

Birth Trauma

This information comes from the research compilations of [Dr. Jeanne Ohm](#)

The effects, frequency and overt damage of birth trauma is perhaps the easiest way to understand why all children need to be checked for spinal misalignments and cranial distortions.

Routine labor procedures such as **inducing labor, pain medications, and restrictive maternal positions** lead to further complications and the resultant use of forceful pulling and operative devices such as forceps, vacuum extractions and c-sections.

Standard obstetric management includes grasping the infants head during birth usually accompanied by some degree of pulling and rotation. Further intervention including the application of obstetric devices creates an environment where an even more serious injury is bound to happen.

Although the studies cited below mostly deal with the excessive trauma caused by obstetric, operative devices it is important to note this comment by Dr. Abraham Towbin, medical researcher on spinal injury, He says, 'the birth process, even under optimal, controlled conditions is a traumatic potentially crippling event for the fetus.'

More Studies Needed

Neglected spinal cord, brain stem and musculoskeletal injuries stemming from birth trauma Gottlieb MS.
[J Manipulative Physiol Ther 1993 \(Oct\);16 \(8\):537-543](#)

- Birth trauma remains an underpublicized and, therefore, an undertreated problem. There is a need for further documentation and especially more studies directed toward prevention. In the meantime, manual treatment of birth trauma injuries to the neuromusculoskeletal system could be beneficial to many patients not now receiving such treatment, and it is well within the means of current practice in chiropractic and manual medicine.

Relationship Between Trauma at Birth and Infant Digestive Disorders

X-ray symptomatology and differential diagnosis of functional

obstruction of the digestive tract in children induced by birth injuries of the spine and spinal cord Michailov MK, Akberov RF. Radiol Diagn (Berl) 1989;30(6):669-674

- Clinical, neurological and roentgenological complex investigations of 174 children with similar birth injuries revealed pathogenetic relations between birth trauma of the spine, the medulla and the functional obturations of the intestinal tract as pylorospasms, spastic-hypotonic dyskinesia of the ileum and gastroesophageal reflux. Frequent complications were aspiration pneumonia, reflux oesophagitis, oesophageal stenosis and the development of intestinal invagination due to dysrhythmic iliac peristalsis.

Birth Trauma and Learning Disorders

The relationship of craniosacral examination findings in grade school children with developmental problems Upledger JE. J Am Osteopath Assoc 1978 (Jun);77 (10):760-776

- This study correlates the positive relationship between obstetrically complicated births, cranial motion disorders and learning disabilities.

Trauma to the Head and Neck Resulting in Multiple Disorders.

Orthopedic Medicine a New Approach to Vertebral Manipulation by R. Maigne

- Birth trauma to the cervical spine and cranium can result in disorders such as: headaches, vestibular problems, auditory troubles, visual disturbances, pharyngolaryngeal disorders, vasomotor and secretion dysfunction and psychic disturbances. Care to realign the neck achieves excellent results with many of these dysfunctions.

Routine Positions in Labor Cause Unnecessary Birth Trauma

Labor posture Gastaldo TD. Birth 1992 Dec;19 (4):230

- In vaginal births, 4.6% of term neonates suffer unexplained brain bleeds and up to 10% suffer neonatal encephalopathy. These injuries may be avoided by decreasing distortion of fetal skulls,

from pelvic contracure at delivery. The popular semi-recumbent position places the laboring woman squarely on her sacral apex. This closes her pelvic opening and creates a undue stress and difficulty in the baby's descent.

Operative Devices: Forceps and Vacuum Extraction:

Kinematic Imbalance Due to Suboccipital Strain in Newborns.

Biedermann H *Manuelle Medizin* 1992; 6:151-6

- A significantly high portion of babies suffered birthing injuries due to prolonged labor and use of extraction devices resulting in Kinematic Imbalances due to Suboccipital Strain.
- 135 children younger than 24 months were all treated by specific "manipulation" of suboccipital joints caused by: intrauterine malalignment, assisted births (extraction side), prolonged labor, multiple fetuses, and higher trauma.

Suboccipital Strain in Newborns by Dr. Peter Fysh

- The upper cervical spine and atlanto-occipital junction have been identified in previous studies as being the cause of a diversity of clinical findings affecting the newborn infant. This month we review a study by Biedermann in which suboccipital strain is identified as causing a variety of signs and symptoms in a group of 114 young infants. The study, published in the Journal of Manual Medicine, not only identifies the signs and symptoms of the suboccipital strain syndrome, but also highlights the effectiveness of spinal adjustments in correcting the problem.

Forceps Combined with Rotation Causes Serious Complications

High cervical spinal cord injury in neonates delivered with forceps: report of 15 cases Menticoglou SM, Perlman M, Manning FA. **Obstet Gynecol. 1995 (Oct); 86 (4 ~ Pt 1): 589-594**

- High cervical spinal cord injury in neonates resulted as a serious complication of forceps rotations of 90 degrees or more. The common feature in all cases was a forceps cephalic delivery, almost always a rotation of 90 degrees or more from the occipitoposterior or occipitotransverse position. High cervical spinal cord injury in neonates is a specific complication of forceps

rotation.

