

Sensory Integration Movement Activities for the Challenged Child
American Dance Therapy Conference 2012 Albuquerque, NM
Presenter: Kimberly Dye MS BC-DMT

Abstract

Movement involving several elastic resistance props provides sensory input that is beneficial for children with sensory processing dysfunction . This workshop will give you ideas for working with the challenged child in both group and individual settings.

Sensory Integration refers to how an individual's central nervous system processes sensory information and how that in turn affects one's behavior as it relates to cognitive, motor, and social interactions. Sensory Processing Dysfunction (SPD) occurs when the brain inefficiently processes sensory messages coming from a person's body and his or her environment. (Kranowitz, 2005) Mild to severe cases can be seen in those with Attention Deficit Disorders, (ADD), Attention Deficit Hyperactivity Disorder, (ADHD), Asperger's Syndrome, Autism, and even Eating Disorders. Sensorimotor activities particularly those involving deep pressure and gravity challenges can have rehabilitative effects for children resulting in a sense of calm, an ability to focus, and experience more ease in groups.

We all learn about the world through our senses. A child having difficulties organizing sensory information may avoid or be frightened by activities such as the playground, because they may not be receiving accurate information through their senses. This can impact every other area of their learning. They may be overly sensitive to movement, touch, sights, and sounds, or not sensitive enough to the same sensory input. Some children show poor balance in movement activities or have difficulty coordinating their movements to learn such tasks as riding a bike. Often what first may look like "bad behavior" is actually a child with underlying sensory processing difficulties.

Studies have shown that whole body, deep pressure enhances dopamine receptors in the brain that results in better focus, motivation and impulse control. (Fisher, A. G., 1991) Temple Grandin, renowned author, lecturer, and recovered autistic, created the "squeeze machine" a deep pressure device that she swore by every day since it helped her overcome her sensitivity to touch and allayed her general anxiety. (Grandin 1992). Pressing into or being supported by the walls of heavy spandex during a Dance/Movement therapy session can address a multitude of symptoms exhibited by the SPD child: sensitivity to touch, hypo or hyper mobility, poor co-ordination, spatial awareness, and body boundaries.

Nylon/lycra spandex and tubular springy bands are used in Pilates and sports training to provide flexible resistance for training muscles eccentrically (Page and Ellenbecker 2008) (Herman, 2004, 2005) creating stronger, leaner muscle more desirable in dance and certain sports. The whole body resistance provides sensory feedback for accessing and moving from core to distal, a key movement task for achieving whole body co-ordination. In the expressivity of dance, we see legendary Martha Graham in her "Lamentations" creating visually stunning images as the fabric extends dynamic shapes in space. As Dance/Movement therapists we also use large elastic stretch fabrics to create a sense of group and belonging by bridging the distance between the individual and group movement. (Kreuger and Coleman 2008).

Preverbal early healthy brain and nervous system development is known to be effected by a positive, loving environment as well as a sequential, progressive accomplishment of movement tasks. Neuro-developmental movement, foundational language of the Occupational and Dance/Movement therapist can be organized in the following patterns: Breath, Touch, Core-Distal, Head/Tail, Body Halves-Right side Left side, Upper/Lower, Cross Lateral, and Vestibular (Bartenieff 1980). Moving thru these early patterns helps organize the nervous system, increases blood and oxygen flow to the brain, and strengthens focus, memory, and the child's ability to process new information.

Developmental movement patterns may also be creatively enhanced by using sensory input from stretch fabrics. Anne Green Gilbert, (2006), noted author and dance educator, uses Stretch-eze®, (Dye 2012) a circular full body resistance band, to creatively teach her "Brain Dance", an amalgam of developmental movement and effort shape patterns, (Laban 1971). She includes the tactile and proprioceptive input of the resistance band to help the child find and activate muscles responsible for moving body parts separately and in coordination with each other. Moving while wrapped in resistance fabric creates a feeling of body organization, comfort and support, and focused energy.

We will practice creative ways in circle and individually using elastic resistance to lead your clients in movement that not only move through important developmental patterns but also begin to introduce dance concepts of shape, directions in space and flow. (Dye 2003, 1998).

Current brain development research promotes the critical importance of music and movement in the early years of a young child's development. (Harman) Other key elements for learning include structure and repetition, motivation, and social interaction opportunities. Taken as a whole these cooperative stretch fabric movement activities can incorporate all of the key elements needed to facilitate growth in critical areas of development. These include the readiness skills of social/emotional, sensory-motor, receptive and expressive language and cognitive skills (Krueger and Sullivan-Coleman 2010). Structured movement activities with the Co-OperBlanket involving song for preschool and co-operative games for the older child will be demonstrated through experiential and video. (Gilbert 2006) (Dye 1998). Participants will have the opportunity to discuss their experience and evaluate its clinical relevance to their work settings.

