

Child Abuse and Neglect

Trauma Symposium
February 15, 2019

Megan Gilbert, NP Carey Lewis, NP J. Craig Egan, MD



Arizona pair arrested in 'extreme' neglect and abuse case

The 3-year-old child, who had allegedly been offered up for sex, was rescued Monday after authorities found her in a trash bag surrounded by feces in a closet. Her mouth, arms, hands and legs were duct taped, Meza said. She was also malnourished.

<https://www.reviewjournal.com/uncategorized/arizona-pair-arrested-in-extreme-neglect-and-abuse-case/>



Police call child abuse case one of worst ever

Sometimes the beatings came from a military belt. Other times it was a computer cord. When the little girl wasn't hit, she was forced to hold her petite frame in a push-up position and read from a book placed below her face.

If she didn't know the meaning of a word, the lashes continued.

"Everybody in my life hurts me," the child told investigators at Mesa's Center Against Family Violence.

More than 100 bruises and other injuries covered her body and she was taken to a hospital to be checked for internal injuries.

http://www.eastvalleytribune.com/news/police-call-child-abuse-case-one-of-worst-ever/article_1855669e-05d8-568f-960f-24910930effc.html



Phoenix woman arrested for child abuse after baby breaks arm at unlicensed daycare

PHOENIX (KPNX)- A woman running an unlicensed daycare is in jail for child abuse after an 11-month-old baby in her care had an unexplained broken arm, according to court paperwork.

...if she had broken the baby's arm, it was probably when she lifted the baby by one arm.

<https://kvoa.com/news/2018/10/27/phoenix-woman-arrested-for-child-abuse-after-baby-breaks-arm-at-unlicensed-daycare/>



December 17, 2018

Association of Friday School Report Card Release With Saturday Incidence Rates of Agency-Verified Physical Child Abuse

Melissa A. Bright, PhD; Sarah D. Lynne, PhD; Katherine E. Masyn, PhD; et al; Marcus R. Waldman, MS; Julia Graber, PhD; Randall Alexander, PhD, MD
JAMA Pediatr. 2018;173(2):176-182. doi:10.1001/jamapediatrics.2018.4346

Release of report cards on Monday through Thursday was not associated with increased incidence rates of child physical abuse the same day or the day after the release; however, nearly a 4-fold increase in the incidence rate of verified child physical abuse reports was found on Saturdays after a Friday report card release.

Conclusion and Relevance This association of school report card release and physical abuse appears to illustrate a unique systems-based opportunity for prevention.



What Is Child Maltreatment?

Child maltreatment constitutes all forms of child abuse including physical abuse, emotional ill-treatment, sexual abuse, neglect, negligent treatment and exploitation of children, resulting in actual or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, trust or power.

(WHO, 2017)



Objectives

- Define child maltreatment (abuse)
- Review epidemiology
- Discuss the important elements of a thorough assessment
- Review common soft tissue, skeletal & head injury patterns
- Identify frequently missed injuries
- Discuss high index of suspicion
- Discuss how to recognize victims of sexual abuse/trafficking
- Review key components of on-scene documentation



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Child Abuse and Neglect

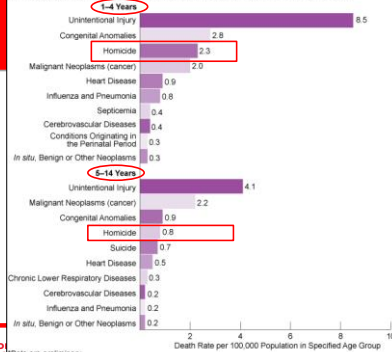
676,000 children were confirmed by child protective services as being victims of abuse and neglect in 2016.

1 in 4 children have experienced child neglect or abuse (including physical, emotional, and sexual) at some point in their lives



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Leading Causes of Death Among Children Aged 1-14 Years, 2009*



*Data are preliminary.

Source: Kochanek KD, Xu JM, Murphy SL, Miniryo AM, Kung HC. Deaths: Preliminary Data for 2009. National Vital Statistics Reports, vol 59 no 4. Hyattsville, MD: National Center for Health Statistics; 2011.

Available at http://www.cdc.gov/nchs/data/nvsr/nvsr59_04.pdf. Accessed July 2011.

