

Improving Chronic Pain Outcomes with Integrative Nursing Interventions

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Objectives

- Apply the biopsychosocial framework to the approach used for chronic pain management
- Explain five strategies to help identify risk factors that contribute to chronic pain and possible therapeutics to treat these factors
- Describe three key ways to implement integrative pain management strategies into your nursing practice

Chronic Pain is a Worldwide Problem

- Chronic pain is a problem for over 40% of the population worldwide
- The consequences of chronic pain expand across psychological, social and functional outcomes
- International Association for the Study of Pain established principles for the assessment and treatment of pain in all individuals



Biopsychosocial Framework



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Health
interactives
by USA TODAY



24 hours in the
ER: Front lines
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Hospital
death rates
How
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you

Your Health: Can pain be predicted?

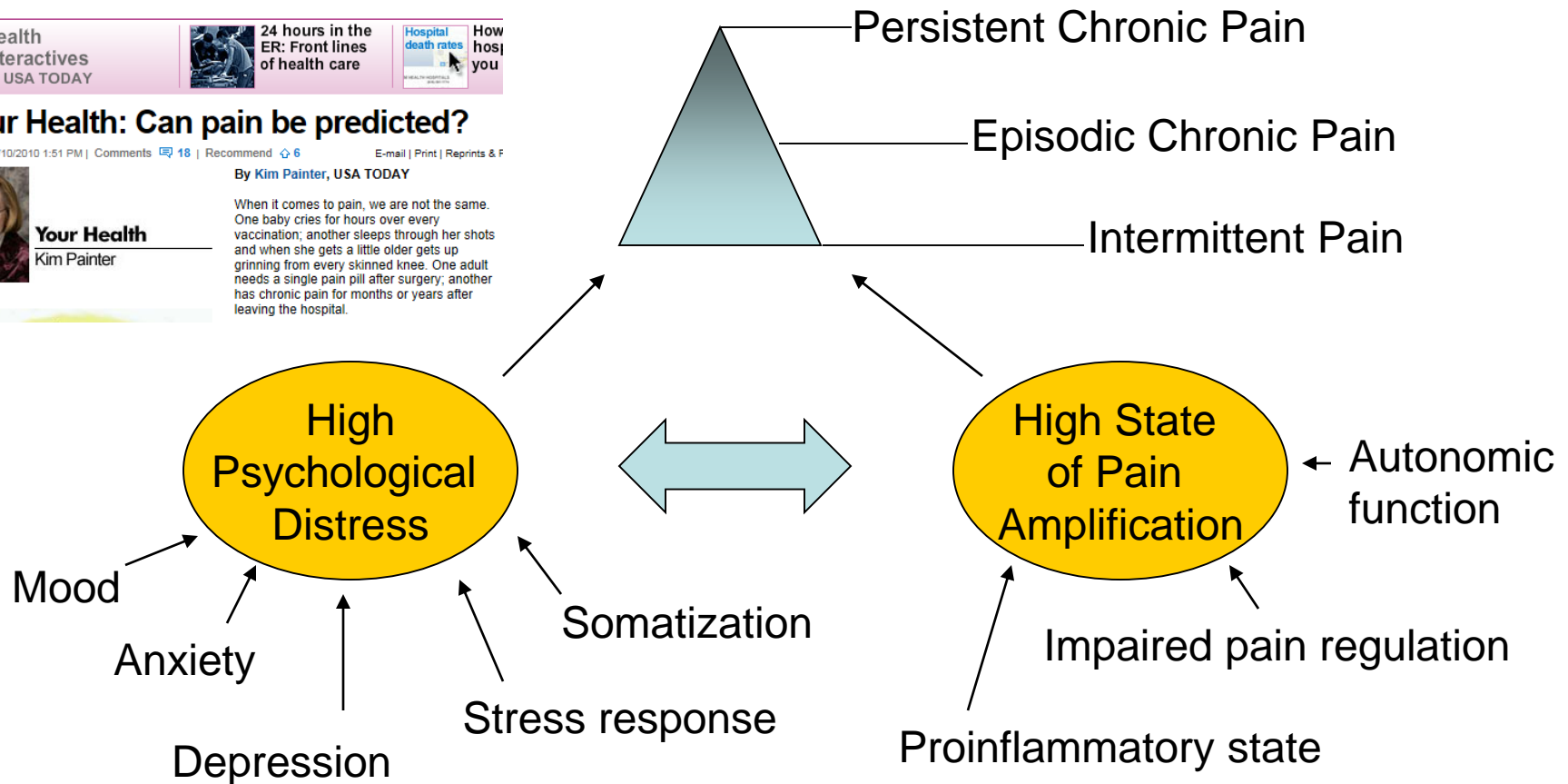
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By Kim Painter, USA TODAY