Pioneer occupational therapist Jean Ayres, (1972) described the vestibular-proprioception system as that which responds to what is happening in our own bodies. Depending on an overactive or under active processing ability, she noted difficulties in bilateral motor coordination, sequencing, spatial orientation, balance reactions, and posture tonicity. She created movement intervention strategies by adapting and organizing the child's own compensatory movement initiations which often involved spinning, swinging, deep bodily pressure, muscular resistance, and gravitational challenges. She noticed after performing these controlled movements that children exhibited physical improvements that included postural control, spatial awareness, and better overall motor performance.

The Airwalker®, a heavy duty lycra, womb-like sling is known as the Cadillac of suspended therapy equipment. Originally designed as a tool for meditation, it now populates many Occupational, Physical, and Movement Therapy offices. It provides multi sensory input Ayres identified: whole body deep pressure, (tactile), gravitational challenge, (vestibular), and muscle resistance (proprioception). The height of Airwalker in relation to the floor is also adjustable creating countless motor planning activities. This novel activity fires norepinephrine production which promotes sustained attention. Airwalkers in schools can have recuperative effects for the easily overstimulated student. Contracting and stretching muscles against the resistance of

gravity on the body also fires serotonin receptors which affects a more positive mood and ability to experience pleasure.

Today's presentation will give you new tools and techniques using the props listed below that will help you motivate, rehabilitate, and creatively inspire your SPD children to better health.

Stretch-eze®- Individual full body stretch band that provides deep pressure. (tactile), Many therapists have children push, pull, lift, or carry heavy items in order to contract and compress muscles and joints. This enables the brain to use vestibular input effectively. Pressing into the elasticity of the fabric helps achieve the same goal without the risk of joint injury. (proprioception)

BodySox®- Individual Lycra sack with Velcro opening that provides whole body, deep pressure, (tactile), body image feedback (proprioception), spatial orientation (vestibular), and expressive movement (novel activity)

Airwalker®- Suspended, lycra, womb-like sling that provides whole body deep pressure, (tactile), gravitational challenge, (vestibular), and muscle resistance (proprioception)

Elastablast®- Circular, heavy-duty, bungee elastic that challenges one's relationship to gravity (vestibular), provides resistance for muscle and joint action (proprioception), and facilitates a group cooperative experience. (socialization)

CoOperBlanket® - Circular wide stretch band that provides whole body deep pressure. (tactile) The large blanket is excellent for creating a group cooperative experience with children of mixed abilities.

References

Ayres, A.J. (1972) *Sensory Integration and Learning Disorders*. Los Angeles: Western Psychological Services.

Bartenieff, Irmgard. (with Lewis, D.) (1980) "Body Movement: Coping With the Environment". New York, NY: Routledge,

Dye, Kimberly. (2012) "Stretch-eze For Kids" DVD Seattle, Clairmont Productions
www.dyenamicmovement.com

Dye, Kimberly. (2003) "BodySox, For Dance, Movement Therapy, and Sensory Integration". DVD. Seattle. Educational Videos Plus

Dye, Kimberly. (1998) CoOperBlanket, A dynamic, cooperative movement tool for elementary and preschool children. DVD Grayland/Welch Productions

Fisher, A. G., Murray, S. E, & Bundy, A.C. (1991) Sensory Integration, Theory and Practice. Philadelphia: F.A. Davis Company

Gilbert, Anne Green (2006) "Brain-Compatible Dance Education." Reston, VA: NDA/AAHPERD.

Grandin, Temple (1992) Calming Effects of Deep Touch Pressure in Patients with Autistic Disorder, College Students, and Animals. Journal of Child and Adolescent Psychopharmacology. Vol. 2, Number 1, Mary Ann Leibert, Inc.

Harman, Mary Ann "Music and Movement-Instruments in Language Development"; Early Childhood News www.musicwithmar.com

Herman, Ellie, (2004) Ellie Herman's Pilates Props Workbook, Ellie Herman

Kranowitz, C. (1998, revised 2005). The Out of Sync Child: Recognizing and Coping with Sensory Integration Dysfunction. New York: Berkley.

Kranowitz, C. (2004). The Goodenoughs Get in Sync. Sensory Resources, Las Vegas, NV.

Kreuger, LJ & Sullivan-Coleman MJ (2008). Let's Play with the ElastaBlast: Facilitating Preschool Friendships for Children of All Abilities

Laban, Rudolph Von. (1971) The Master of Movement. Boston, MA: Plays Inc.

Miller, L.J. (2006) Sensational Kids: Hope and Help for Children with Sensory Processing Disorder (SPD); Chapter 11: The Science of SPD: pp. 251-266;G. P.Putnam's Sons, New York

Page, Phillip and Todd S. Ellenbecker, editors (2003). "The Scientific and Clinical Application of Elastic Resistance" Human Kinetics.