

**American Academy of Pediatrics  
Abusive Head Trauma (Shaken Baby Syndrome)  
Background Information for Reporters**

Abusive Head Trauma is sometimes called Shaken Baby Syndrome.<sup>1</sup>

The injuries seen in infants and toddlers with Abusive Head Trauma (AHT) may include:

- Bleeding over the surface of the brain (subdural hemorrhages).
- Other brain injuries, including brain swelling and injuries to the white matter of the brain.
- Bleeding on the back surface of the eyes (retinal hemorrhages).
- Some victims have evidence of blunt impact to the head; others do not.
- Some victims have other evidence of physical abuse, including bruises, abdominal injuries, and recent or healing broken bones; others do not.

Child abuse pediatricians and other experienced physicians are trained to conduct a careful and thorough evaluation for child abuse, accidental injury, as well as other possible causes of the findings seen in each individual child.

Precise estimates are difficult to obtain, but hospitals around the country care for hundreds of infants and young children who sustain life-threatening abusive head trauma and who very often have additional injuries. The US government estimates that about 30 children younger than one year of age per 100,000 are injured from AHT, resulting in at least **1200 seriously injured infants and at least 80 deaths each year.**<sup>2,3</sup>

Most experts believe that AHT is largely preventable. The most common incident leading to abusive head injury is infant crying.<sup>4</sup> Exhausted parents and other caregivers may become frustrated and angry and “lose it” when infants in their care cry inconsolably. Many states have programs designed to remind new parents of techniques to quiet their infants, reduce their own stress, and avoid hurting their infants.<sup>5,6</sup> Such programs are being studied to see how helpful they are to parents.

The existence of AHT in infants and young children is a settled scientific fact. The scientific support for the diagnosis of AHT comes from over 40 years of research in a broad array of clinical and basic science disciplines, including pediatrics, neurosciences, ophthalmology, orthopaedics, radiology, pathology, epidemiology, and biomechanics. In a report issued in April 2012, the CDC reported that “serious traumatic brain injury in young children is largely the result of abuse.”<sup>7</sup>

In some cases of AHT, the adult who was caring for the child admits to harming his or her infant. Published accounts of confessions document that some parents have shaken their children on repeated occasions, leading to the injuries that physicians identify in these cases.<sup>8</sup> These reports confirm the published clinical findings.

As always in medicine, knowledge about AHT advances with research. Although there is still much to learn about the mechanisms and precise pathophysiology of injury and death in abusive head trauma, the position that “shaking cannot harm an infant”, which is held by only a few vocal advocates, has not been scientifically supported by clinical research and practice.

---

<sup>1</sup> Christian CW, Block R, and the Committee on Child Abuse and Neglect. Abusive Head Trauma in Infant and Children. *Pediatrics* 2009;123:1409-11.

<sup>2</sup> Parks SE, Sugerman D, Xu L, Coronado V. Characteristics of non-fatal abusive head trauma among children in the USA, 2003-2008: application of the CDC operational case definition to national hospital inpatient data. *Inj Prev* 2012;18:392-8.

<sup>3</sup> Parks SE, Kegler SR, Annet JL, Mercy JA. Characteristics of fatal abusive head trauma among children in the USA: 2003-2007: an application of the CDC operational case definition to national vital statistics data. *Inj Prev* 2012;18:193-9.

<sup>4</sup> Reijneveld SA, van der Wal MF, Brugman E, et al. Infant crying and abuse. *The Lancet* 2004;364:1340-2.

<sup>5</sup> Dias MS, Smith K, DeGuehery K, et al. Preventing abusive head trauma among infants and young children: a hospital-based, parent education program. *Pediatrics* 2005;115:e470-7.

<sup>6</sup> Barr RG, Rivara FP, Barr M, et al. Effectiveness of educational materials designed to change knowledge and behaviors regarding crying and shaken-baby syndrome in mothers of newborns: a randomized, controlled trial. *Pediatrics* 2009;123:972-80.

<sup>7</sup> Parks SE, Annet JL, Hill HA, Karch DL. *Pediatric Abusive Head Trauma: Recommended Definitions for Public Health Surveillance and Research*. Atlanta (GA): Centers for Disease Control and Prevention; 2012, p 5.

<sup>8</sup> Adamsbaum C, Grabar S, Mejean N, Rey-Salmon C. Abusive head trauma: judicial admissions highlight violent and repetitive shaking. *Pediatrics* 2010;126:546-55.

For further information on child maltreatment, see:

U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2012). *Child Maltreatment 2011*. Available from <http://www.acf.hhs.gov/programs/cb/research-data-technology/statistics-research/child-maltreatment>.