

consequence of gastroesophageal reflux, abnormal muscle tone, immobility, and altered positioning. Skin problems may result from pressure areas, malalignment; poor bracing, nutrition, and immobility. Latex allergy has also been reported in children with CP ([Nehring, 2010](#)).

A wide variety of technical aids are available to improve the function of children with CP. Airway clearance devices help mobilize secretions (e.g., therapy vest which essentially performs what was done formerly by clap pulmonary therapy, or physiotherapy). Eye/hand coordination can be enhanced by computerized toys and games. Toys may be operated by a head or hand switch. Microcomputers combined with voice synthesizers aid children with speech difficulties to “speak.” Smart phones with speech applications are appropriate for some children.

Many other electronic devices allow independent functioning. Sensors can be activated and deactivated by using a head stick or tongue or other voluntary muscle movement over which the child has control. Voice-activated computer technology may also allow increased mobility and ambulation with specially designed devices, such as wheelchairs. The application of this technology makes it possible for persons with CP to function in their own residences and can be extended into the workplace.

There is some evidence that **neuromuscular electrical stimulation (NMES)** in addition to dynamic splinting may result in increased muscle strength, range of motion, and function of upper limbs in children with CP. Further studies are needed in children with CP to support the use of botulinum toxin A in conjunction with NMES to decrease muscle spasticity and improve function ([Wright, Durham, Ewins, et al, 2012](#)).

Behavior problems are common and often interfere with the child's development. Attention-deficit/hyperactivity disorder and other learning problems require professional attention. In addition, children with CP may have vision difficulties, such as strabismus, nystagmus, and optic atrophy ([Johnston, 2016](#)). Speech-language therapy involves the services of a speech-language pathologist who may also assist with feeding problems.

Physical therapy is one of the most frequently used conservative treatment modalities. This requires the specialized skills of a qualified therapist with an extensive repertoire of exercise methods