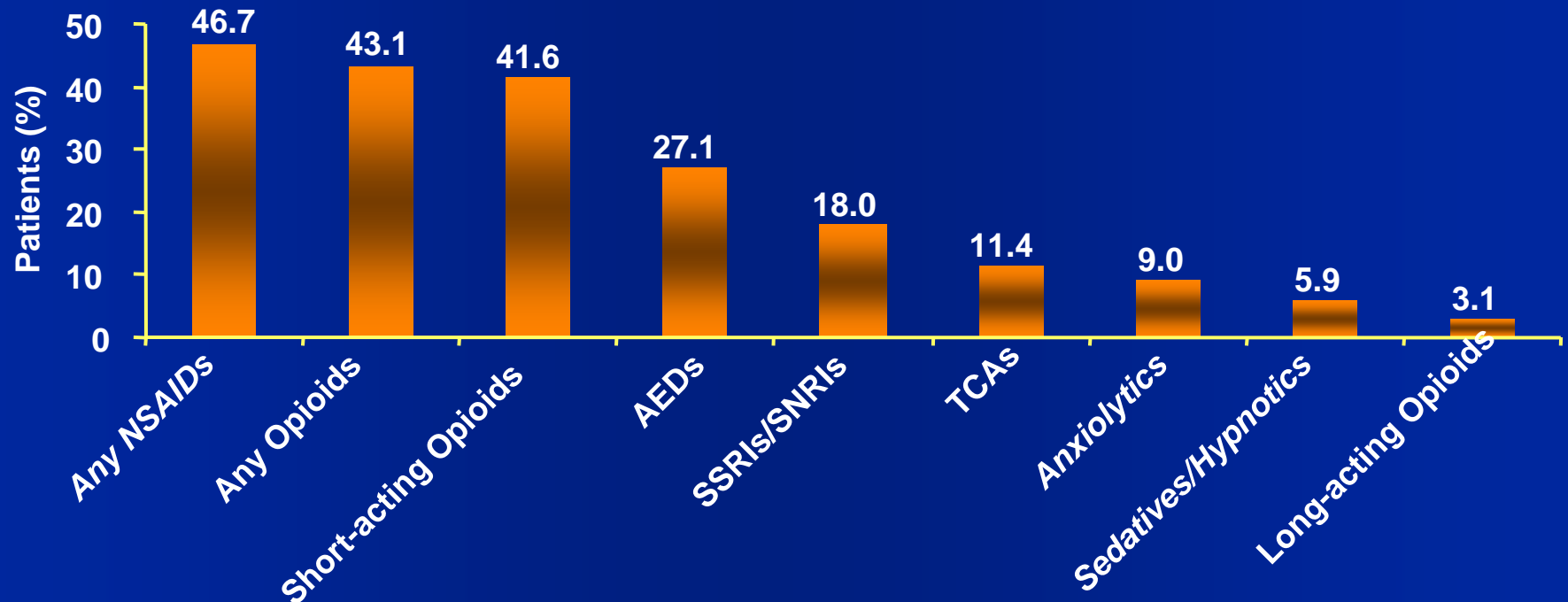
- Traditional analgesics don't work for neuropathic pain.

- Fact

- Acetaminophen, NSAIDs and Opioids may relieve all types of pain

# Prescription Medication Use By Patients With Diabetic Peripheral Neuropathy

Proportion of Patients Using Various Types of Rx Medications (N=255)



NSAID = nonsteroidal anti-inflammatory drug; AED = antiepileptic drug; SSRI = selective serotonin reuptake inhibitor; SNRI = serotonin/norepinephrine reuptake inhibitor; TCA = tricyclic antidepressant.

