



What are Neural Tube Defects?

Neural Tube Defects (NTD) are abnormalities that can occur in the brain, spinal cord, or spine of a developing baby. Very early in the development of a baby, certain cells form a tube (called the neural tube) that will later become the spinal cord, the brain, and the nearby structures that protect them, including the backbone (also called the spinal column or vertebrae). As the development progresses, the top of the tube becomes the brain and the remainder becomes the spinal cord.

An NTD occurs when this tube does not close completely somewhere along its length, resulting in a hole in the spinal column or another type of problem.

What causes NTD?

- a) Chromosomal or genetic abnormalities - hence evaluation of the chromosomes of the baby may be warranted
- b) Inadequate folic acid intake by the mother or using medications like methotrexate which oppose the action of folic acid or genetic factors causing abnormal folate metabolism.
- c) Intake of anti-seizure medications
- d) Obesity



e) Diabetes Mellitus

What is the outlook for this baby?

Neural tube defect like anencephaly is lethal

In cases of spina bifida about 35% die in the first 5 years of life, 25% of the babies die in the womb and 20% dying during the first 12 months of life.

The surviving infants usually have paralysis in the lower limbs and bladder and bowel dysfunction. Intelligence is usually normal.

Is there any treatment?

Closure of the spina bifida while the baby is still in the womb can be attempted though this surgery is not done in India as of now. It may improve the baby's motor and bladder function.

What is to be done further during the pregnancy?

Follow-up scans every 4 weeks to monitor the condition and the baby's growth and well being.

How likely is it to happen in the future pregnancy?

If one parent or one sibling has the same condition then the risk of it occurring in the next pregnancy is about 5%, if two siblings are affected then 10%

How can you prevent NTDs in your baby?

Taking folic acid supplement 5 mg per day for 3 months prior to getting pregnant and 2 months after getting pregnant can prevent recurrence in the next pregnancy by about 75%

