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Water on the Brain

Hydrocephalus occurs when excess fluid builds up in your brain, most often because of an obstruction preventing proper fluid drainage. The excess fluid can compress surrounding, fragile brain tissue, causing brain damage. Left untreated, hydrocephalus can be fatal. Once known as "water on the brain," hydrocephalus is sometimes present at birth, although it may develop later. About 1 out of 500 children is born with the disorder (Staff, Mayo Clinic, 2009). The outlook if you have hydrocephalus depends on how quickly the condition is diagnosed and whether any underlying disorders are present.

Hydrocephalus may be diagnosed before birth by prenatal ultrasound, a diagnostic imaging technique which uses high-frequency sound waves and a computer to create images of blood vessels, tissues, and organs. Ultrasounds are used to view internal organs as they function, and to assess blood flow through various vessels (Smith, 2010). In many cases, hydrocephalus does not develop until the third trimester of the pregnancy and, therefore, may not be seen on ultrasounds performed earlier in pregnancy.

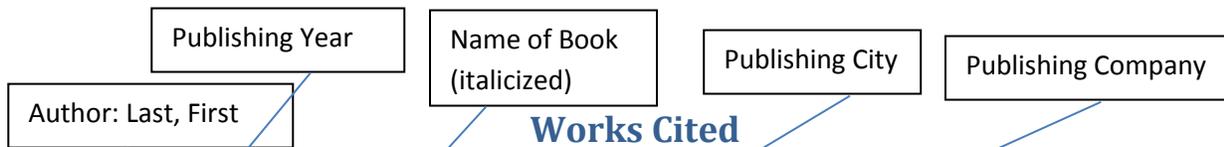
The diagnosis of congenital hydrocephalus may also be made at birth after diagnostic testing. During the examination, the physician obtains a complete prenatal and birth history of the child. He/she may also ask if there is a family history of any hydrocephalus or other medical problems. The physician will also ask about developmental milestones in older children since hydrocephalus can be associated with other neuromuscular disorders. Developmental delays may require further medical follow-up for underlying problems.

The adult brain usually produces about one half liter (500cc) of CSF daily in spaces within the brain called ventricles (McKhann, 2009). The CSF circulates out of the ventricles, bathes the brain and spinal cord, and is reabsorbed into the bloodstream. Hydrocephalus is derived from the Greek: "hydro"-water and "cephalus" – head. Hydrocephalus usually results either from: 1) an imbalance between CSF production and absorption (communicating hydrocephalus); or 2) when there is a blockage within the ventricular system such as a tumor that prevents CSF circulation (obstructive hydrocephalus).

There are two kinds of hydrocephalus. Congenital hydrocephalus is present at birth. Causes include genetic problems and problems with how the fetus develops. An unusually large head is the main sign of congenital hydrocephalus. Acquired hydrocephalus can occur at any age. Causes can include head injuries, strokes, infections, tumors and bleeding in the brain. Symptoms of acquired hydrocephalus can include; headache, vomiting, nausea blurry vision, balance problems, bladder control problems, and thinking and memory problems (Kramer, 2010). Hydrocephalus can permanently damage the brain, causing problems with physical and mental development. If untreated, it is usually fatal. With treatment, many people lead normal lives with few limitations. Treatment usually involves surgery to insert a shunt. Medicine and rehabilitation therapy can also help.

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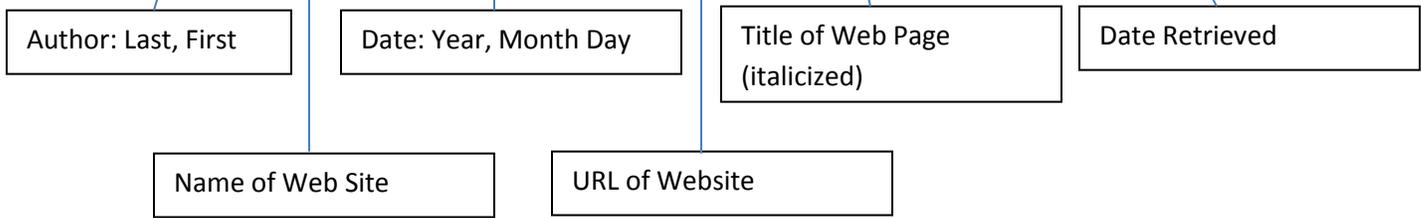


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