

1 **Therapeutic Approaches to Pain Management**

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2 **Objectives**

3 **Pain and Sports**

- The primary cause of pain in children/adolescents is participating in a sport
- Accounts for the number one reason for ER visits among children. (1)
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4 **What kind of pain??**

5 **Describing Pain**

Sharp, stabbing, dull, achy, stretching, sore, tingling...

6 **Chronic pain, Chronic Inflammation**

7 **Treating chronic pain/inflammation....**

- Rest
- Modalities
- Tissue mobility
- Therapeutic Exercise/Body Mechanics
- Flexibility
- Aerobic Activity

8 **Rest/Sleep**

9 **Modalities for pain modulation**










10 **Machines are NOT enough!**

11 **Get Moving!!**

- Tissue Mobility
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- Don't Forget the Core!
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- Flexibility
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12 **Aerobic Activity**

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- 30min/day
 - Moderate Aerobic Activity

- Low impact to high impact
 - 13  **Most Common Chronic Pain Treated in Athletes:**
 - Back Pain
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 - Abdominal Pain
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 - Chest Pain
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 - CRPS/RSD
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 - 14  **Treatment...**
 - Addressing the cause, not just the symptoms...
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 - But, what if the symptoms are in the way of treatment??
 - 15  **Treatment Goal?**
 - 16  **Back Pain**
 - Lumbar spine pain accounts for 5-8% of athletic injuries (Harvey Sports Medicine)
 - Common sports involved: Football, Wrestling, Diving, Gymnastics, Dance, Cheerleading
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 - 17  **Treating Back Pain**
 - Any motion or activity limitations/precautions
 - Increasing activity gradually with emphasis on core activation/lumbar stabilization training
 - Flexibility
 - 18  **Abdominal Pain**
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- Psychosocial components
- Common Sports involved:
running, biking, swimming
- - 19  **Treating Abdominal Pain**
 - Breathing Techniques
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 - Stretching
 - 20  **Chest Pain**
 - Common Sports involved: Golf, Rowing, Baseball pitching, Tennis, Wrestling
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 - Treatment: Rib mobility; breathing techniques; rest from overuse activities
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 - 21  **CRPS**
 - Complex Regional Pain Syndrome/Reflex Sympathetic Dystrophy
 - May be history of acute trauma or not
 - Often LE, especially in athletes and adolescents

- All sports involved...

- Physical Therapy/Occupational Therapy is noted as the mainstay of treatment

22 **Rehab Goal**

23 **CRPS Treatment Guideline**

- 1 • Participation
 - Pain Assessment
 - Desensitization techniques
 - Edema
 - Electrical Stimulation/TENS
- 2 • Animal Walks
 - Functional Activities
 - Sustained Weight Bearing
 - Stress Loading
 - Aerobic Activity
 - Mirror Therapy

24 **Literature Review of CRPS**

- Wilder, R.T. (2006). Management of Pediatric Patients with Complex Regional Pain Syndrome, 22(5), 443-448.
 - Article summarized the current information about diagnosis and treatment in children
 - Sherry et al, Bernstien et al, and Murray et al; Demonstrate 90% "cure rate" with intensive PT
 - Lee et al: Frequency of treatment didn't matter 1 time/week vs 3times/week
 - Small sample size
 - Similar amounts of exercise between the 2 groups
 - TENS units: Worth while to trial to determine effective of pain management to get through PT
 - All another medical intervention are to support the patient getting through PT (includes CBT, sympathetic blocks, medication-antidepressants and anticonvulsants)

25 **Literature Review of CRPS**

- Sherry, D.D., Wallace, C.A., Kelley, C., Kidder, M., and Sapp, L. (1999). Short-and Long-term outcomes of children with complex regional pain syndrome type I treated with exercise therapy. *Clinical Journal of Pain*, 15(3), 213-223.
 - 103 children, mean age of 13 (87 girls); 49 of them followed for 2 years.
 - Interventions: 4hrs of therapy including aerobics, functionally-based exercises, 1-2hrs of hydrotherapy, and desensitization.
 - No modalities or medicines use
 Outcome measures: Pain, physical dysfunction, and recurrent episodes

Results: 92% were symptom free with a mean duration of therapy for 6 days

Those followed for 2 years: 88% still symptom free, but 31% had recurrence -Median time to recurrent episode was 2 months

Conclusion: Intense PT/exercise is effective in treating CRPS in children and associated with low rate of long-term dysfunction and symptoms.

26 **Literature Review of CRPS**

- Geertzen, J., & Harden, R.N. (2006). Physical. And occupational therapies in complex regional pain syndrome type I. *Journal of Neuropathic pain and symptoms palliation*, 2(3). 51-55.
 - PT generally described goal of paper to outline more specific detailed guidelines on treatment interventions, frequency, and intensity.

- Summarized goal in order of treatment priority including:
 - Manage edema, initiate gentle active movement, begin desensitization, use TENS unit as appropriate, contract bath if acute/mild case
 - Increase range of motion and flexibility increase stress loading (scrubbing and carrying), address posture deficits if appropriate
 - Function!

27  **Will pain go away?**

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Focus on Function!

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28  **Back to Function,
Back to Community, Back to Sport**

- Daily Aerobic Activity
- Bike, Aquatic Therapy, Pilates/Yoga, Tai Chi

29  **Return to Sport**

... Rome wasn't built in a day...

30  **References...**

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