

Message from the Japanese Teratology Society

Proposal for supplemental intake of folic acid to reduce the risk of neural tube defects

The Japanese Teratology Society releases the following message for reducing the birth of babies with neural tube defects (congenital defects in the brain and/or spinal cord). Women who are planning to get pregnant or those who may be pregnant are advised to reduce the risk of having a baby with such defects by taking 400 microgram (0.4 mg) of supplementary folic acid per day from 4 weeks before impregnation through gestation week 12. We also suggest that women who are at a high risk, such as those having a neural tube defect patient within their family and those having delivered a baby with such defects previously, should take hospital consultation on folic acid intake because the risk of their next babies suffering from neural tube defects is relatively higher than usual.

Neural tube defects (spina bifida, anencephaly and encephalocele) arise at around gestation week 6 (4 weeks after fertilization) to obstruct the normal development of the brain and spinal cord. Most patients with spina bifida need to receive medical treatments including a surgical treatment soon after birth and treatments for hydrocephaly, walking difficulties and/or micturition disturbances, which may be followed by continuous rehabilitation through their whole life. Babies with anencephaly hardly survive after birth and those having encephalocele may suffer from neurological disorders even if the mass on the brain is removed surgically.

Epidemiological studies have shown that maternal intake of folic acid, a kind of water soluble vitamins, decreases the risk of neural tube defects. According to a British epidemiological study (1), treatment of women of the high risk group, who had had a baby with neural tube defects previously, with 4 mg/day of folic acid successfully reduced the incidence of these anomalies in the next pregnancy: the preventive efficiency was estimated to be 72%. Another study in China (2) also demonstrated the similar preventive effects of folic acid supplementation in primiparas (women bearing their first child) at daily doses of 0.4 mg.

The Japanese Ministry of Health and Welfare (MHW), the present Ministry of Health, Labor and Welfare (MHLW), announced in 2000 that women who are planning to get pregnant should take 0.4 mg/day of supplementary folic acid, in addition to well-balanced food containing 0.4 mg/day of folic acid (3). Daily intake of folic acid at approximately 1 mg/day does not cause excess symptoms (4). However, the percentage of Japanese women who take folic acid supplement is only 10 – 20% (5, 6) and the incidence of neural tube defects in Japan has remained unreduced (7).

The Japanese Teratology Society aims to contribute to the health and welfare of Japanese people by making efforts to prevent the birth of babies with congenital anomalies.

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