

Cabinet for Health and Family Services – Division of Child Care  
Pediatric Abusive Head Trauma Transcript

Section 1






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## Pediatric Abusive Head Trauma

A Program for Child Care Providers

**This course was created by Dr. Melissa Currie, Division of Forensic Medicine, University of Louisville, to meet the requirements of House Bill 285 for Child Care Providers.**

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Protecting the Most Precious Gift of All

Prevent Child Abuse  
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**Pediatric Abusive Head Trauma**

## Objectives

- Review statistics of Abusive Head Trauma
- Define and describe Abusive Head Trauma and its associated injuries known as Shaken Baby Syndrome
- Describe the anatomy of the infant head and brain
- Understand outcomes for victims of Abusive Head Trauma and the range of disabilities
- Discuss risk factors for Abusive Head Trauma
- Discuss prevention of Abusive Head Trauma

**Back**



### **Objectives**

Objectives for the Pediatric Abusive Head Trauma Training:

1. Review statistics of abusive head trauma.
2. Define and describe abusive head trauma and its associated injuries.
3. Describe the anatomy of the infant head and the brain.
4. Understand the range of outcomes for the victims of abusive head trauma.
5. Discuss risk factors for abusive head trauma.
6. Discuss the prevention of abusive head trauma.

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Pediatric Abusive Head Trauma Transcript**

**Pediatric Abusive Head Trauma**

## **House Bill 285 in Kentucky**

- ▶ **Mandates/recommends education for various groups in the state who work with or care for young children**
- ▶ **Helps caregivers recognize early signs of maltreatment, which can prevent escalation to Abusive Head Trauma**
- ▶ **Provides caregivers with tools for dealing with a crying infant—the most common trigger for Abusive Head Trauma**

**Back** **Next**

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### House Bill 285

We're going to discuss the mandates and recommendations for education for the various groups in the state who work with or care for young children.

The goal of House Bill 285

- To help caregivers recognize early signs of maltreatment, which can prevent escalation to abusive head trauma.
- Provide care givers with tools for dealing with a crying infant, which is the most common trigger for abusive head trauma.
- It's also important to remember that the law was written to encompass all caregivers; that includes nurses, child care providers, social workers, emergency medical facilities. As intended by this specific law, the term caregiver is not just referring exclusively to parents.

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Pediatric Abusive Head Trauma Transcript

**Pediatric Abusive Head Trauma**

## **The Evolution of Terminology**

- **Nonaccidental Trauma**
- **Inflicted Neurotrauma**
- **Inflicted Head Injury**
- **Shaken Baby Syndrome**
- **Shaken-Impact Syndrome**

**Preferred terminology since 2009**

**Abusive Head Trauma**

**Back**

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### Evolution of Terms

The terminology for pediatric abusive head trauma that we currently used has evolved over time. It started with non-accidental trauma, inflicted neurotrauma, inflicted head injury, shaken baby syndrome, shaken impact syndrome, and since 2009 it has come into the preferred terminology of abusive head trauma.

This evolution happened mainly because of court experiences. Since many children who have head injuries from abuse have a combination of shaking and impact, we have learned that it is helpful not to limit ourselves to only one mechanism of injury which would have been shaking. Sadly these children often have a variety of mechanisms of injury including shaking, blows to the head, and being slammed into hard or soft surfaces like walls or couches.


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Pediatric Abusive Head Trauma Transcript**

**Pediatric Abusive  
Head Trauma**

**Incidence/Prevalence**

- **Abusive Head Trauma is the most common cause of disability and death in physical child abuse.**
- **Abusive Head Trauma usually occurs in children younger than 1 year of age, but older children can be victims as well.**
- **It is the most common cause of death from brain injury in children less than one year of age.**

**Back**



### Incidence and Prevalence

Abusive head trauma is the most common cause of disability and death in physical child abuse.

PAHT usually occurs in children younger than one year of age, but older children can be victims as well.

It is the most common cause of death from brain injury in children less than one year of age.

When we look at statistics,

- 71 percent of child abuse fatalities and near fatalities occur in children 3 years of age and younger.
- 40 percent of these cases are in children age 1 and younger.

## Section 2

**Pediatric Abusive Head Trauma**

### Kentucky Statistics

- During SFY 2009, 29 children died and 64 children suffered a near fatal incident of child abuse or neglect.
- During SFY 2010 - 34 deaths and 55 near deaths were substantiated.

DCBS Governor's Report on Child Fatalities/Near Fatalities 2010

Pause Play

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### Kentucky Statistics

Kentucky Statistics specifically say that during the state fiscal year 2009, 29 children died and 64 suffered a near fatal incident of child abuse or neglect. During the state fiscal year 2010, there were 34 deaths and 55 near deaths were substantiated.

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Pediatric Abusive Head Trauma Transcript


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Head Trauma**

## Kentucky Statistics

*For perspective: More children die under circumstances of alleged maltreatment between the ages of 0-1 years than from all accidental causes of injury! (includes fire, drowning, motor vehicle and poison-related deaths)*

We Can Do Better:™ Oct, 2009 report from Every Child Matters Education Fund, a nonpartisan child advocacy organization. Kentucky Child Fatality Review System 2007-2009 Annual Reports and direct CHFS database query.

**Back**

  
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### Kentucky Statistics

Other Kentucky Statistics, just to put things in perspective. More children die under circumstances of alleged maltreatment between the ages of 0 and 1 year of age than from all accidental causes of injury which includes fire, drowning, motor vehicle and poison-related deaths.

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Pediatric Abusive Head Trauma Transcript


Pediatric Abusive  
Head Trauma

## Incidence/Prevalence

**It is very rare for a child to die from or be permanently disabled from maltreatment the first time they are abused/neglected.**

Jenny C, Hymel KP, Ritzen A, Reinart SE, Hay TC. Analysis of missed cases of abusive head trauma. JAMA 1999;281: 621-6

[Back](#)[Next](#)



This means children who die from this type of abuse have had repeated incidence  
We have an opportunity to recognize early signs of maltreatment and intervene before the  
situation escalates.



