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# RECOGNIZING PEDIATRIC ABUSIVE HEAD TRAUMA (SHAKEN BABY SYNDROME)

Course # 735

2 Contact Hours

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# Table of Contents

About the Authors .....	3
Learning outcomes .....	3
Introduction .....	3
Mechanism and Internal Signs of Injury .....	4
Outward Signs of Injury .....	4
Risk Factors .....	4
Diagnosis and Treatment.....	5
Signs and Symptoms of AHT/SBS .....	5
Modified Glasgow Coma Scale for Infants and Children .....	6
Caregiver Education.....	6
Prevention Is Key .....	7
The Period of PURPLE Crying®.....	7
Controversial Diagnosis .....	8
Reporting Abuse.....	8
Protecting the Innocent .....	8
References .....	9

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# Recognizing Pediatric Abusive Head Trauma (Shaken Baby Syndrome)

## Disclosures

### Description

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The purpose of this course is to educate healthcare professionals in prevention of and intervention of pediatric abusive head trauma (PAHT), particularly shaken baby syndrome (SBS). Child abuse and trauma affect the entire family unit, the healthcare system, and the community as a whole. The goal of this course is to both help prepare nurses to educate families and caregivers about prevention of abusive head trauma/shaken baby syndrome (AHT/SBS), and to care for patients who are suffering from AHT/SBS.

Learning outcomes include:

- Define pediatric abusive head trauma/shaken baby syndrome.
- Outline the causes of and risk factors for AHT/SBS.
- Summarize the mechanism of injury of pediatric abusive head trauma.

### Criteria for Successful Completion

After reading the material, complete the online evaluation. If you have a Florida nursing license or an electrology license you must also complete the multiple choice test online with a score of 70% or better. Upon completion of the requirements you may immediately print your CE certificate of completion.

### Accreditation

American Nurses Credentialing Center's Commission on Accreditation (ANCC)

- California Board of Registered Nursing Provider No. CEP 1704.
- This course has been approved by the Florida Board of Nursing No. 50-1408.
- Kentucky Board of Nursing Provider No. 70031-12-21

### Conflicts of Interest

No conflict of interest exists for any individual in a position to control the content of the educational activity.

### Expiration Date

This course expires July 31, 2023.

## About the Authors

**James Wittenauer, MSN, MPA, BSN, RN-BC** has been a registered nurse for more than 27 years with over 15 years critical care experience as well as experience in same day surgery, primary care and cardiac care. Mr. Wittenauer received his Associates degree and BSN from Lewis-Clark State College, a master's degree in public administration from Troy State University and a master's degree in nursing administration from the University of Phoenix. Mr. Wittenauer is board certified in pain management nursing. He has authored work for various journals, websites and continuing education series and serves as a peer reviewer for Federal Practitioner.

**Cheryl Duksta, RN, ADN, MEd**, works as a field service coordinator for a major managed healthcare company and prior to that worked as a critical care nurse in an intermediate care unit in Austin, Texas. She is an active member of the American Association of Critical-Care Nurses (AACN) Greater Austin chapter She has more than 20 years of experience in education and medical publishing, including serving as a writer and editor at the National Center of Continuing Education, Inc. Prior to her healthcare career, she served as an elementary public school teacher. Ms. Duksta is a graduate of Texas State University, University of Texas at Austin, and Austin Community College.

**Shelda L. Hudson, RN, BSN, PHN**, completed her bachelor's degree in nursing and obtained a public health certificate at Azusa Pacific University and is a past member of the International Association of Forensic Nurses (IAFN). Most recently, as the Director of Healthcare Continuing Education with the National Center of Continuing Education, Inc she held responsibilities for directing instructional systems development; selecting qualified, credentialed authors for the courses offered by the National Center; and advising staff of required course design and criteria. Ms. Hudson has more than 25 years of experience in publishing courses in continuing education for healthcare professionals with the National Center.

