



# Reflex Neurovascular Dystrophy (RND) Program

at The Children's Institute

## What is Reflex Neurovascular Dystrophy (RND)?

When a child is suffering from chronic pain that seems to last longer or be more intense than would be expected, the problem may be a condition known as reflex neurovascular dystrophy (RND). Other names for this condition include amplified musculoskeletal pain syndrome (AMPS), reflex sympathetic dystrophy (RSD), pediatric fibromyalgia and complex regional pain syndrome (CRPS).

RND is an extremely painful and often difficult condition to diagnose. Sometimes parents and doctors attribute it to "growing pains" and in some cases think the pain is all in the child's head. But RND pain is very intense and very real. At times, the pain can be so excruciating children stop their normal activities. Immobility leads to more pain and sometimes depression.

The Reflex Neurovascular Dystrophy Program at The Children's Institute provides comprehensive evaluation and treatment for those children diagnosed with RND. The purpose of the program is to help the child return to his or her daily activities and to educate the child and his or her family on long-term management of RND.

## Who Can Benefit?

The RND Program at The Children's Institute is dedicated to children and adolescents suffering from chronic pain-related problems.

*Treatment can help children who:*

- Have pain associated with one or more areas of the body or pain that may travel through the body.
- Experience severe pain from something that typically would not be considered painful (for example, a light breeze or wearing a sock or shirt).
- Cannot complete daily activities, such as getting dressed due to pain.
- May be unable to walk, stand or hold on to anything due to pain.
- Discontinue participation in activities due to pain.
- Miss significant amounts of school or receive home bound education (including cyber school) due to pain.

## The RND Team

The RND team includes clinicians with expertise in chronic pain and may include the following:

- Physician/pediatric nurse practitioner
- Physical therapist
- Occupational therapist
- Psychologist
- Recreational therapist
- Nurse
- Patient manager

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## How the RND Team Can Help?

The RND Program at The Children's Institute provides a whole-child approach to treatment by incorporating physical therapy, occupational therapy and psychological counseling. This combined treatment regimen helps to address the mind-body connection and teaches the child how relaxation and stress management can help with long-term pain management.

Medical care focuses on reducing and ultimately eliminating pain medications. Treatment includes intense exercise therapy to the area(s) affected by the pain syndrome. This treatment helps to break the cycle of pain and desensitizes the nerves. It promotes increased strength, endurance and agility, and reduces hypersensitivity. Treatment sessions are individualized, and each child is educated on how to progress his or her activities and home exercise program once discharged from the program.

## Program Goals

The RND team establishes individual goals for each child, which may include:

- Returning full functionality to the affected area.
- Returning to school and daily activities.
- Increasing strength, endurance and agility.
- Decreasing sensitivity to touch to allow for full participation in daily activities.
- Using skills to better manage pain and stress.
- Independence with long-term management of chronic pain.

## Treatment Options

### *Outpatient Treatment*

Outpatient treatment varies in duration and frequency depending on the child's individual needs. Children may receive outpatient treatment only, or this treatment may be done prior to an inpatient admission. Outpatient treatment incorporates physical or occupational therapy sessions lasting 60 minutes in length. During outpatient treatment, the child will be educated on long-term management of his or her RND.

### *Inpatient Treatment*

Inpatient treatment for RND ranges on average from two to four weeks, based on the patient's individual needs. Children begin a daily schedule of three to five hours of therapy, including physical and occupational therapy. Treatment also includes psychology services to address stress reduction, relaxation techniques and counseling. All sessions are mandatory unless the patient has a high-grade fever. Patients perform their therapy independent of the family so that they can focus on the therapist's instructions.

### *Follow-Up Treatment*

Physical and occupational therapists create an individualized home exercise program for each child. These exercises are to be continued independently by the patient following discharge from any of the treatment programs. Continued follow-up with the referring physician is recommended. Follow-up counseling sessions with a psychologist in the community are also an essential part of ongoing treatment. Outpatient physical or occupational therapy visits will be set up as needed following discharge.

The most appropriate treatment program for each child will be determined at initial evaluation. Not all programs are designed to fit the needs of every child.

To schedule an evaluation, please call 412.420.2362. For more information on the RND Program, please contact Ken Smith, Patient Care Services department at 412.420.2420.

For information on ways to support the RND Program at The Hospital at The Children's Institute, please contact the Development department at [dev@the-institute.org](mailto:dev@the-institute.org) or call 412.420.2203.