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Saturday, August 10, 2019

(Room 4)

8:30 - 9:25 WS #71: Managing Obesity with Very Low Calorie Diets, Meal Replacements and Drug Therapy

9:35 - 10:30 WS #81: Managing Obesity with Very Low Calorie Diets, Meal Replacements and Drug Therapy
(Repeated)

Managing obesity with intensive diets and drug therapy: paediatric considerations

Louise A Baur

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Disclosures

- Louise Baur has no disclosures

The core lifestyle recommendations

See also resources at:
pro.healthykids.nsw.gov.au

Available also in Arabic, Burmese, Chinese Simplified, Chinese Traditional, Farsi, French, Hindi, Karen, Swahili, Vietnamese



More intensive dietary interventions?

In adolescents with *moderate to severe* obesity

- No one dietary prescription is necessarily superior to another
- Initial weight loss predicts later weight outcomes
- Use of VLEDs, under supervision, in adolescents with obesity and T2DM can lead to diabetes remission
- Consider use of VLEDs to help kick-start weight loss
- Dietitian involvement is *vital*

Marked variations in response to treatment

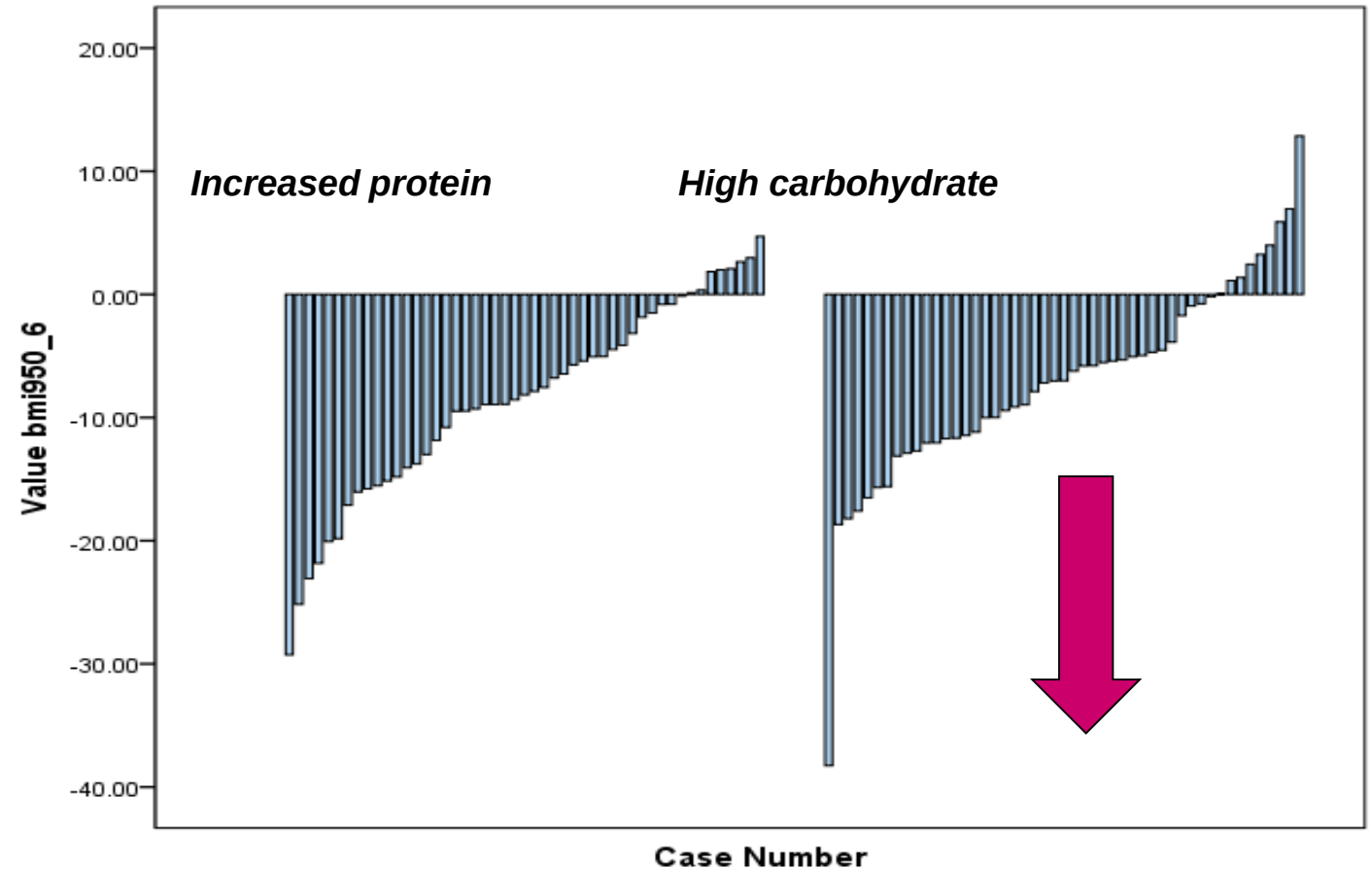
The RESIST trial: Two different types of diet in adolescents with obesity