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Pediatric Abusive Head Trauma Transcript

**Pediatric Abusive Head Trauma**

**Abusive Head Trauma:  
What is it, exactly?**

- ▶ Global brain injury caused by rotational forces
- ▶ Involves shaking, impact or both
- ▶ Subdural hematomas, +/- retinal hemorrhage, bruising, fractures...but it's the injury to the brain tissue itself that causes death and disability
- ▶ Often triggered by crying

**Not typically a one-time event**

**Back**

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### What is Abusive Head Trauma?

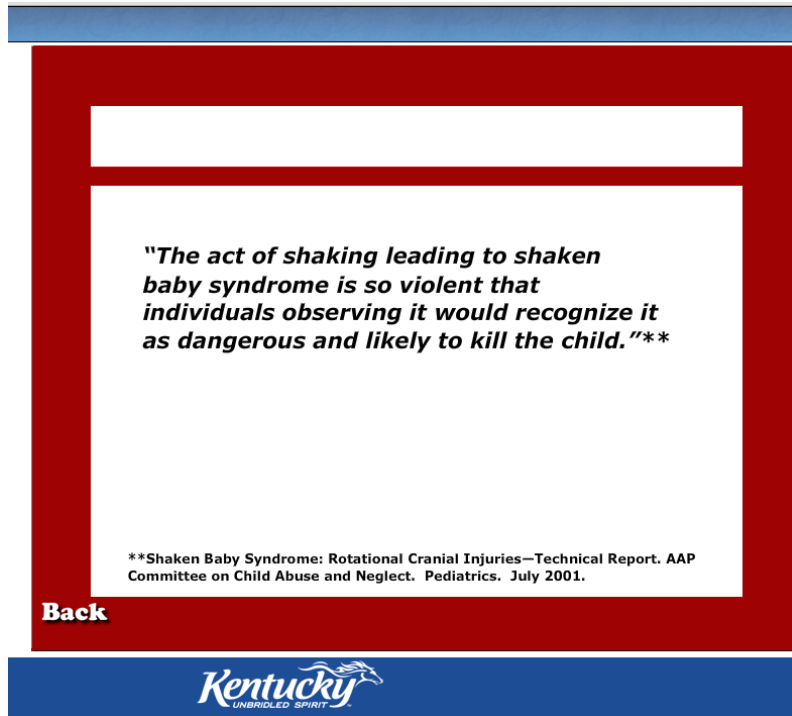
Pediatric Abusive Head Trauma is a global brain injury caused by rotational and angular forces. It involves shaking, impact, or both. It includes; subdural hematomas, retinal hemorrhage, bruising, and fractures, but it's the injury to the brain tissue itself that causes death and disability.

Abusive head trauma is often triggered by crying, and again this is not typically a one-time event.

When looking at pediatric abusive head trauma, we have to think about rotational forces that make the brain turn on its axis, causing a shearing injury. When the child is shaken from side to side and around, the whole brain inside the skull is rotating. With rotation, the brain gets differential movement of structures in areas of the brain. The outer cortex moves more than the brain stem, this mechanism of shaking a child is grasped around the ribcage and shaken violently. The head whips back and forth. This can also occur in older children.

25 to 50 percent of patients have external evidence of trauma, bruising. But that means that 50 to 75 percent of children injured this way have no external evidence.

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Pediatric Abusive Head Trauma Transcript



***"The act of shaking leading to shaken baby syndrome is so violent that individuals observing it would recognize it as dangerous and likely to kill the child."\*\****

**Back**

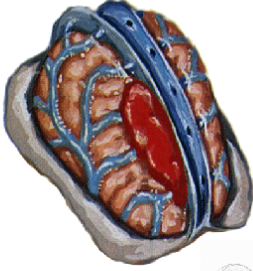
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This is not passive event. When the child is being shaking the child's head is whipping back and forth and is sustaining serious injury.


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Pediatric Abusive Head Trauma Transcript

**Pediatric Abusive Head Trauma**

**How does shaking cause injury to a baby?**



- Bridging veins stretch, rupture, and bleed, leading to subdural bleeding.
- Brain tissue is distorted/stretched during the event, causing damage to nerve cells and brain tissue (either temporary or permanent damage).



**Back**

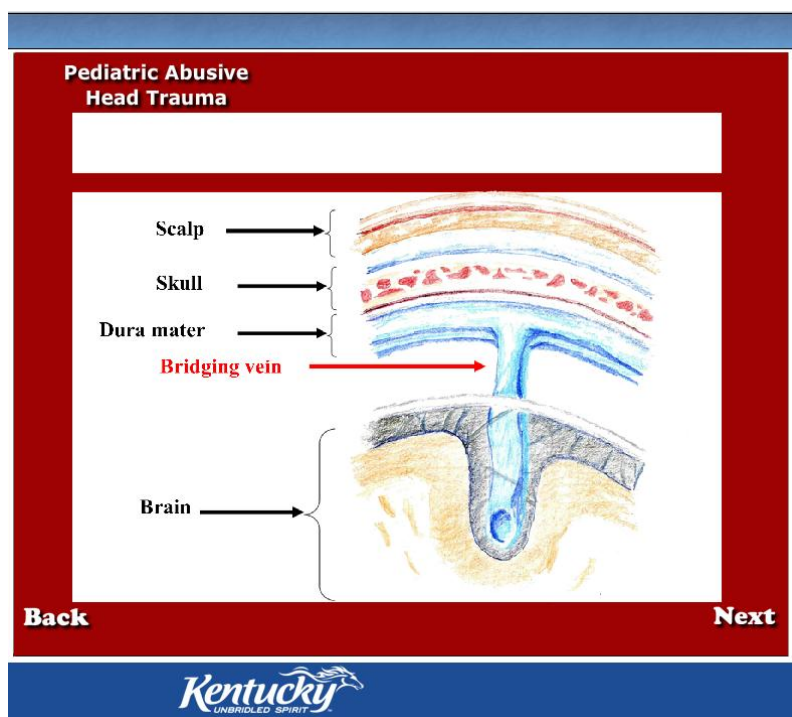
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How Does Shaking Cause Injury to a Baby?

When we look at the anatomy of the brain, there are several different things that we see. The bridging veins stretch throughout the brain. During this process they can rupture and bleed leading to subdural bleeding. Brain tissue is distorted and stretched during the event, causing damage to nerve cells and brain tissue; this is either temporary damage, or permanent damage.