Your Health
Kim Painter

When it comes to pain, we are not the same. One baby cries for hours over every vaccination; another sleeps through her shots and when she gets a little older gets up grinning from every skinned knee. One adult needs a single pain pill after surgery; another has chronic pain for months or years after leaving the hospital.

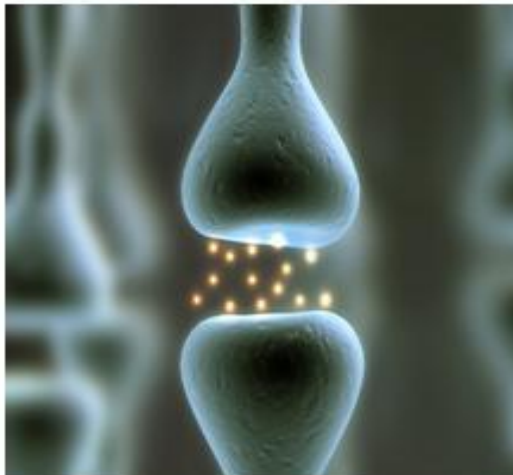


Genetic factors regulating psychological and pain processing

Dworkin et al. (2011). *Journal of Pain*, 12(11), T1-T108.

Mechanisms of Chronic Pain

Following peripheral inflammation or nerve injury, pain facilitating neurons release excitatory amino acids (EAAs), nitric oxide, proinflammatory cytokines, matrix metalloproteinases (MMPs), and adenosine triphosphate (ATP)

