

Treating Chronic Pain in Children

Shalini Shah, M.D

Director, Pediatric Pain Services

Department of Anesthesiology & Perioperative Care
University of California, Irvine



UC Irvine Health

What Does Pain *Look* Like?



What Does Pain *Feel* Like?





Jenny...

Energetic 13 year old girl

Ballet class

Didn't even remember any injury, maybe a slight fall during ballet practice, but not out of the ordinary

Treated by the pediatrician

The sprain had healed

Well Heeled Ankle Sprain



Over The Next Two Years

...But the pain came back

Work-up was negative

X-ray negative for any fracture

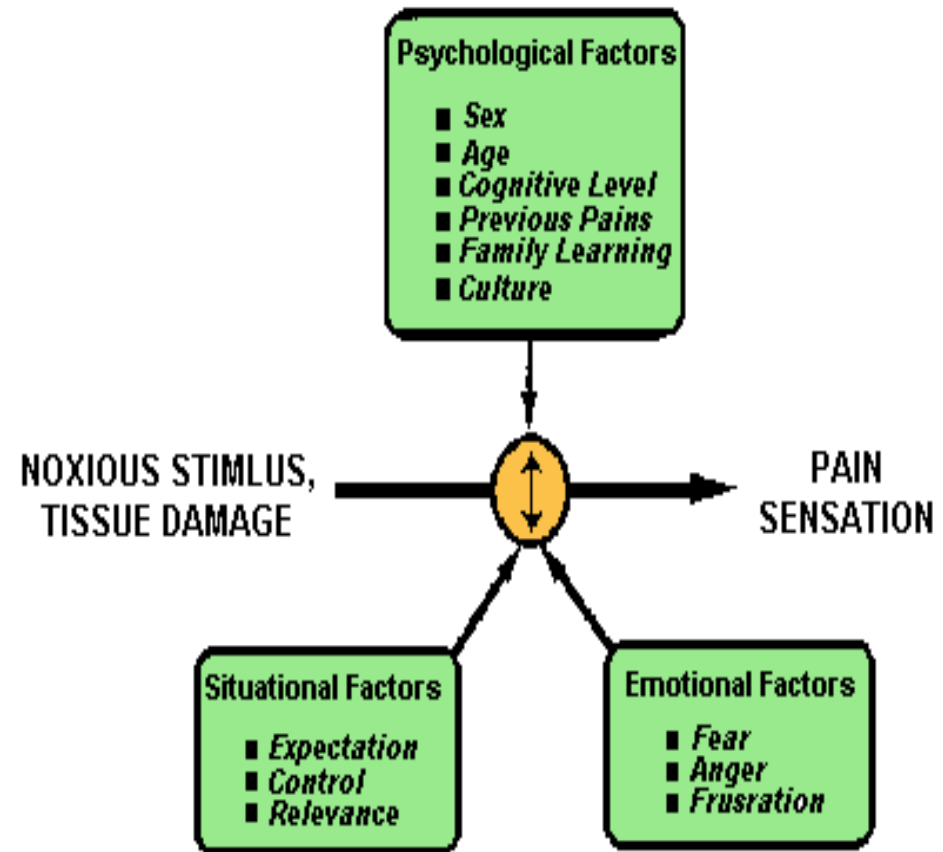
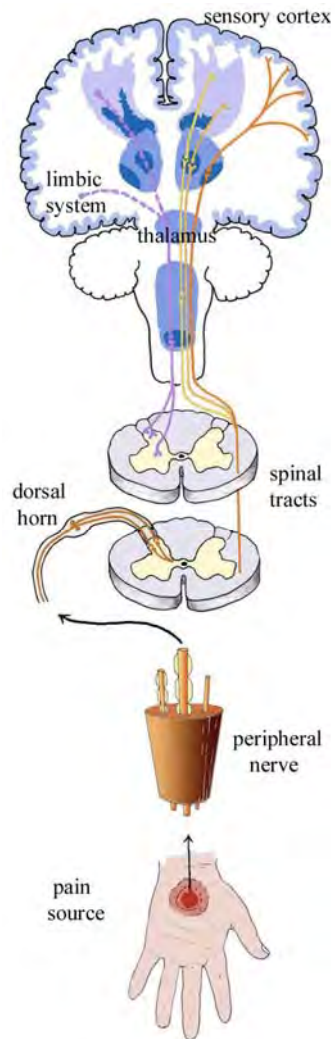
Blood tests negative

From Doctor to Doctor for opinions

How Can the Brain Perceive This So Wrong?



