

An Example of a Typical Day of Exercise Therapy for Children with Amplified Musculoskeletal Pain

The overall goal is to restore normal physical function. The restoration of function usually comes before the pain starts to diminish. We focus on doing the things that are most difficult in order to desensitize the child to the pain. This including tactile stimulation for those with allodynia (pain in response to light touch).

0800 - 0900: Therapy Pool

Pool sessions can be done in small groups, although younger children may require one-on-one supervision for safety and compliance. Pool activities may include: weight bearing laps in shallow water (such as hopping, running, or jumping), water aerobics, flutter kicking laps with a kick board, upper extremity resistive exercises wearing hand paddles, swimming laps, and water polo. The child may take extra long showers to desensitize painful body areas and we make sure they shower in a normal fashion (standing, washing hair, etc.).

0900 - 1000: Physical Therapy

Children are seen one-on-one. Endurance exercises are selected with the child's interest, independence, and symptoms in mind. Sessions begin with warm up activities and then timed activities such as animal walks, 90 foot run, and step-ups. Endurance exercises include: stationary bicycling with varying resistances, treadmill jogging and running at various speeds and inclines, mini-trampoline jumping, weight shifting and balance activities, skipping rope, and calisthenics such as jumping jacks, squat thrusts, mountain climber steps, push ups, and sit ups. Ball exercises are used for trunk stability and rotational activities especially in children with back pain. Every effort is made to simulate physical education or sport specific activities.

1000 - 1100: Occupational Therapy

Children are seen one-on-one. Timed activities are used to measure functional progress such as stepping in and out of bathtub in 1 minute, carrying a wooden box around an obstacle course, arm step-up, and getting up and down off the floor. Non-timed activities included window painting, grip strength, biometrics, writing, and kitchen activities such as stirring cookie dough. Endurance activities include arm bike and overhead activities such as filling in seek and find game taped high on the wall. Quality of movement is continuously monitored by the therapist who may give verbal cues to correct abnormal gait or arm movements. Regions of allodynia are treated with contrast baths, towel rubs, ice or lotion massage, texture desensitization and vibration (both local and total body vibration). Children are encouraged to do the desensitization themselves but initially most are unable to do so. Children time themselves and otherwise are encouraged to take an active role in the therapy program.

1100 - 1200: Physical Therapy

This is a continuation and advancement from the morning physical therapy.

1200 - 1300: Lunch

Lunch can simulate a school cafeteria setting (loud, busy, jostled).

1300 - 1400: Psychological evaluation or Music or Art Therapy (time may vary from 0900 to 1500)

All children have a psychological evaluation to explore the individual and family psychodynamics. If available, art and music therapy can be helpful; especially in children not given to verbal expression. The creative arts therapy may include music-assisted relaxation, progressive muscle relaxation, expression through music production or art, constructing a wellness book, etc. In addition to individual sessions, group sessions can help. The child may need to have help with school re-entry issues and a social worker or education specialist may serve in this role. Academic testing may be done if deemed necessary.

1400 - 1500: Occupational Therapy

This is a continuation and advancement from the morning occupational therapy.

1500-1600: Physical Therapy

This is a continuation and advancement from the morning physical therapy

Evening:

Evening assignment may include specific activities such as walking, chores, sleeping with covers, etc. We expect the child to engage in normal evening activities such as dinner with the family, talking to friends, doing homework.

Weekends:

Each child will have a specific home exercise program that will take about 30 to 60 minutes to complete. This should be done twice a day. Additionally, they are encouraged to participate in active recreational activities such as walks, shopping, or sightseeing.

Schoolwork:

Schoolwork is generally put on hold and make-up work done once the child returns to the classroom. Some schoolwork can be done and in the evenings and weekends. We will assist in getting the school to help make re-entry as smooth as possible.

References:

1. BERNSTEIN BH, SINGSEN BH, KENT JT, KORNGREICH H, KING K, HICKS R, HANSON V. Reflex neurovascular dystrophy in childhood. *Journal of Pediatrics* 1978;93:211-215
2. Sherry, DD. Pain Syndromes. In: Isenberg DA, Miller JJ III (eds). Adolescent Rheumatology, London, Martin Duntz LTD. 1998, p 197-227.
3. Sherry DD, Weisman R. Psychological aspects of childhood reflex neurovascular dystrophy. *Pediatrics* 1988;81:572-578
4. Sherry DD, McGuire T, Salmonson K, Wallace CA, Mellins E, Nepom B. Psychosomatic musculoskeletal pain in childhood: clinical and psychological analysis of one hundred children. *Pediatrics* 1991;88:1093-1099
5. Sherry DD, Wallace CA, Kelley C, Kidder M, Sapp L. Short and long term outcome of children with complex regional pain syndrome type I treated with exercise therapy. *Clinical Journal of Pain* 1999;15:218-223
6. Sherry DD. An overview of amplified musculoskeletal pain syndromes *Journal of Rheumatology* 2000;Suppl 58:44-48
7. Amplified Musculoskeletal Pain in Childhood. Diagnosis and Treatment Guidelines (DVD) MMXIII, Sherry DD, executive producer

StopChildhoodPain.org

E-mail: AMPSprogram@email.chop.edu