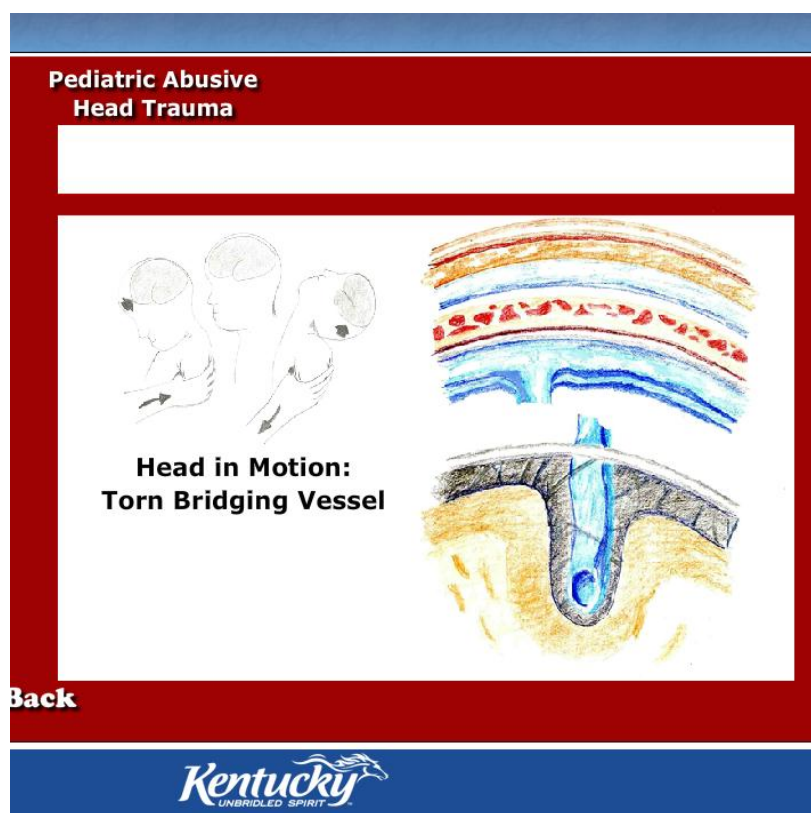
What you need to do to get an idea of this is, make a fist and look at your own fist representing the baby's brain. Then take your other hand and place on top of the fist, representing the skull covering the brain. Now rotate your fist inside the open hand to simulate what happens when the baby is violently shaken. The brain is moving around. The bridging veins help connect the brain to the skull, but while this violent rotation is occurring, those veins are being ripped apart.

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This picture shows the anatomy of the brain. You can see where the bridging vein connects the scalp, skull and dura mater. During rotation of the brain, this vein becomes ripped apart from the brain which causes bleeding inside the vein.

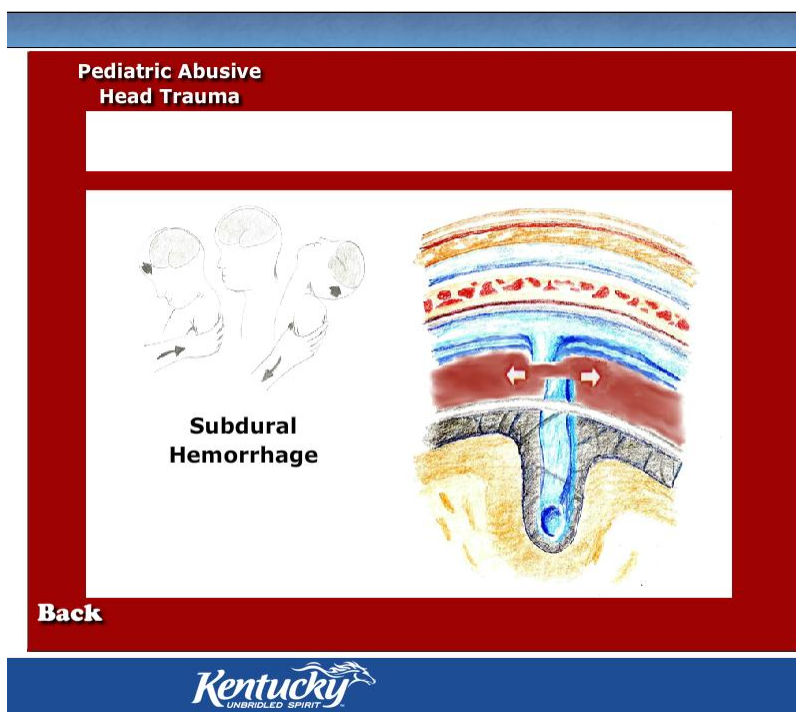
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Again we see from this illustration,

that the motion of child's head causes the rotation of the brain stretching the bridging vessel to the point it will tear.

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Pediatric Abusive Head Trauma Transcript



Subdural hemorrhage results from blood filling in the cavity after the tear.

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**Pediatric Abusive Head Trauma Transcript**

**Pediatric Abusive Head Trauma**

**Why is the infant at such high risk?**

- Inside of the infant skull is smoother—fewer 'nooks and crannies' to hold the brain in place
- More space between outside of brain and inside of skull
- Relatively large head:body ratio and weak neck muscles
- Not as much protective covering around the individual nerve cells
- Infant brain—25% more water than adult (think under-set gelatin)

**Back**

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**Why is the Infant at Such High Risk?**

- Inside of the infant's skull is smoother. There are fewer nooks and crannies to hold the brain in place.
- More space between the outside of the brain and the inside of the skull.
- The child has a relatively large head, body ratio and week neck muscles.
- There is not as much protective covering around the individual nerve cells.
- And in the infant brain, there is 25 percent more water than in adults.

Reasons that infants can be more severely injured than adults from these types of traumatic forces;

- It's just that the head is proportionally larger than the body. Infant toddler heads are heavier, accounting for about 25 percent of their total body weight. Compared to an adult who might have a head that is 10 percent of the body. Infant toddler brains are made up of more liquid than adults, therefore there is going to be more movement that is possible.
- There is more space between the brain and the skull of an infant toddler, and therefore more room for the brain to move around and gain momentum.
- There is a drastic size and strength difference between the victim and the perpetrator. When the child is shaken, the head whips back and forth and side to side causing that rotational force. Think of the soft brain tissue inside of the hard surface of the skull connected by small tissues to the skull. The brain slams against the inside of the hard skull with each directional change. Part of the brain tears away tearing brain cells.

