

Introduction

Positioning for Play: Interactive Activities to Enhance Movement and Sensory Exploration, Second Edition, is an expanded collection of reproducible activities from the original text, entitled *Positioning for Play: Home Activities for Parents of Young Children*. This updated collection of reproducible activities is designed for use by early interventionists, early childhood educators, occupational therapists, physical therapists, speech pathologists, and community health nurses who work with families with young children who have developmental delays or are at risk for developmental delays.

A supportive environment is critical for optimum child development, and early identification of developmental issues has been shown to reduce the long-term impact of developmental delays (Batshaw, 2007; Shonkoff & Phillips, 2000; Zeanah, 2000). Two conditions have been identified that help to support health and wellness of children (Shonkoff & Phillips, 2000). The first condition is the “need for stable and loving relationships with a limited number of adults who provide responsive and reciprocal interaction, protection from harm, encouragement for exploration and learning, and transmission of cultural values” (p. 413). The second condition is described as the “need for a safe and predictable environment that provides a range of growth-promoting experiences to promote cognitive, linguistic, social, emotional, and moral development” (p. 413). Research exists that links supportive parent-child relationships with optimal child physical and mental health (Hetherington & Parke, 2003; Zeanah, 2000). Thus, the focus of *Positioning for Play* is to facilitate opportunities that promote positive caregiver and child relationships and promote environments that enhance child development.

Movement and play experiences for the young child provide the foundation for motor, sensory, cognitive, language, communication, and social skill development. Young children with physical or other developmental delays or young children who are at risk for developmental delays need support from their caregivers for these movement, sensory, and play experiences. In addition, young children learn best from engaging in play activities in places where the family lives and frequents (Shonkoff & Phillips, 2000). The activity sheets from *Positioning for Play* illustrate ways that caregivers can hold, position, and play with their child in the familiar settings of their home and community while using toys, objects, materials, and family members that are readily available. In addition, the activity sheets demonstrate proper body mechanics for both child and caregiver, and include a brief explanation of the skills that are being developed.

How to Use This Book

The reproducible activity sheets in *Positioning for Play* are for use by early interventionists, early childhood educators, occupational therapists, physical therapists, speech pathologists, and community health nurses as a method to enhance caregiver education for the development of a home program. The activities enhance caregiver education and home programming when used in conjunction with demonstrations and verbal explanations. After the education session, the activity sheets can be used as a reminder for caregivers during the time between therapy and education sessions. Plus, caregivers can use the activity sheets to teach other family members or individuals who frequently interact with the child.

The activity sheets are grouped into 10 sections according to developmental position. Each section begins with an introduction that explains the developmental position and the motor skills that this position can promote. Each individual activity sheet provides further information about the motor and sensory skills that can be enhanced while playing with the child in the described developmental position. In addition, each activity sheet provides play suggestions that can be used to enhance sensory, cognitive, gross-motor, fine-motor, self-help,

■ Introduction ■

and language/communication skills. The introduction, description of the activity, and the play suggestions are written in non-technical terms to allow for increased understanding by caregivers. However, each activity sheet also includes a section entitled “Notes for Therapists,” written in technical language for therapists, nurses, and early intervention professionals, that provides biomechanical, musculoskeletal, neuromuscular, sensory, and/or learning explanations. The “Notes for Therapists” sections can be used as technical explanations about the activity.

In each of the sections, the activity sheets that require the caregiver to hold the child are generally arranged in order of developmental ability for the child, where the easier activity positions are explained first and the activities that require more body coordination for the child and caregiver are explained last. The therapist or early intervention professional can select the most developmentally appropriate activity for the child and add additional activity sheets as the child progresses. For activities that require the caregiver to move a child’s arms or legs in a particular manner, it is recommended that the therapist or early intervention professional demonstrate the activity and instruct the caregiver to gently move the child’s limbs in order to encourage the child to move. The caregiver should never use force to bend, pull, or stretch the child’s limbs, muscles, and joints.

