

Pre-meal water consumption for weight loss

Drinking 500 mL of water 30 minutes before each meal can be used in conjunction with a hypocaloric diet to lead to greater weight loss in overweight or obese middle-aged and older adults. Pre-meal water consumption for weight loss is an easy to implement intervention. It has NHMRC Level 2 evidence of efficacy and adverse effects are unlikely. There are some considerations, and the intervention would be contraindicated in patients with congestive cardiac failure, and in those with severe renal impairment.

This article forms part of a series on non-drug treatments, which summarise the indications, considerations and the evidence, and where clinicians and patients can find further information.

loss is an easy to implement intervention, as with any weight loss behavioural change, long term motivation may be a problem.

Older people are at risk of dehydration, and this intervention may provide further benefit in this population.

Where drinking water quality is inadequate, buying bottled water may be cost prohibitive.

Resources

Key references

- Daniels MC, Popkin BM. Impact of water intake on energy intake and weight status: a systematic review. *Nutr Rev* 2010;68:505–21
- Dennis EA, Dengo AL, Comber DL, et al. Water consumption increases weight loss during a hypocaloric diet intervention in middle-aged and older adults. *Obesity* 2010;18:300–7.

Authors

HANDI Project Team.

Acknowledgements

Handbook of Non Drug Intervention (HANDI) Project Team members include Professor Paul Galsziou, Dr John Bennett, Dr Peter Greenberg, Professor Sally Green, Professor Jane Gunn, Associate Professor Tammy Hoffman and Associate Professor Marie Pirota.

Competing interests: None.

HANDI is supported by a grant from the Jack Brockhoff Foundation.

Provenance and peer review: Commissioned; not peer reviewed.

correspondence afp@racgp.org.au

The condition

Based on body mass index (BMI) measures in 2011–12, about 64% of adult Australians were overweight or obese, according to an Australian health survey conducted by the Australian Bureau of Statistics.

The intervention

Drinking 500 mL (2 cups) of water 30 minutes before each meal can be used to assist in weight loss. When combined with a hypocaloric diet, pre-meal water consumption leads to greater weight loss than a hypocaloric diet alone. The intervention can lead to:

- an approximately 2 kg greater weight loss over 12 weeks
- a 44% greater rate of weight loss.

Water is readily available and inexpensive.

No studies have tested differences for the intervention regarding the use of tap or bottled water, or mineral or spring water. Water intake during a meal may have the same or similar effect as when taken before a meal.

The indication

The effectiveness of pre-meal water consumption for weight loss has been seen in overweight and obese middle-aged and older adults. There is less evidence for its benefit in younger people.

It is known that gastric emptying slows down as people age, which may be why water helps older people feel fuller for longer.

What should I consider?

Contraindications

Contraindications to the use of pre-meal water consumption for weight loss are congestive heart failure or severely impaired renal function.

Considerations

A consideration may be any condition where increased urine production may be problematic, such as prostate conditions, incontinence, and immobility and difficulty getting to the toilet.

Adverse effects

Water toxicity (hyponatraemia) is very rare in the general population. The typical victim is a marathon runner (and therefore unlikely to be overweight or obese).

Evidence

National Health and Medical Research Council (NHMRC) Level 2 evidence (at least one properly designed randomised controlled trial).

Anything else?

Although pre-meal water consumption for weight