## Section 3

**Pediatric Abusive Head Trauma**

**What DOESN'T cause Abusive Head Trauma injuries/findings?**

*High-profile court cases, news media, perpetrators and professional defense witnesses have all alleged the following as potential explanations for the injuries found with abusive head trauma:*

- ▶ **Short falls\***
- ▶ **Bouncing a child on your knee**
- ▶ **Rough play**
- ▶ **Immunizations**
- ▶ **Vitamin C or D deficiency**
- ▶ **Birth trauma**
- ▶ **Toddlers, pets**

\* Chadwick et al. Pediatrics. 2008; 121:1213-1224

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### What Doesn't Cause Abusive Head Trauma Injuries and Findings?

So we know that certain things do not cause this type of injury:

- Short falls. Like a child falling from a couch or a bed.
- Bouncing a child on your knee.
- Rough play between a toddler and an adult, or between young toddlers.
- Immunizations cannot cause these types of injuries.
- Vitamin C or D deficiencies.
- Birth trauma.
- Toddlers and pets.

With birth trauma, we know that some babies are born with characteristics that might be similar to abusive head trauma but they resolve within 4 to 6 weeks. They are not prominent.

Also regarding rough play, the children that are typically at high risk for abusive head trauma injuries, are typically under the age of one. And this is not a time when children would engage in rough play due to limited mobility.



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Pediatric Abusive Head Trauma Transcript

**Pediatric Abusive Head Trauma**

**The Question of Impact**

- If impact is involved, may see skull fracture, scalp bruise, or scalp swelling—but not necessarily.

***In other words, absence of evidence of impact does not mean impact didn't occur.***

**Back**

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### Impact

When impact is involved you may see skull fractures, scalp bruising or scalp swelling, but not necessarily. In other words, the absence of evidence of impact does not mean that impact did not occur. For example, if a child was thrown at a soft surface, a bed or a couch, outward evidence may not show impact, but internal damage may still be done.

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Pediatric Abusive Head Trauma Transcript**

**Pediatric Abusive  
Head Trauma**

**Possible Injuries in Other Areas of the Body**

- ▶ **Retinal hemorrhages**
- ▶ **Rib fractures/ other fractures**
- ▶ **Bruising**
- ▶ **Internal abdominal injury**
- ▶ **Brain swelling (bulging soft spot)**

**OR NOTHING**

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**Possible Associated Injuries in Other Areas of the Body**

With pediatric abusive head trauma, we could see injuries like retinal hemorrhages, rib fractures or other fractures, internal abdominal injuries, bruising, brain swelling, bulging of the soft spots in the brain, or we could see no associated injuries.

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**Pediatric Abusive  
Head Trauma**

**Cause for Concern**

**Infants with bruises\***

**Vomiting without diarrhea**

**Irritability**


**Lethargy, Unusual sleepiness, sluggishness or  
seeming "spaced out"**

**Seizures/Tremors**

**Breathing difficulty/gasping for  
breath/stopped breathing**

\*This especially important for PREVENTING  
escalation of violence and AHT.

**Back****Next**



When should you have cause for concern

- Infants with bruises
- Vomiting without diarrhea
- Irritability
- Lethargy
- Seizures/Tremors
- Breathing Difficulty

It is important to remain aware of these warning signs. Infants that are too young to cruise, should not bruise.

If you notice unusual reaction when moving an infant, screaming, extreme discomfort or appear to be in pain this is cause for concern, a visit to the doctor, notifying DCBS

If a child has a change in behavior or difficulty tracking objects or unable to see, take the child to the doctor and contact DCBS.


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Pediatric Abusive Head Trauma Transcript

Pediatric Abusive  
Head Trauma

**Important Key Issues**

- Infants with abusive head injury may look completely normal/uninjured from the outside.
- The signs and symptoms can be hard to notice and easily mistaken for a more benign problem.
- Abusive head trauma is sometimes missed and/or misdiagnosed by medical professionals.
- Therefore, as a child care provider, it is extremely important to document observed changes in behavior in the child's file.

**Back**




### Key Issues

Important key issues to remember: Infants with abusive head trauma may look completely normal, uninjured from the outside. The signs and symptoms can be hard to notice and easily mistaken for less concerning problems. AHT is sometimes missed and misdiagnosed by medical professionals. Therefore as a child care provider it is extremely important to document observed changes in the child's behavior and keep those for your files.

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Pediatric Abusive Head Trauma Transcript


## Section 4

**Photograph Warning**



Some of the following photographs are graphic and disturbing, as they depict injuries in our young children.

**Next**



We are going to look at some photographs of children who have been injured. They are graphic and disturbing as they depict injuries to our young children.

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**Pediatric Abusive Head Trauma**

### TEN-4 BRUISING RULE

**ANY bruising of the**  
**TORSO**  
**EARS**  
**or**  
**NECK**

**on any child less than 4 years of age**

**or**

**ANY bruising, ANYWHERE, on a child 4 months of age or younger**



Pierce et al. Bruising Characteristics Discriminating Physical Child Abuse From Accidental Trauma. Pediatrics. December 2009.

**Back**



**The 10-4 Bruising Rule:**

***Any bruising of the torso, ears or neck in a child four years of age or younger; OR any bruising anywhere on a child who is four months of age or younger. These are all concerns.***

- The torso includes the chest, the back, the buttocks and the genital area. In this picture, this three year old child was struck with a wooden paddle and you can see the bruising on the torso.
- Ears includes any part of the ear. In this picture, sadly this six month old baby was kicked in the head and has bleeding inside the skull from impact. In addition to the ear bruising that is visible from the outside.
- Neck bruising--In the bottom picture, the neck bruising is in a four month old boy who was violently shaken. Notice the bruises under his chin and on his chest. He survived but has severe developmental problems.