10 Leading Causes of Death by Age Group, United States - 2017

Rank	Age Groups										Total
	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	
1	Congenital Anomalies 1,480	Unintentional Injury 1,260	Unintentional Injury 1,077	Unintentional Injury 940	Unintentional Injury 1,141	Unintentional Injury 764	Unintentional Injury 776	Unintentional Injury 1,141	Unintentional Injury 1,141	Unintentional Injury 1,141	Unintentional Injury 1,141
2	Heart Disease 1,189	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077
3	Unintentional Injury 1,189	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077
4	Unintentional Injury 1,189	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077
5	Unintentional Injury 1,189	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077
6	Unintentional Injury 1,189	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077
7	Unintentional Injury 1,189	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077
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9	Unintentional Injury 1,189	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077	Unintentional Injury 1,077
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Data Source: National Vital Statistics System, National Center for Health Statistics, CDC.
Prepared by: National Center for Injury Prevention and Control, CDC, using WONDER.



10 Leading Causes of Injury Deaths by Age Group Highlighting Unintentional Injury Deaths, United States - 2017

Rank	Age Groups										Total
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Data Source: National Center for Health Statistics (NCHS), National Vital Statistics System.
Prepared by: National Center for Injury Prevention and Control, CDC, using WONDER.



Child Abuse and Neglect: Consequences



Physical

In 2016, about 1,750 children died from abuse and neglect across the country.

Abuse and neglect during infancy or early childhood can cause regions of the brain to form and function improperly with long-term consequences on cognitive and language abilities, socioemotional development, and mental health.³ For example, the stress of chronic abuse may cause a "hyperarousal" response in certain areas of the brain, which may result in hyperactivity and sleep disturbances.^{4,5}

Children may experience severe or fatal head trauma as a result of abuse. Nonfatal consequences of abusive head trauma include varying degrees of visual impairment (e.g., blindness), motor impairment (e.g., cerebral palsy) and cognitive impairments.⁶ Children who experience abuse and neglect are also at increased risk for adverse health effects and certain chronic diseases as adults, including heart disease, cancer, chronic lung disease, liver disease, obesity, high blood pressure, high cholesterol, and high levels of C-reactive protein.



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Child Abuse and Neglect: Consequences



Psychological

In one long-term study, as many as 80% of young adults who had been abused met the diagnostic criteria for at least one psychiatric disorder at age 21. These young adults exhibited many problems, including depression, anxiety, eating disorders, and suicide attempts.¹⁰

The stress of chronic abuse may result in anxiety and may make victims more vulnerable to problems, such as post-traumatic stress disorder, conduct disorder, and learning, attention, and memory difficulties.^{4,5}

Youth who have experienced child abuse and neglect receive more medications for depression, anxiety, and other issues than other youth in psychiatric care.



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Child Abuse and Neglect: Consequences



Behavioral

Children who experience abuse and neglect are at increased risk for smoking, alcoholism, and drug abuse as adults, as well as engaging in high-risk sexual behaviors.^{7,13} Those with a history of child abuse and neglect are 1.5 times more likely to use illicit drugs, especially marijuana, in middle adulthood.¹⁴ Abused and neglected children are about 25% more likely to experience problems such as delinquency, teen pregnancy, and low academic achievement.¹⁵ One study found that physically abused children were at greater risk of being arrested as juveniles, being a teen parent, and not graduating high school.¹⁶ A National Institute of Justice study indicated that being abused or neglected as a child increased the likelihood of arrest as a juvenile by 59%. Abuse and neglect also increased the likelihood of adult criminal behavior by 28% and violent crime by 30%.¹⁷ Child abuse and neglect can have a negative effect on the ability of people to establish and maintain healthy intimate relationships in adulthood.



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Child Abuse and Neglect: Consequences



Economic

The total lifetime economic burden resulting from new cases of fatal and nonfatal child abuse and neglect in the United States in 2008 is approximately \$124 billion in 2010 dollars. This economic burden rivals the cost of other high profile public health problems, such as stroke and Type 2 diabetes.¹⁹ The estimated average lifetime cost per victim of nonfatal child abuse and neglect was \$210,012 (in 2010 dollars), including:

- Childhood health care costs
- Adult medical costs
- Productivity losses
- Child welfare costs
- Criminal justice costs
- Special education costs

The estimated average lifetime cost per death is \$1,272,900, including medical costs and productivity losses.¹⁹ Research suggests the benefits of effective prevention likely outweigh the costs of child abuse and neglect.



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Child Abuse and Neglect: Definitions

Acts of Commission (Child Abuse)

Words or overt actions that cause harm, potential harm, or threat of harm

- deliberate and intentional
- harm to a child might not be the intended consequence
- Intention only applies to caregiver acts—not the consequences of those acts.

Physical abuse
Sexual abuse
Psychological abuse



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Child Abuse and Neglect: Definitions

Acts of Omission (Child Neglect)

Failure to provide needs or to protect from harm or potential harm

- failure to provide for a child's basic physical, emotional, or educational needs or to protect a child from harm or potential harm.

