

# A Body-Mind Technique for Children

By

Paula G. Ray, OTR and Tera L. Galloway

The Burdenko Method, as a water and land technique, has been used extensively with adults for rehabilitation, conditioning, and athletic training. This sequential program begins in the vertical position in deep water and uses a trunk buoyancy device so the extremities can move freely. The Burdenko Method came to the forefront with the treatment of high profile athletes such as Paul Wylie, Kevin McKale and Nancy Kerrigan. It is a method that requires focused attention, precision, and body-mind concentration. It makes one think about movement and the qualities of movement: balance, coordination, flexibility, endurance, speed, and strength. So one may ask if this technique is relevant for children?

Our answer is YES! Any technique when working with children must be FUN. Because water frees the body from gravity, children play in this water environment naturally. This paper will focus on the value of teaching children the vital connection of thinking and moving: the body-mind connection and the cornerstone of the Burdenko Method. When you are learning a new exercise you need to think it through and usually this thinking process makes one move more slowly. Because children like to move quickly, thinking and moving slowly goes against their basic nature. It is the environment of water that provides the instructor a medium for freedom of movement. The buoyancy of water automatically challenges balance, the first quality of movement in the Burdenko Method. The qualities of water give the instructor a tool to teach children about the importance of thinking and moving in a safe and free environment. Most of our movements are automatic, however, when learning a new skill one needs to think about how to execute it. The Burdenko Method focuses on six qualities of movement and when more than one quality is required, slowing down and thinking about how to do this new exercise is essential. This can be a challenge for children, as well as, adults.

When working with children one needs to know age characteristics, including what can be done to help children develop and grow physically and mentally. Between three and four years of age children begin to learn about cause and effect and the body-mind connection. Application of body-mind principals may be more difficult for children before the age of three due to their short attention span or simply their desire to move fast. As a child matures they will be able to accept instruction and supervision, which developmentally occurs at five to six years of age. Dominance of one side of the body develops, as well as, integration of all the qualities of movement (Brazelton). Although the ideal age to begin body-mind training is five, an instructor can begin to teach the importance of thinking or visualizing movement at an early age. Imagination and creativity are primary at this early age and dramatic play can be used to demonstrate a

new way to move. The key is to plant the seed. Children need to know that what they think, can change the way they move; it can help them learn more advanced motor skills in a safe FUN way.

The first level in the Burdenko Method uses the vertical position in deep water, which for most children is the shallow end of a pool. Finding a buoyancy device for the trunk of the body can be a challenge even though many companies produce products for children. We have used the small waist belts, noodles, wet vests, and other creative adaptations. When a child has a fear of not touching the bottom of the pool we have had parents assist manually. Other equipment we have used has included: small bar bells, swim bars, rings, kickboards, and a variety of other water toys.

Although water exercises are only used with our adapted aquatics class, the land exercises have been added to the children's swim team program as a warm up prior to getting into the pool. The importance is building on success, which may mean breaking an exercise down into small steps (similar to task analysis), or adapting an exercise or using different equipment. As an instructor or therapist we must be as creative as the children we teach. Children must be "given the opportunity (1) to make the necessary physical and mental adjustment to the water, (2) to learn how to maintain a good position in the water and (3) to receive sufficient practice while in this position so that a pattern of movement can be developed" (America Red Cross). Any one of these steps left unsolved can minimize success. Playfulness in an environment that is safe fosters neurosensory integration, as Knickerbocker would agree. You cannot force central nervous system organization or movement integration, this will happen naturally in a safe playful environment –WATER.

Water temperature is also vital as it can have an affect on a child's success. With children diagnosed with cerebral palsy, tone is usually a factor, consequently, a warmer water temperature is essential. Although 86°F is OK, for comfort and better results, 88°F to 90°F degrees is preferred. Children with low tone, however, with cases such as spina bifida, can tolerate cooler water temperatures.

The Core Program of the Burdenko Method divides exercises into three focus areas: Upper Body, Trunk and Spine (Core), and Lower Body. During the initial evaluation or first class, analyze the child's overall developmental picture by dividing his/her strengths and weaknesses within those three areas. For example, a child with spina bifida and/or paraplegia will typically have well-developed shoulder and arm muscles (Upper Body) while development of their Trunk and Spine (T/S) and Lower Body (LB) is reduced. Thus, when looking to challenge this child, the instructor would focus on their T/S and LB, but for relaxation, choose to work with the child's Upper Body (UB).

A typical session for a child with spina bifida could include exercises such as: simply finding the vertical position; then adding the pendulum exercise or splits and spreads with arm press/pump downs (assuming s/he has control of some LB). The symmetrical arms stroke is good to introduce as it focuses more on his/her UB strength. Deep water is essential to allow freedom of movement. The basic equipment needed is a trunk

buoyancy device, and barbells. The size and age of a child will determine which barbells to use. A child less than three feet tall can typically use short barbell for all the exercises. Children taller than 3' may need to vary from short to long barbells depending on the exercise.

Finding the vertical position is the first step to any Burdenko workout. This exercise alone can challenge a child's core muscle strength. The pendulum challenges both the T/S and the UB. The starting position is vertical, which the child has mastered, and the action of the exercise is to swing to a side lying position while keeping the trunk and legs in the side lying position. Changing the plane of movement from vertical to side lying challenges core strength. The primary focus is to stay in side lying near the surface then swinging straight down to vertical, then continuing on to the other side, continuously keeping in the same plane of movement. The splits and spreads exercise can be done with or without arms to challenge coordination while the symmetrical arm stroke focuses solely on the Upper Body, the child's strength. This is a nice positive and successful way to end a session.

For children with cerebral palsy and muscular tightness (high tone), a similar workout could be used but adding hamstring stretches and walking in water at various depths would be added. Multi-direction walking is very important and can be a part of any workout. Some children may not be able to walk on land but find that with assistance either from the instructor, parent or a buoyancy device that they have the core stability to walk forwards, backwards and side to side. If a child is too short, walking along the stairs is an easy remedy. Marching, hopping, jumping and kicking is also FUN and it challenges the balance/buoyancy factor. Rhythm with any exercise adds the quality of coordination and combining different sequences with different upper body movements such as punching forward, side, or down, increases the challenge. Kicks forward and back or simply swinging the same arm and legs back and forth combines balance, coordination and flexibility, the first three qualities in the Burdenko Method.

These three qualities: Balance, Coordination and Flexibility provide a solid foundation for growth. Children love the challenge, variety and FUN that this body-mind technique provides.

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