



# Joint statement on Shaken Baby Syndrome

**Co-signatories:** Canadian Association of Chiefs of Police, Canadian Institute of Child Health, Canadian Paediatric Society, Canadian Public Health Association, Child Welfare League of Canada, Health Canada, Saskatchewan Institute on Prevention of Handicaps, The Canadian Bar Association

**Statement of purpose:** Shaken Baby Syndrome is a preventable tragedy. There are several purposes for the joint statement on Shaken Baby Syndrome as follows:

1. to create a common understanding, based on current evidence, of its definition, cause, outcomes and consequences for the family and community;
2. to stimulate the development of effective ongoing local and national prevention strategies; and
3. to encourage the provision of support for affected children and families. The statement provides a basis for work in developing multidisciplinary guidelines for the identification and management of Shaken Baby Syndrome.

It is a tool that can be used to extend knowledge about Shaken Baby Syndrome throughout Canada.

**Audience:** Professionals who work in the areas of health, child welfare, police services, justice, education and social services; governments; organizations; communities; and interested members of the general public.

**Terminology:** Shaken Baby Syndrome is often referred to as shaken/impact syndrome because impact trauma, or blows to the head, is commonly found associated with it and may be an important factor in its causation. The term "Shaken Baby Syndrome", or "SBS", has gained common acceptance and will be used throughout the statement. The terms "baby", "infant" and "child" will be used interchangeably.

## WHAT IS SHAKEN BABY SYNDROME?

Shaken Baby Syndrome is a collection of findings, all of which may not be present in any individual child with the condition. Injuries that characterize Shaken Baby Syndrome are intracranial hemorrhage (bleeding in and around the brain); retinal hemorrhage (bleeding in the retina of the eye); and fractures of the ribs and at the ends of the long bones. Impact trauma may produce additional injuries such as bruises, lacerations or other fractures.

Shaken Baby Syndrome is a condition that occurs when an infant or young child is shaken violently, usually by a parent or a caregiver. Some experts believe that impact trauma to the head is a necessary component of the mechanism of injury. Signs of impact may or may not be visible because the impact, which produces sudden deceleration of the head (ie, the head's movement comes to a sudden stop), may be against a soft object such as a mattress.

## WHAT IS THE INCIDENCE OF SHAKEN BABY SYNDROME?

Currently, there is no definitive answer to the question of how many babies are affected by Shaken Baby Syndrome in Canada. The incidence of Shaken Baby Syndrome may be severely underestimated due to missed diagnosis and under-reporting.

## WHICH CHILDREN ARE MOST AT RISK?

Shaken Baby Syndrome can occur at any age but occurs most frequently in infants less than one year of age. A baby's demands, especially crying, can become the trigger for a frustrated parent or caregiver to shake a child. Infants are particularly susceptible because of their rela-

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tively large heads, heavy brains and weak neck muscles and because they are shaken by people who are much larger and stronger than they are.

### **HOW FORCEFUL A SHAKING CAUSES INJURY?**

The severity of the shaking force required to produce injury is such that it cannot occur in any normal activity such as play, the motions of daily living or a resuscitation attempt. The act of shaking that results in injury to the child is so violent that untrained observers would immediately recognize it as dangerous.

### **IS SHAKEN BABY SYNDROME CHILD ABUSE?**

Shaken Baby Syndrome, with or without impact trauma, is a form of child abuse. When it is suspected, it will be investigated by the police because it is a form of assault, which is a criminal offence in Canada. It will also be investigated by the provincial or territorial child welfare authority because a child with an inflicted injury and other children in the same environment may be in need of protection.

### **HOW IS THE BRAIN INJURED?**

Violent shaking has its most serious effect on the infant's head, causing it to whip backward and forward, and to undergo rotational forces. The shaking causes shearing of blood vessels around the brain, leading to a subdural hematoma (a hemorrhage around the brain). The brain may be injured as it smashes against the skull during shaking. Nerve cells in the shaken brain may be damaged or destroyed. As a consequence of these injuries, brain swelling and a lack of blood and oxygen may result, producing further damage. The resulting brain dysfunction can be manifested in a number of ways.