Activity sheets that do not require the caregiver to hold the child but require the use of furniture or other household items for positioning are toward the end of each of the sections. These activities facilitate the child’s development of independence and problem solving for sensory-motor learning. Teaching families about positioning through the use of home furniture or other household items or by using child products found in local stores is very important because families need to know that their child is in a safe place to play in a therapeutic position. Be creative with adapting children’s toys and furniture for positioning.

When an individual moves his or her body and limbs to reach and manipulate objects, move through space, and/or maintain a stationary position, the individual’s muscles have the ability to automatically and appropriately respond and adjust to the biomechanical forces that are influenced by gravity. This ability is referred to as “muscle tone.” Some children with developmental delays have issues with muscle tone that can impact the responsiveness of their muscles to react or adjust to movement challenges. As a result, these children are more at risk for delays in sensory-motor skill development and coordination that may further impact their ability to effectively engage in play. Therefore, information follows about special considerations regarding the sensory-motor challenges of children with low muscle tone, high muscle tone, or hemiplegia (muscle tone asymmetry). In addition, recommendations for appropriate activity selection and suggestions regarding optimal management of these muscle tone issues through positioning and play are included. Therapists and early intervention professionals are encouraged to review this information when working with children who have muscle tone issues.

Considerations for Children With Low Muscle Tone/ Hypotonicity/Floppy Muscles

Children with low or floppy muscle tone have difficulty lifting their bodies and limbs against gravity to move, play, and maintain their position. Children with low or floppy muscle tone often have joints that are hyper-mobile. As a result, children with low or floppy muscle tone have issues with joint instability that affects their ability to move with coordination and to develop endurance for moving. To compensate for this issue, children with low or floppy muscle tone tend to lean their bodies on a supporting surface to avoid holding their bodies and limbs against gravity. In addition, they try to “lock” their joints (such as locking elbows or knees) or posture their limbs away from their bodies (with extreme leg and/or arm abduction and external rotation) to increase biomechanical stability through the assumption of a wide base of support. This posturing does decrease the amount of muscle effort to maintain a position; however, this posturing inhibits the child’s ability to shift body weight to change position to allow for mobility and to hold toys/objects at midline. In addition, when attempting to move, children with low or floppy muscle tone tend to use either flexor muscle groups

or extensor muscle groups without balance control between these muscle groups to allow for coordinated movement. Children with low or floppy muscle tone often have difficulties developing appropriate head control and trunk control, and often prefer positions that require minimal muscular effort (such as back-lying/supine position) and avoid positions that require additional effort (such as tummy-lying/prone or hands and knees position). As a result, children with low or floppy muscle tone have difficulty learning to move, often seem passive in their attempts to explore and interact, and are at risk for limited play and sensory experiences.

When selecting appropriate activities for children with low or floppy muscle tone, keep in mind that the activity should be challenging enough to encourage the child to move and explore, but not so difficult that the child tries to lean on you or furniture to compensate for poor muscle control and joint stability. Encourage optimal body alignment as described on the activity sheets, so that the child has an opportunity to use his or her joints and muscles with the best mechanical advantage for movement and stability. During play, encourage the child to bring arms and legs together to develop limb-to-limb contact, balance control, and body awareness. Provide plenty of opportunities for the child to experience being in different positions throughout the day. Children with low or floppy muscle tone tend to prefer back-lying/supine position. Therefore, encourage the child to reach or roll from supine position, have the child play in side-lying position, and provide support in the more difficult positions against gravity (such as prone/tummy-lying, hands and knees position, and sitting) to ensure success during play. Supported upright positions can be easier for the child because the forces of gravity are decreased and the child can have success with head control, trunk control, and limb movements. The experience of success while learning to move through play will help the child with low or floppy muscle tone to develop greater skill for the challenging developmental positions such as crawling, standing, and walking.