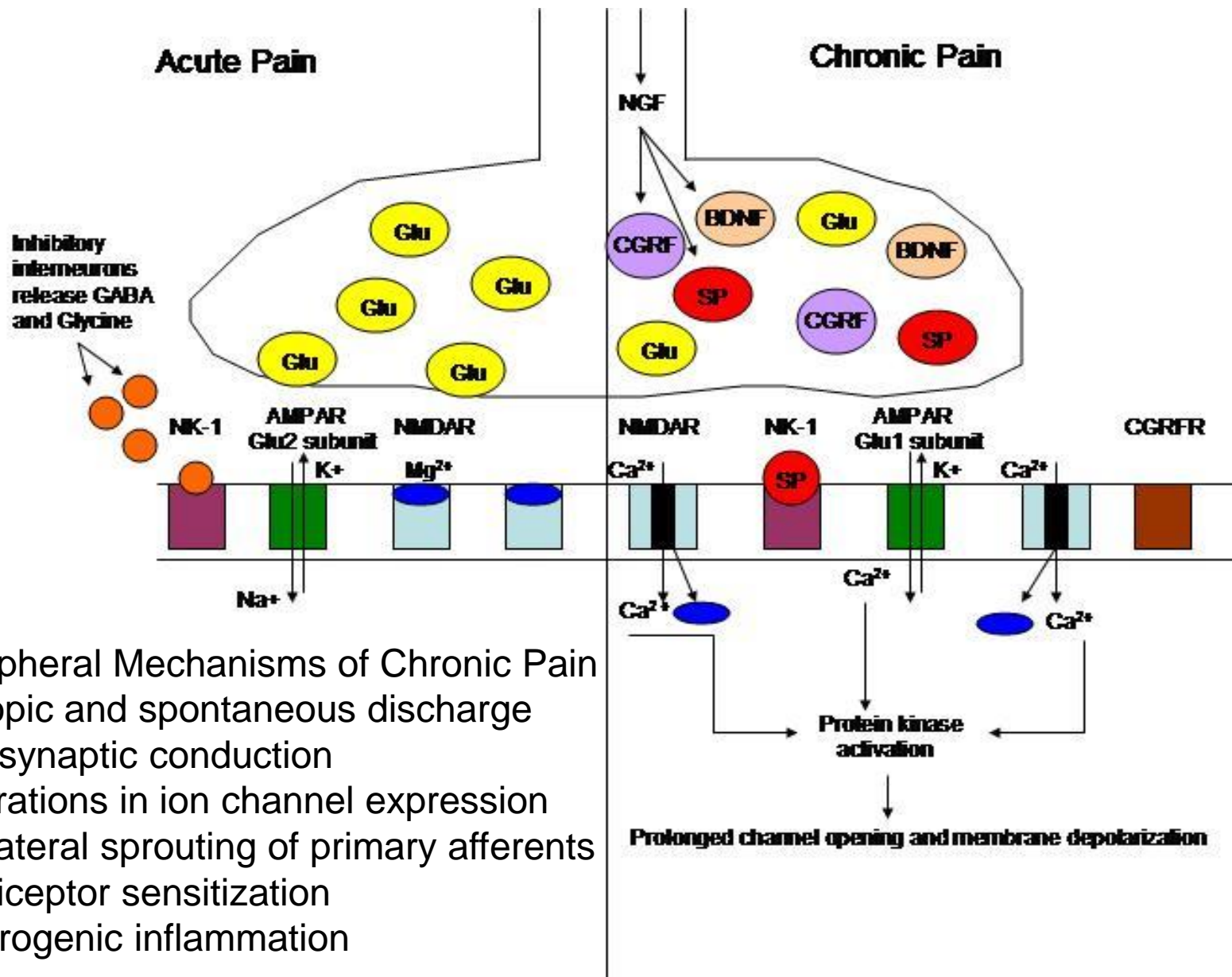


The release of these substances activate glial cells (microglia, astrocytes, and possibly oligodendrocytes) as well as surrounding Schwann cells. Activated glia increase release of proinflammatory cytokines (interleukin [IL]-1 β , IL-6, and TNF- α) and chemokines which promote pain sensitivity



A-beta afferent fibers sprout and synapse with secondary neurons causing persistent pain

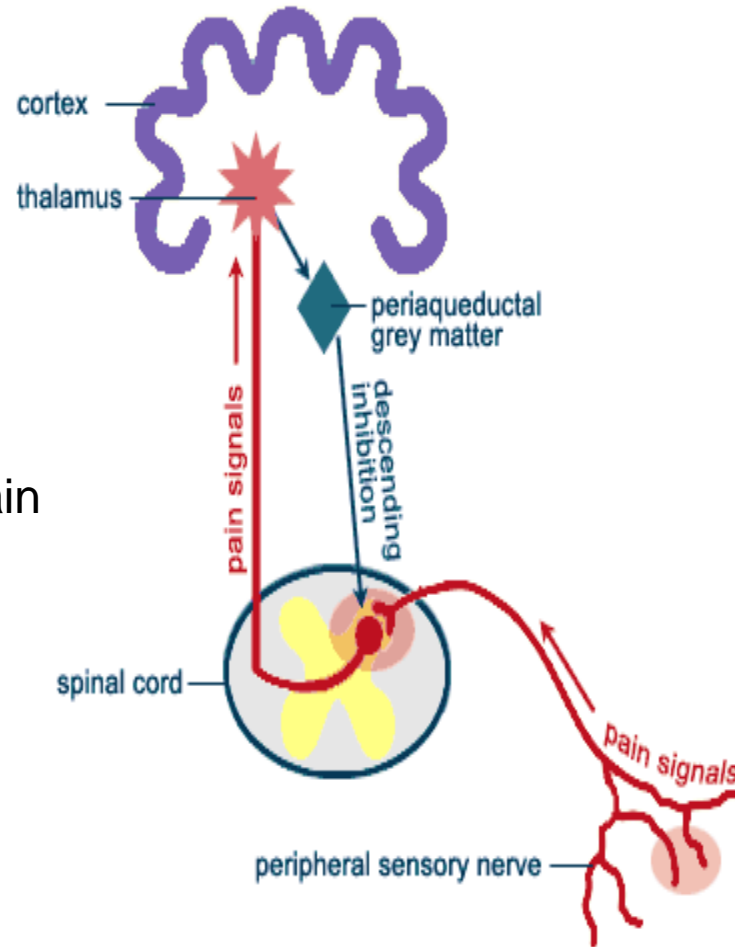
Activation of surrounding glia induce pathways of persistent pain