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Pediatric Abusive Head Trauma Transcript**



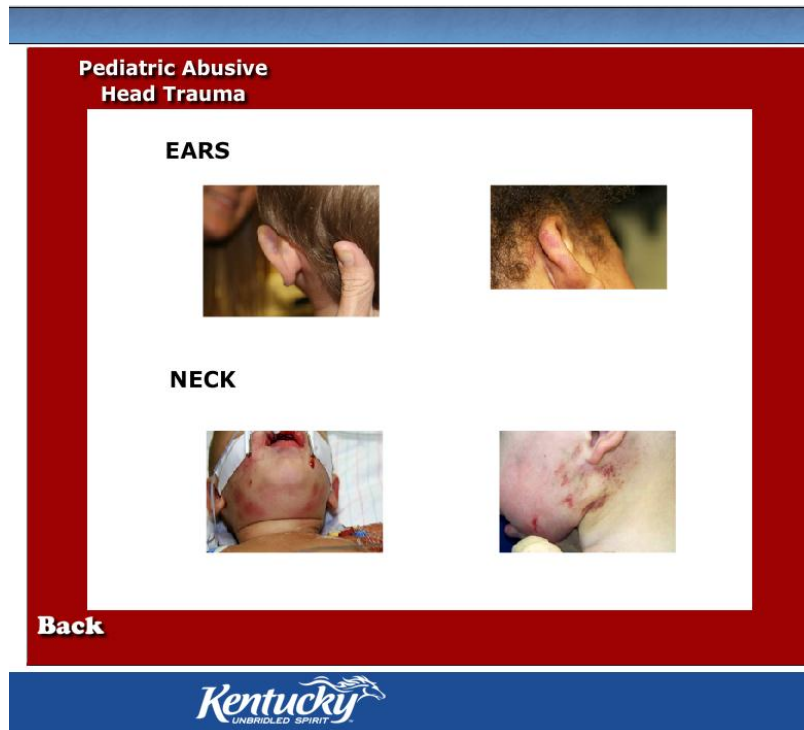
### **The torso**

I want to elaborate on some of these photographs.

The baby on left was 9 months old when she was brought into the emergency room by her mother with unexplained bruising after being left alone with the mother's boyfriend. The baby presented happy and playful with only a small bruise on torso. Mom noticed a small difference in the child's behavior which resulted in the emergency room visit. It was found that the child had suffered a tear in her liver damage from a fisted blow.

Far Right: The baby was discovered in his crib after during a domestic violence call. Luckily, the social work conducted a skin check and discovered bruising on the belly. The child suffered injuries to his liver and pancreas along with broken bones and a head injury. The bruises on the torso were the main clue.

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Pediatric Abusive Head Trauma Transcript**



Ears and neck

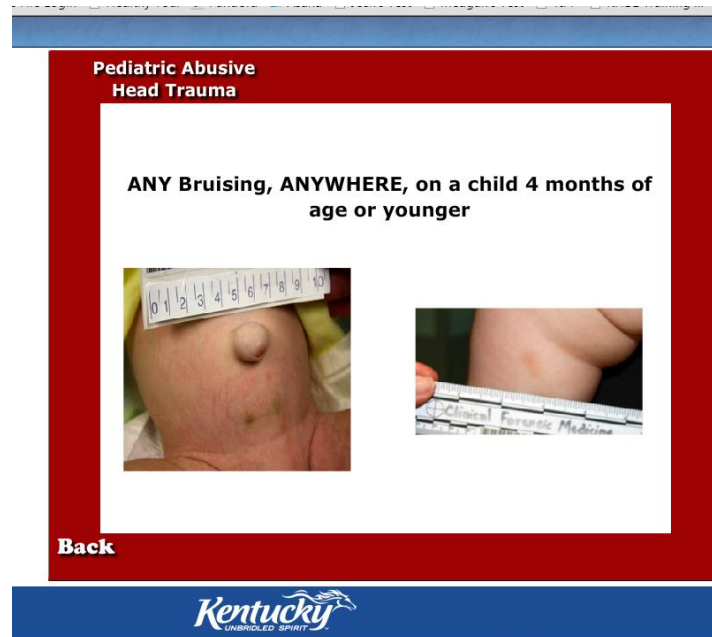
- Top left picture pinched on ear
- Bottom left picture shows an infant who was Kicked in the ear

PAHT cases bruises on the neck and corresponding thumb prints on the chest are typical. The whipping of the head can cause the neck bruising.

Bottom right corner, shows a child who went in for a well check and injury on the neck was explained as the baby falling asleep on a lego. DCBS became involved. The baby had been strangled by the father when he would not stop crying. The mother did find a lego in the crib the next morning however it was not a result of the injury.



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Pediatric Abusive Head Trauma Transcript**



**Any Bruising**

Any bruising, anywhere, on a child four months of age or younger is a concern. These are non-mobile infants who are not falling not getting into toys or injuring themselves. Therefore they should not have bruising on their bodies.

In the picture on the left, the child went in for a well checkup. Bruises were noted during the exam. The parents said that the baby wiggles a lot during diaper changes. The doctor understood the significance and had an abuse work up. The baby was found to have multiple healing fractures and had an injury to the liver. Abuse had been happening over an extended period of time, since some injuries were already healing.

The only clue was the bruises on the abdomen. This particular child does have a herniated belly button. That has no significance to the case. Look at the two small bruises under the belly button, and that was the doctor's only clue that abuse had occurred.

The child in the picture on the right has an almost identical story. And the only sign was the bruise on the back of the leg.



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Pediatric Abusive Head Trauma Transcript**

**Pediatric Abusive  
Head Trauma**


**What is Normal?**

- Normal accidental bruises in toddlers and older children are typically

- On the front of the body
- Over bony prominences (forehead, elbows, knees, shins)



**Back****Next**



**What is Normal Bruising for Young Children?**

Normal accidental bruises in toddlers and older children are typical, however they are usually on the front of the body because when the child falls they fall forward typically. And they're over bony areas of the body, like the forehead, elbows and particularly the knees and shins.

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Pediatric Abusive Head Trauma Transcript


Pediatric Abusive  
Head Trauma

**Bruising Summary**

- Bruising is extremely rare in infants less than 6 months of age and uncommon in pre-ambulatory infants.
- Bruising in infants is a significant indicator of abuse, must be reported to DCBS and must be medically evaluated.
- Bruising is the most overlooked sign of abuse.
- Remember the TEN-4 Bruising Rule.

Sugar, Taylor, Feldman et al. **Bruises in Infants and Toddlers Those Who Don't Cruise Rarely Bruise.** ARCH PEDIATR ADOLESC MED/VOL 153, APR 1999.