# Drugs for Neuropathic Pain

- Antidepressants
  - Tricyclic Anti-depressants
  - Serotonin and NE Reuptake Inhibitors  
SNRIs
- Anti-convulsants
- Local Anesthetics
  - Lidocaine
  - Capsaicin
- Anti-arrhythmics
  - Mexilitine

# NNT and NNH for Adjuncts

Class	NNT	NNH (Major/ minor)	Comments
TCA	3.6	28/6 <sup>(A)</sup>	DPN 1.3/PHN 2.7
Venlafaxine	3.1	16.2/ 9.6	
Gabapentin	4.3	NS/3.7	DPN 2.9/PHN 3.9
Carbamazepine	2.5	NS/3.7	TGN; DPN 2.3
Phenytoin	2.1	NS/3.2	DPN

(A) NNH for TCA is for amitriptyline

\* Minor NNH not reported

# Mechanisms of Actions

<b>Drug Class</b>	<b>Mechanism</b>
Tricyclic Anti-Depressants	Nor-epinephrine and Serotonin activity
SNRIs	Nor-epinephrine and Serotonin activity
Local Anesthetics	Sodium & Ca <sup>++</sup> Channel Blockaid Substance P
Anti-convulsants	Sodium Channel Blockaid, GABA Agonist

# Common Side Effects

Drug	Side Effects
Tricyclic Antidepressants	Anticholinergic effects
SNRIs	Hypertension, Drug-drug and drug-disease interactions
Local Anesthetics	Confusion, arrhythmias, burning sensation
Anticonvulsants	Psycho-motor effects

# Principles for the Treatment of Neuropathic Pain

- Adjuvant drugs are only partially effective
- Limited by high side-effect profiles
- Require long titration periods
- Require long term use
- May require 'rational polypharmacy'

# Other Recalcitrant Pain Problems

- Fibromyalgia
- Muscle spasm (e.g. neuro injuries)
- Osteoporosis
- Complex regional pain syndromes
- Metastatic disease

# Other Agents for Recalcitrant Pain Problems

- Muscle Relaxants

- Ciclobenzaprine, carisoprodol, chlorzoxazone, methocarbamol, etc
  - Not muscle relaxants
- Baclofen
  - GABA agonist

- Benzodiazepines

- Not analgesics
- Anxiolytic; ? Muscle spasm

## Other Agents for Recalcitrant Pain Problems

- Calcitonin and Bisphosphonates
  - Analgesic mechanisms unknown
  - Some evidence for calcitonin, pamidronate and clodronate.
- Corticosteroids
  - Inflammatory conditions, some neurologic conditions, bone metastasis, bowel obstruction
  - Little data on drug comparisons or dose relationships
- Cannabinoids

# Topical Analgesics

	<b>Commercially Available Products</b>	<b>Pharmacy-compounded Preparations</b>
<b>Examples</b>	<p>Capsaicin</p> <p>Lidocaine 2.5%/Prilocaine 2.5% topical</p> <p>Topical Lidocaine Patch 5%</p> <p>Diclofenac gel</p> <p>Diclofenac patch</p>	<p>Alpha-2 agonists</p> <p>Anticonvulsants</p> <p>Local anesthetics</p> <p>NMDA antagonists</p> <p>NSAIDs</p> <p>Opioids</p> <p>TCA's</p>
<b>Considerations</b>	<ul style="list-style-type: none"> <li>● Consistency of preparation</li> <li>● Established safety and efficacy (FDA)</li> </ul>	<ul style="list-style-type: none"> <li>● Potential variability of preparation</li> <li>● Lack of controlled trials</li> </ul>

# New Agents

## New Approvals

- Tapentadol for moderate to severe acute pain; mixed action on mu receptors and NE re-uptake (Schedule II)
- Febuxostat (Uloric) for acute gout; xanthine oxidase inhibitor
- Milnacipran for fibromyalgia; NE and Serotonin re-uptake inhibitor

# Principles of Analgesic Use in Older Adults

- Start low, go slow
- Insure an adequate trial
- Stop drugs that are ineffective
- Optimize one regimen first, then gradually add agents
- Monitor for adverse events frequently
- Pay particular attention to multiple agents acting on CNS
- Taper down as indicated