

# CHASA

## Children's Hemiplegia & Stroke Association

www.CHASA.org ~ www.KidsHaveStrokes.org ~ www.PediatricStrokeHope.org

### INFANT & CHILDHOOD STROKE FACT SHEET

#### What is a Stroke?

A stroke occurs when the blood supply to any part of the brain is interrupted, resulting in tissue injury and loss of brain function.



Oscar, stroke at or around birth  
Aspiring superhero

#### How often does childhood stroke occur?

- ✓ A number of strokes occur prior to birth, but it is unclear how often this happens
- ✓ Stroke occurs at a higher rate in infants who are less than 1 month old; around 1 in 4000 live births
- ✓ For children 1-18 years old, stroke occurs in 6 out of 100,000 children
- ✓ 5 - 10% of children will die from their stroke

#### What are the symptoms?

- ✓ Varies according to age of the child
- ✓ Infants – seizures that are confined to one area of the body, apnea, poor feeding in newborn, and/or early hand preference before 10 months of age
- ✓ Young children – delays in gross motor development, tightness or restricted movement in legs and arms, and/or language delays
- ✓ Older children – seizures, sudden onset hemiplegia (one-sided paralysis)

#### Why is diagnosis delayed?

- ✓ Infants may not present with symptoms for several months as brain has not matured enough to show them
- ✓ Non-use of affected upper limb wrongly attributed to normal hand preference
- ✓ Delays in crawling and walking wrongly attributed to normal "lateness"
- ✓ Normal cognitive functioning doesn't raise suspicion

#### What are the outcomes?

- ✓ More than 85% of newborns who have a stroke survive to adulthood

- ✓ More than 50% of infants and children will have serious, long-term neurological disabilities including: hemiplegia (one-sided paralysis), seizures, speech, vision, behavioral, and learning difficulties
- ✓ Requires both acute and long-term rehabilitation in some survivors
- ✓ All levels of health, education, and social services in the U.S. are utilized by infant and childhood stroke survivors

#### What causes stroke in an infant or child?

Over 100 risk factors for stroke in newborns and children have been reported; however in one-third of newborns and one-tenth of children, no cause is found. The most frequently reported risk factors in children are:

- ✓ Cardiac disorders
- ✓ Hematological disorders
- ✓ Metabolic disorders
- ✓ Vascular disorders
- ✓ Infection, including chicken pox.

There have been no randomized, clinical trials for acute treatment or secondary prevention of stroke in newborns or children.



Elijah, stroke in utero  
3 year old on the move

#### Why is more research needed?

Infant and Childhood stroke research is a neglected area, with both professionals and the general public lacking awareness of the problem and its potential consequences.

Over the last decade, there has been a revolution in stroke care for adults, with the advent of specialist stroke units and evolving treatments. Similar advances have not been seen in the treatment of childhood stroke. The life long physical, emotional, and social effects of stroke in an infant impact the individual and society for

decades. This continues throughout later childhood and full adulthood years in contrast to the relatively shorter duration of impact in an adult stroke survivor.



Mimi, stroke in utero  
Playful infant

Young stroke survivors may experience decades of weekly therapy sessions, seizure and spasticity medications, orthotics, orthopedic surgery, behavioral interventions, special education in the school system, and loss of work time for parents. This creates a financial burden for families, the healthcare system, the education system, and society as a whole; not to mention the emotional toll for the family and child.

Further research is needed in perinatal and childhood stroke to identify risk factors and determine the best treatment and prevention.

#### How can you help?

Donate to the Children's Hemiplegia and Stroke Association, a 501(c)(3) non-profit organization, to help provide research awards to scientists who engage in infant or childhood stroke research.

Volunteer to help raise awareness about the prevalence of infant and childhood stroke.

CHASA also provides early stroke survivor families with support and information on infant and childhood stroke through online support groups, parent matching, local activities, speaker programs, websites, phone hotline, college scholarships and family retreats.