**Editor Lia Ludlam, BS**, Ms. Ludlam is a medical, science and technical writer based in Texas. She has written articles for BYU Magazine and BYU's College of Physical and Mathematical Sciences. Previously, she worked as a researcher in lab investigating neurodegenerative disease. She holds bachelor's degree in Genetics and Biotechnology from Brigham Young University and is pursuing a master's degree in Nutrition.

## Learning outcomes

After taking this course, participants should be able to:

1. Define pediatric abusive head trauma/shaken baby syndrome.
2. Outline the causes of and risk factors for AHT/SBS.
3. Summarize the mechanism of injury of pediatric abusive head trauma
4. List the signs and symptoms of AHT/SBS
5. Detail the diagnosis and treatment for SBS
6. Report suspicion of AHT/SBS to the proper authorities
7. Explain pertinent parent/caregiver education and prevention as related to AHT/SBS.
8. Evaluate resources for healthcare personnel and parents regarding AHT/SBS.

## Introduction

Connie, a nurse at a pediatrics office, called back her first patient of the morning, a 4-month-old boy named Joshua whose parents brought him in for lethargy and poor feeding. Joshua's parents explained that Joshua had been unusually "groggy" for the past two days and had not been waking to eat in his typical feeding pattern. When they managed to rouse him enough to take a bottle, he couldn't obtain good suction, so his intake was poor.

Joshua's mother stated, "I think he may have caught a virus from his uncle, who babysat Joshua the other night. Joshua's been like this ever since we went out to dinner and left him with my brother. But I've taken his temperature routinely, and he hasn't been running a fever."

Connie scanned the baby's body when his parents undressed him and while she took his vital signs. Joshua had faint bruises bilaterally on his arms. When asked, Joshua's parents said that his uncle made the bruises while bouncing Joshua on his knee. Connie wondered if this was really the case. These subtle signs alerted Connie to the possibility of a traumatic brain injury caused by shaking a baby.

Connie documented her assessment and quickly informed the doctor of a possible case of AHT/SBS. The doctor immediately assessed Joshua, explained to the parents that further diagnostics needed to be conducted, and called an ambulance to transport Joshua to the local hospital. Although they didn't know for sure if Joshua had suffered abuse, Connie and the doctor felt confident that they had taken steps necessary to assist Joshua in the event that he did suffer from SBS.

Child abuse and abusive head trauma did not originate in modern times. Pediatric abusive

head trauma can be found in records from biblical times. In 1971, the British Medical Journal published an article by pediatric neurosurgeon Dr. Norman Guthkelch who associated the head trauma (subdural hematoma) with repeated acceleration and deceleration in cases of infant abuse, describing symptoms that are now associated with shaken baby syndrome. In 1972, Dr. John Caffey coined the term *whiplash shaken baby syndrome*. In the 1980s, the term *shaken baby syndrome* was first used and has since been widely adopted by the public to describe this distinctive form of abuse. In 2009, the American Academy of Pediatrics recommended the use of the term Abusive Head Trauma instead of Shaken Baby Syndrome. Today, in medical use, the term Abusive Head Trauma (AHT) prevails.

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**“Pediatric abusive head trauma” means the various injuries or conditions that may result following the vigorous shaking, slamming, or impacting the head of an infant or young child. (KYS 620.020(8))**

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In this course abusive head trauma (AHT) and shaken baby syndrome (SBS) will, for the most part, be used interchangeably. AHT/SBS is considered preventable. With the mental visual image that “shaken baby” gives people, the term’s use with the public and in education reminds people of what NOT to do. In other words, while a medical diagnosis may be that of abusive head trauma, for educating expectant or new parents and caregivers, the imagery of a shaken baby may be more easily comprehended and recalled from memory during a time of heightened emotions of frustration and anger.