Marked variations in response to treatment

The RESIST trial: Two different types of diet in adolescents with obesity

Changes in a measure of BMI severity:

- 82 children decreased (mean 10%)
- 16 increased (mean 3%)

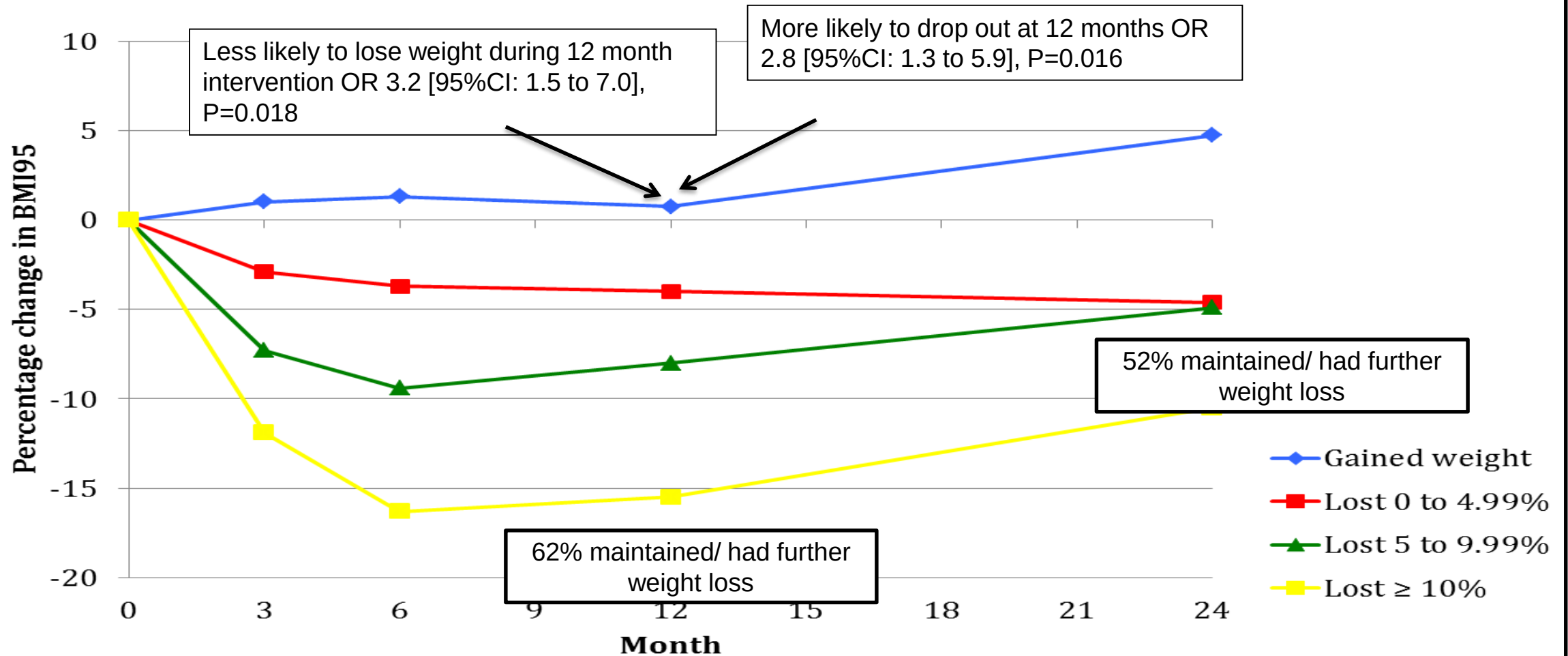


Early weight loss: indicative of longer term weight loss

Findings from the RESIST study of adolescents with obesity and insulin resistance

