

A Paced Approach to Activity

Implementing Best Practices –
Pediatric Chronic Pain Workshop

Objectives

1. To review the role of the physiotherapist in the pediatric chronic pain team.
2. To describe the use of pain education in improving physical performance.
3. To review the importance of exercise in managing the de-conditioning and inactivity associated with chronic pain.
4. To describe the use of pacing as a method of facilitating activity in pediatric chronic pain patients

The Role of the Physiotherapist in the Pediatric Chronic Pain Team

- Assessment
- Manual therapy
- Modalities
- Education
- Exercise Prescription
- Behaviour management
- Ergonomics

Goals of Physiotherapy

- Inclusion of exercise in every day life of the child or teen
- Facilitation of appropriate activity behaviours
- Re-integration of participation at the community level
- Return to function

Education

- Neurophysiology of pain and nociception
- Central sensitization
- Anatomy and physiology of their painful body area
- Address medical misconceptions of entire family
- Principles of exercise science
- Education can change attitudes and beliefs
- Changed attitudes and beliefs can change physical performance

“Know pain, or no gain” ~ Butler & Moseley 2003

Exercise

- Graded, individualized exercise:
 - Aerobic conditioning
 - General and targeted strengthening
 - Flexibility and core/trunk stability
 - Balance, coordination, desensitization
 - Relaxation, breathing, and rest

“But exercise makes my pain worse!”

- Leads to downward spiral of inactivity, deconditioning, fatigue, loss of muscle tone
- Consequently pain increases, perpetuating the spiral
- Child or teen’s pain compounded by deconditioning and reduced exercise tolerance
- Return to function dependent on reversing spiral, and physical reconditioning

Pacing

- Systematic progression of exercise/activity
- Balance between activity and rest
- Avoids “overactivity-underactivity” cycle (Birkholtz et al., 2004)
- Determine activity tolerance
- Baseline is proportion of tolerance (ex. 20-50%)
- Incremental increase by quota (ex. 10%)
- Quota established with therapist but controlled by patient

Example: Exercise Pacing

- 16 year old female, competitive baseball player
- Out of play since practice injury 18 month ago
- LTG: Return to baseball
- STG: Perform 20 minutes of continuous biking
 - Tolerance: 10 min. of stationary biking
 - Baseline: 5 min. stationary bike (50% of tolerance)
 - Quota: Patient and PT agree upon 1-2 minute increase every 2 sessions of biking
 - Patient will perform baseline (and quota as scheduled) on both good and bad days

Behaviour Management

- Pacing philosophy - exercise, school, home
- Scheduling - return to activities of daily living
- Promotion of self-management, self-efficacy
- Goal setting, long- and short-term
- Activity selection & problem solving
- Reinforce success
- Developing principles for a “wellness” lifestyle

Summary

- The physiotherapist is an essential component of the multi- or inter-disciplinary pediatric chronic pain team
- Education can change physical performance
- Exercise is needed to address pain- related de-conditioning and reduced activity tolerance
- Pacing is key to facilitating exercise, increasing activity tolerance, and returning to function

References

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