AHT/SBS, also referred to as shaken-impact syndrome and inflicted head injury, is a form of abusive head trauma that includes a constellation of signs and symptoms that result from violently shaking an infant by the shoulders, arms, or legs. Injury may result from shaking alone or from shaking combined with impact, such as when an infant is thrown against a wall. Although SBS can occur in children up to 5 years old, it is most common in infants younger than 12 months, especially those between 2 and 8 months of age.

The actual number of AHT/SBS cases is not known; however, the National Center on Shaken Baby Syndrome gives an estimate of 1,300 cases each year in the United States.

AHT/SBS is the most common cause of death and long-term disability in physically abused infants and young children. Of infants with abusive head trauma, 25% will die, and almost all victims will suffer serious health

and developmental consequences including but not limited to:

- Irreversible brain damage
- Blindness (partial or total)
- Retinal hemorrhage
- Eye damage
- Cerebral palsy (postnatally-acquired)
- Hearing loss
- Spinal cord injury
- Paralysis
- Seizure disorders
- Learning disabilities
- Death
- Central nervous system injury
- Closed head injuries
- Rib fracture
- Subdural hematomas
- Developmental delays
- Physical disabilities
- Speech disorders
- Intellectual disability

## Mechanism and Internal Signs of Injury

Infants and toddlers are prone to head injuries because of the relatively large size of their heads compared to their bodies. Babies in particular have large, heavy heads and weak neck muscles. Their undeveloped brains also have a higher water content compared with adult brains. When an infant is shaken, the infant’s head whips forward and backward, causing the fragile brain to slosh back and forth within the infant’s skull. This acceleration/deceleration can cause bruising, swelling, and bleeding in the brain and tearing of the surrounding vessels. During the abuse, the infant’s head may also strike an object, the floor, or a wall, resulting in blunt trauma. The force of deceleration is greater when the baby’s head comes in contact with another object, causing even more severe injury. As such, some experts suggest that the term *shaken-impact syndrome* is more accurate for this type of trauma.

The characteristic internal injuries associated with AHT/SBS include subdural and subarachnoid hemorrhage (bleeding in the brain), retinal hemorrhage (bleeding in the retina), diffuse axonal injury (nerve damage), damage to the spinal cord and neck, and fractures of the ribs and bones. Although all of these injuries may be present in cases of abusive head trauma, the triad of injuries that points to AHT/SBS is subdural hemorrhage, retinal hemorrhage, and cerebral edema.

Subdural hemorrhage that occurs with AHT/SBS occurs between the dura (the outermost membrane surrounding the brain and spinal cord) the brain itself. The bridging vessels that transport blood from the surface of the brain to the dura are delicate in infants. They are particularly susceptible to tearing when sudden

head motions extend the vessels. Subdural hemorrhage can be either unilateral or bilateral, although it is more commonly a bilateral injury. Autopsies of infants who are shaken reveal cerebral edema and bleeds ranging from 2–15 ml in volume which is typically much less compared to the amount of bleeding in cases of accidental head injury (which can exceed 100 ml). Subdural hematoma is commonly found in SBS cases and more rarely in other forms of head injury.

The same vessels that tear to produce a subdural hemorrhage can also produce a subarachnoid bleed because they pass through the arachnoid space, which is larger in infants than in adults. Subarachnoid hemorrhage is commonly sparse and often difficult to detect. If the infant suffers a head impact along with shaking, the force from the blow often results in diffuse brain swelling and increased intracranial pressure because the compliant skull provides less protection for a child than the developed skull does for an adult.

A cardinal sign of SBS is retinal hemorrhage which, according to Levin et al (2014), is present in 85% of the cases of abusive head injury due to acceleration/deceleration forces. The forceful shaking associated with AHT/SBS causes multiple hemorrhages of the retina in both eyes and blood to fill the empty cavity in the eye and may result in blindness.

