

Complex Regional Pain Syndrome

Background

Complex regional pain syndrome (CRPS) is a severely disabling, progressive neurological disorder characterized by pain that is disproportionate to the severity of the initial injury or stimulus and cannot be explained by the original trauma. CRPS most commonly affects the arms, legs, hands, or feet. Diagnosis can be challenging because CRPS may or may not be associated with an identifiable precipitating injury.

The cause of CRPS is not fully understood but research supports a dysfunctional interaction between the central and peripheral nervous systems and/or an inappropriate inflammatory response. CRPS can be triggered by an initial injury including sprain, twist, dislocation, fracture, soft tissue injury (e.g., burn, bruise), or surgical procedure. Even minor medical procedures may be a trigger. In other cases, no actual injury is identified. Pain may start in a small area like a finger or toe before spreading to affect an entire limb.

The main feature of CRPS is amplified, unrelenting and excessive sensitivity to pain from a stimulus or touch that is not normally painful (e.g., touch of a shirt, wind on face). Pain can be continuous, aching, burning, shooting, stabbing or stinging. Pain often intensifies over time and can spread throughout the affected region. In rare cases, pain can spread to the opposite extremity. Other signs and symptoms of CRPS include changes in skin temperature and color, swelling, joint stiffness and muscle weakness.

Pain is associated in lower extremities for children, compared to the upper extremities of adults. Pediatric cases are also less likely to have a history of a precipitating injury prior to onset of CRPS. The majority of pediatric cases are diagnosed in girls between 8 and 16 years old.

There is no cure for CRPS, but remission is possible. Early recognition promotes a favorable prognosis and restoration of function. Treatment is directed at contributing factors, and a multidisciplinary approach may include a combination of pharmacotherapy, physical therapy, and psychotherapy, all aimed at improving quality of life.



Top Takeaways for School

CRPS is a developmental health concern that can interfere with a student's functional ability. Students are at increased risk for school absenteeism.

Psychological comorbid disorders are more prevalent in pediatric cases, including stress, anxiety, disordered eating, and self-injurious behaviors.

Children with CRPS are often described as high achievers.

Children with CRPS often display an incongruent affect, meaning their appearance and demeanor are not always consistent with reports of severe pain.

School staff perceptions and responses to pain are important, as negative interactions or a perceived lack of support can impact a student's classroom engagement and motivation.

Considerations for the Individualized Healthcare Plan (IHP)

- Nursing diagnoses: Pain (acute/chronic), impaired physical mobility and risk for injury
- Student-specific triggers, avoidance, or intervention strategies
- Use of specialized equipment, adaptive equipment, and orthotics
- Activity, positioning, transferring (consider precautions and/or restrictions)
- Equipment troubleshooting (consider equipment/device user manual, battery, charger)
- Consider emergency action plans (EAPs) and emergency evacuation plans (EEPs) related to special health care needs, including staff education/training

Discussion Starters for the Educational Team

1. Would the student benefit from evaluations or assessments in any of the following areas: physical therapy, occupational therapy, speech and language therapy, assistive technology, adapted physical education, functional behavior, psychology, hearing and vision?
2. Would the student benefit from additional academic support and/or modified education (e.g., copies of notes, extra time, reduced workload, simplified instructions, alternative formats for presentation of material, 504/IEP)?
3. Can rest breaks, safe spaces or reduced stimulation times be built into the student's schedule?
4. Does the student need support with gross or fine motor skills in the classroom?
5. Does the student require activity precautions to prevent injury?
6. Is the physical school environment safely accessible for the student's mobility needs (e.g., entry and exit, ramps, location of classes, access to elevator, doorways)?
7. Does the classroom environment support the student's needs and/or equipment (e.g., desk/seating options, maneuverability space, electrical outlets, flash pass for bathroom or nurse)?

Resources

Kennedy Krieger Institute: Functional Rehabilitation of Chronic Health Impairments Program
[kennedykrieger.org/patient-care/centers-and-programs/functional-rehabilitation-of-chronic-health-impairments](https://www.kennedykrieger.org/patient-care/centers-and-programs/functional-rehabilitation-of-chronic-health-impairments)

Meg Foundation
[megfoundationforpain.org](https://www.megfoundationforpain.org)

Reflex Sympathetic Dystrophy Syndrome Association (RSDSA)
[rsds.org](https://www.rsds.org)



For more information, please scan the QR code or visit: [KennedyKrieger.org/SHNIC](https://www.KennedyKrieger.org/SHNIC)