How the Body Understands Pain Signals



Disability in Children With Chronic and Recurrent Pain



Let's Go Back To Jenny....

Complex Regional Pain Syndrome (CRPS)

Features:

- Nerve Pain Syndrome
- Skin Color Changes
- Temperature Changes
- When left untreated, pain is no longer just a symptom of a disease but a disease itself

Epidemiology

Post Traumatic 50%-90%

Rare before age 8

Lower extremity >> upper (8:1)

Approx. 20% become bilateral or spread to remote extremity



Week 3



Week 6



Week 12



How Do We Treat Pain in Children?

Effects of Chronic Pain

Physiologic

Metabolic

Behavioral



Metabolic Response

Increased secretion of catecholamine, glucagon, and corticosteroids.

Delayed wound healing

Poor intake / anorexia

Impaired mobility

Sleep disturbances

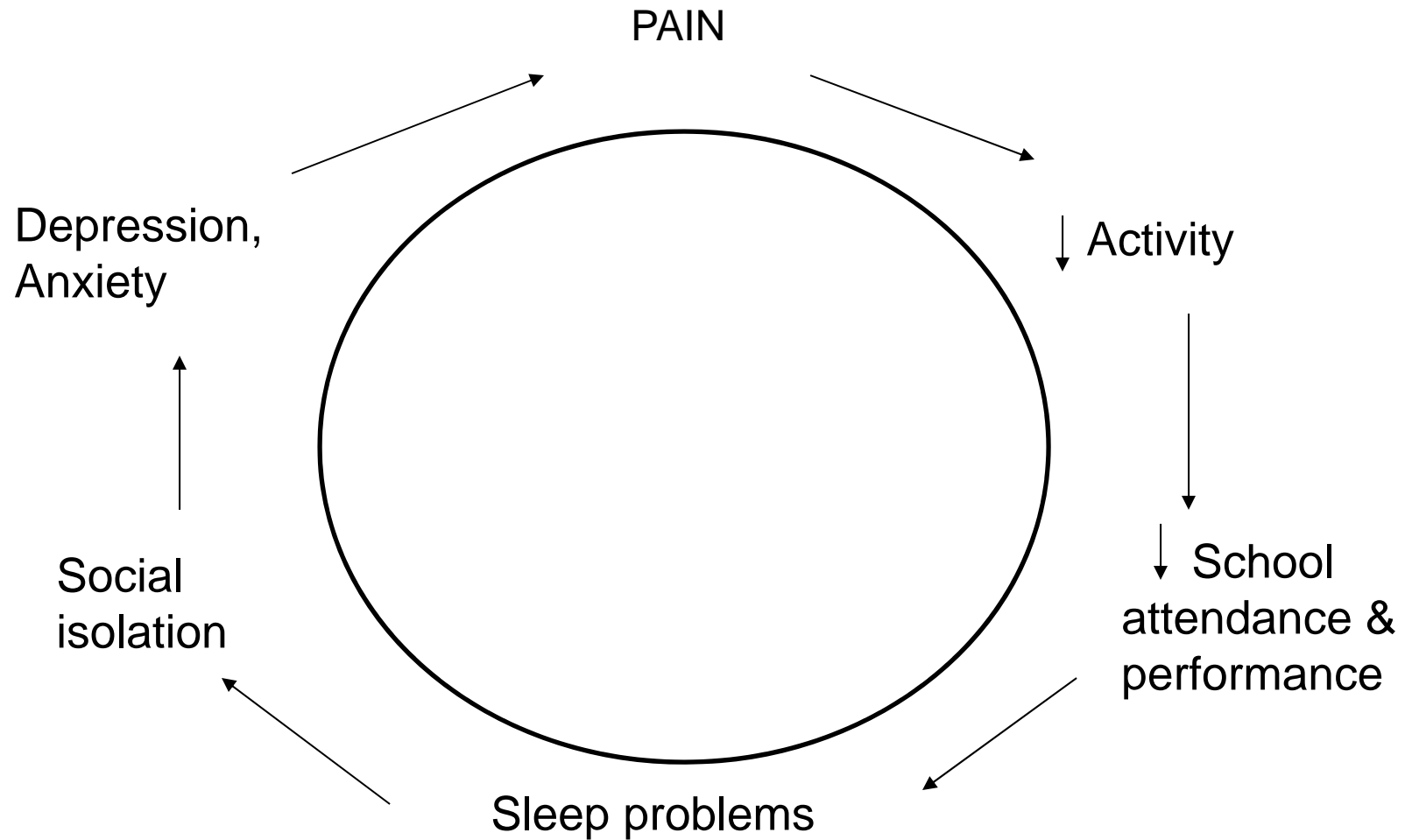
Irritability

Behavioral Response



Expression of pain

Chronic Pain Cycle



GOAL

Focus of programs is on rehabilitation

- Functional improvements in:
 - Physical functioning
 - Social functioning
 - Emotional functioning
 - Role functioning
 - Quality of life

Focus is *not necessarily* on reducing pain

So When Is It Time to See a Specialist?

- As a parent , how do we know that we are beyond “something is wrong?”

- Or, as a Pediatrician, how do you know when to refer?

“Pain is whatever the person says it is and exists whenever he says it does.”

Margo McCaffery

What is Our Approach?

