

## HELPING HANDS FAMILY GATHERING

We would like to get together as many families as possible for outings and gatherings.

The next gathering will be A Northwest Picnic for Brachial Plexus Families on Saturday, September 22, 2001.

Location: Point Defiance Park, beginning at 10:00am  
Please contact Peggy or Julia for further details.

Call or email:

Peggy Ferguson: (360) 275-5501 [ferguson@hctc.com](mailto:ferguson@hctc.com)  
or

Julia Aten: (253) 964-3550 [jaten@uswest.net](mailto:jaten@uswest.net)

For more information on the United Brachial  
Plexus Network contact:

[support@erbspalsy.org](mailto:support@erbspalsy.org),

or call Pam or David Lester at (972) 429-1931 or  
by mailing to:



Helping Hands  
C/O Peggy Ferguson  
P.O. Box 2090  
Belfair, WA 98528

**UBPN**

\*Support Group Information may also be  
obtained at the above address.

# HELPING HANDS

## BRACHIAL PLEXUS INJURY SUPPORT GROUP

### POSSIBLE SYMPTOMS

- LIMP/PARALYZED ARM, HAND, FINGERS
- "WAITER'S TIP POSITION" OF ARM
- LACK OF MUSCLE CONTROL IN THE ARM
- DECREASED SENSATION OF ARM/HAND

### TREATMENTS

- RANGE OF MOTION EXERCISES AND PHYSICAL THERAPY/OCCUPATIONAL THERAPY
- PRIMARY SURGERY: NERVE EXPLORATION/NERVE GRAFTING (UP TO THE AGE OF 12 MONTHS)
- SECONDARY SURGERIES: MUSCLE RELEASES, MUSCLE/TENDON TRANSFERS

**Helping Hands** is a local Support Group Affiliate for the UBPN non-profit organization.

If you would like more information/are interested in participating in our support group efforts,

Please Contact:

Peggy Ferguson: (360) 275-5501

[peggy@erbspalsy.org](mailto:peggy@erbspalsy.org)

Julia Aten: (253) 964-3550

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## ABOUT THE BRACHIAL PLEXUS

The brachial plexus anatomy is complex, but can be described in terms of basic function. The brachial plexus is derived from 5 "roots" or spinal nerves that exit the spinal cord in the neck. The nerves then pass through the axilla or armpit behind the collarbone (clavicle), and split into the final nerve branches that supply the muscles and skin of the shoulder, arm, elbow and hand.

The roots are named for the level of spinal cord that they exit. The upper roots (C5 and C6) exit from the cervical (meaning "neck") 5th and 6th vertebrae. The middle root (C7) exits above the 7th cervical vertebra, and the lower roots exit from C8 (below the 7th cervical vertebra) and T1 (below the 1st thoracic vertebra). The upper roots supply upper structures (C5 to shoulder, C6 and C7 to elbow), and the lower roots supply the forearm and hand.

Injury to upper roots, most common, is known as Erb's palsy. Erb's palsy (paralysis) affects the shoulder and elbow, because the upper roots supply these structures. Injury to the lower roots is known as Klumpke's paralysis, relatively uncommon and very rarely exists by itself. Due

to the lower roots being injured, the hand is more affected. If the lower roots are injured, the injury is generally so severe that all the roots of the plexus are involved and the injury includes all parts of the arm.

Erb's is seen about 60% of the time, isolated Klumpke's is about 5%, and mixed injuries involving all elements of the plexus to some degree make up 35%. The injury to the upper roots is thought to be a bending or stretching of the neck in a direction away from the side of injury. Lower root injury is thought to be caused by pulling up of the arm above the head, so that stretch on the C8 and T1 roots results. Injuries can occur in both children and adults.

The upper roots are firmly fixed to the bony sides of the spine and tend to be torn in this region. These injuries are known as "ruptures" and can be repaired. Lower roots do not have support by bony structures, and therefore are unprotected, and tend to be torn out of the spinal cord. These injuries are called "avulsions" and cannot be directly repaired. Other techniques of reconstruction can be used. Of course, the upper roots can be avulsed and the lower roots can be ruptured, but the most common patterns are upper ruptures and lower avulsions.

Because lower root injuries are more severe (avulsions) and the areas that those roots supply are farther from the neck, they tend not to recover as well as upper root injuries.

\*\*This information comes from Rahul Nath, MD, Assistant Professor, Departments of Neurosurgery and Surgery (Plastic Surgery), Brachial Plexus Anatomy and Mechanisms of Injury. Texas Children's Hospital, Houston, TX (Brachial Plexus Clinic).

## TREATING YOUR CHILD

Range of Motion exercises are very important

in recovery. Find an Occupational or Physical Therapist that works with infants and get started as soon as possible.

Many children with a shoulder dystocia injury have transient cases; they improve with no visible signs by the age of 3-4 months. If significant improvement is not seen by this age, have your child evaluated by a pediatric neurologist (tests like MRI and EMG will be helpful in determining if surgical intervention would be of help).

We have a list of experts and hospitals that specialize in this area. While this injury occurs in 2-3 in 1,000 births, there is very little common knowledge about the treatments and resources available to help understand, prevent, and correct this type of injury.

## UBPN (UNITED BRACHIAL PLEXUS NETWORK)

The United Brachial Plexus Network (UBPN) is a non-profit organization that was created to offer support for families and individuals affected by the Brachial Plexus injury, Erbs Palsy. Our organization is dedicated to providing information and resources through the internet as well as through the mailing of our newsletters and information packets.

THE Internet, UBPN Home Page:

<http://www.ubpn.org>

The links on this site enable you to obtain a wealth of information at your fingertips.

Key words: Shoulder Dystocia, Erb's Palsy, Klumpke's Palsy, Brachial Plexus Palsy