Early weight loss: indicative of longer term weight loss

Findings from the RESIST study of adolescents with obesity and insulin resistance



Turning around type 2 diabetes in adolescents with obesity – the SHAKE IT study. The effect of a Very Low Energy Diet on weight loss

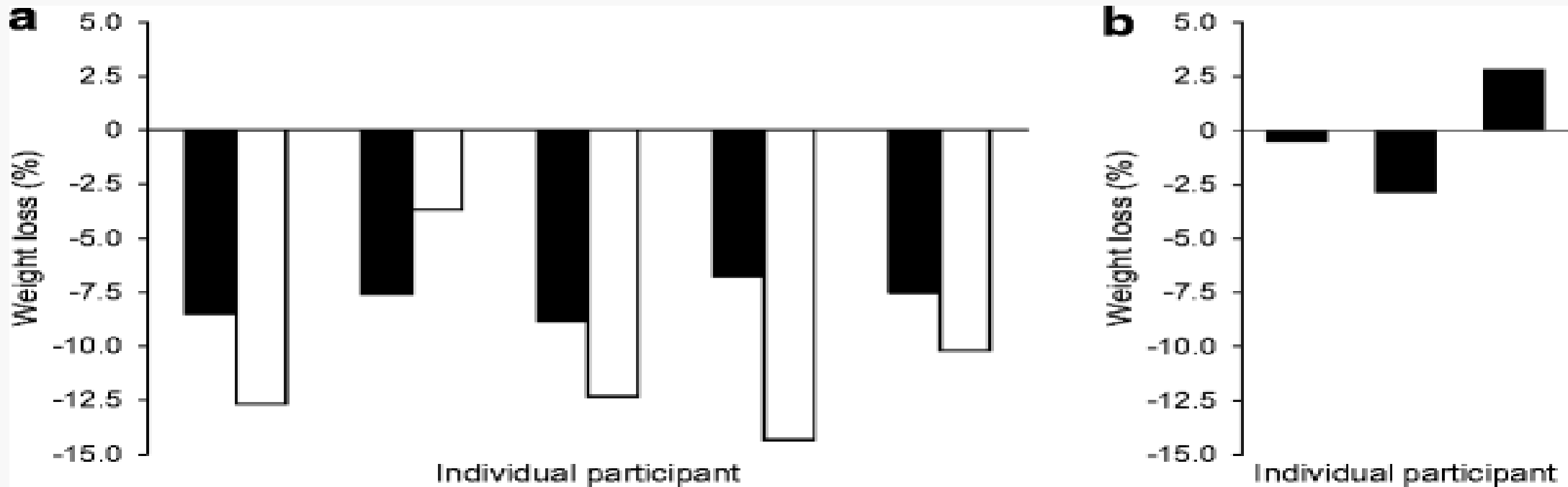


Fig. 2

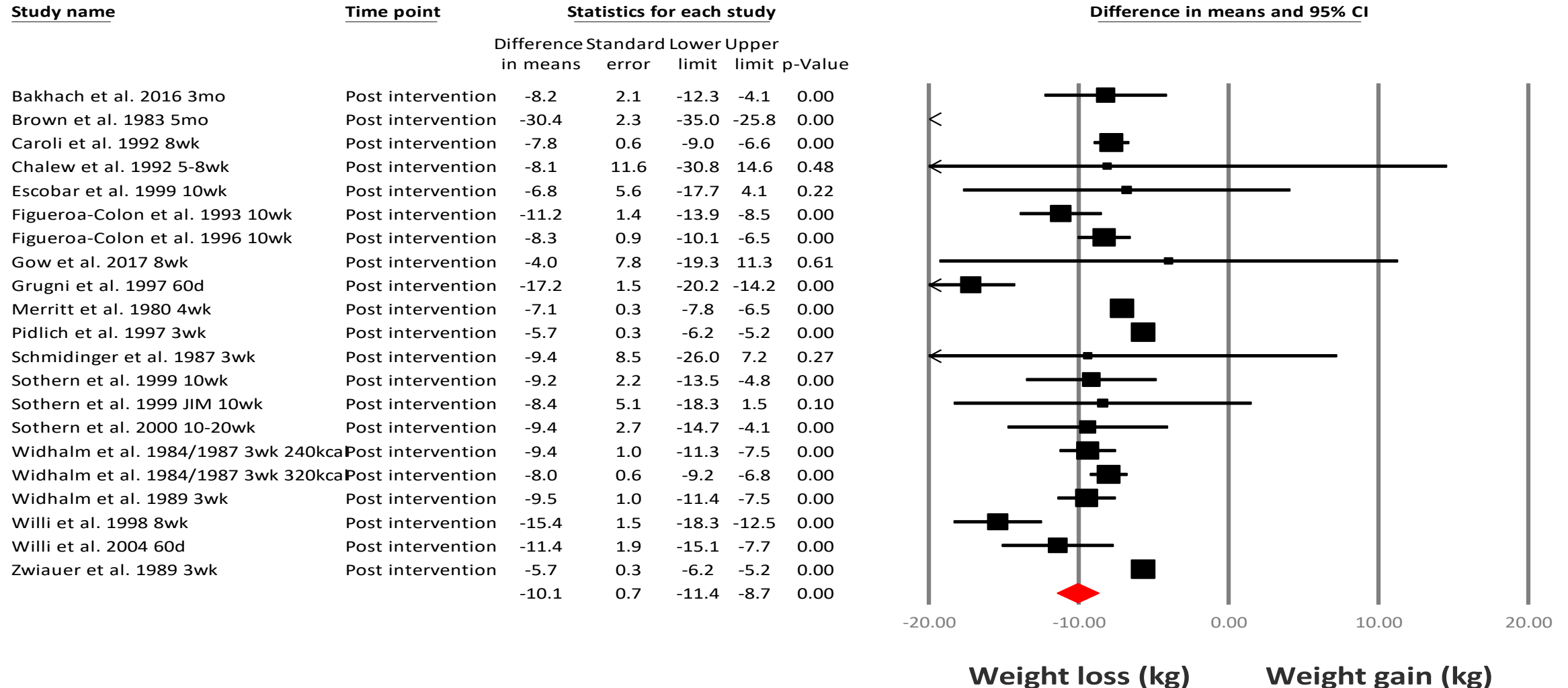
Individual participant weight loss of (a) adherers and (b) non-adherers at 8 (black bars) and 34 weeks (white bars)

Very Low Energy Diets (VLEDs) in children and adolescents

- **VLED: Aims for <800 kcal/day (3,350kJ), typically <50g CHO**
 - **At The Children's Hospital at Westmead – use of shakes /bars, PLUS evening meal of lean meat plus leafy salad/ low CHO vegies**
 - **Potential greater kick-start for weight loss**
 - **Potential to reverse type 2 diabetes***
- **Typically recommended for short duration, under supervision of a dietitian**
- **Safety issues?**