Approaches to Pain Treatment

Multidisciplinary - medical, psychological, physical therapist

Multiple Methods- to assess (1) pain perception and (2) pain behavior

Structured or unstructured clinical interview

Questionnaires – pain, coping, psychological functioning

Family Dynamics, School, Sleep

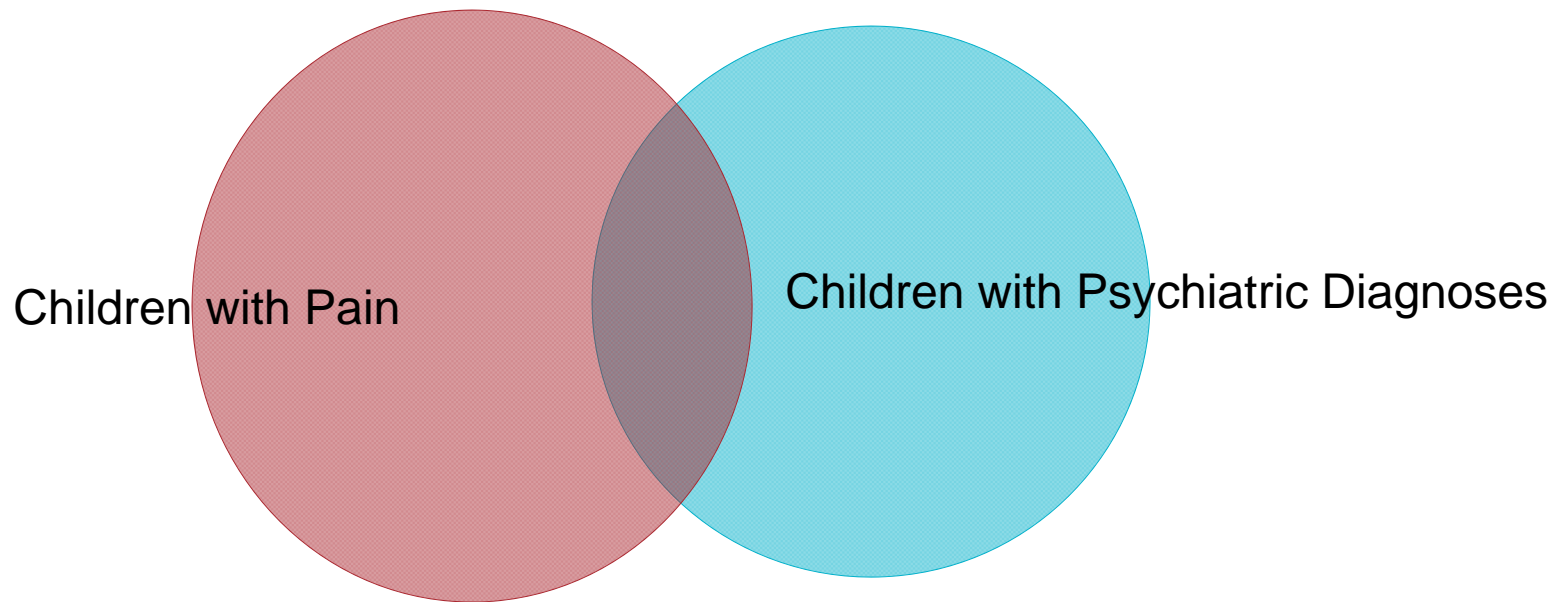
Pain Diaries

Drawings/body outlines/Rating Scales

Psych testing – psycho- educational, personality

Psychological Assessment Studies: Children with Chronic and Recurrent Pain Syndromes

Substantial comorbidity with psychiatric diagnoses



Commitment to a Therapeutic Alliance Amongst All Providers