Physical neglect
Emotional neglect
Medical and dental neglect
Educational neglect
Inadequate supervision
Exposure to violent environments



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Types Of Abuse

- **Physical Abuse**
 - Hitting, beating and shaking
- **Emotional or Psychological Abuse**
 - Threatening, insulting, ridiculing, confining
- **Neglect**
 - Failing, despite having the means to provide: medical care, food, education, shelter or other essentials for a child's healthy development.
- **Sexual Abuse**
 - Sexual contact or exposure to sexual acts or materials
 - Sex trafficking



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Risk Factors for Victimization

Individual Risk Factors

- Children younger than 4 years of age
- Special needs that may increase caregiver burden
 - Disabilities
 - Mental health issues
 - Chronic physical illnesses



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Risk Factors for Perpetration

Individual Risk Factors

- Parents' lack of understanding of children's needs, development, and parenting
- Parental history of child abuse and/or neglect
- Substance abuse and/or mental health issues including depression in the family
- Parental characteristics such as young age, low education, single parenthood, large number of dependent children, and low income
- Nonbiological, transient caregivers in the home (e.g., mother's male partner)
- Parental thoughts and emotions that tend to support or justify maltreatment behaviors



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Risk Factors for Perpetration

Family Risk Factors

- Social isolation
- Family disorganization, dissolution, and violence, including intimate partner violence
- Parenting stress, poor parent-child relationships, and negative interactions

Community Risk Factors

- Community violence
- Concentrated neighborhood disadvantage (e.g., high poverty and residential instability, high unemployment rates, and high density of alcohol outlets), and poor social connections.



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Protective Factors for Child Maltreatment

Family Protective Factors

- Supportive family environment and social networks
- Concrete support for basic needs
- Nurturing parenting skills
- Stable family relationships
- Household rules and child monitoring
- Parental employment
- Parental education
- Adequate housing
- Access to health care and social services
- Caring adults outside the family = role models or mentors

Community Protective Factors

- Support for parents, take responsibility for preventing abuse



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History

- What is the detailed history of the injury?
- How was child acting immediately before/after the injury?
- What prompted caregiver to seek medical attention?
 - Was there a delay in seeking care? If so, why?
- How high was the fall?
 - From what?
 - Landing surface?
 - Witnessed or unwitnessed?
 - How was the child found and who found them?



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When Do We Consider Maltreatment?

- Injury is not compatible with the history provided
- Changing or multiple stories
- Mechanism is inconsistent with developmental ability of the patient
- Many previous injuries
- Delay in seeking care
- Unexplained co-existing injuries
- Blaming other family members, siblings, or pets



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Red Flags

- No history
- History inconsistent/changing
- Injury inconsistent with mechanism
- Feeding history- ? Choking
- Fussy baby/hard to console
- Multiple adults in home
- Delay in presentation
- Special needs/developmental delay
- Premature
- Poor hygiene



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Physical Exam

- Remove all clothing
- Visualize skin, oral, nasal, ears, GU, anal (skin discolorations, swelling, deformities, malnourished)
- Palpate
- Non-ambulatory patient: range extremities
- **Take pictures of all injuries for medical record (appearance may evolve over 12-24 hrs)**



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Abusive Head Trauma

- Abusive Head Trauma (AHT) = shaken baby, shaken impact syndrome
- Acceleration/deceleration during "shaking"
- Often occurs with an impact
- Responsible for ¼ of brain injuries in children <2
- Approximately 80% of all deaths from head trauma in children <2 years is from inflicted injury



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Head Trauma

Presenting symptoms to suspect head injury

- Lethargy
- Fussiness
- Vomiting/decreased PO
- Seizures
- Apnea
- Posturing
- Coma



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Infant Head... Why Is It At Risk?

- Head relatively larger in size
- Weak neck muscles
- Thin calvarium
- Incomplete myelination
- Flat skull base
- If suspicious for acceleration/deceleration injury apply c-collar



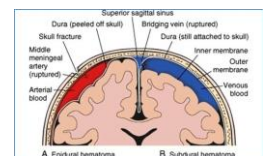
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Head Trauma

Epidural Hematoma

- Usually arterial, (>75%) associated with fracture
- Some may have a reported + LOC and then lucid period
- Can go from lucid to critically quickly



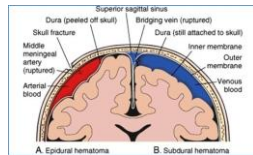
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Head Trauma

