



## Pre-meal water consumption: weight loss

### Intervention

Drinking water 30 minutes before main meals during a low calorie diet.

Water intake during a meal may have the same or similar effect.

### Indication

Gastric emptying slows down as people age, which may be why water helps older people feel fullers for longer

Overweight and obese middle-aged and older adults.

There is less evidence for benefit in younger people.

### Contraindications

- Congestive heart failure
- Severely impaired renal function.

### Precautions

Any conditions 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 (unlikely to be overweight or obese).

### Availability

Readily available and cheap.

### Description

Drinking 500ml water (2 cups) 30 minutes before each meal.

When combined with a hypocaloric diet, premeal water consumption leads to greater weight loss than a hypocaloric diet alone:

- approx. 2kg greater weight loss over 12 weeks
- 44% greater rate of weight loss.

Water is readily available and inexpensive. No studies have tested differences in tap, bottled, mineral or spring water.

### Tips and Challenges

Although this is extremely easy, 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.

### Grading

NHMRC Level 2.

### References

Daniels MC, Popkin BM. Impact of water intake on energy intake and weight status: a systematic review. *Nutrition reviews* 2010; 68(9): 505-21

Dennis EA, Dengo AL, Comber DL, Flack KD, Savla J, Davy KP, Davy BM. Water Consumption Increases Weight Loss During a Hypocaloric Diet Intervention in Middle-aged and Older Adults. *Obesity* 2010; 18: 300-307. doi: 10.1038/oby.2009.235