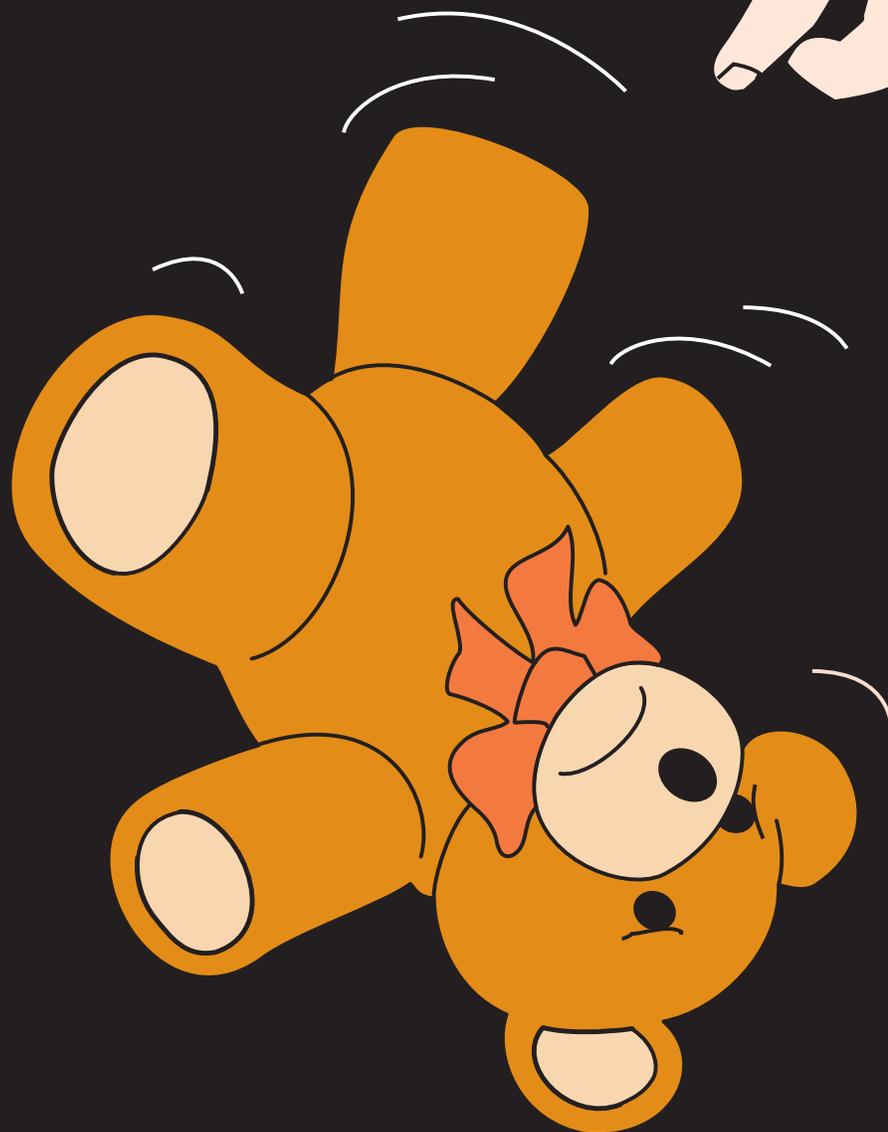


# Recognition of Physical Child Abuse

American College of Surgeons  
Committee on Trauma  
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# Recognition of Physical Child Abuse