Diffuse axonal injury causes the potentially profound disability associated with SBS. Because the axons of infants have not developed myelin, they are more susceptible to tearing. The acceleration/deceleration movements of the head related to shaking, tear the axons, resulting in cell death and brain swelling. Because infants have such small axonal processes, these types of injuries can be difficult to detect.

## Outward Signs of Injury

Abusive head injuries may be accompanied by outward signs of abuse, such as bruising, or fractures that can be seen on x-ray. Too often, however, injuries due to AHT/SBS are insidious and not easily noticed by caregivers or healthcare professionals. Symptoms of AHT/SBS range from vague, such as lethargy, vomiting, and crying, to severe and frightening, such as convulsions and coma. (See **Figure 1** for a detailed list of signs and symptoms of AHT/SBS.)

The injuries associated with SBS result from extreme force. Subdural and retinal hemorrhages are not injuries related to short falls in the home, motions associated with an infant swing, bouncing of infants on a knee, or playful tossing of infants. These injuries are associated with rotational forces from violent shaking.

## Signs and Symptoms of AHT/SBS

Not all injuries from AHT/SBS are visible; however, babies may display these outward signs:

- Vomiting
- Increased irritability or uncontrollable crying
- Poor sucking resulting in an inability to nurse or eat
- Significant changes in sleeping patterns
- Bulging fontanelles, separated skull sutures, or increased head circumference
- Convulsions or seizures
- Respiratory distress
- Unresponsiveness or inability to be awakened
- Coma or death
- Bilateral bruising on arms or body
- Any bruising on a child of less than 4 months

Figure 1

## Risk Factors

Prolonged or inconsolable crying is the most common trigger for AHT/SBS. Episodes of crying that can trigger shaking behavior of parents and other caregivers are known to increase in the first month after birth, peak in the second month, and decrease thereafter. Because young infants cry more frequently than older infants and toddlers, they are more at risk for being shaken. Many caregivers deal with crying with patience and compassion; however, at times caregivers may be under stress from work, family, or financial issues; in addition, they may be suffering from the sleep deprivation related to parenting. Add the frustration of an inconsolable baby, and caregivers can “snap”.

In addition to crying, other situations can trigger SBS, including feeding difficulties, such as when infants refuse to take a bottle, and toilet training in older infants. These situations can increase caregiver frustration and anger and make them susceptible to shaking their infant.

Certain risk factors put an infant at risk for AHT/SBS. Children are at greater risk if they:

- were born prematurely
- have disabilities
- are younger than 6 months
- were born at the same time as another infant, such as a twin
- are male (~60% vs ~40% female)
- Parents and caregivers are more likely to shake an infant if they:
- are younger
- abuse drugs and/or alcohol
- have an unstable social/emotional support system
- have unrealistic expectations about childrearing and child development
- were abused or neglected as a child
- have a history of domestic violence
- are a single parent
- are male

- lack prenatal care services
- are prone to fits of anger
- are prone to acts of violence on impulse

According to the American Association of Neurological Surgeons, “The perpetrator of the abuse is most often the father, boyfriend of the mother, female babysitter or the mother.”

## Diagnosis and Treatment

Diagnosing abusive head trauma/shaken baby syndrome is difficult due to the unique nature of the trauma and the age of the victim. There is neither a single injury nor a single test that is diagnostic.

*Abusive head trauma is difficult to diagnose.*

*Misdiagnosis is common.*

In the “Consensus statement on abusive head trauma in infants and young children” published in *Pediatric Radiology* in 2018 the authors state “The diagnosis of AHT is a medical diagnosis made by a multidisciplinary team of pediatricians and pediatric subspecialty physicians, social workers and other professionals based on consideration of all the facts and evidence. AHT is a scientifically non-controversial medical diagnosis broadly recognized and managed throughout the world.”

In an Feb 2019 article by Drs. Joyce and Huecker, they state

Four variables predict abusive head trauma with 98% accuracy.

