

# Deficiency leads to congenital spinal deformity: Parents, doctors' group campaign as FSSAI cuts folic acid fortification

Tabassum Barnagarwala | Mumbai, Palghar August 13, 2019

In 2016, the FSSAI laid down fortification standards for wheat, maida, oil, salt, milk and rice as per WHO guidelines. But in 2018, the FSSAI revised them considerably reducing folic acid, iron and vitamin B12 in wheat, maida and rice.

Ten-month-old Dakshita, a spina bifida patient, needs immediate surgery. (Express photo)

In remote Jawhar, a hilly taluka of Palghar, farmer Prakash Kamble laments not knowing the importance of folic acid. His pregnant wife never took the government-funded pills regularly and 10 months ago, when their daughter Dakshita was born, the child was diagnosed with spina bifida — a congenital birth defect due to folic acid deficiency in pregnant women.

A 150 kilometres away in Mumbai, Sudhakar Timmaraju has similar regrets. With his 26-year-old daughter, also a spina bifida patient, paralysed waist down, Timmaraju has been campaigning for food fortification. "Women do not consume iron tablets every day, but they do consume wheat. If fortification in wheat is widely followed, this disorder can be prevented," Timmaraju said.

A group of doctors and a parents' support group have urged the Food Safety and Standards Authority of India (FSSAI) to increase fortification levels of folic acid in wheat flour. Fortification is addition of micronutrients to daily food to improve diet. In 2016, the FSSAI laid down fortification standards for wheat, maida, oil, salt, milk and rice as per WHO guidelines. But in 2018, the FSSAI revised them considerably reducing folic acid, iron and

vitamin B12 in wheat, maida and rice. As per the revised guidelines, implemented this July, folic acid levels have been reduced by 13-17 times in wheat flour.

“Folic acid deficiency is one major cause of spina bifida. Four to seven children per 1,000 births suffer from this defect,” Dr Santosh Karmarkar, paediatric surgeon in Lilavati hospital, said. Spina bifida is a neural tube defect that affects spinal growth, causing paralysis of lower limbs in some cases.

In Palghar, Dakshita has developed a huge bulge in her lower back, which requires immediate surgery. The tribal health infrastructure, however, lacks facilities and she needs to be referred to Mumbai. “The bulge is a bunch of spinal nerves protruding out,” Karmarkar, who is holding a camp in the tribal hamlet, said. Folic acid intake among women, he added, can prevent 75 per cent cases of spina bifida in newborns.

According to Dr Parveen Bhalla, coordinator of Haryana Demonstration Project, like Dakshita’s mother, a study on 900 women in Haryana shows 60 per cent are deficient in folic acid and vitamin B12. The US Centres for Disease Control and Prevention, WHO, and government of Haryana has made fortified wheat flour mandatory in two blocks of the state to gauge whether anaemia levels improve in these women. “We can prevent neural tube defects if women in reproductive age group have adequate folic acid levels,” Bhalla said. Neural tube is embryonic structure in brain and spine, a disorder in which can affect growth of nerve cells.

In 85 countries, fortification of wheat flour is mandatory. India is yet to join the league. While in 2016, FSSAI complied with WHO guidelines, mandating 1,300 gm folic acid per kg wheat, but in 2018 it reduced folic acid levels to 75-150 gm per kg. In May, FSSAI explained its move by claiming that guidelines for folic acid fortification is laid to prevent anaemia, not neural tube defects.

Mumbai-based Timmaraju, a banker, who is campaigning for fortified wheat flour, gifts folic acid to brides at every wedding he is invited to. “The level of folic acid needs to remain high in wheat until FSSAI introduces fortification for other food items. Simply distributing folic acid tablets without a monitoring mechanism will not help reduce neural tube defects,” Timmaraju said.

His paralysed daughter Suman functions on a wheelchair. The spinal defect required her to undergo four surgeries in the last six years. She is prone to infection and has poor bowel

movements. "I could not ensure my wife consumed folic acid, but I campaign for it wherever I go," he added.

Bhalla, meanwhile, claimed the incidence of neural tube defects can be brought down to 8-10 from 45 per 10,000 live births with better folic acid intake.

The doctors' and parents' support groups are planning to file a PIL if FSSAI does not change its guidelines. Officials with FSSAI said folic acid levels were reduced in fortified wheat based on a few studies citing its possible side-effects.