Proceedings of the Nutrition Society (2024), **83 (OCE1)**, E187 doi:10.1017/S0029665124002052

47th Annual Scientific Meeting of the Nutrition Society of Australia and Nutrition Society of New Zealand, 28 November – 1 December 2023, Nutrition & Wellbeing in Oceania

Folic acid and iodine supplement use from preconception through to six weeks postpartum in New Zealand women

B. Hunter[1], H. Mazahery[2], Y. Jin[3] and C. Gammon[4]
[1]*School of Sport, Exercise and Nutrition, College of Health, Massey University, Albany 0632, New Zealand*
[2]*School of Population Health, Curtin University, Western Australia, 6102, Australia*
[3]*School of Health Sciences, College of Health, Massey University, Palmerston North, 4442, New Zealand*
[4]*School of Health Sciences, College of Health, Massey University, Albany 0632, New Zealand*

Folic acid (FA) and iodine supplements are recommended by the Ministry of Health (MOH) for pregnant and/or lactating women in New Zealand (NZ)[(1)]. Evidence suggests that many NZ women are not just taking FA and iodine in the form of a single-nutrient supplement (SNS) but are taking FA and iodine as part of a multivitamin supplement (MVS) which may or may not contain the recommended doses, and some are using a combination of both[(2)]. No NZ study has examined the daily dose taken from both SNS and MVS for both FA and iodine across all time periods [(2, 3)]. The aim of this study was to investigate what nutritional supplements containing FA and iodine were taken by postpartum NZ women, preconception, during the three trimesters of pregnancy and postpartum, and examine how well the women's supplement use aligned with the NZ MOH recommendations. This cross-sectional observational study utilised data gathered on FA and iodine supplement use from an anonymous survey between February and August 2022. Descriptive statistics including frequency and percentages were reported. Folic acid and iodine weekly intakes from SNS and MVS were calculated by multiplying the amount of nutrient in each supplement, with the number of times per day taken, and the average number of days taken per week reported. A total of 584 women were included in the analysis. In addition to the SNS for FA (0.8mg and 5mg) and iodine (150 ug), women took 28 different MVS. Fifty-eight percent (preconception; 30% from SNS, 18% from MVS, and 10% from both) and 96% (1st trimester pregnancy; 61% from SNS, 17% from MVS, and 19% from both) of women took FA containing supplements. More than 75% of women reported taking iodine containing supplements during pregnancy (1st and 2nd trimesters: 93%, 3rd trimester: 89%) and postpartum (76%).Approximately 60% took SNS, 18% took only MVS and 14% took both. Based on the MOH recommendations, only 30% (preconception) and 62% (1st trimester) achieved sufficiency of FA supplementation at 0.8mg/day; 35% (preconception) and 69% (1st trimester) achieved sufficiency of FA at 5mg/day; around 50% women achieved sufficiency of iodine supplementation at 150 µg/day during pregnancy while only 37% during postpartum. The balance either took none, an insufficient dose or a dose that exceeded the recommended dose and many took them during non-recommended periods (FA after the 1st trimester; iodine preconception). Most women reported taking FA and/or iodine containing supplements at some point before, during and after their pregnancy. However, it is concerning that a large number of women do not seem to be adhering to the MOH recommendations for FA and iodine supplementation.

Keywords: folic acid; iodine; multivitamin supplement

Ethics Declaration

Yes

Financial Support

This research received no external funding.

References

1. Ministry of Health (2018) https://www.health.govt.nz/your-health/pregnancy-and-kids/pregnancy/helpful-advice-during-pregnancy/folic-acid-iodine-and-vitamin-d
2. Teixeira JA, Marchioni DM, Castro TG *et al.* (2018) *Public Health Nutr* **21**(12), 2183–2192.
3. Bulloch RE, McCowan LME, Thompson JMD *et al.* (2019) *Br J Nutr* **122**(8), 910–918.