Peripheral Mechanisms of Chronic Pain

- Ectopic and spontaneous discharge
- Nonsynaptic conduction
- Alterations in ion channel expression
- Collateral sprouting of primary afferents
- Nociceptor sensitization
- Neurogenic inflammation

Amplification of Pain



Central Mechanism of Chronic Pain
Central sensitization
Spinal reorganization
Cortical reorganization
Changes in inhibitory pathways
Changes in facilitatory pathways
Changes in glial cell function

Woolf, C. J. (2011). *Pain* 152(3), S2-S15.

Pain Management Principles

- *Acknowledge* a patient's report of pain
- *Share responsibility* for managing pain
- Apply a *multi-modal approach* when treating pain
- Identify *outcome goals* when treating pain
- *Communicate* with providers about pain management
- Promote *safe use* of prescribed controlled substance medications
- *Utilize tools and resources* in pain management
- Be informed re: the *Federation of State Medical Boards' Model Policy* in pain management

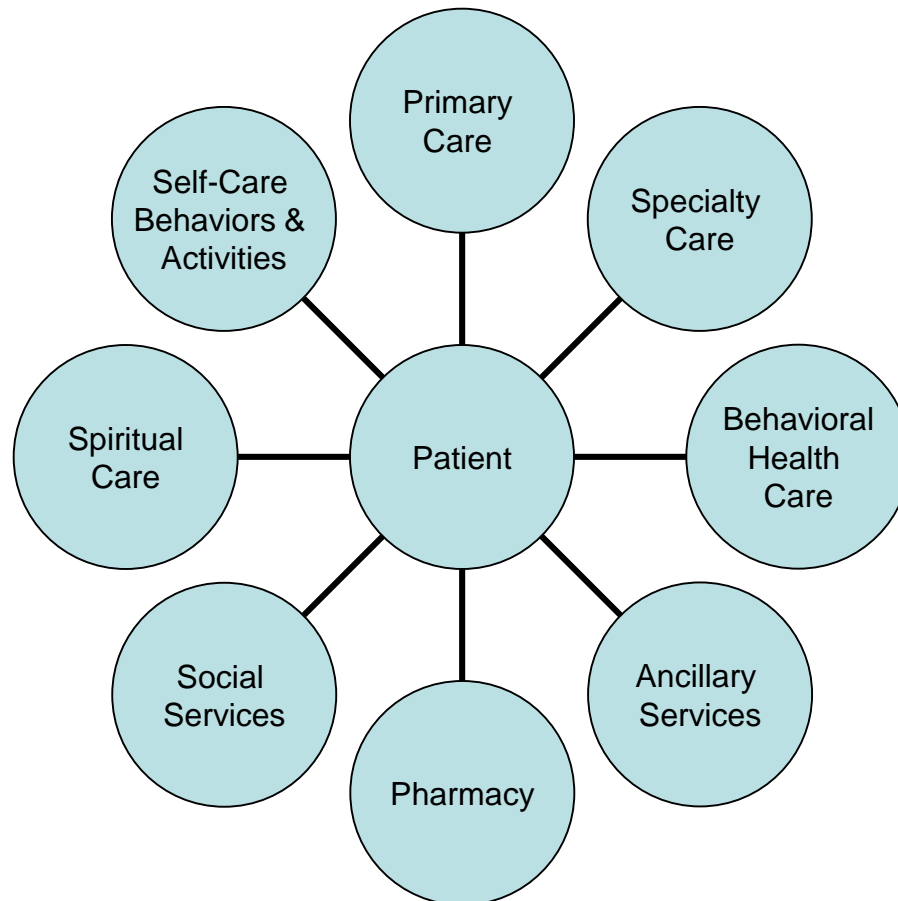
Pain Management System

- Clinical environment
 - Policies and support
- Patient selection
 - Risk of abuse screening
- Setting Goals
- Follow-up and Documentation
- Ongoing monitoring
- Addressing non-adherence