- Acute respiratory compromise before admission
- Bruising of the ears, neck, and torso
- Bilateral or interhemispheric subdural hemorrhages
- Skull fractures other than of a single, unilateral, nondiastatic, linear, or parietal

variety

Because infants are more tolerant of increased intracranial pressure than older children, related signs and symptoms are sometimes delayed, postponing diagnosis. Also, it is difficult to assess signs of head injury in children because of their developmental level.

The Modified Glasgow Coma Scale for Infants and Children, also known as the pediatric Glasgow Coma Scale or pGCS is commonly used as a one of multiple findings used for the diagnosis. (see Figure 2).

It is vital that an accurate and thorough history be obtained, particularly for the week prior to the time the infant presents to medical professionals. Nurses should ask questions that assess the social history of the family, in addition to the family and medical history of the infant.

Because AHT/SBS is difficult to detect, healthcare professionals should be on the lookout for any of the following circumstances:

- Any infant or young child who presents with a history that is not plausible or consistent with the presenting signs and symptoms
- The presence of a new adult partner in the home
- A history of delay in seeking medical treatment
- A previous history of or suspicion of abuse
- The absence of a primary caregiver at the onset of injury or illness
- Physical evidence of multiple injuries at varying stages of healing
- Unexplained changes in neurologic status, unexplained shock, or cardiovascular collapse

In addition to history and physical examination, some diagnostic tests can be completed to help confirm AHT/SBS: computed tomography (CT) scan, magnetic resonance imaging (MRI) of the head and spine, ophthalmologic exam, and x-rays. If a subarachnoid hemorrhage is suspected, and no evidence of increased intracranial pressure is noted, the doctor may perform a lumbar puncture to confirm a diagnosis.

Unfortunately, the prognosis for infants who suffer from abusive head trauma is worse than that of infants who suffer from accidental head trauma. Treatment depends on the severity of the presenting symptoms and may include emergency, life-sustaining measures. The priority for nursing care is the ABCs—airway, breathing, and circulation.

Children may undergo brain surgery to relieve intracranial pressure and may need respiratory support. Some children need long-term treatment to cope with the lasting effects of abuse, including physical and occupational therapy, speech therapy, and special education.

## Modified Glasgow Coma Scale for Infants and Children

	Child	Infant	Score
Eye Opening	Spontaneous	Spontaneous	4
	To speech	To speech	3
	To pain only	To pain only	2
	No response	No response	1
Best verbal response	Oriented, appropriate	Coos and babbles	5
	Confused	Irritable cries	4
	Inappropriate words	Cries to pain	3
	Incomprehensible sounds	Moans to pain	2
	No response	No response	1
Best motor response	Obeys commands	Moves spontaneously and purposefully	6
	Localizes painful stimulus	Withdraws to touch	5
	Withdraws in response to pain	Withdraws to response in pain	4
	Flexion in response to pain	Abnormal flexion posture to pain	3
	Extension in response to pain	Abnormal extension posture to pain	2
	No response	No response	1

Score  $\leq$  12 suggests a severe head injury; score  $\leq$  8 suggests need for intubation and ventilation  
score  $\leq$  6 suggests need for intracranial pressure monitoring.

From U.S. Department of Health and Human Services

Figure 2

was helpful to them; further, the incidence of AHT/SBS declined more than 60% in the areas where information was provided. The lesson is for nurses and other healthcare professionals to be diligent in providing parents and caregivers of infants with appropriate educational materials.

One key aspect of education is alerting parents and caregivers to triggers. Most parents do not want to harm their children and could never imagine shaking a baby to the point of harm. However, certain behaviors can trigger parents and caregivers. The most common trigger is crying. This seemingly benign infant behavior can frustrate even the most compassionate of caregivers, causing them to reach a breaking point where their emotions and physical actions overcome their reasoning and self-control.

Nurses need to explain to caregivers and parents that crying is normal for babies, especially babies younger than six months of age. Nurses should reassure caregivers that the episodes of crying will subside in time.

