

Spina bifida is a neural tube defect that evolves during neurulation when the neural folds fail to fuse and result in an open neural tube. New studies have shown that our understanding of neural tube closure might be wrong and suggested a single site neural tube closure in humans. Various factors like nutrition, genetics, and environment lead to the formation of a neural tube defect. Folic acid and Vitamin B12 have been shown as effective supplements when it comes to lowering the risk of developing NTD and. Genetic mutations of MTHFR, CUBN, CHKA, SARDH, MTRR, Grhl-3, which are all involved in methylations are considered important risk factors for NTD's. Wrong methylation or hypomethylation of Hox and Vangl genes have shown to be also playing a role in NTD's. Par1/Par2 mutations in mice have shown to cause Spina Bifida.

Keywords: Spina Bifida, NTD, Neural tube defects, Myelomeningocele, Neurulation