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Spina Bifida & Hydrocephalus Canada  
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## **Study indicates Prenatal Surgery may benefit babies diagnosed with Spina Bifida**

A new study in the New England Journal of Medicine indicates that a delicate surgery performed on a fetus can improve the health of children born with spina bifida.

The study, which appeared in the online journal Feb. 9 and will be released in the print edition March 24, compared children who have the surgery after birth with children who had the surgery performed in the uterus. The study shows that the prenatal surgery improves the likelihood that a child born with spina bifida will be able to walk and lessens the risk of other neurological complications.

SBHAC is excited that the findings indicate a fetus which undergoes surgery has a significant improvement in quality of life and mobility. While the surgery itself does carry risk SBHAC is encouraged that the surgery may soon be an option for Canadian couples faced with prenatal diagnosis.

The study focused on women whose fetuses had myelomeningocele - the most common and most severe form of spina bifida, in which the spinal cord bulges outside the spinal column. The condition can result in lifelong cognitive disabilities, fluid on the brain, bowel problems and paralysis.

When surgeons operate on such babies it is usually done within a few days of birth. They insert the spinal cord back into its canal and seal off the opening with sutures. If successful, this limits fluid buildup in the brain and spinal cord and lessens the pull of the cord on the brain.

The study reports that 183 pregnant women were chosen who had a fetus diagnosed with myelomeningocele. Half were randomly assigned to undergo fetal surgery while the others were assigned to delay the surgery until after birth. The fetal surgery was done between 19 and 26 weeks of gestation.

The study documents 158 of these operations, with roughly equal numbers from each group. Two children died in each group.

The results also show that 42 percent of children who had undergone surgery in the womb were able to walk unassisted at age 3 compared with 21 percent of those who received the surgery postnatally. The two groups didn't show marked differences in mental development.

Within a year after fetal surgery, children were less likely to need a shunt, a surgically implanted tube that drains fluid from the brain. Shunts can become clogged and infected and children often require additional surgeries to remedy that problem.

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However, there were risks associated with the fetus surgery. Nearly four-fifths of babies that underwent surgery in utero were born prematurely (before 37 weeks) with 10 of 78 born before 30 weeks of gestation. Of the others, 15 percent were born prematurely. An average full-term pregnancy is about 40 weeks.

*Source: U. S. News and World Re port; news services*

<http://www.nejm.org/doi/full/10.1056/NEJMoa1014379>

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