Considerations for Children With High Muscle Tone/ Hypertonicity/Tight Muscles

Children with high tone and tight muscles tend to move stiffly, have difficulty moving their joints freely, have limited range of movements in their limbs, and have limited variability to their movements. Children with high tone and tight muscles tend to posture their legs with hip adduction and internal rotation, with knees flexed or extended and ankles plantar flexed. Children with high tone and tight muscles tend to posture their arms with shoulders elevated and retracted or protracted, elbows flexed or extended, forearms pronated, and hands in a fist position. The amount of muscle tightness and limb involvement can vary from child to child and the movement abilities will differ. However, children with high tone and tight muscles tend to move very slowly, predictably, and tend to use the same patterns repeatedly; as a result, children with high tone and tight muscles are at risk for developing joint problems and limitations in joint movement. In addition, children with high tone and tight muscles can become easily frustrated or insecure when trying to play or hold their body positions against gravity. These children often “get stuck,” have difficulty moving out of positions, and prefer less challenging positions such as back-lying or supine.

When selecting appropriate activities for children with high tone and tight muscles, keep in mind that the activity should provide opportunities for sensory and movement variety while allowing the child’s muscles to be elongated and relaxed enough to allow for movement control. To provide muscle relaxation and increased mobility, use activities that promote body rotation (such as turning the body to reach), moving or positioning the limbs that promote alternating movements (such as bicycle movements of the legs, side-lying position, or prone with one leg bent and one leg straight). Encourage optimal body and joint alignment, as described on the activity sheets, so that the child’s joints and muscles are at the best mechanical advantage for movement and stability. Since children with high tone and tight muscles often “get stuck” in a position, it is critical to provide many opportunities for the child to experience different developmental positions throughout the day. During play activities throughout the day, help the child experience the sensory feedback from movement to allow for increased motor control and body awareness. Initially, when using the preferred developmental positions

■ Introduction ■

(such as supine), provide opportunities for limb movements (such as reaching in back-lying, side-lying or encouraging transition movements between these positions). Progress to developing a higher level of skill in prone, hands and knees, and sitting positions to provide opportunities for more variety in sensory and movement experiences. When the child is ready for more movement challenges, provide opportunities for sensory and movement experiences in kneeling, standing, and walking positions. For children that need additional support in the more challenging positions (such as sitting, kneeling, and standing), use furniture or other materials to allow the child to have support while experiencing play in these positions.

Considerations for Children With Hemiplegia (Movement, Structural, and/or Tonal Asymmetry)

Children with hemiplegia (movement, structural, and/or tonal asymmetry) have issues with movement control on one side of their body (arm, leg, and trunk) that result in movement and postural asymmetry. Children with hemiplegia have less sensory awareness of their affected limbs. As a result, they often avoid or learn *not* to use the side of the body that does not move as easily as the other side (i.e., learned non-use). Because these children have less sensory awareness of the affected limbs and may not be able to feel, look, or listen for objects or people that are positioned near the affected side, they limit their exploration and manipulative play experiences and learn to move asymmetrically. Children with hemiplegia may tend to posture one arm with shoulder in elevation/retraction, elbow flexion, forearm pronation, wrist flexion, and hand fist. One leg may be postured with hip internal rotation/adduction/flexion, knee flexion, and ankle plantarflexion. However, these posturing patterns may vary between children due to differences in muscle tone and joint mobility. In general, these children are at risk for developing orthopedic joint issues in their limbs and spine, and develop delays in bilateral skills that further impact skills for play, learning, and self-care.

When selecting appropriate activities for children with hemiplegia, keep in mind that the activity should provide opportunities that promote sensory awareness of the affected side, body symmetry, and bilateral limb use. Encourage symmetry when positioning the child during play, and use toys and materials that involve using both sides of the body. When the child reaches with the preferred side, help the child learn to move and support body weight over the affected side while using appropriate joint alignment, as described in the activity sheets. In addition, try to encourage the child to reach with the affected arm and hand and use the unaffected side for support. Finally, after the child reaches for and grasps a toy, encourage the child to return to a symmetrical position with midline orientation for bilateral limb function. Encourage sensory awareness of the affected side by placing and touching toys/objects on or near the affected side. You or the child can massage the affected side to promote more tactile and proprioceptive awareness.

Finally, therapists and early intervention professionals are encouraged to present the activities in *Positioning for Play* in a fun and practical way and to incorporate the activities into daily family routines. By incorporating the activities into family routines, families can use the activities in a more natural way and family members will be excited to play with their child.