

Use of Lead-Containing Items for Weight Therapy

ISSUE: Frequently, recommendation is made by occupational therapists that parents and special needs classroom teachers and paraprofessionals purchase/provide weighted vests, blankets, lap pads or other child-oriented products for use with children with autism spectrum disorder and other dysfunctions of sensory integration, such as ADD, ADHD, and hyperactivity. People should be aware that some of these items may contain hazardous substances, (*specifically LEAD*).

BACKGROUND: The first six years of life are a time of unparalleled rapid physical and neurological growth. Because children (as compared with adults) absorb a greater proportion of the lead that they consume, the effects on a child's developing nervous system, hearing, vision, cognitive development and behavior can be devastating. For the most part, such effects are irreversible. Long-term effects of lead poisoning can reduce a child's potential in school, work, health and human relationships.

Children younger than six years of age are a high-risk group for lead exposure, with one and two year old children representing the cohort at greatest risk. This is due to their age-appropriate hand-to-mouth exploration of their immediate environment. For children with special needs this period of hand-to-mouth activity may be extended and may include activities such as chewing/sucking or eating non-food items.

The concept of weighted garment therapy for children with autism spectrum disorder and other dysfunctions of sensory integration is based on the Sensory Integration therapy technique of deep pressure. Deep pressure is often used to assist a child to learn to self-calm and relax so that sensory stimuli can be processed. The use of a weighted item provides the child with unconscious information from the muscles and joints. Children who are easily distracted, hyperactive, hypoactive or lacking in concentration may respond positively to the additional stimulus a weighted item provides.

Although there is limited research in the area of weighted garment therapy, many therapists have found that the weighted vest, etc. appears to assist with reflex maturity, body position awareness and coordination, balance, eye/hand coordination, spatial perception and hearing and speaking skills. Because of these anecdotal outcomes, many therapists working with children are recommending the use of a weighted vest and/or other weighted therapy.

The Oregon Department of Education has no official position relative to the use of weighted garments, etc. for children with autism and other dysfunctions of

sensory integration. Various local school districts and occupational therapy professionals, however, have suggested or recommended the use of weighted garments for children in their classrooms whom they identify as potentially benefiting from weighted garments, blankets and lap pads.

Cutting edge weight technology uses medical device material made from Thermoplastic Elastomer. This material is molded with steel pellets for weight and shaped to fit vest pockets and ankle/wrist bands. Each weight is securely sealed with one layer of polyfoil and a bright outside covering of heavy weight nylon fabric. The result is a soft, safe, flexible, durable weight device. Wafer weights can be commercially purchased to use in vests and other child products.

Other suggested weights for blankets, vests and lap pads include dried peas and flaxseed, both natural and non-toxic weight sources. In some instances, however, some practices of concern have been reported. They are:

- Internet/telephone purchase of lead-bearing products such as blankets, vests and lap pads, from local distributors or national firms.
- Anecdotal reports that volunteer citizen groups are constructing weighted vests for special needs children and using lead sinkers or lead shot sewn into them to provide appropriate weight for therapeutic uses.
- Local dental office decisions to re-cycle dental aprons/shields into child-oriented weighted products through schools and to families.

Because of the potential for poisoning children when therapeutic vests, blankets and lap pads incorporate lead to provide weight, through damage and wear to the covering, or the lead material is not totally encapsulated, *and* because safe and non-toxic weight alternatives are available, lead sinkers, lead shot, lead dental aprons and lead dental shields, or ***any lead-bearing components are not acceptable*** for use in therapeutic child products.

RECOMMENDATIONS:

- School districts should caution parents, professionals and paraprofessionals about hazards associated with using therapeutic weighted products for children that contain lead, as products with safe and non-toxic alternatives are available.
- School districts, through their occupational therapists and autism and behavioral specialists, should encourage parents to dispose of lead-weighted therapeutic products currently in their possession as hazardous waste, or return them to point of purchase or donation. ***They should not be used for children.***

- Dental office surplus and worn aprons and shields should be recycled as recommended by the Oregon Dental Association, and not donated for use in schools and homes.
- Any distributors of lead-weighted blankets, vests and lap pads should notify any customers who purchased these items **for therapeutic use with children** to dispose of the products currently in their possession as hazardous waste, or return them to the point of purchase for disposal.

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