BackNext



Bruising Summary

- Bruising is extremely rare in infants less than six months of age, and uncommon in pre-ambulatory infants.
- Bruising in infants is a significant indicator of abuse, and it needs to be reported to DCBS and must be medically evaluated.
- Bruising is the most overlooked sign of abuse.
- Remember the 10-4 bruising rule.

## Section 5

**Pediatric Abusive Head Trauma**

### Outcomes

- ▶ **Death rate approximately 20-30%**
- ▶ **Long-term disability high amongst survivors—up to 90% affected**
- ▶ **Severity of disability can range from mild/subtle to permanent vegetative state.**

**Back** **Next**

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Mortality rate approximately 20-30%

- Long-term morbidity (disability) high amongst survivors—up to 90% affected
- Disabilities include learning disabilities, emotional/behavioral issues, speech and language delays, vision/hearing, hormone/growth problems (due to pituitary injury)
- Severity of disability can range from mild/subtle to permanent vegetative state.

If we are looking at outcomes think of it as a pie diagram;

- 1/3 die from the injuries
- 1/3 suffer significant delays
- 1/3 do well with mild impact. Of this group of it is important to note that only 10% have no delays. So 90% of cases have some sort of delay.


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Pediatric Abusive Head Trauma Transcript

**Pediatric Abusive  
Head Trauma**

**Other Outcomes**

- Research is ongoing regarding the subtle brain changes that can occur after Abusive Head Trauma. The full spectrum of disability hasn't yet been defined.
- Disabilities include:
  - Learning disabilities
  - Emotional/behavioral issues
  - Speech and language delays
  - Vision/hearing
  - Hormone/growth problems (due to pituitary injury)

**Back**



Outcomes

Research is ongoing regarding the subtle brain changes that can occur after abusive head trauma. The full spectrum of disability hasn't yet been defined. Disabilities include; learning disabilities, emotional and behavior issues, speech and language delays, vision and hearing problems, growth and hormone problems due to pituitary injury. With these pituitary injuries, hormone and growth problems may not become obvious until the onset of adolescence.


**Cabinet for Health and Family Services – Division of Child Care  
Pediatric Abusive Head Trauma Transcript**

**Section 6**

**Pediatric Abusive Head Trauma**

**Triggering Situations**

- ▶Crying baby
- ▶Child's misbehavior
- ▶Toilet training
- ▶Argument/family conflict
- ▶Parental stressors outside the home
- ▶Discipline gone awry



**Back**

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**What Triggers Pediatric Abusive Head Trauma Situations?**

The number one trigger is a crying baby.

Also a child's misbehavior, arguments and family conflicts, toilet training, parental stressors outside the home, discipline gone awry. In the state of Kentucky, toilet training, accidents and issues, is the number two reason for pediatric abusive head trauma and child abuse situations to occur. This happens mainly because parents do not understand the child's developmental milestones and what the child is capable of doing and what the child is not capable of doing. Research has shown that crying tends to interrupt certain activities of the parent or caregiver and that becomes a major trigger. Things like interrupting intimate time between parents or Interrupting a parent or caregiver who is playing a videogame or watching a television program.

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Pediatric Abusive Head Trauma Transcript**


**Pediatric Abusive  
Head Trauma**

**Family Risk Factors**

- ▶ Domestic/family violence
- ▶ Single parent/military deployments
- ▶ Unemployment/financial stressors
- ▶ Isolation
- ▶ Poverty/limited resources
- ▶ Animal abuse



**Back**



**Family Factors**

There are certain factors that make families more at risk for pediatric abusive head trauma:

- Domestic and family violence.
- Single parents.
- Military deployments.
- Unemployment or financial stressors.
- Isolation from support groups.
- Poverty and limited resources.
- Animal abuse.

Since the decline of the economy in 2008, we have seen families under significant financial stressors. With the increase of these financial stressors, abuse cases have increased.

We also want to point out that if a child were to tell you that someone in the family was abusing an animal, if the toddler were to report that to you, you need to document this immediately. Any time a family member is abusing an animal, that family is at even more at risk for child abuse or domestic violence to occur.


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Pediatric Abusive Head Trauma Transcript**

**Pediatric Abusive  
Head Trauma**

**Caregiver Characteristics**

- ▶ **Substance abuse**
- ▶ **Mental illness**
- ▶ **Low self-esteem**
- ▶ **Poor impulse control**
- ▶ **Abused as a child**
- ▶ **Teenage parent**

**Back**



**Caregiver Characteristics**

There are certain characteristics of the caregiver that make them more at risk to result in pediatric abusive head trauma and child abuse.

These characteristics include:

- Substance Abuse
- Mental Illness (Primarily Untreated)
- Low self esteem
- Poor impulse control
- A caregiver that was abused as a child
- A teenage parent

Now just because a caregiver possesses one of these characteristics, does not mean they will abuse their child. However it does put them at a higher possibility. Not every adult that was abused as a child will repeat that pattern. It is just that they are now at a higher risk group.




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Pediatric Abusive Head Trauma Transcript**

## Section 7

**Pediatric Abusive Head Trauma**

**Child Characteristics**

- **0-3 years of age**
- **Drug affected**
- **Premature birth/NICU stays/multiples**
- **Colic**
- **Physical disabilities**
- **Developmental disabilities**
- **Emotional/behavioral difficulties**
- **Chronic illness**
- **Unwanted child (NOT the same as unplanned)**
- **Result of infertility treatment/long-awaited child**



### Child Characteristics

These are the characteristics of the children most at risk of suffering from aht and child abuse:

- Children from 0 to 3 years of age.
- Drug affected children.
- Premature births, NICU stays, multiples.
- Children with colic.
- With physical disabilities.
- With developmental disabilities.
- With chronic illness.
- With emotional and behavioral disabilities.
- An unwanted child. (Which is not the same as an unplanned child)
- A child that is the result of infertility treatment and has been long awaited.

All of these factors increase the stress level of the parent. The children are more dependent, they're more demanding and they have ongoing demands, things that are not treated conditions. When we look specifically at a child who is the result of an infertility treatment or a long awaited child, this characteristic seems in contrast to the others on the list. However, parents who have tried multiple infertility treatments and have awaited a child for a long time still can be overwhelmed by a child's needs and the child's ability to cry. Unfortunately this group of parents often does not feel they can complain or they can go to others for help. They have waited for this child for so long that they feel like they should be happy regardless of the child's behavior or the child's demands. This group of parents still needs a support system just like any other group of parents, regardless of how desperate they were in order to find and have a child.