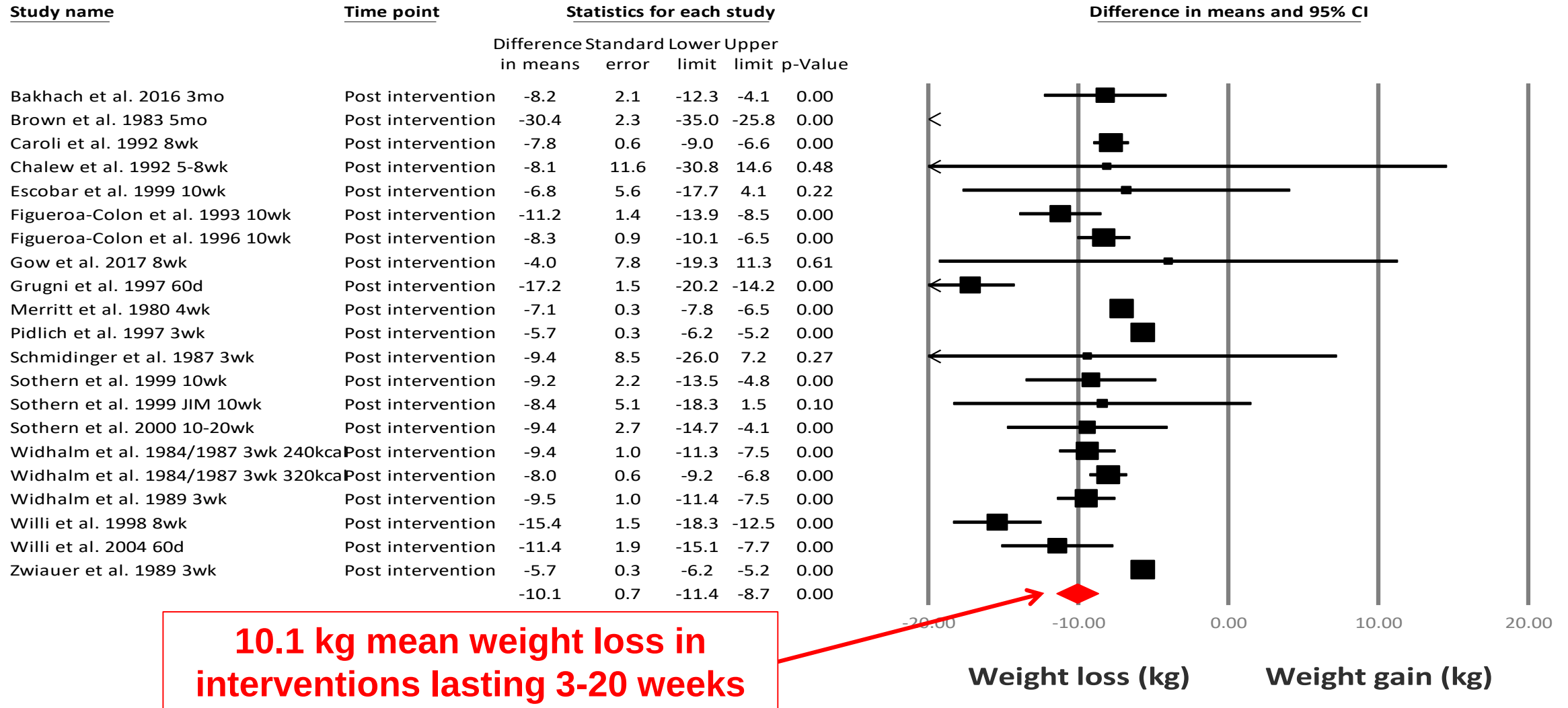
* Gow M, et al. Reversal of type 2 diabetes in youth who adhere to a very low energy diet: a pilot study. Diabetologia 2017; 60:406-415.

Very Low Energy Diets (VLEDs) in children and adolescents: results of a systematic review *



* Andela S, et al. Efficacy of very low-energy diet programs for weight loss: A systematic review with meta-analysis of intervention studies in children and adolescents with obesity. Obesity Reviews 2019; 20: 871-882

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What about safety?

In general, adverse events not well described. And hence conclusions on safety cannot be drawn

GENERAL SIDE-EFFECTS

- Only ten studies monitored for general side-effects.
- Six reported the presence of side-effects in some participants.
- Symptoms included fatigue, hunger, postural dizziness, nausea, muscle cramps, bad breath and headache.

CARDIAC

- Three studies monitored for ECG changes.
- One study reported a potentially life-threatening arrhythmia (non-sustained VT) in one participant after the participant switched to a nutritionally-inadequate homemade formulation.
- Remaining two studies reported nil concerns.

GROWTH

- Six studies reported height and growth-related outcomes.
- Concerns of decreased growth velocity in two studies. Possible explanations include normal growth patterns.
- Remaining four studies reported nil concerns.

PSYCHOLOGICAL

- Two studies reported on psychological well-being.
- Outcomes included increased quality-of-life, self-esteem, and no new negative eating behaviours.