Parents may benefit from learning about The Period of PURPLE Crying®, which was developed by the National Center of Shaken Baby Syndrome to help parents understand the patterns of infant crying. Multiple studies have shown this program as successful in reducing AHT. Parents can use the acrostic PURPLE as a memory device to remind themselves of the characteristics of the period. (See Figure 4).

Nurses can also offer parents the following tips for dealing with a crying baby:

- Check the baby for signs of illness, teething, or a dirty diaper and resolve those problems if possible.
- Sing to or talk to the baby.
- Take the baby for a walk or a ride in the car, if the caregiver is calm enough to drive.
- Offer the baby a pacifier or safe toy.
- Gently rock the baby or rub his or her back.

Parents and caregivers must understand that they may not be able to console the baby and that an inconsolable baby does not make them bad parents or incompetent caregivers.

In cases where a baby does not stop crying and a parent or other caregiver is feeling frustrated, they can place the baby on his or her back in a safe crib and should step away; call a friend, a relative, or a parent support group to seek reassurance. After 10 or 15 minutes, then check on the baby. If their frustration has subsided, they can once again pick up the baby and attempt to comfort the child. If the frustration and stress are still present, they should soothe the infant for a moment, without picking the infant up, and then walk away for another 10 or 15 minutes. They can try relaxation techniques, such as conscience breathing, mental imagery, counting to 100 or listening to a favorite song.

*AHT sequela “More than 50% of children will have partial or complete blindness.”*

Of survivors, about one third will suffer from profound disabilities, such as an inability to sit up, walk, or even breathe. Some of these victims will be nonresponsive, living out their lives in a vegetative state. Another third of survivors will suffer blindness, seizures, behavioral and learning problems, and other serious disabilities that affect independent living.

*“More than half of children aged 0 to 4 years injured by abusive head trauma will die before they turn 21 years old.” - <https://www.ncbi.nlm.nih.gov/books/NBK499836/>*

### Caregiver Education

The key to prevention of AHT/SBS is education. Other than assisting in life-saving measures, the most important intervention for nurses is parent/caregiver education. In one study, parents in New York were given information about AHT/SBS prior to discharge with their newborn. At follow-up 7 months after discharge, parents stated the information



Angela Baylee, Air Force spouse, receives a Shaken Baby Syndrome demonstration while attending Play Day in the Park. After shaking the demonstration doll, red lights flash, indicating where brain damage has occurred. The demonstration played a key role in the Play Day in the Park event, which aimed to raise awareness about child abuse prevention. (Air Force Photo by Laura Mowry)

Figure 3

## Prevention Is Key

Abusive head trauma and SBS often result in death and disability in otherwise healthy children and devastate families. One can see not only the devastation with the life of the child and family, but also the cost to society. The National Center on Shaken Baby Syndrome assessed the lifetime societal and economic impact to be \$13.5 billion in the United States based on the number of reported occurrences of AHT in 2010. The abuse also taxes the healthcare system and resources. According to Peterson et al (2015), the initial inpatient care for each child admitted within 2 days for an initial abusive head trauma averaged \$31,901. In the four years after diagnosis, experts estimated that AHT/SBS results in an average cost of \$47,952.

Fortunately, AHT/SBS is completely preventable, and nurses play an important part in decreasing the incidence of this type of abuse.

Many states have enacted their own prevention programs to reduce the incidence of AHT/SBS. For example, Kentucky initiated the Health Access Nurturing Development Services (HANDS) program, in which a visitor provides support and information to parents in their homes, beginning during pregnancy and lasting until their child is two years old.

The goals of the HANDS program are healthy pregnancies and births, healthy child growth and development, healthy and safe homes, and self-sufficient families. Other similar home visitation programs have shown positive results in high-risk families.