Parent's Toolbox

Mom, You Can Do the Same Thing!

- ✓ Should not have to get to the point where you feel overwhelmed and the pain has taken over your mind and body
- ✓ Distraction
- ✓ Take your child to his/her happy place
- ✓ Child must learn to function in spite of pain in order to reduce pain

Top 10 Reasons To Consider To Refer To A Pediatric Pain Specialist

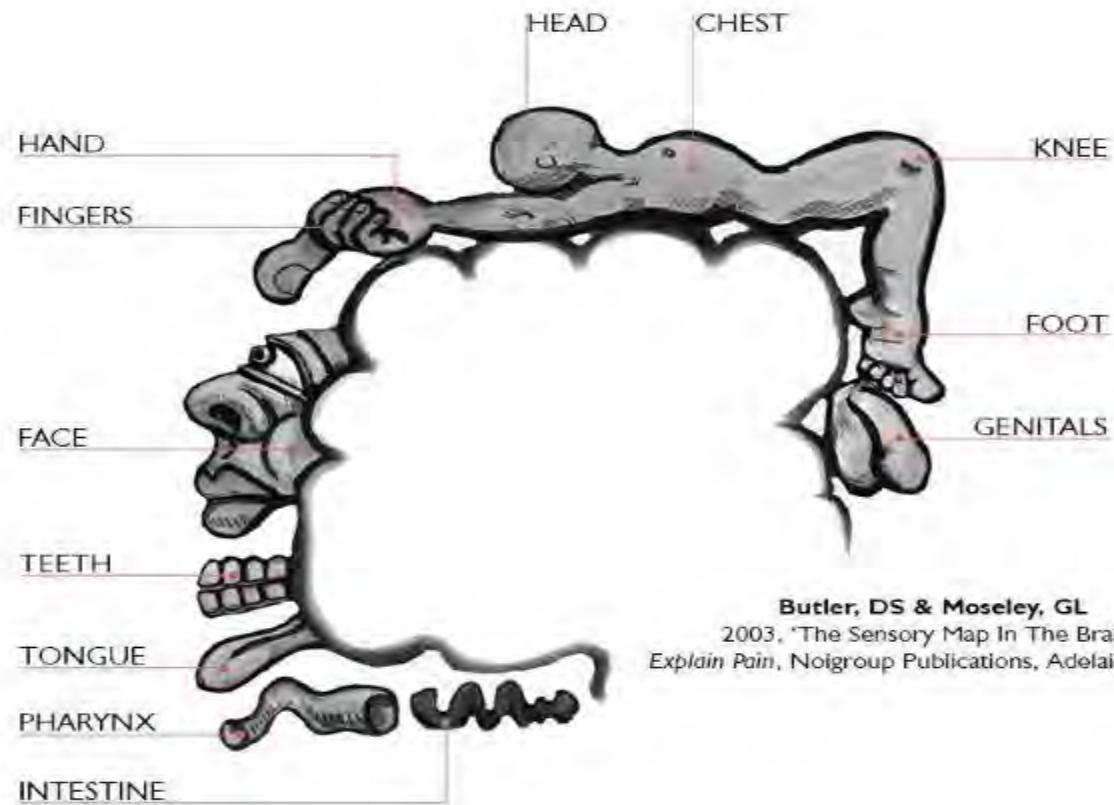
- ✓ Pain > 3 Months
- ✓ Changes in Sensory or Motor Functioning
- ✓ Child has been started on prescription pain killers
- ✓ Socially, the child is withdrawn from activities
- ✓ Behavioral Changes: Anxiety or Depression