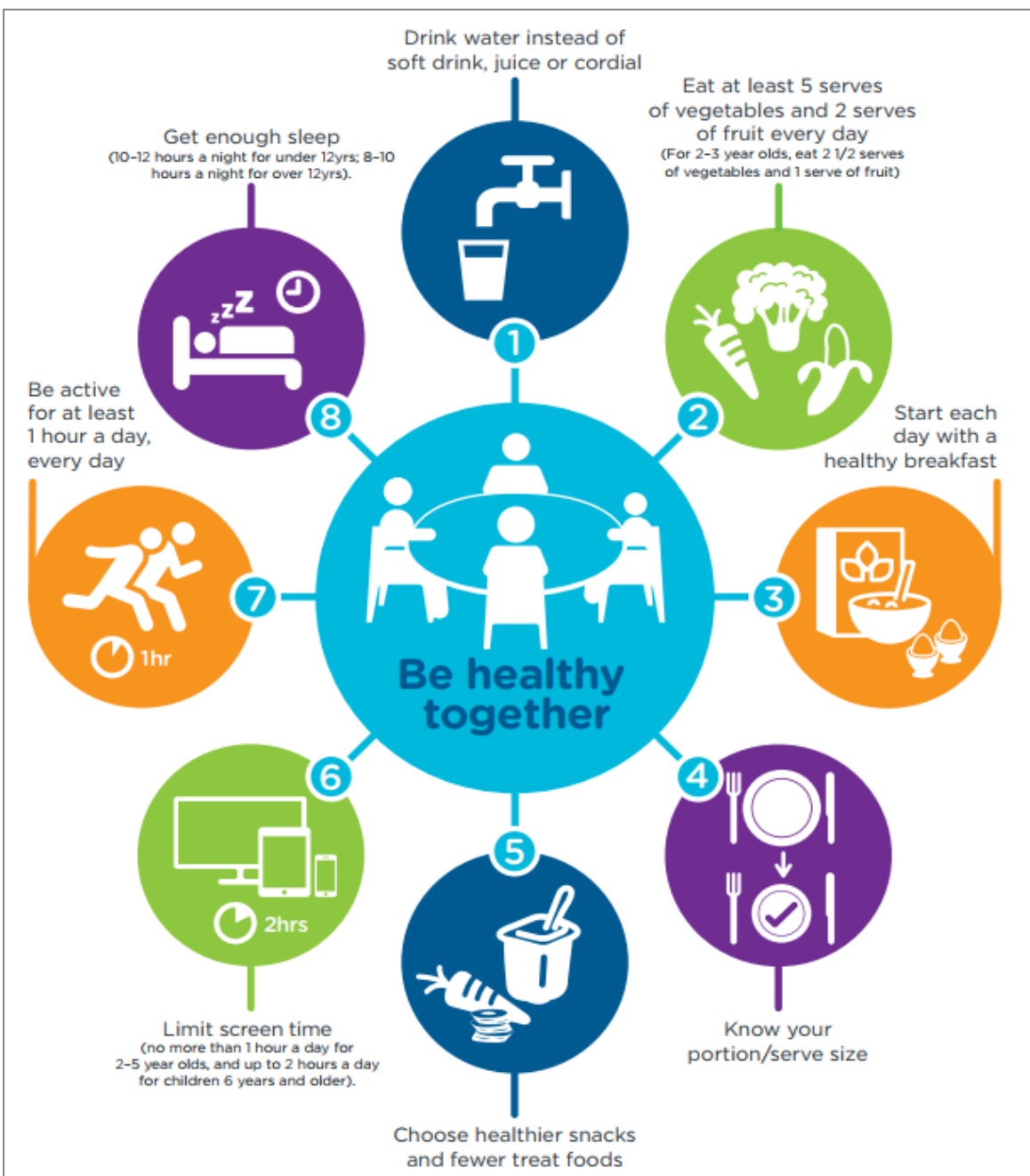
In adolescents with *moderate to severe obesity*

- No one dietary prescription is necessarily superior to another
- Consider use of VLEDs to help kick-start weight loss – especially in those with T2DM?
- Dietitian involvement is vital

Pharmacotherapy

Pharmacotherapy in obesity – potentially useful, although options very limited

- Current anti-obesity agents are limited in number and availability, with few subsidised by government agencies
- Few trials performed in adolescents, with clinical use often being off-label
- 2016 Cochrane Review:
 - Metformin and orlistat both result in weight reduction (~2 kg)
 - Metformin used in adolescents with clinical insulin resistance
 - Orlistat rarely used
 - Greater attrition in adolescent trials than in adult trials
 - Several ongoing trials identified – topiramate, GLP-1 receptor agonists



See also resources at:
pro.healthykids.nsw.gov.au

**Thank
you!**