National-level agencies and non-profit organizations also provide assistance to parents and caregivers to help prevent AHT/SBS. As healthcare professionals, nurses can share the following resources with parents so they can keep their children safe:

- *National Center on Shaken Baby Syndrome* (<https://www.dontshake.org>) provides information and training related to AHT/SBS. Their program *The Period of PURPLE Crying* (<https://www.dontshake.org/purple-crying>) is an infant abuse prevention program focused on educating parents and caregivers of the period of increased crying to prevent . They provide booklets, dvds and web-based, and education for the prevention of SBS.
- *Circle of Parents* (<http://circleofparents.org>) mission is to “Prevent child abuse and neglect and strengthen families through mutual self-help parent support groups.” It offers training for organizations and agencies and has a network of parent-led support groups in 19 states that provides a place for parents to share ideas and address challenges of parenting.
- *The Shaken Baby Alliance* (<http://shakenbaby.org>) was founded in late 1990s by three mothers whose children suffered from SBS. The mission of the alliance is to provide family and victim support services, support for professionals including forensic investigation training, child abuse case consultation and education for the prevention of SBS.

Understanding what type of respite services are available in your community for caregivers of children and educating the new or expectant parents of the options can be very helpful. For parents to know that a support network exists and that there is help available can serve to relieve frustration, anger or stress and provide a healthy alternative.

The National Respite Network and Resource Center website has an interactive map with information in each state to locate respite funding and caregiver services. Because of the variability of services offered within each state, it recommended that the legwork to locate services for parents of infants and children be

## The Period of PURPLE Crying®

P	U	R	P	L	E
<b>Peak of Crying:</b> Your baby may cry more each week, the most in month 2, then less in months 3-5	<b>Unexpected:</b> Crying can come and go and you don't know why	<b>Resists Soothing:</b> Your baby may not stop crying no matter what you try	<b>Pain-like Face:</b> A crying baby may look like they are in pain, even when they are not	<b>Long-Lasting:</b> Crying can last as much as 5 hours a day, or more	<b>Evening:</b> Your baby may cry more in the late afternoon and evening

Source: National Center on Shaken Baby Syndrome (NCSBS). <https://www.dontshake.org/purple-crying>

Figure 4



The class provides attendees the opportunity to learn from experienced fathers about topics such as managing stress, infant care, shaken baby syndrome and bonding with the baby while gaining hands-on practice. (U.S. Air Force photo by Airman 1st Class Kathryn R.C. Reaves)

**Figure 5**

done in advance to ensure services are indeed available for parents, rather than just providing the website respite locator link to expectant or new parents. (<https://archrespitelo.org/respitelocator/respite-locator-service-state-information-map>) Not all states provide respite services for new parents.

## Controversial Diagnosis

In recent years, the diagnosis of AHT/SBS has come under scrutiny, bringing forth debates among healthcare experts and lawyers. There have been numerous cases in which parents and other caregivers have been convicted where it was later brought to light that a child's history of illness and structural and functional issues with the nervous system had not been considered. It is important that signs and symptoms associated with a natural disease process or congenital conditions are not overlooked. An incorrect diagnosis can result in innocent people being wrongfully convicted of abuse and sent to prison.

Later in life, the neurosurgeon who first described the injuries indicative of SBS, Dr. Norman Guthkelch, expressed his concern over the frequent diagnosis of SBS. He devoted his time to reviewing cases of individuals who had possibly been wrongfully convicted.

Dr. Guthkelch reviewed a case in Arizona in which a father was convicted in 2002 of SBS in the death of his infant son in 2000. In 2008

the Arizona Justice Project began to investigate the case.

Dr. Guthkelch's concern was that the child's medical history was ignored in favor of an SBS diagnosis. The parents had been diligent and persistent about seeking medical explanations and treatment for their son who had medical problems from birth and thereafter a history of uncontrolled seizures. Yet, the medical history and doctors who had seen the infant prior to his final ER visit were either ignored or not consulted with prior to the conviction.