Forceps Causing Multiple Traumas and Even Death

Kielland's forceps: association with neonatal morbidity and mortality Chiswick ML, James DK.
Br Med J 1979 Jan 6;1(6155):7-9

- The neonatal mortality rate attributable to use of the forceps was 34.9 per 1000. The incidences of delayed onset of respiration (17.4%), birth trauma (15.1%), and abnormal neurological behaviour--namely, apathy or irritability or both--(23.3%) significantly exceeded those in a matched group of babies born spontaneously. Fetal asphyxia played a major part in the aetiology of neonatal complications.
- Babies on whom Kielland's forceps were used, however, had a significantly greater incidence of abnormal neurological behaviour even in the absence of fetal asphyxia (14.3%), and in all of these babies the abnormal behaviour was transient and did not necessitate admission to the special-care baby unit
- The results suggest the neonatal complications are caused by the forceps and not related to the process of birth itself.

Forceps Related to Facial Paralysis

Facial nerve palsy in the newborn: incidence and outcome Falco NA, Eriksson E.
Plast Reconstr Surg 1990 Jan;85(1):1-4

- This study published in "Plastic Reconstructive Surgery" retrospectively identifies and characterizes patients with facial palsy related to birth trauma and describes the natural history of this disorder. This retrospective study revealed that 91% of all children who had suffered with facial paralysis were delivered with forceps. The incidence of additional birth injuries also was substantially higher among affected subjects than among the general population of newborns.

Fetal Skull Fractures from Vacuum Extraction Devices

Skull fracture caused by vacuum extraction Hickey K, McKenna P.

Obstet Gynecol 1996 Oct;88(4 Pt 2):671-673

- The vacuum extractor is being increasingly advocated as the instrument of first choice for assisted vaginal delivery. It is widely believed that the vacuum cup will dislodge before causing serious fetal trauma. The vacuum extractor exerts considerable traction force. Fetal skull fracture can result, and its true incidence may be higher than expected, considering that few neonates with normal neurologic behavior undergo skull x-ray.

Vacuum extraction: does duration predict scalp injury? Teng FY, Sayre JW. Obstet Gynecol 1997 Feb;89(2):281-5

- In only 134 vacuum extraction-assisted deliveries there were 28 infants with scalp trauma, including 17 superficial lacerations, six large caputs, and 12 cephalohematoma; one infant had subgaleal, subdural, and subarachnoid hemorrhages. The proportion of injuries was greater for applications exceeding 10 minutes (6 of 9) than for those 10 minutes or shorter (22 of 121, $P < .01$). Cosmetic scalp trauma occurred in 21% of our newborns delivered by vacuum extraction and was more common after longer vacuum applications, longer second stages, and paramedian cup placement.

Vacuum Extraction Increases Neurological Deficits in Children.

Craniocerebral birth trauma caused by vacuum extraction: a case of growing skull fracture as a perinatal complication Papaefthymiou G, Oberbauer R, Pendl G. Childs Nerv Syst 1996 Feb;12(2):117-20

- A case of growing skull fracture following birth trauma and caused by vacuum extraction is reported in order to emphasize the incidence of this peculiar head injury at the beginning of extrauterine life and to point out its relation to possible neuropsychological disturbances that may appear later in childhood. Delivery by vacuum extraction increases the incidence of perinatal injuries and consequently the incidence of neurological deficits in children. Neurosurgical repair is advocated as the appropriate treatment, with the aim not only of cosmetically correcting the lesion's typical subgaleal protuberance with cranioplasty, but also of performing a water-tight closure of the dura, enabling the cerebral cortex to "fill in" the intracerebral lesion. The surgical technique and gross pathology of the lesion are described together with radiological findings before and after surgery. Reports by other authors are reviewed in an attempt to

identify the conditioning factors and pathological features of this traumatic injury to skull and brain in neonates and infants. The literature on cranial fractures associated with intracerebral lesions at this age shows a significant difference in recovery and outcome from that after similar lesions in older children.

Spinal Cord Injury During Birth

Spinal-cord injuries during birth Byers RK; [Dev Med Child Neurol 1975; 17\(1\):103-10](#)

- Recognized causative factors are traction on the infant's trunk during breech delivery, rotational stresses applied to the spinal axis, traction on the cord via the brachial plexus in shoulder dystocia, and hyperextension of the fetal head in breech delivery or transverse presentation. Recognition of these factors is the basis for prevention of this terrible accident.

Birth Trauma Has Lasting Psychological Effects

Although almost addressing trauma to the nervous system when looking at birth trauma, there is growing evidence that the traumas of birth have lasting psychological effects.