### **WHAT ARE THE SIGNS AND SYMPTOMS OF INJURY?**

Infants who have been shaken may have symptoms ranging from irritability or lethargy and vomiting, to seizures or unconsciousness with interrupted breathing or death. Babies with relatively mild shaking have symptoms similar to a viral illness. Caregivers and even physicians who are not aware of what has happened to the baby may not detect the head injury, or rib and long bone fractures, and may attribute the baby's fussiness to a more benign cause such as the 'flu'.

The more serious the child's neurological injury, the more severe the symptoms, and the shorter the period of time between the shaking and the appearance of symptoms. From the time of the shaking, these children do not look or act as usual – they may not eat or sleep or play normally.

Babies who are shaken may be brought to medical attention by a caregiver who offers no history of injury, a vague account of events or an explanation that is not consistent with the physical findings. Unless the physician is aware of the possibility of abuse and knowledgeable about the signs of Shaken Baby Syndrome, the cause of these children's symptoms can be missed.

### **WHAT ARE THE LONG TERM HEALTH CONSEQUENCES?**

The outcome for infants who suffer brain damage from shaking can range from no apparent effects to permanent disability, including developmental delay, seizures and/or paralysis, blindness and even death. Survivors may have significant delayed effects of neurological injury resulting in a range of impairments seen over the course of the child's life, including cognitive deficits and behavioural problems. Recent Canadian data on children hospitalized for Shaken Baby Syndrome show that 19% died, 59% had neurological deficits, visual impairment and/or other health effects, and only 22% appeared well at discharge. Recent data indicate that babies who appear well at discharge may show evidence of cognitive or behavioural difficulties later on, possibly by school age.

### **WHAT CARE WILL AFFECTED CHILDREN AND FAMILIES NEED?**

It is likely that most children with Shaken Baby Syndrome will require special services for the duration of their lives. These services may include health and mental health care, speech and language therapy, infant stimulation, rehabilitation and special education. Additional supports such as residential placement, adapted housing and employment advocacy may also be needed. Long term effects are experienced by birth, adoptive and foster families of children affected by Shaken Baby Syndrome. Nonabusing parents may require additional support from health, social and legal services.

### **WHY DO PEOPLE SHAKE BABIES?**

This is not fully understood. It is related, in part, to the stress a caregiver can feel in looking after an infant. When exhausted or frustrated by a baby's crying, some people react violently and shake the child. Other situations known to trigger shaking are toileting and feeding difficulties. As with other forms of child abuse, shaking may be repeated and accompany other kinds of maltreatment.

### **ARE SOME PEOPLE MORE LIKELY TO SHAKE BABIES?**

Shaken Baby Syndrome occurs in all socioeconomic groups and, probably, in all cultures. Canadian research has shown that the babies who are shaken are most often male and under six months of age. The research also identified biological fathers, stepfathers and male partners of biological mothers as more likely to shake an infant. Female babysitters and biological mothers are also known to shake babies.

Some risk factors commonly associated with child abuse, including Shaken Baby Syndrome, are social isolation, family violence, substance abuse, psychiatric conditions, an adult having been abused as a child or youth, poor parental attachment to a child and inadequate knowledge of child development. Shaken Baby Syndrome also occurs in families with no apparent risk factors.

## WHAT CAN WE DO ABOUT SHAKEN BABY SYNDROME?

The identification, evaluation, investigation, management and prevention of Shaken Baby Syndrome require a multidisciplinary approach that relies on the knowledge, skills, mandate and jurisdictional responsibilities of key disciplines. There is a need for shared commitment and coordination among health, child welfare, police, social services, justice and education professionals, as well as the community at large. Knowledge of Shaken Baby Syndrome should be provided in the professional education of all the involved disciplines, and ongoing education needs to be provided as new developments occur in the field.

The medical evaluation of an infant with suspected Shaken Baby Syndrome requires a multidisciplinary health team approach. Expertise in Shaken Baby Syndrome is needed within the specialties of emergency medicine, intensive care, critical care, neurosurgery, neurology, ophthalmology, orthopedics, radiology, pathology, paediatrics, family medicine and allied health professions. Not all these professionals will be available or needed in every case.

