

## IS VITAMIN B12 SUPPLEMENTATION ADEQUATE IN VEGAN WOMEN OF REPRODUCTIVE AGE?\*

### Why this was investigated

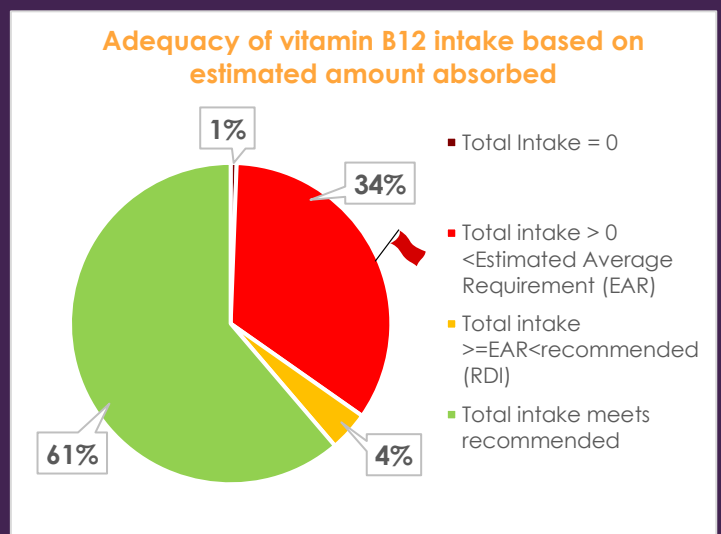
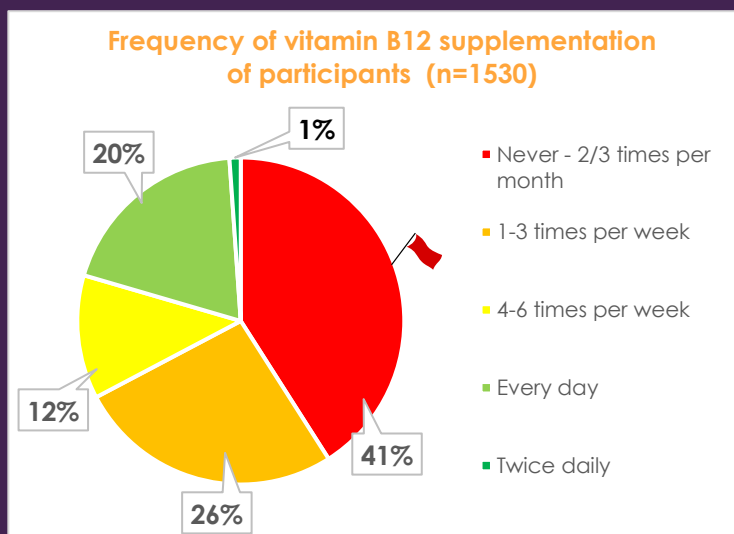
Taking steps to ensure an adequate intake of vitamin B12 is critical to the health of people on a vegan diet, as plant-derived foods do not naturally contain bio-active vitamin B12. In our previous analysis, we compared participants' average daily intake of vitamin B12 from food and supplements to the Recommended Dietary Intake (RDI). However, the amount of vitamin B12 that is absorbed from supplements is substantially lower than the absorption rate from food, so we re-analysed the data based on estimated amount absorbed.

### What was done

Data from 1,530 vegan women of reproductive age in Australia was collected via a cross-sectional survey. Vitamin B12 intake from food was estimated via a validated food frequency questionnaire (FFQ) and supplementation intake was estimated via a detailed online survey.

In this analysis, we took into account the estimated absorption from supplements (using published data on absorption rates) in order to investigate adequacy of total vitamin B12 intake in vegan women of reproductive age (18-44 yrs).

VITAMIN B12 INTAKE IS IMPORTANT AS AN INADEQUATE INTAKE CAN RESULT IN A **WIDE RANGE OF NEGATIVE HEALTH CONSEQUENCES**. THE EFFECTS CAN BE **IRREVERSIBLE OR EVEN FATAL**. ADEQUATE SUPPLEMENTATION CAN PREVENT DEFICIENCY.



### Conclusions

- **39%** of vegan women of reproductive age **have an intake of vitamin B12 below recommended and they (and their unborn or breastfed infants) may be at risk of deficiency**
- Although some vegan foods are fortified with added vitamin B12, only 10.7% of the participants meet the recommended intake via fortified foods, highlighting the importance of regular and adequate supplementation of vitamin B12 for vegans
- The potential absorption of vitamin B12 needs to be considered when estimating adequacy of intake and when recommending supplementation dose and frequency
- Regular, adequate vitamin B12 supplementation is recommended for **everyone** on a vegan diet

\* Benham, A. J., Gallegos, D., Hanna, K. L., & Hannan-Jones, M. T. (2022). Vitamin B12 Supplementation Adequacy in Australian Vegan Study Participants. *Nutrients*, 14(22), 4781.