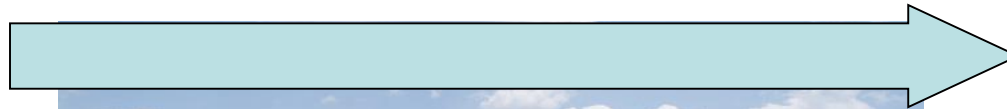
Patient-Centered Pain Care

Chronic pain care is always interdisciplinary.



Share Responsibility for Managing Pain

Commitment
Collaboration
Communication
Coordination



Safe &
Effective
Pain
Management



Goals should be directed toward:

- Improving general health

- Cessation of tobacco use

- Exercise

- Improving psychological well-being

- Self-management behaviors

- Abstaining from high-risk behaviors

- Work rehabilitation if possible

Integrative Strategies for Pain Management

1. Nursing interventions

- A. Educate about pain and treatment options
- B. Assist patients to optimize treatment modalities
- C. Ensure that both active and passive modalities are utilized

2. Nonpharmacological modalities

- Active
 - Exercise/Movement therapy
 - Cognitive strategies (Guided imagery, Mindfulness)
- Passive
 - Massage
 - Electrocutaneous therapy

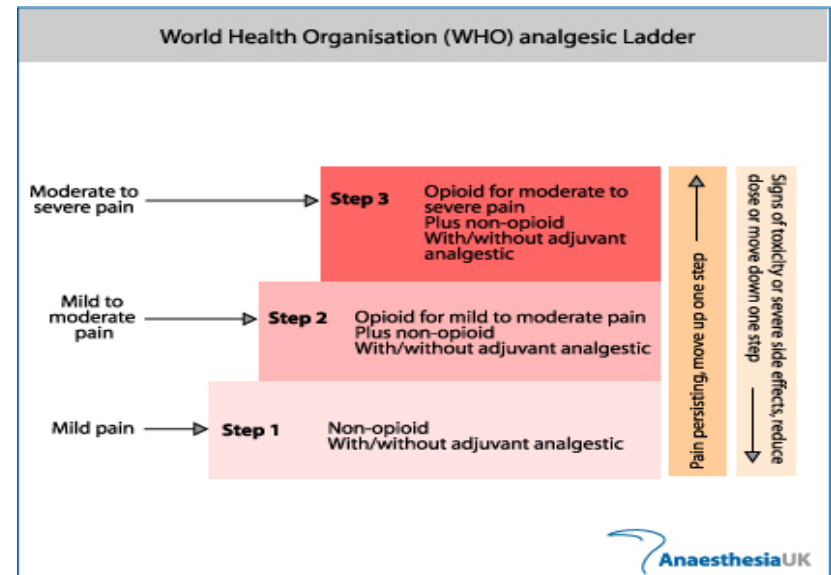
Pharmacological Selection

Peripheral agents

- Aspirin
- Acetaminophen
- NSAIDs/COX-2 inhibitors
- Nerve blocks
- Capsaicin

Central Agents

- Anticonvulsants
- Antidepressants
- Alpha2-agonists
- Opioids



Nonpharmacological Selection

- Type and location of pain
- Patient preferences for both active and passive modalities
- Resources/access to active and passive modalities



Electrocutaneous Therapy

- Many different devices available
- Patient preferences concerning intervention delivery/access to treatment
- Scrambler/Calmare therapy is approved for chronic neuropathic pain
 - Delivery
 - Review of clinical studies
 - Integrative approach

Resources

- American Chronic Pain Association
- www.theacpa.org
- American Pain Society
- www.ampainsoc.org
- Emerging Solutions in Pain
- www.emergingsolutionsinpain.com
- International Association for the Study of Pain
- www.iasp.org