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**Pediatric Abusive Head Trauma**

### **Kentucky Fatality Risk Factors**

**Top three risk factors for fatal abusive injury among adult caregivers in the home include:**

- \*Substance Abuse**
- \*Domestic Violence**
- \*Violent Criminal History**

**Also think of untreated mental illness.**

**Back**

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#### Kentucky's Fatality Risk Factors

The top three risk factors for fatal abusive injury include;

- Substance abuse
- Domestic violence and
- Violent criminal history among the adult caregivers in the home.

The 2010 DCBS child abuse and neglect annual report of child fatalities and near fatalities reports, that of KY stats show from July 1, 2006 to June 30, 2010,

- Domestic violence was in 65 percent of cases.
- Substance abuse was in 70 percent of cases.
- Criminal history was in 80 percent of cases.
- And untreated mental illness in 38 percent of cases.

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Pediatric Abusive  
Head Trauma

### Perpetrator Statistics

**Physical abuse:**

- Father
- Mom's boyfriend (paramour)
- Mother


**"Children living in households with one or more male adults that are not related to them are at increased risk for maltreatment injury death."**

(Specifically, they are 8 times more likely to die of maltreatment than children in households with two biological parents. Risk of maltreatment death was not increased for children living with only one biological parent.)

**\*\*Note:** This statistic does NOT apply to same-sex couples. Limited research actually shows lower rates of abuse among same-sex couples—particularly when there are two male caregivers in a committed relationship.

Stiffman et al. Pediatrics. April 2002. Household Composition and Risk of Fatal Child Maltreatment.

Back



### Perpetrator Statistics

The top three perpetrators in physical abuse cases:

1. Father
2. Mother's Boyfriend
3. Mother

Children living in households with one or more male adults that are not related to them are at an increased risk for injury, maltreatment and death. This does not mean male same sex couples. These are additional men living in the household.

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**Pediatric Abusive  
Head Trauma**


**Case Review**

A 4-month-old baby boy presents for well child exam and is noted to have two fingertip-sized bruises on each thigh. Parents explain that they came from a diaper change when the child was squirming. Social history offers no red flags. The doctor has seen the older sibling for the past two years.

What should this provider do?

**Report this to social service**

**Back**



**Case Review**

You are changing a four month old baby boy's diaper and see two fingertip sized bruises on each thigh. The parents explained that they came from a diaper change when the child was squirming. The child's two year old sister has been at the center since she was six weeks old. The family has always been involved and never been a problem. What should you do?

In this case you still report to DCBS because under four months old, we should see no bruising. Past history does not clear the name of a family when you are concerned about abuse. We're looking at individual incidents.

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Pediatric Abusive Head Trauma Transcript**

**Pediatric Abusive Head Trauma**

**.....continued**

- Unfortunately, this provider didn't understand the significance of bruising in an infant.
- On the first visit to the Dr., the Pediatrician described family as "very nice, no concerns." Under social hx: "Family appropriate."
- One week later, the patient was brought to the emergency department unresponsive and having seizures.
- He was found to have bilateral subdurals\*, and 13 broken bones (inflicted by dad, who was tearful and outraged when told that someone had harmed his son).



**Back**



In this same case study, unfortunately this provider did not understand the significance of bruising in an infant. On the first trip to the doctor, the pediatrician described the family as very nice, no concerns. One week later the patient was brought to the emergency department unresponsive and having seizures. He was found to have bilateral subdurals, 13 broken bones, inflicted by dad who was tearful and outraged when told that someone had hurt his son. This particular child did survive. However the child was in a vegetative state with around the clock care.

This picture tells us why it is so important and not overkill to report bruising and to never overlook it.

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Pediatric Abusive  
Head Trauma

The Lessons Learned

**Bruising in babies is *NOT* normal.  
Maltreatment can and does occur in “nice families”.**

*The absence of risk factors is not  
the same as the absence of risk.*

Back



Lesson Learned

Bruising in babies is **not** normal. Maltreatment can and does occur in nice families. The absence of risk factors is not the absence of risk. Also remember risk factors might be present in a family that we aren't aware of. Families often don't disclose domestic violence, substance abuse and criminal history.

## Pediatric Abusive Head Trauma

### Who are we most likely to overlook?

- ▶Caucasian family
- ▶Two parent families
- ▶Middle-class, well-educated parents
- ▶Families that look like our own
- ▶Very young infants

Jenny C, Hymel KP, Ritzen A, Reinert SE, Hay TC. Analysis of missed cases of abusive head trauma. JAMA. 1999;281:621-626

**Back**

The logo for the Kentucky Department of Transportation features the word "Kentucky" in a large, stylized script font. Below it, the words "UNBRIDLED SPIRIT" are written in a smaller, sans-serif font. To the right of the text is a silhouette of a galloping horse.

Caucasian families, two parent families, middle class, well educated parents, families that look like our own and very young infants. We are especially likely to overlook a family that is similar to our own. A family that looks like us, a family that looks like our family and a family with a similar background. Just because the background of the family is similar, does not mean that the same thing is occurring in their home as in your own home.

**Cabinet for Health and Family Services – Division of Child Care  
Pediatric Abusive Head Trauma Transcript**

**Pediatric Abusive  
Head Trauma**

**Prevention: What Can I Do?**

- **Make a report to DCBS when you suspect abuse**
- **Document any signs/symptoms you see**
- **Take pictures of injuries**
- **Document any information you receive from a parent/caregiver when you have suspicions**
- **Document observations of parent/caregiver reactions to concerns and interactions with the child**

**Back**

**Prevention**

**What can I do?**

Make a report to DCBS when you suspect abuse. Document any signs and symptoms you see. Take pictures of injuries for DCBS employees to view. Document any information you receive from a parent/caregiver when you have suspicions. Document observations of parent/caregiver reactions to your concerns and interactions with their child. The most important thing is documentation. When documenting what happens within the child care setting, it is important to understand the difference in observing versus interpreting the situation. Documenting observations means writing down exactly what you see.



