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Music Therapy & Cerebral Palsy Fact Sheet

Definition: Cerebral palsy describes several chronic conditions affecting body movement and muscle coordination. It is caused by damage to one or more specific areas of the brain, usually occurring during fetal development, birth, and infancy. Damage to motor areas in the brain disrupts the brain's ability to adequately control movement and posture. "Cerebral" refers to the brain and "palsy" to muscle weakness/poor control. Cerebral palsy itself is not progressive (i.e. brain damage does not get worse), however, secondary conditions, such as muscle spasticity, can develop, which may get better or worse over time. Cerebral palsy is characterized by an inability to fully control motor function, particularly muscle control and coordination. Depending on which areas of the brain have been damaged, one or more of the following may occur: muscle tightness or spasticity, involuntary movement, disturbance in gait or mobility, difficulty in swallowing and problems with speech. Abnormal sensation and perception, impairment of sight, hearing or speech, seizures, and/or mental retardation may also occur. Other problems that may arise include difficulties in feeding, bladder and bowel control, problems with breathing because of postural difficulties, skin disorders because of pressure sores, and learning disabilities.

Incidence: Approximately 764,000 children and adults in the United States manifest one or more of the symptoms of cerebral palsy. Currently, about 8,000 babies and infants are diagnosed with the condition each year.

Characteristics and Need Areas:

- **COGNITIVE:** Some may have learning disabilities and/or mental impairment
- **SPEECH/COMMUNICATION:** Some may have stuttering, fluency, cluttering issues or other disorders with the voice
- **MOTOR SKILLS:** Difficulty with fine motor tasks (such as writing or using scissors), difficulty maintaining balance or walking, involuntary movements



- **SOCIAL:** An individual with cerebral palsy may be limited in participating in activities due to motor, communication or other restrictions

How can music therapy address the need areas for an individual with Cerebral Palsy?

SPEECH: Rhythm-based techniques have shown to be successful in treating fluency and rate of speech by providing a structured and predictable foundation for verbal responses. Vocal exercises with singing can help to remediate unusual loudness, breathing and pitch of the speaking voice. Music therapy can also address receptive speech skills as described in the goal example below. Music therapists can co-treat with speech therapists to enhance the effectiveness of the treatment.

GOAL EXAMPLE for COMMUNICATION/LANGUAGE

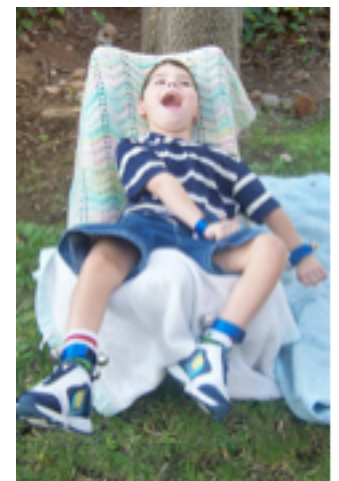
By (date), given melodic cueing and picture cards, Paul will demonstrate receptive language skills by making a choice via hand reach between a field of two (musical instrument vs. nonpreferred item) for 75% of opportunities with minimal prompting.

Baseline: Paul currently reaches for preferred items for 25% of opportunities. Due to his increased motivation when music is present and need for a symbolic communication method, music provides an enhanced way for Paul to transition from real-object presentation to symbolic representation.

COGNITIVE: Music can be used to motivate, reinforce and reward the learning process. Music can serve as a memory aid (for example the ABC song) for academic information. Educational songs with visual aids can be created to meet the needs of the individual and practiced in the home or classroom.

MOTOR SKILLS: Music can be used to structure and guide stretching/range of motion and other motor exercises. Playing musical instruments can exercise muscles and help improve fine and gross motor skills. Music therapists can also co-treat with occupational and/or physical therapists to enhance the effectiveness of the therapy.

SOCIAL: Social song stories can teach appropriate social interaction, eye gaze, facial expressions, turn-taking, and other important social skills. In addition, group-based music therapy sessions can provide a successful, normalized outlet for individuals with cerebral palsy to engage in social experiences through music.



Paul, an 8-year old boy with CP is highly motivated to play the bells

RELATED RESEARCH:

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NATIONAL ORGANIZATIONS

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