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O.T.'s Use of Technology throughout the Lifespan

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Cerebral Palsy:

- Is a group of disorders of the brain that affect body movement, balance, and posture.
- Is caused by damage to specific areas of the brain (usually during fetal development) but can happen during the first 2 years of life.
- Is not a disease. It is not progressive and is not contagious.¹

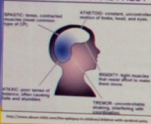
How many people in the US today have cerebral palsy?

How Can Cerebral Palsy Affect A Child?

- Muscle tone (stiffness or flaccidity) and muscle weakness, affecting positioning and play
- Balance and movement difficulty with delays in motor skills like sitting, crawling, and walking
- Problems in sensory processing with touch and movement discrimination, vision and hearing loss, sucking, swallowing and chewing which affect social interaction, communication, education, play and feeding²



TYPES OF CEREBRAL PALSY



What causes cerebral palsy?



O.T.'s Use of Technology Throughout the Lifespan

Early Childhood

Grace At Age 5

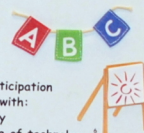
Grace started kindergarten. In addition to out-patient care, Grace began receiving school-based therapy services, including:

- Occupational Therapy
- Speech Therapy
- Physical Therapy

Occupational Therapy's Role With Technology in Early Childhood

Assess child's need and supervising the use of technology with difficulties or dysfunction in:

- Feeding
 - Bathing and Dressing
 - Communication
 - Playing
 - Mobility
 - Positioning and handling
 - Handwriting and classroom participation
- Occupational Therapy also helps with:
- Securing funding for technology
 - Family involvement with the use of technology³



Grace's Treatment Team Members

- Pediatrician
- Neurologist
- Orthopedist
- Occupational Therapist
- Social Worker
- Speech Therapist
- Physical Therapist
- Classroom Aide
- Special Education Teacher³



Technology Used by Grace



Universal cuff with eating utensils



Bathing chair



Switch toys



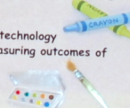
Positioning bolsters



Occupational Therapy Assessments

Occupational therapists and occupational therapy assistants observe children with cerebral palsy at home, during play, and at school. An experienced occupational therapy assistant can assist occupational therapists in:

- Assessing functions in activities of daily living
- Fine Motor function
- Gross Motor function
- Positioning for access of technology
- Determining need and measuring outcomes of assistive technology



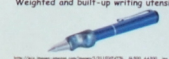
Funding Sources for Technology

- Individuals with Disabilities Education Act (IDEA)
- Private medical insurance
- Medicaid
- Early and Periodic Screening, Diagnosis, and Treatment (EPSDT)
- State Assistive Technology Loan Programs
- Other funding sources such as: Lions, Masons and Kiwanis Clubs, United Way, United Cerebral Palsy Association, March of Dimes⁴

Communicative Devices: DynaVox



Weighted and built-up writing utensils



Stander



Meet Grace

Grace was born at 36 weeks gestation weighing 5 lbs. Her mother was a stay-at-home mom and her father was a program manager at a local construction company. Grace had one brother who was 3 years old at the time of her birth. Grace's parents became concerned when she didn't meet some of the typical milestones for children in their first year of life. She wasn't rolling over or sitting up independently at 6 months. She had difficulty manipulating or holding on to her toys. At Grace's one-year well-baby check-up she still wasn't sitting up on her own or crawling. At that point, her pediatrician ordered a CT scan and referred Grace to a pediatric neurologist.

She was subsequently diagnosed with Moderate Spastic Quadriplegia Cerebral Palsy, and began receiving occupational therapy, speech therapy, and physical therapy in the months and years to come. At 2 years old Grace started using a gait trainer for ambulation.

Grace's occupational therapist introduced switches with large activation buttons for her toys along with other technology to help Grace lead her life as independently as possible. Grace's receptive language was normal, but she had limited intelligible expressive language. As at 3 years old she also began using an Augmentative Communication Device to enhance her communication skills.