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## General Approach

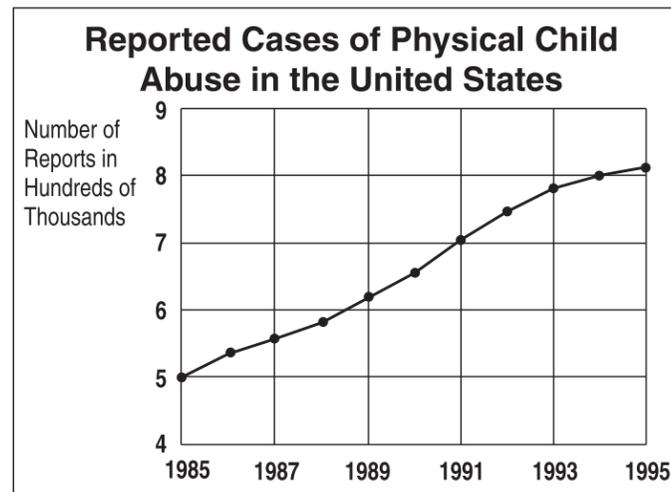
- ABCs of pediatric trauma care
- The primary goal is the child's safety
- Carefully document injuries, with legal implications in mind
- Do not attempt to identify perpetrator or assign guilt or blame
- Reporting of suspected abuse is required in all 50 states
- Admit child when abuse is suspected and initiate social service process

## Epidemiology

- More than 800,000 reported cases per year
- More than 1,200 deaths per year
- Crosses all socioeconomic boundaries

## Suspect Abuse If: History

- Failure to thrive
- Delay in obtaining care
- Multiple previous injuries
- Absent or uninterested caregiver
- Fluctuating or conflicting histories
- History not consistent with injury, developmental level of victim, or alleged child perpetrator



**Developmental Milestones**  
Earliest Typical Age in Months When Skill Acquired

2	4	6	8	10	12	14	16
Rolls over					Drinks from a cup		
Reaches					Walks unassisted		
		Feeds self cracker			Walks up stairs		
		Pulls to standing			Removes clothing		
		Walks holding on			Rides tricycle		

**Bruise Age in Days**

1	2	3	4	5	6	7	10	14	21	28
Red	Blue	Purple	Green	Yellow-Brown	Resolved					

## Suspect Abuse If: Physical Findings

- Bruises:**
- Pinch marks: paired ovals
  - Slap marks: parallel stripes
  - Cord marks: loops, stripes
- Bites:**
- Adult mouth intercanine distance >3 cm
- Head:**
- Multiple or bilateral skull fractures
  - Skull fracture in fall <4 feet
  - Retinal hemorrhages

**Shaken Baby Syndrome:** <2 years old without external trauma with retinal and subarachnoid hemorrhages

**Tin Ear Syndrome:** unilateral ear bruising, ipsilateral cerebral edema, and retinal hemorrhages

- Chest:**
- Rib fractures: multiple, bilateral, posterior, different ages
  - Trunk encirclement bruises

- Extremity Fractures:**
- Metaphyseal "chip" or "bucket handle"
  - Diaphyseal spiral <9 months of age
  - Transverse midshaft long bone
  - Femur fracture <2 years of age
  - Acromion process of scapula
  - Proximal humerus

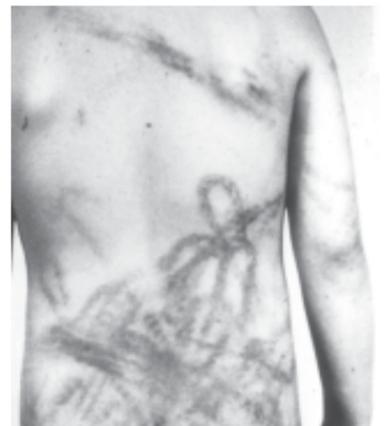
- Burns:**
- Circumferential, uniform depth, multiple, no splash
  - Buttock, perineum, back, dorsal hand, stocking-glove
  - Cigarette burns: round, 4–8 mm diameter

- Perineum:**
- Contusions, hymenal disruption

Retinal hemorrhages on fundoscopic exam



Looped bruises consistent with cord or "whip" marks



"Bucket handle" fracture of the distal tibia



Circumferential "glove" scald burn pattern

Fundoscopy photograph courtesy of Christie Morse, MD, Department of Ophthalmology, Children's Hospital, Dartmouth, NH. Other photographs from slides in *The Visual Diagnosis of Child Physical Abuse*. Slide kit prepared by Carole Jenny, MD, and Thomas C. Hay, DO, Elk Grove, IL, American Academy of Pediatrics and the C. Henry Kempe National Center for the Prevention and Treatment of Child Abuse and Neglect, 1994. Used with permission of the American Academy of Pediatrics.

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