



# The Association between dairy consumption and constipation in a population-based sample of adults in Australia: a cross-sectional study

Hajara Aslam<sup>1</sup>, Mohammadreza Mohebbi<sup>2</sup>, Anu Ruusunen<sup>1,3</sup>, Samantha L Dawson<sup>1</sup>, Lana J Williams<sup>1</sup>, Michael Berk<sup>1,4</sup>, Kara L Holloway-Kew<sup>1</sup>, Fiona Collier<sup>1,4</sup>, Amy Loughman<sup>1</sup>, Julie A Paso<sup>1,4</sup> & Felice Jacka<sup>1</sup>

<sup>1</sup>Deakin University, School of Medicine, IMPACT SRC, Geelong, Australia, <sup>2</sup>Deakin University, Geelong, Australia. Biostatistics Unit, Faculty of Health, Melbourne, Australia, <sup>3</sup>Department of Psychiatry, Kuopio University Hospital, Kuopio, Finland, <sup>4</sup>Barwon Health, Geelong Australia

## Background

- Although constipation is a symptom, not a disease, it inflicts a substantial burden on quality of life and costs to health care.<sup>1-3</sup>
- Dietary strategies have been effective in both the prevention and management of constipation.<sup>4</sup>
- Despite reported inverse associations between dairy intake and constipation in children, the association between dairy and constipation in the general adult population remains understudied.<sup>5,6</sup>

## Methods

### Research question



**Sample:** Geelong Osteoporosis Study<sup>7</sup>



Data from women at 6-yr follow-up (n=632) and men at baseline (n=609) were utilised

**Exposure:** Information on dairy (milk, yogurt, and cheese) were self-reported and total dairy was calculated by summing the intake of milk, yogurt, and cheese, which was expressed as serves per day.

**Outcome:** Constipation was self reported by using the validated Bowel Symptom Questionnaire.

**Confounders:** Mobility, irritable Bowel Syndrome (IBS) were self-reported and major depressive disorder (MDD) was captured by a semi-structured clinical interview (SCID-I/NP).

**Study design:** Multivariable adjusted logistic regression was used to estimate the odds ratio (OR) and 95% confidence interval to examine the link between categories of milk (<250 mL/d, 250-1000 mL/d, >1000 mL/d), yogurt (0 g/d, <200 g/d, ≥200 g/d), cheese (0 g/d, <40 g/d, ≥40g/d), and total dairy (<1 serve/d, 1-2 serves/d, ≥2-4 serves/d, ≥4 serves/d), with constipation.

## Results

In women, consumption of <250 mL/d of milk was marginally associated with constipation compared to consuming 250-1000 mL/d of milk (Table). Consumption of 1-2 serves/d of total dairy was associated with a reduced likelihood of constipation compared to consuming 1 serve/d of total dairy in women (Table). In men, no association was observed between milk and constipation. Neither yogurt nor cheese consumption were associated with constipation in women or men.

**Table :-Logistic regression analysis of the association between milk, yogurt, cheese and total dairy consumption and constipation in women and men**

	Women		Men	
	Odds ratio	95% CI	Odds ratio	95% CI
<b>Milk</b>				
<250 mL/d	1.58	0.99-2.51	1.20	0.61-2.06
250-1000 mL/d	Reference		Reference	
>1000 mL/d	1.14	0.10-12.44	0.87	0.16-4.60
<b>Yogurt</b>				
0 g/d	1.00	0.61-1.63	1.03	0.56-1.88
<200 g/d	Reference		Reference	
≥200 g/d	0.96	0.49-1.89	4.16	0.63-27.54
<b>Cheese</b>				
0 g/d	0.44	0.17-1.17	1.30	0.50-3.18
<40 g/d	Reference		Reference	
≥40 g/d	0.59	0.27-1.28	2.18	0.48-9.90
<b>Total dairy</b>				
< 1 serve/d	Reference			
1-2 serves/d	**0.47	0.26-0.86	0.70	0.32-1.56
>2-4 serves/d	0.61	0.34-1.09	1.28	0.57-2.89
>4 serves/d	0.28	0.08-1.06	0.65	0.12-3.68

Adjusted for mobility, MDD, and IBS ; \*\* p< 0.05

## Conclusion

Moderate consumption of milk and total dairy was associated with reduced odds for constipation in women, however any form of dairy consumption was not associated with constipation in men. Further studies are warranted to confirm results

## References

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