Top 10 Reasons To Consider To Refer To A Pediatric Pain Specialist

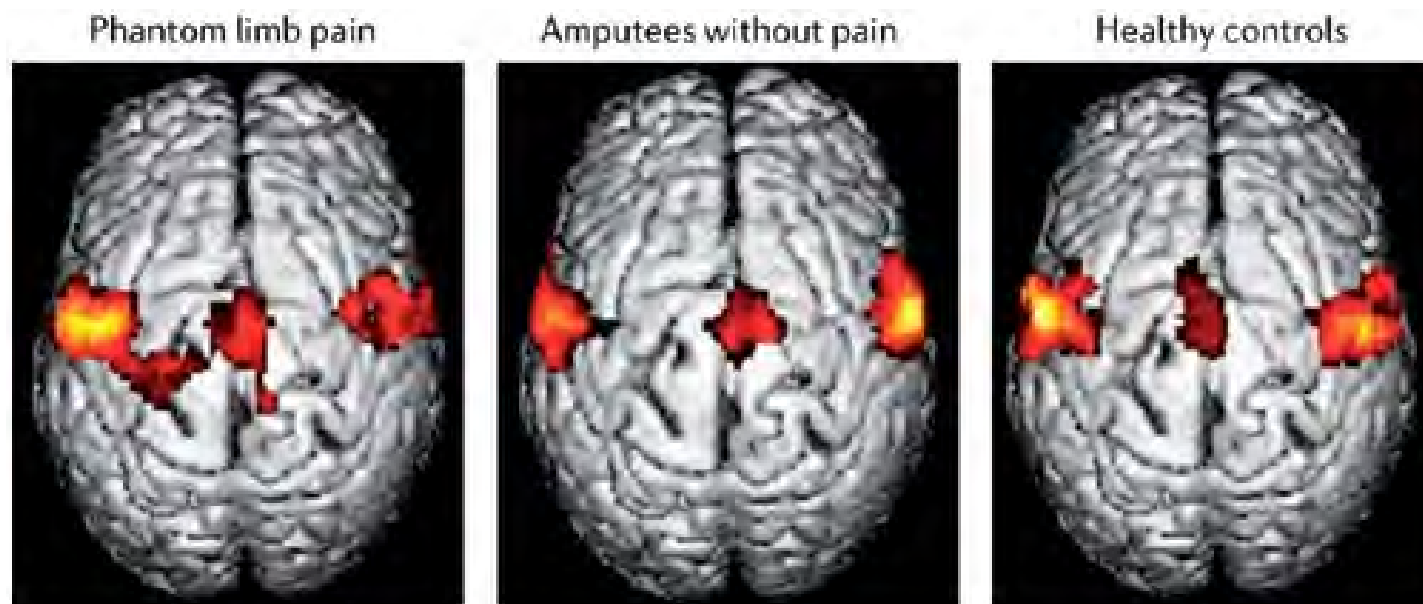
- ✓ School Performance Declining
- ✓ Sleep Disturbances
- ✓ Parent's go from Doctor to Doctor for treating the Pain
- ✓ Pain Persists Even Though Original Injury is Healed
- ✓ When to Refer? When You Think of It!!

