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## Antenatal folic acid and vitamin D supplement use: data from the SCOPE Ireland pregnancy cohort study

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Data in Irish women show low compliance with periconceptual folic acid supplementation guidelines, which are strongly associated with socio-demographic background<sup>(1)</sup>. There are currently no recommendations for vitamin D supplementation during pregnancy in Ireland. The aim of this study was to describe the prevalence of nutritional supplement use, with particular attention to folic acid and vitamin D, in women participating in the Screening for Pregnancy Endpoints (SCOPE) Ireland prospective cohort study.

Participants (*n* 1768) were healthy, nulliparous women, having a singleton pregnancy and receiving antenatal care in the Cork University Maternity Hospital. Women provided written informed consent during their first trimester and completed a series of clinical and questionnaire-based assessments at 15 and 20 weeks' gestation<sup>(2)</sup>. Brand-level data on the use of nutritional supplements were reported pre-conception, throughout the first trimester and at 15 weeks' gestation.

Statistical analysis was conducted using SPSS<sup>®</sup> version 20.0 (SPSS, IBM). Prevalence data were compared using Pearson Chi-Square. *P* < 0.05 was considered statistically significant.

Folic acid supplementation was reported by 70 % of women prior to conception, which increased to 99 % during the first trimester and then decreased to 65 % at 15 weeks' gestation. Among supplement users, the median (IQR) folic acid dose was 400 (0) µg per day. Overall, 97–99.5 % of supplement users met the RDA of 400 µg per day<sup>(3)</sup>.

At 15 weeks' gestation, 36 % of women were taking a multivitamin product, which represented an increase of 13 % from the pre-conception prevalence.

Overall, 41 % obtained vitamin D in supplemental form from a combination of multi-vitamins, fish oils and vitamin D supplements. The mean (SD) vitamin D intake from supplements was 5.0 (1.5) µg/d at 15 weeks' gestation.

N	Folic acid				Multivitamin			
	Pre-conception		First trimester		Pre-conception		First trimester	
	Users	Non-users	Users	Non-users	Users	Non-users	Users	Non-users
	1242	526	1751	17	410	1358	546	1222
Age ≤ 25y (%)	3.1	31.6*	11.2	52.9*	4.9	13.6*	7.3	13.5*
Age ≥ 35y (%)	15.9	7.2*	13.4	5.9	17.3	12.1*	15.4	12.4
University education (%)	54.6	31.9*	48.0	35.3	56.6	45.2*	54.8	44.8*
Obese (%)	11.8	13.7	12.2	29.4	11.7	12.5	10.8	13.0
Smoking at 15 weeks (%)	4.8	22.2*	9.8	35.3*	7.1	10.9*	6.0	11.8*
Alcohol at 15 weeks (%)	15.2	19.4*	16.6	5.9	17.3	16.2	18.3	15.6

\* Denotes significant difference between users and non-users (*P* < 0.05)

In this large, well-characterised pregnancy cohort, almost one third of women did not report preconception folic acid supplementation use, although it increased substantially during the first trimester of pregnancy. The prevalence of antenatal multivitamin use is low and is the major contributor to supplemental vitamin D. Women who are non-smokers, above 35 years of age and who have a university education are more likely to take a multivitamin supplement during pregnancy and to be compliant with periconceptual folic acid recommendations.

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2. McCowan LM, Roberts CT, Dekker GA, et al. (2010) *BJOG* 117, 1599–607.
3. Health Promotion Unit of Department of Health (1995) *What every woman needs to know about the prevention of neural tube defects spina bifida and anencephaly*. Dublin: Department of Health.