Subdural hematoma

- Usually venous
- Common, may be mild or severe



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Retinal Hemorrhages

- Seen in 60-90% of abusive head trauma
- Usually bilateral
- Extend into periphery
- Resolution 10 days to 12 weeks
- Can lead to blindness if severe



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Skeletal Injuries

- Pediatric Skeleton
 - more compliant than a fully developed adult's
 - can absorb more injury
 - more difficult to fracture



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Skeletal Injuries

- Not one particular *fracture* that is pathognomonic for abuse
- Fractures that should raise a provider's suspicion
 - Rib
 - Scapular
 - spinous process
 - Sternal
 - long bone metaphyseal or spiral/oblique fractures - especially in those patients not yet ambulatory
 - Rib fractures were found to be more numerous and anterior in abused patients than in nonabused patients [67].
- Supracondylar humerus fractures were found to be more suggestive of accidental trauma [67].



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<https://www.pedsurglibrary.com/apia/view/Pediatric-Surgery-Net>

No Bones About It...

Abusive skeletal injuries include:

- Any bone
- Any fracture
- Any kid
- Any where



Fractures of abuse are usually morphologically identical to accidental fractures:

What usually separates the two is the history, or lack thereof.

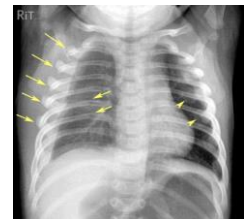


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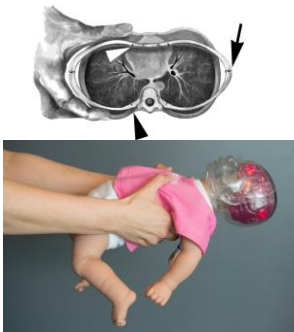
Rib Fractures... HIGH Suspicion For Abuse

- Rare because rib cage compliant
- 90% occur < 2 years old
- Often multiple, bilateral
- Posterior or lateral
- Usually occult, asymptomatic
- Not caused by minor trauma, CPR (rare complication of birth trauma)
- Acute fracture difficult to see



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When Is A Bruise Not *Just* A Bruise?

- When it is on a **non-ambulatory** infant
- When it is on the **TEN-4 FACES-P** areas on the body
- When it is a **patterned** injury
- When they are on **areas not readily injured** by an ambulatory child
- When they are **wide-spread and multiple**



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Child Maltreatment Quick Assessment

• TEN-4: Red flags

Bruising on the:

- Torso - chest, abdomen, back, buttocks, GU, and hip
- Ears
- Neck
- <4 years (or any bruising 4 months and younger)

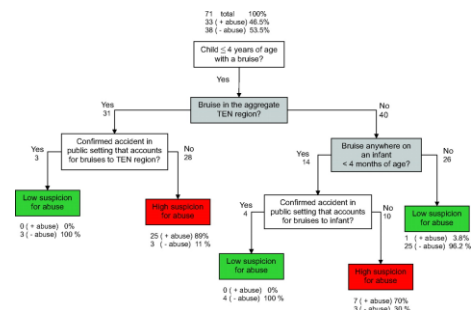
[Pediatrics](#)
January 2010, VOLUME 125 / ISSUE 1



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Dendrogram of CART.



Mary Clyde Pierce et al. *Pediatrics* 2010;125:67-74

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PEDIATRICS™

TEN-4

Torso –

- chest
- abdomen
- Back
- Buttocks
- GU
- hip



TEN-4

Ears (slap)



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TEN-4

Neck (strangulation)

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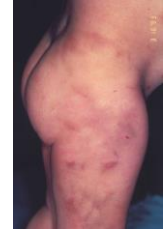
TEN-4

<4 years (or any bruising 4 months and younger)



Multiple bruises; non-ambulatory child

Wide-spread bruising

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Child Maltreatment Quick Assessment

• FACES-P:

- Frenulum
- Auricular area(pre/post),
Angle of jaw
- Cheek
- Eyelid
- Sclera
- Patterned bruising

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FACES-P:

Frenulum

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FACES-P:

Auricular area(pre/post), Angle of jaw
Cheek

- Potential loss of consciousness/
airway (hypoxic event)
- Potential traumatic brain injury
 - Intracranial hemorrhage
 - Barotrauma to the ear
 - Facial fractures
 - C-spine injury

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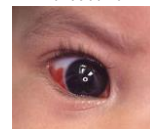
FACES-P:

Sclera



Scleral Hemorrhage

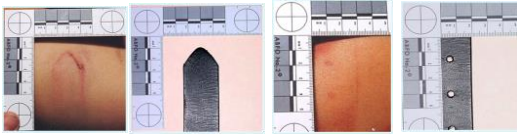
- May indicate underlying
traumatic brain injury
- Mechanisms:
 - Suffocation
 - Acceleration/deceleration
 - Blunt trauma

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FACES-P: Pattern bruising

Recognizing Pattern Marks



It's not your responsibility to determine what it is...