**Pediatric Abusive  
Head Trauma**

**Prevention: What Can I Do?**

- Help parents understand it's okay for a baby to cry—it's how they communicate!
- Help parents understand it is normal to feel frustrated by a crying baby—and it is okay to take a break and ask for help.
- Become a resource for parents who may be frustrated and need temporary relief or support.
- Share tips with parents on how to soothe infants.
- Share tips with parents on taking care of themselves.
- Tell parents about 1-800-CHILDREN.
- Talk openly with the children in your home about the dangers of shaking a child!

**Back**



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## Section 8

Pediatric Abusive  
Head Trauma

**Tools: Soothing a Crying Baby**

- Meet baby's immediate needs (feed, change, ensure proper environmental temperature, etc.).
- Pay attention to noise and lighting in environment and try a change of location.
- Check baby for signs of illness or injury, and call the baby's doctor if there are any concerns.
- Rock, walk, or dance with baby.
- Walk baby in stroller or take a drive with baby in carseat.

**Back**Pause Play



### Tools for Soothing a Crying Baby

Meet the baby's immediate needs; food, change, make sure the environmental temperature and factors are appropriate. Pay attention to noise and lighting in the environment and try a change of location. Check the baby for signs of illness or injury. And encourage parents to call the baby's doctor if there are any concerns. Rock, walk or dance with the baby. Walk the baby in a stroller or take a ride with the baby in the car.

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Pediatric Abusive Head Trauma Transcript

**Pediatric Abusive  
Head Trauma**

**Tools: Soothing a Crying Baby**

- Shush in baby's ear or vacuum.
- Place a "white noise" machine near the child.
- Check to make sure clothing isn't too tight, fingers and toes aren't bent or caught, nothing is poking the baby (new clothes with tags, etc.).
- Place baby on her back in safe sleeping environment (crib without padding, toys, stuffed animals or pillows), close the door, turn on TV or radio, and check on baby every 10-15 minutes.  
*Crying will not hurt the baby.*
- If you feel frustrated or angry, take a break. Count to ten. Call a friend or support person.

Pause Play



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Pediatric Abusive Head Trauma Transcript


Pediatric Abusive  
Head Trauma

**Tools: Soothing Yourself**

- Recognize babies cry and they usually cry more from 2-8 weeks of age.
- Rest—sleep when the baby sleeps—give yourself permission to make sleep and your baby your first priorities.
- Give yourself permission to be frustrated—having a baby is hard work!
- Take a deep breath, count to 5, 10, or 20
- Ask for help—get a sitter, ask a family member or friend to watch the baby.

Back

Pause Play



### Tools for Soothing Yourself

- Recognize that baby's cry, and they usually cry more from 2 to 8 weeks of age. After that the crying tapers off.
- Rest, give yourself permission to make sleep and your baby your top priorities.
- Give yourself permission to be frustrated. Having a baby is hard work.
- Take a deep breath, count to five, ten or twenty.
- Ask for help. Get a sitter. Ask a family member or friend to watch the baby.
- Do something you enjoy walk, hike, read, take a bath.
- Talk with other new parents about being a new parent.
- When feeling frustrated
  - Place the baby on her back in a crib and go to another room.
  - Check on the baby every five to ten minutes.
- Listen to soothing music and check on the baby when needed.


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Pediatric Abusive Head Trauma Transcript

Pediatric Abusive  
Head Trauma

**Take-Home Message**

**Abusive Head Trauma is rarely a one-time event. It is more often the culmination of an ongoing escalation of violence against the child—and non-offending caregivers are often unaware of the abuse.**

**Back**



The take home message of this training:

Abusive head trauma is rarely a one-time event. It is more often the culmination of an ongoing escalation of violence towards a child. And non-offending caregivers are often unaware of the abuse.

**Cabinet for Health and Family Services – Division of Child Care  
Pediatric Abusive Head Trauma Transcript**

**Pediatric Abusive  
Head Trauma**

**AHT Prevention Strategies**

**Refer parents for Home Visitation when appropriate**

- Every Child Succeeds
- Department for Public Health HANDS Program
- First Steps
- Head Start
- Pre-school


**Become familiar with your community resources**

- Family Support (K-CHIP, WIC)
- Food pantries
- Churches

**Encourage families to seek support**

- 1-800-CHILDREN
- 211

**Back** **Pause** **Play**



**PAHT Prevention Strategies**

Refer parents for home visitations when appropriate.

- Programs like Every Child Succeeds
- The Department of Public Health Hands Program
- First Steps
- Head Start or other Pre-Schools

Become familiar with your community resources.

- Family support such as KCHET or WIC
- Food Pantries or
- Churches

Encourage families to seek support.

- 1-800-CHILDREN or
- 211

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Pediatric Abusive Head Trauma Transcript


Pediatric Abusive  
Head Trauma

**Key Prevention Messages**

- Crying is normal.
- Crying increases from 2-8 weeks.
- Sometimes you can't stop the crying!
- Provide parents with specific tools for soothing a crying infant.
- Tell parents when nothing else works, it is okay to place the infant in a safe place and take a break.

**Back**

Pause Play



Key Prevention Messages

- Crying is normal.
- Crying increases from 2 to 8 weeks.
- Sometimes you can't stop the crying.
- Provide parents with specific tool for soothing a crying infant.
- Tell parents when nothing else works, it is okay to place the infant in a safe place and take a break.


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Pediatric Abusive Head Trauma Transcript**

**Pediatric Abusive  
Head Trauma**

**Take-Home Messages**

- Abuse Head Trauma is the most dangerous and deadly form of child physical abuse.
- Babies who do not cruise should not bruise.
- Remember the TEN-4.
- Teaching caregivers ways to soothe a crying infant and the dangers of shaking can be an effective prevention tool.
- Experience tells us that we often fail to recognize early warning signs—and we therefore miss opportunities to intervene and prevent further harm to abused children.

**Back**Pause Play



Other take home messages


- Abusive head trauma is the most dangerous and deadly form of child abuse.
- Babies who do not cruise, should not bruise.
- Remember the 10-4 rule.
- Teaching caregivers ways to soothe a crying infant and the dangers of shaking can be an effective prevention tool.
- Experience tells us that we often fail to recognize early warning signs of pediatric abusive head trauma. We therefore miss opportunities to intervene, and prevent further harm to abused children.



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**Pediatric Abusive  
Head Trauma**

**You have  
completed  
this Training  
click the Next button  
to continue to  
the Quiz**



**Back** **Next**

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