THE SENSORY MAP IN THE BRAIN

Groups of neurones devoted to body parts (the homunculus) are in a thin strip of brain just above your ear



Butler, DS & Moseley, GL
2003, 'The Sensory Map In The Brain',
Explain Pain, Noigroup Publications, Adelaide, pg 23



Flor *et al.* *Nature Reviews Neuroscience* **7**, 873–881 (November 2006) | doi:10.1038/nrn1991

GOALS OF MANAGEMENT: HAPPY HEALTHY CHILDREN!

Decrease pain and suffering

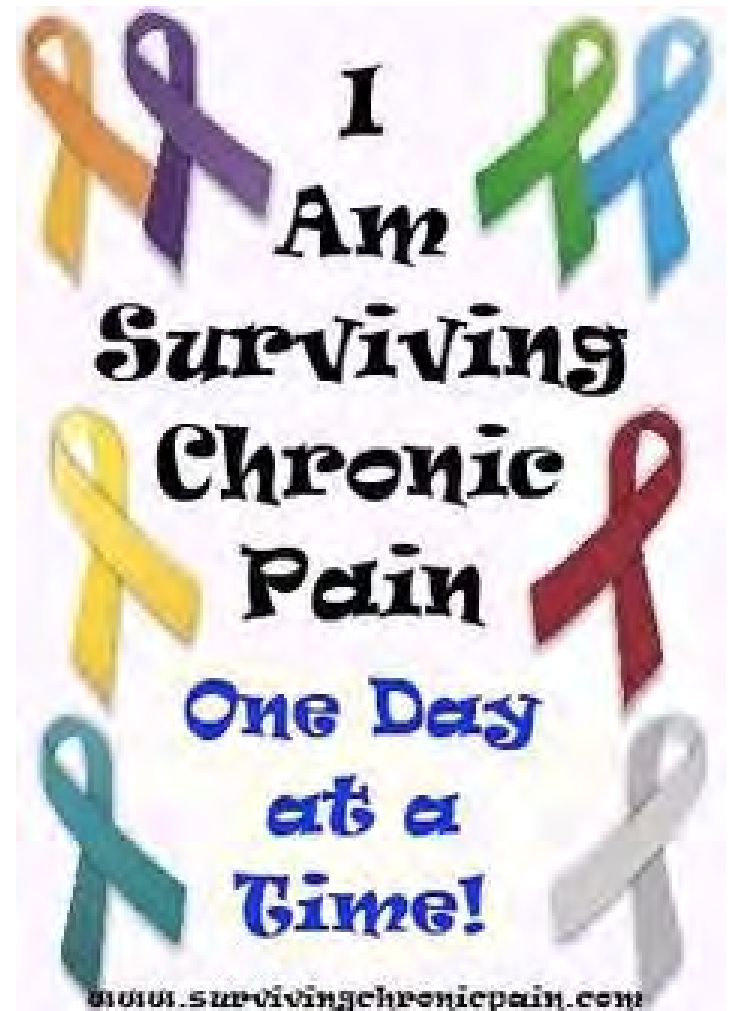
Promote family bonding

Encourage physical functioning

Promote normal coping mechanisms

Decrease patient risk from complications

Success is on your side!



You are the KEY!



Babies are unable to communicate their pain to the untrained eye...

However, you have the tools to assess your babies for pain and make it better!!

Thank you

Shalini Shah, M.D.

The UC Irvine Center for Comprehensive Pain Management,
Irvine, CA

Questions?