It is your responsibility to recognize that it exists on the child and report it



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Cigarette Burns

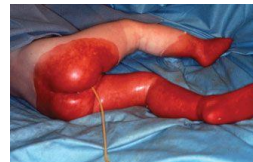
- Sharply demarcated
- Round, oval or wedge
- May be confused with impetigo (more irregularly shaped)



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Burns: Well-demarcated margins



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Beware of underlying injury: Significant internal injury may be present with minimal external signs



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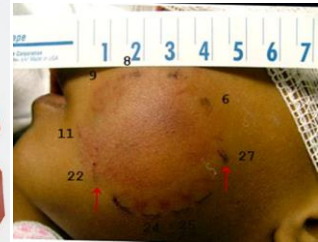
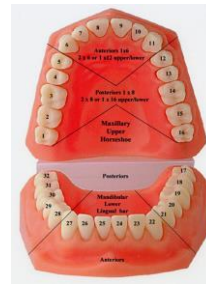
Human Bite Marks

- DON'T CLEAN OR BATHE!
- DON'T PUT MEDICATIONS ON THEM!
- GENETIC EVIDENCE COULD BE LOST!
- Often aggressively infected with mouth bacteria if skin broken.
- Report inflammation immediately and culture before treatment.
- Forensic photographs must be done quickly
 - Don't wait -- call law enforcement.



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Abdominal Bruising

- Second only to TBI in abuse mortality.
- Often no surface bruising with fatal abdominal injury.
- Adult fist covers much more area in infant and child than adult (i.e. global rather than focal injury).



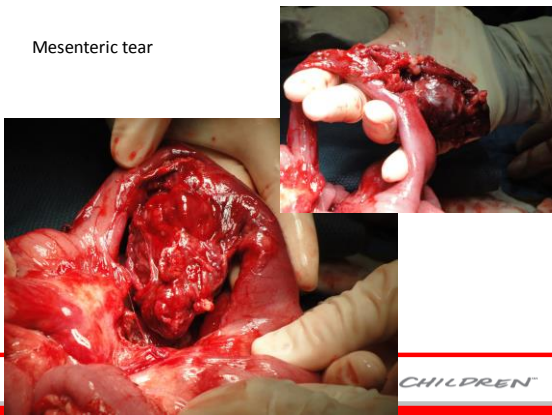
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Mesenteric tear



How To Recognize A Victim Of Sex Trafficking?

- Malnourished
- Accompanied by an older, controlling person
- Older boyfriend & friends
- Limited access to personal ID
- Limited/no access to \$
- Sudden change in behavior
- Branding, tattoos, bruises, scars
- Runaway, homeless
- Won't make eye contact
- Drug use/STDs



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What Should You Do?

- Do NOT put yourself or the victim in danger by confronting the suspected victim, buyer or trafficker
- Seek appropriate medical care
- Document your observations of physical details of all parties, including cars, clothes, tattoos, and physical features



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DOCUMENT, DOCUMENT, DOCUMENT

- You are the **FIRST** look into what happened
- Stories start to change after the **FIRST** contact
- Where did you find patient?
- Who was with patient when you arrived on scene?
- Are there other children present?
- Do NOT dispose of any clothing, diapers, items that could be potential evidence



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What if Abuse is not identified?

- *An abused child has approximately a 50 percent chance of being abused again, and has an increased risk of dying if the abuse is not caught and stopped after the first presentation*

Am Fam Physician. 2007 Jan 15;75(2):221-228



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What if Abuse is not identified?

- 173 abused children with head injuries
 - 54 were not recognized as having been abused on initial presentation
 - Fifteen of these children were subsequently re-injured
 - four of these children died
- 1,572 patients who presented with NAT from 2000 to 2010 and 53 patients (3.4%) subsequently presented with recurrent NAT.
 - These patients were more likely to be
 - male (66% vs. 52%)
 - white (83% vs. 65%)
 - *Mortality was significantly increased (24.5% vs. 9.9%)*

Transl Pediatr. 2014 Jul; 3(3): 195-207



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Missed Signs Of Abuse Often Leads To
Escalating Abuse Resulting In Severe
Injury Or Death



Mandatory Reporters

Arizona Child Abuse Hotline:
1-888-SOS-CHILD (1-888-767-2445)

National Human Trafficking
Hotline:
1-888-373-7888



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