"Although controversy can still be generated, especially among persons who are not acquainted with contemporary findings, we should not proceed arrogantly with the routine traumatization of our infants at birth! Fortunately, an increasing number of therapists are being privately trained to recognize and work to resolve prenatal/perinatal trauma, but there could never be enough of them to do the work that is piling up. It would take an army of therapists to keep up with endless production line of trauma at birth! Their work could be--and should be--eliminated with the prevention of unnecessary traumas of contemporary obstetrics. But there is no end in sight at this time." [Read entire article](#)

Birth Trauma: A Modern Epidemic

"Birth today has become a technological experience where a natural process has been replaced with artificial procedures and schedules. Without the necessary support during pregnancy, women enter the birth process with fear and are led to rely on drugs instead of their bodies' own natural strengths. These drugs weaken her body's ability to function and lead to even further interventions. The more interventions used in birth, the greater the risk of injury to both the mother and baby.

References:

Kiminski HM, Stafli.A & Aiman J. The effect of epidural anesthesia on the frequency of instrumental obstetric delivery. *Obstet Gynecol* 1987; 69 (5): 770-773

Birth injury and method of delivery Benedetti T. *NEJM* 1999 Vol 341, No. 23

Content of care by independent midwives: assistance with pain in labor and birth Sakala C. *Soc Sci Med* 1998; 26 (11): 1141-1115

"One expert medical researcher on spinal cord and brain stem injury tells us, 'the birth process, even under optimal, controlled conditions is a traumatic potentially crippling event for the fetus.'"

"Spinal cord and brain stem injuries often occur during the process of birth but frequently escape diagnosis. Respiratory depression in the neonate is a cardinal sign of much injury. In infants, there may be lasting neurological defects reflecting the primary injury."

Latent spinal cord and brain stem injuries in newborn infants
Towbin A. *Develop Med Child Neurol* 1969; 11, 54-68

"Routine procedures such as inducing labor, pain medications and restricted maternal positions are known to cause greater difficulty in labor and lead to further interventions."

Satin AJ., Hankins, GD. Induction of labor in postdate fetuses. *Clin Obstet Gynecol* 1989; 32 (2): 269-277

Arulkumaran S et al. Obstetric outcome of patients with a previous episode of spurious labor. *Am J Obstet Gynecol* 1987; 157 (1): 17-20

Chestnut DH et al. **The influence of continuous epidural bupivacaine analgesia on the second stage of labor and method of delivery in nulliparous women** *Anesthesiology* 1987; 66: 774-780.

Gardosi J, Huston N & B-Lynch. **Randomised, controlled trial of squatting in the second stage of labour** *Lancet* 1989; 2 (8654): 74-77.

"Medical research on birth trauma tells us , 'Forceful pulling on the baby's neck particularly when combined with stretching of the spine- has been considered the most important cause of infant spinal and brain stem injury.'

Towbin A. "Brain Damage in the Newborn and its Neurological Sequels"

1998 Chapter 1: 138.

Adams C, et al. "Spinal cord birth injury: Value of computed tomographic myelography," 1998 Depts of pediatric neurology and radiology: University of Toronto

Rossitch E, Oakes J. Perinatal spinal cord injury: clinical, radiographic and pathologic features *Pediatr Neurosurg* 1992; 18: 149-152

A recent study published in the New England Journal of Medicine revealed startling data. It reports: difficult labor itself and the method of delivery may lead to brain injuries and deaths in babies.

Brain injuries were found in:

- one out of every 664 infants delivered with forceps;
- one out of every 860 deliveries by vacuum extraction and
- one out of every 907 infants delivered by c-section.

Towner D et al. Effect of Mode of Delivery in Nulliparous Women on Neonatal Intracranial Injury *NEJM* 1999; Vol. 341, No. 23

Another published medical study reports: "mechanical stress imposed by obstetric manipulation-even the application of standard orthodox procedures may prove intolerable to the fetus. Difficult breathing in the newborn is a classic indication of such injury"

It further states , " Survival of the newborn is governed mainly by the integrity and function of the vital centers in the brain stem. Yet paradoxically, the importance of injury at birth to the brain stem and spinal cord are matters which have generally escaped lasting attention."

Latent spinal cord and brain stem injuries in newborn infants

Towbin A. *Develop Med Child Neurol* 1969; 11, 54-68

Birth trauma causes spinal injury. The effect is lifelong impairment

Neglected spinal cord, brain stem and musculoskeletal injuries stemming from birth trauma Gottlieb MS. *J Manipulative Physiol Ther* 1993 Oct;16 (8):537-43

(The excerpts listed above are taken from the text of the video, "Birth Trauma: A Modern Epidemic" by Dr. Jeanne Ohm)

The Newborn Infant

by Peter Fysh

...Chiropractors should also play an important role in evaluation of the newborn infant. It is just possible that an early chiropractic evaluation, performed during the first month of life, may have a significant effect on a child's ability to develop to its full potential -- both physically and mentally. We are aware of the tremendous stresses which are placed on the neck and head of a neonate during the birth process. These stresses can result in a wide variety of problems, from subluxation of the upper cervical spine to significant trauma to the brainstem. One of the first tasks of a chiropractor, when examining a newborn infant, should be to check the spine for signs of trauma induced by the birth process. Subluxation of the atlas can be the cause of an infant who is irritable, who sleeps for only short periods, also of one who feeds poorly because of irritability in a particular feeding position or because of regurgitation...