

## Physical Trauma During Pregnancy

### Intrauterine Assault

Physical trauma is the most common non-obstetric cause of maternal and fetal death. Physical trauma occurs in one out of every 12 pregnancies. In addition, pregnancy trauma victims experience nearly twice the rate of death compared to their non-pregnant counterparts. Several risk factors predispose pregnant woman and their fetus to assault including:

- Young age (<25 years)/single parents
- Lower educational background
- Unstable family dynamics
- Financial/food/housing concerns or stress
- Domestic violence
- Alcohol or drug abuse
- Mental illness
- Limited support systems

The most common form of intentional physical trauma in pregnant women is domestic violence or interpersonal violence (IPV). IPV accounts for an estimated 25% of all traumatic injury cases involving pregnant women, and IPV disproportionately affects teen mothers and women of lower socioeconomic status. Victims of IPV and/or any type of physical trauma during pregnancy may experience many life-threatening events including preterm labor, premature rupture of membranes, uterine rupture, hemorrhaging, pregnancy loss, low birthweight infants, and stillbirth.

### Recognizing Injury Patterns and Treating Complication During Pregnancy

Healthcare providers may notice a pregnant woman's signs and symptoms of IPV including bruises, low weight gain over the course of the pregnancy, and/or an anxious or depressed mood.

Pregnant women also commonly experience lower-extremity fractures and bladder injuries as a result of physical trauma, and are at greater risk for pelvic fractures, bleeding, and placental abruption. Treatment includes close monitoring and potential delivery of the fetus. Not taking any type of action, or implementing treatment, after physical trauma could result in death of the fetus and death of the mother.

Blunt and penetrating abdominal trauma is also a potentially catastrophic complication in which all the uterine layers are disrupted, resulting in hemorrhage, shock, fetal death, and maternal death. Urgent and emergent treatment includes cesarean delivery, uterine repair, and/or hysterectomy.

### Shaken Baby Syndrome (Abusive Head Trauma)

Shaken Baby Syndrome (SBS), or Abusive Head Trauma (AHT), is the most severe form of abusive head injury in children under five years of age. SBS can cause permanent brain damage and, in some cases, even death. Signs of SBS are hard to detect and may remain unnoticed by caregivers and unrecognized by providers.

Signs and symptoms of shaken baby syndrome may include, but are not limited to:

- Lethargic baby
- Vomiting baby
- Fussy baby
- Baby's Refusal to eat

SBS is a devastating form of traumatic brain injury that occurs when a child is violently shaken and subjected to rapid acceleration, deceleration, and rotational forces, with or without impact. First recognized in medical literature in 1972, 'shaken baby syndrome' describes the signs and symptoms resulting from violently shaking an infant or child (Caffey, 1972)

Head trauma occurs when an infant or toddler is shaken repeatedly and vigorously, causing the brain to be tossed in different directions within the skull. Following an episode of severe shaking, a baby's brain may swell, increasing pressure within the skull. The swelling can compress blood vessels and prevent the brain from getting enough oxygen, which can then increase the severity of the injury.

A shaking episode can cause damage in as little as five seconds. Infants' and toddlers' neck muscles are not strong enough or fully developed enough to support the force of shaking. Additionally, infants' and toddlers' brain tissue is still fragile and can't absorb the force of being shaken. The damage of forceful shaking is even greater when shaking ends with an impact.

Abusive baby shaking happens across all cultures and socioeconomic classes. Baby shaking happens as many as 33 cases per 100,000 during the first two years of a baby's life (Narang, 2014). 1 in 4 children who are shaken dies from their injuries. Approximately 80% of children who survive being shaken suffer from permanent brain damage resulting in blindness, deafness, paralysis, cerebral palsy, or cognitive impairments (CDC, 2010).

## What You Can Do

Many resources, toolkits, seminars, and systems of support are available for [prevention and intervention of IPV](#)<sup>i</sup> including teaching safe and healthy relationship skills, engaging adults with peers, disrupting the developmental pathways towards IPV including those that address early childhood environments, parenting skills, and other supports to prevent future involvement in violence. In addition, resources are also available for supporting psychological, physical, emotional, housing, and other needs of survivors and their children to help prevent future experiences of IPV and lessen or reduce negative consequences and experiences. If you, or someone you know has experience interpersonal violence of abuse, please call the [National Domestic Violence Hotline 24/7: 1-800-799-7233](#)

### Additional Training

- 1) Relias Course - REL-HHS-0-AHT; Abusive Head Trauma (Shaken Baby Syndrome) – 1 hour
- 2) Webinar - <https://youtu.be/qemlFTmQlhk>; Effects of Intimate Partner Violence on Maternal and Fetal Health – 30 minutes

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<sup>i</sup> Preventing Intimate Partner Violence Across the Lifespan: <https://www.cdc.gov/violenceprevention/pdf/ipv-technicalpackages.pdf>