

Endocrine and metabolic risks associated with vitamin D and iodine intake through food supplements during pregnancy

Five cases of neonatal hypercalcaemia and two cases of congenital hypothyroidism involving food supplements for pregnant women have been reported under the national nutrivigilance scheme overseen by ANSES. These reports led ANSES to assess the risks associated with the consumption of food supplements containing vitamin D or iodine intended for pregnant women.

Neonatal hypercalcaemia and vitamin D

The analysis of the reports received showed that the doses of vitamin D provided by "pregnancy" food supplements are not by themselves likely to lead to hypercalcaemia in a pregnant woman or a healthy foetus.

Nevertheless, if the child has a genetic hypersensitivity to vitamin D, intake of this vitamin during pregnancy may result in neonatal hypercalcaemia. Screening for this anomaly, which is not routinely carried out, would have been able to confirm the origin of the hypercalcaemia reported to the nutrivigilance scheme.

Congenital hypothyroidism and iodine

Iodine is needed for the neurological and behavioural development of the foetus. However, an excessive iodine intake (oral or transdermal) during pregnancy increases the risk of hypothyroidism, hyperthyroidism or goitre in the newborn.

For the two cases of congenital hypothyroidism received by the nutrivigilance scheme, the available data could not be used to formally incriminate the food supplement, which was not the only source of iodine to which the mother was exposed.

ANSES's recommendations

Besides the cases associated with the consumption of vitamin D and iodine that were reported to the nutrivigilance scheme, ANSES warns against combining multiple sources of vitamins and minerals in the absence of an identified need. In some cases this may lead to the upper intake levels being exceeded.

For pregnant women:

- ANSES reminds pregnant women that they should not consume food supplements without first seeking the advice of a healthcare professional, and recommends that they in-

form their doctor, pharmacist or midwife of any product (medicine or food supplement) they have taken, whether it was issued on prescription or purchased over the counter.

For healthcare professionals:

- The consequences of hypercalcaemia on newborn health, in the event of hypersensitivity to vitamin D, require appropriate preventive measures to be implemented. In the event of confirmed hypercalcaemia in a pregnant woman, it will be necessary to search for the cause with the appropriate examinations and reconsider the relevance of vitamin D supplementation.
- In newborns, in cases of unexplained hypercalcaemia, it is important to screen for a mutation in the gene predisposing the child to hypercalcaemia.
- The simultaneous exposure to multiple sources of iodine (from drugs or food supplements) increases the risk of thyroid disorders in newborns and must therefore be avoided during pregnancy.
- The Agency stresses the importance of not combining different sources of vitamins and minerals without regular biological monitoring.

Lastly, the Agency reminds healthcare professionals of the importance of notifying the nutrivigilance scheme of any adverse effects they are made aware of, which could be related to the consumption of food supplements.

Gwenn VO VAN REGNAULT (Anses)

TO FIND OUT MORE, VISIT:

ANSES OPINION and REPORT on the endocrine and metabolic risks related to the intake during pregnancy of vitamin D and iodine through food supplements involved in cases of nutrivigilance. May 2017

<https://www.anses.fr/en/system/files/NUT2013SA0240EN.pdf>