



## Dynasplint® Systems and the Neurologically Involved Child

### NEUROLOGICAL DIVISION

Children with neurological conditions have many special needs. One need is the ability to maintain joint range of motion and prevent contractures from developing. This can be challenging when a child has episodes of increased tone with spasticity, especially when rigid splints and serial casting are not tolerated... Dynasplint® Systems can help.

The neurologically involved child is an excellent candidate for dynamic splinting and Dynasplint® Systems. Our spring-loaded tension system safely accommodates the child's neurologically induced tone, moving with the child during episodes of resistance or spasms. When the tone relaxes or the muscle fatigues, the spring-loaded mechanism gently and steadily brings the child back to his or her available end-range of motion to continue a low-load, prolonged-duration stretch (LLPS).

Dynasplint® Systems are fully adjustable for length and girth, allowing them to grow with the child, making them a more cost-effective alternative to custom made splints. Because Dynasplint® Systems have an adjustable tension system, it is possible to find the exact amount of tension needed to challenge the tone while allowing the patient to mentally relax and accept the splint; therefore, providing for a safe and effective stretching time at the joint's end-range.

Dynasplint® Systems can be beneficial for both existing contracture patients, as well as those new tone patients who need early intervention to prevent contractures from forming and maintain ROM for the future. A long-term wearing schedule is always recommended.

The problems that can occur without early ROM and tone management are as follows: contractures with shortened connective tissue, decubitus ulceration of the skin, problems with hygiene, dressing, transfers, pain management, and proper positioning in bed or while sitting.

Overall, the *Dynasplint® Systems Management Program* for the neurologically involved child can greatly reduce the cost of rehabilitation by eliminating the need for multiple splints due to growth and range changes, and by lessening the possibility of surgical intervention. As a *take home therapist*, Dynasplint® Systems can deliver a daily individualized program of ROM therapy and tone management at home. It is usually recommended that the patient use the Dynasplint® Systems for 6-8 hours of continuous stretching while at rest.

*Stretch Beyond Your Expectations.®*



## Benefits of Using Dynasplint® Systems with the Neurologically Involved Child

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- Dynasplint® Systems are a spring-loaded, dynamic splint that provides a low-load, prolonged stretch for ROM therapy and tone management.
- As an adjunct to a child's physical therapy and/or occupational therapy programs, Dynasplint® Systems can deliver an additional 6-8 hours of continuous stretching, at home, while the child is resting.
- Dynasplint® Systems are available in infant, pediatric and youth sizes and are fully adjustable for length and girth, eliminating the need for multiple splints due to growth and range of motion changes.
- Dynasplint® Systems will safely accommodate the child's neurologically induced tone, moving with the child during episodes of resistance or spasms. When the tone relaxes or the muscle fatigues, the spring-loaded mechanism gently and steadily brings the child back to their end-range to continue a low-load, prolonged-duration stretch (LLPS).
- Dynasplint® Systems can be used in place of serial casting or after serial casting to maintain and further the gains made by the casting program. Dynasplint® Systems constantly stretch the child at his/her end-range of motion, safely moving with the child during episodes of increased tone or spasticity; then the system gently and steadily stretches the joint back to the end range to continue a low-load prolonged-duration stretch. Static splints and casts do not move with the child and can lead to skin breakdown and vascular compromise. Unlike most cylindrical casts, Dynasplint® Systems are removable (worn only 6-8 hours in bed at night while the child sleeps); therefore, the child is able to use his/her extremity during the day for functional or therapeutic activities.
- Dynasplint® Systems can be used before Botox® injections to facilitate better position for locating the injection sites.
- Dynasplint® Systems can effectively be used to maintain and improve the gains achieved with Botox®, Baclofen, and phenol motor point injections. Clinically, many physicians and therapists agree that Dynasplint® and Botox® are a "winning combination" by furthering the ROM gains, managing the tone, and in some cases, decreasing the frequency of injections, thereby decreasing the possibility of resistant antibodies forming.
- Dynasplint® Systems can be used before a tendon release or a tendon lengthening to allow for better surgical outcomes.
- Dynasplint® Systems can be used status post tendon release or lengthening to gently maintain and improve the gains achieved by these surgical procedures.

—Gail C. Smith, Managing Director

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