## WHAT ARE THE LEGAL IMPLICATIONS OF SHAKING A BABY?

Shaking a child is not a recognized method of discipline; forceful shaking is child abuse and a criminal assault. The legal implications of Shaken Baby Syndrome involve child welfare and criminal investigations. These investigations will determine whether it is safe for children to remain in their parents' or caregivers' care, and whether an individual is charged with a criminal offence such as assault or homicide. All disciplines involved in this aspect of the problem, including social workers, police officers, lawyers (for the Crown and defence), as well as judges and probation officers require knowledge of the etiology, effects and outcomes for these children so as to provide the optimal intervention.

## HOW CAN SHAKING A BABY BE PREVENTED?

Strategies must be designed to educate the entire Canadian population – adults and youth – about the dangers of losing control when caring for an infant. Key messages should explain that the most common trigger causing an individual to shake a baby is the child's crying, and that physical discipline has no place in caring for children. The emphasis should be: "Never shake a baby!", and to seek help if a baby's demands create anger or frustration, making it difficult for a person to maintain control. Parents need to learn that there are alternative strategies for dealing with exhaustion and feelings of frustration toward a baby, and that caution must be taken in choosing alternate caregivers. Great caution should be used in letting inexperienced caregivers, those who have difficulty controlling their anger and those

with any resentment toward an infant look after a baby, even for a short time.

Targeted approaches to prevention should be provided to those considered to be at higher risk for abusing a child. Those identified by research as more likely to injure children – young parents, males, parents and caregivers burdened by high stress and those with aggressive tendencies – need to be cautioned.

These messages can be delivered through professional organizations, public education campaigns such as public service announcements, parenting education programs, parent support networks, school curricula and many organizations that provide services to people.

## RECOMMENDATIONS

- **Data collection and surveillance:** Existing surveillance systems – such as the Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP), the Canadian Paediatric Surveillance Program, the Canadian Collaborative Study on Shaken Impact Syndrome, and the Canadian Incidence Study of Reported Child Abuse and Neglect – should be used to collect national data on an ongoing basis. Researchers, practitioners and policy makers must have access to these data at provincial/territorial and regional levels.
- **Research:** Research is needed in the areas of general knowledge of the injury caused by shaking a baby; psychosocial aspects of Shaken Baby Syndrome, including family history, risk factors, the profiles of perpetrators and the triggers of violent behaviour; and the long term consequences for survivors. Shaken Baby Syndrome prevention programs must also be evaluated to determine their effectiveness.
- **Prevention:** Prevention efforts should be built on a broad population health basis, and should comprise a variety of approaches such as popular media and school curricula. Strategies should provide the general public and targeted audiences not just with the caution regarding shaking a baby but with guidance for coping with the demands of a baby. National, provincial/territorial, regional and local preventive strategies should include an increased implementation of accessible parent support programs. Approaches targeted to those at higher risk for violence include child development, parenting programs and anger management.
- **Care and treatment:** Personnel with training in developmental disabilities and early intervention and in education programs are needed to help survivors of Shaken Baby Syndrome and their families. Accessible professionals with expertise in child abuse must be identified at the provincial/territorial or regional level to consult with social workers, child protection agencies, and legal and forensic authorities.

- **Law enforcement and justice:** Education regarding Shaken Baby Syndrome should be provided to those involved in the child welfare and justice systems, including child protection personnel, police, medical examiners and coroners, prosecutors, lawyers and judges.
- **Community response:** Multidisciplinary services and supports should be available to survivors of Shaken Baby Syndrome, and to biological, adoptive

and foster families affected by it.

- **Professional Training:** Protocols and guidelines should be developed to ensure appropriate and consistent response to Shaken Baby Syndrome. The above guidelines should provide for the continued development of expertise in the identification, treatment and management of all aspects of Shaken Baby Syndrome, and for its prevention.

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The recommendations in this statement do not indicate an exclusive course of treatment or procedure to be followed. Variations, taking into account individual circumstances, may be appropriate.

*Internet addresses are current at the time of publication.*