After review of medical records and autopsy information by five doctors, including the doctor who had originally determined the cause of the death, the consensus was that the infant had died from an ongoing disease process that may have led to venous thrombosis.

The pro bono attorneys entered a motion

for a new trial and worked to petition to overturn the murder conviction. Instead of a new trial, after a decade in prison, the father was released, and the county attorney dismissed all charges.

Researchers and those investigating cases for flawed convictions continue to contribute to existing medical knowledge about AHT/SBS. Nurses and other healthcare professionals need to be careful to not rush to judgment in cases of suspected AHT/SBS. Healthcare professionals should not be overzealous in concluding that every child that presents with certain symptoms is a victim of abuse. Discriminating abuse from other conditions can be difficult. Differential diagnoses are very important. Subdural hematomas could be present from birth. Some medical conditions such as venous sinus thrombosis mimic symptoms of AHT/SBS.

When abuse is suspected, protecting the child is most important. The role of the nurse is to advocate for his or her patient—the child—by accurately assessing the patient and administering care in a professional and objective manner. The nurse should consult other members of the healthcare team for assistance in determining the appropriate needs of the child and the family.

## Reporting Abuse

Healthcare professionals are classified as mandated reporters and have a duty to report suspected or confirmed child abuse, including AHT/SBS. When reporting, nurses and other healthcare professionals need to take care to not place blame for the abuse but to describe objective medical observations and treatments when reporting potential abuse to state authorities. Nurses should not make evaluative statements or diagnoses and should leave the matter of conviction to the criminal justice system.

Nurses should follow state law and facility policy when reporting suspected abuse. Links for state mandates for reporting and state child abuse reporting numbers can be found at the US HHS Child Welfare Information Gateway <https://www.childwelfare.gov/organizations/?CWIGFunctionsaction=rols:main>.



## Child Welfare Information Gateway

PROTECTING CHILDREN ■ STRENGTHENING FAMILIES

Links for state mandates for reporting and state child abuse reporting numbers can be found at the US HHS Child Welfare Information Gateway [https://www.childwelfare.gov/organizations/?CWIGFunctionsaction=rols:main.dspList&rolType=custom&rs\\_id=5](https://www.childwelfare.gov/organizations/?CWIGFunctionsaction=rols:main.dspList&rolType=custom&rs_id=5)

# SHAKEN BABY SYNDROME

**Never Shake A Baby!**  
**Crying is Normal. Shaking is Not.**

SHAKEN BABY SYNDROME IS PREVENTABLE



Put baby in  
a safe place



Walk away



Take a  
time out



Ask for  
help!



americanspcc.org  
The Nation's Voice for Children

Courtesy: <https://americanspcc.org/never-shake-a-baby-shaken-baby-syndrome>

dspList&rolType=custom&rs\_id=5

## Protecting the Innocent

Connie, the pediatric nurse whose quick action helped baby Joshua receive emergency care, called the state child abuse agency and reported her findings after Joshua was transported to the hospital. Although abuse was not confirmed at the time, Connie fulfilled her duty as a mandated reporter.

One morning, several days later, the hospital staff sent Joshua's hospital records to Connie's office. She reviewed the chart, noting the hospital pediatrician's diagnosis of AHT, with subdural hemorrhage, retinal hemorrhage, cerebral edema, and two fractured ribs evident in diagnostic tests. State investigators were on the case, and criminal charges were pending. Joshua's prognosis would not be clear for some time, but Connie knew he would likely need long-term medical care and therapy.

As disheartened as she was to hear about Joshua, Connie realized her value as a nurse, caring for and advocating for her patients.

Abusive Head Trauma/SBS is a tragedy that can be prevented through greater community awareness and education efforts by nurses and other healthcare professionals. Prevention is a community effort that includes recognizing and communicating the risk factors. Communities can also share ways to lessen the load on caregivers who are under great amounts of stress. Through prevention, we can help all people live to their full potential.

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