



## *Brachial Plexus Injury Awareness*

### **BRACHIAL PLEXUS INJURY INFORMATION FOR SCHOOLS**

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This information has been created to help you understand the special needs of a child with a brachial plexus injury (also referred to as Erb's Palsy or Klumpke's Palsy). Although there are many ways in which a person can receive a brachial plexus injury (vehicular accidents, sports injuries, gunshot wound, animal bite, due to specific medical treatments / procedures / surgeries or due to viral causes), it is most probable that a child received their injury at their birth and due to a birthing emergency called *shoulder dystocia*. Shoulder dystocia is when the baby's shoulder becomes impacted on the mother's pelvic bone. During the birth, the brachial plexus nerves can be stretched, torn, or avulsed (pulled out of the spinal column) leaving the child with differing degrees of paralysis to the shoulder, arm and/or hand.

Here are a few areas that may challenge a child:

#### **SELF-CARE SITUATIONS**

Most children with brachial plexus injuries have difficulty lifting their affected arm up over their head or even above shoulder level, causing difficulty in dressing and grooming. Some children develop strategies for coping with most situations; however, others may require assistance with putting on clothing and outerwear like jackets, shoes, boots, gloves and hats. Tying shoes, buttoning and zipping clothing can be especially challenging to these children.

The child may have difficulty using the restroom. For example, pulling underwear, pants and tights up and down can be quite time consuming if the child's grasp is weak or elbow function is poor. Parents teach their children adaptive strategies to manage the best they can. There are children with brachial plexus injuries, however, who require assistance for considerable time even though they prefer to be as independent as possible and may find it embarrassing to ask for assistance. These children may need discreet help.

#### **SCHOOL WORK**

If a child's naturally dominant arm is damaged, he/she adapts by using the non-dominant hand. A right-handed child, in other words, must adapt by becoming a left-handed person when the right arm or hand is affected by paralysis. Carrying heavy objects or wearing a backpack may not be advised because it might overstress the injured limb or overuse the dominant limb. Many children with brachial plexus injuries have difficulty with fine motor skills. Simple things such as cutting, coloring, and even handwriting are more difficult for them and may take longer to master. They

may not be able to hold a paper in place because they don't have the requisite strength in their affected arm to do so. One solution may be to place the paper onto a clip board. Other challenges may include using a ruler, compass, protractor, or computer. Extra time may be required for the child to complete the task.

## **PLAY AND ACTIVITY TIME**

Caution is advised for children with brachial plexus injuries involved in playtime, physical education or recreation. Physiological imbalance may affect the child's sense of balance and gross motor coordination. Supervision is recommended for some activities such as climbing or swinging from playground equipment. Sometimes the affected shoulder is underdeveloped and a fall or jerking of the arm can cause dislocation. In extreme cases a BPI child cannot break a fall because of the flaccid limb and injuries to the head can occur. Physical fitness tests may need to be adapted. Occasionally, BPI children also suffer from damage to the diaphragm which could affect the time and distance they can run. The child's parents or occupational therapist will advise you if this is likely to be a concern.

## **LUNCH/SNACK TIME**

One of the most frustrating situations for those affected by brachial plexus injuries can be lunch or snack time! Opening lunch boxes, a lid on a Tupperware container, Ziploc bags, pudding, yogurt, milk cartons or snack bags usually requires two hands. For children who purchase school meals, carrying a tray can be prohibitive because grasping both sides of the tray to support its weight can be difficult. Some children may not be able to perform a "sawing" action if the meal purchased needs to be cut into smaller pieces. Some students with brachial plexus injuries will need assistance with tasks that require two hands.

## **TRANSPORTATION TO AND FROM SCHOOL**

Depending on which arm is injured, the student with a brachial plexus injury may need assistance boarding or getting off of the school bus. Help may be needed with the seat belt, if applicable. The bus driver should be made aware of the injury so that assistance is given properly during any bus evacuation drills.

## **CONCLUSION**

We hope this information gives you insight into some of the challenges faced in a school environment by a child affected by a brachial plexus injury. Our goal is to help the children reach their full potential and to foster a positive self-image. We encourage our children to think of their affected limb as "special" but never "bad." We want to encourage our children to use their affected arms to the fullest extent possible, and to find ways to adapt to new or challenging situations rather than shy away from them. Your help in joining with us to promote these goals in the school environment is appreciated.

If you have any further questions about your student's abilities or any potential problems, please speak to your student's parent, guardian, or occupational therapist.