

## **ABUSIVE HEAD TRAUMA (AHT)**

Abuse Head Trauma is a type of inflicted traumatic brain injury that happens when a baby is violently shaken. A baby has weak neck muscles and a large, heavy head. Shaking makes the fragile brain bounce back and forth inside the skull and causes bruising, swelling, and bleeding, which can lead to permanent, severe brain damage or death. The characteristic injuries of AHT are subdural haemorrhages (bleeding in the brain), retinal haemorrhages (bleeding in the retina), damage to the spinal cord and neck, and fractures of the ribs and bones. The damage can be even greater when a shaking episode ends with an impact (hitting a wall or a crib mattress, for example), because the forces of acceleration and deceleration associated with an impact are so strong.

After the shaking, swelling in the brain can cause enormous pressure within the skull, compressing blood vessels and increasing overall injury to the brain's delicate structure. These injuries may not be immediately noticeable. Symptoms of AHT include extreme irritability, lethargy, poor feeding, breathing problems, convulsions, vomiting, and pale or bluish skin.

AHT injuries usually occur in children younger than 1 year old, but may be seen in children up to the age of 5. Approximately 25% of all babies who are shaken die from their injuries. AHT is underreported because the damage to the brain isn't always immediately seen or the abuse may not be reported.

### **Treatment**

Emergency treatment for a baby who has been shaken usually includes life-sustaining measures such as respiratory support and surgery to stop internal bleeding and bleeding in the brain. Doctors may use brain scans, such as MRI and CT, to make a more definite diagnosis.

### **Prognosis**

In comparison with accidental traumatic brain injury in infants, AHT injuries have a much worse prognosis. Damage to the retina of the eye can cause blindness. The majority of infants who survive severe shaking will have some form of neurological or mental disability, such as cerebral palsy or mental disability, which may not be fully apparent before 6 years of age. The development of language, vision, balance, and motor coordination, all of which occur to varying degrees after birth, are particularly likely to be affected in any child who has AHT. Children with AHT may require lifelong medical care.