

VITAL

Issue 49
winter
2011

NEWS, VIEWS & INFORMATION FOR NUTRITIONAL PROFESSIONALS

Young women and weight management

- 2 Weight loss that works
- 4 Gen Y: unique challenges
- 5 How big is the weight gain problem?
- 6 Tips for tackling obesity

 mla
nutrition

EDITORIAL

This issue of *Vital* is devoted to the topic of weight management in young women. The available evidence suggests that this is a vulnerable group who are at risk of weight gain and its associated physical and mental health problems. Yet evidence is lacking, both in the area of prevalence and interventions.

The features in this issue are based on the presentations and discussions from a recent symposium, "Tackling obesity in young women" hosted by Dietitians Association of Australia (DAA) and sponsored by Meat & Livestock Australia (MLA) which was held in Sydney on the 23rd March 2011.

Tackling obesity in young women

PRESENTATIONS:

Weight gain in young women: how big is the problem?

Professor Kate Steinbeck, The University of Sydney

Weight loss intervention for young women: what works?

Dr Helen O'Connor, The University of Sydney

Weight management in practice: insights from young women

Dorothy Dudley, Ipsos Marketing

PANEL MEMBERS:

Professor Kate Steinbeck, endocrinologist, adolescent physician and Medical Foundation Chair in Adolescent Medicine at the University of Sydney at Children's Hospital Westmead.

Dr Helen O'Connor, senior lecturer University of Sydney and chief investigator for the Weight Loss in Overweight Women (WOW) study.

Dorothy Dudley, Research Director, Ipsos Marketing, with over 20 years experience in the market and social research industry.

Mia Freedman, journalist, author and Chair of the National Body Image Advisory Group which provides advice to the Federal Government.

Dr Cindy Pan, medical practitioner, best selling-author and media personality with an interest in women's health.

Dr Janet Franklin, Senior Dietitian, Metabolism & Obesity Services, Royal Prince Alfred Hospital.

Weight loss that works for young women

A higher protein diet is found to be more effective than a higher carbohydrate diet in promoting weight loss in young women.

Increasing evidence suggests that a high protein diet is an effective weight loss intervention for middle-aged women, and for men. But until now the effectiveness of such an approach has not been investigated in young women.

Young women are generally underrepresented in weight loss research. A systematic review of weight loss interventions in 18–25 year olds found only one of the six studies identified included diet, exercise and behaviour modification, the gold standard approach for weight management.¹

The study

Dr Helen O'Connor and her group at the University of Sydney designed a weight management trial for young women to compare the effectiveness of a higher carbohydrate diet (HC) and a higher protein diet (HP) with the aim of a minimum loss of 5% of initial body weight.

The intervention involved diet, exercise and behaviour modification. Participants were supported with face-to-face consultations weekly for the first three months and fortnightly for the following three months. There was a further six-month follow-up with monthly support.

Healthy, non-vegetarian women aged 18–25 with a BMI >27.5 kgm⁻² were recruited. Recruitment was one of the most challenging aspects of the study, with some potential participants unwilling to commit the time and others ineligible due to iron deficiency (since this was one of the study outcomes).

Table 2: Nutrient profiles of daily diets

Nutrient	HP Diet	HC Diet
Energy (kJ)	5615	5602
Protein (g)	107 (32% of E)	67 (20% of E)
Carbohydrate (g)	138 (41% of E)	191 (58% of E)
Sugars (g)	73	83
GI/GL	46/61	52/93
Dietary fibre (g)	23	24
Total fat (g)	38 (25% of E)	32 (21% of E)
Calcium (mg)	908	877
Iron (mg)	12.2	9.9
Zinc (mg)	11.7	7.6

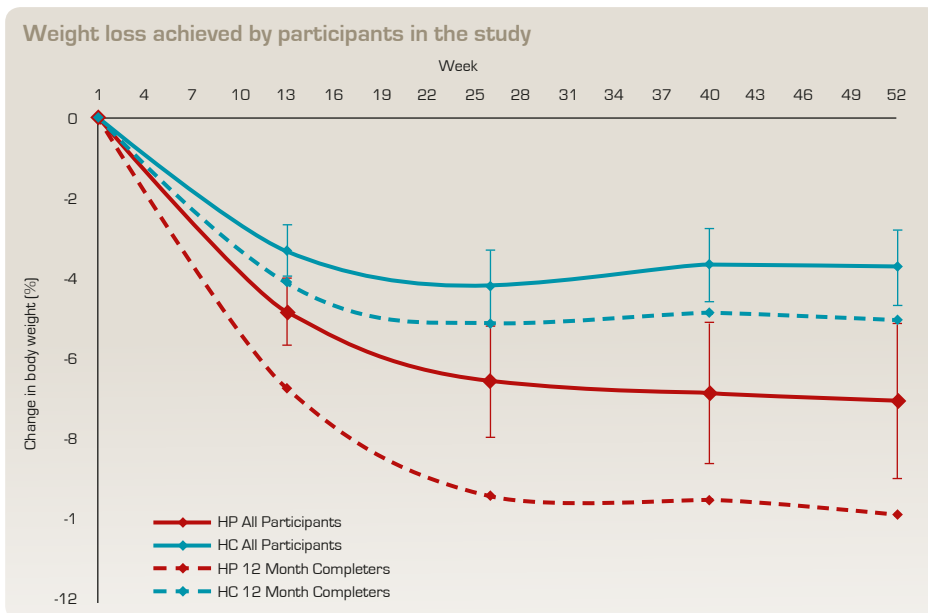
The 71 women were randomised to either the HP or the HC diet, both of which were closely matched for energy, saturated fat and most micronutrients. Most diets were low GI (see Table 2).

Results

- At six months, there was a significantly greater weight (8.9 versus 4.6 kg; P=0.03) and fat (8.0 versus 3.4 kg; P=0.04) loss on the HP diet. This translated into a mean percent loss of initial weight of 9.3% versus 5.1% for HP and HC, respectively (P=0.06). More participants on the HP diet lost ≥10% of initial weight (42.9% versus 26.7%; P=0.05).

Table 1: Diets used in the study

Food group	Units/day	1 unit exchange
Cereal	1	40g high fibre low GI breakfast cereal
Bread	3	1 slice wholegrain bread
Rice and pasta	HP: 0 HC: 1.75	120 g cooked rice or pasta
Lean meat	HP: 3 (1 at lunch; 2 at dinner) HC: 1	HP: 100g raw lean meat; 2 eggs HC: 80g raw lean meat
Dairy	2	250ml skim milk
Fruit	2	150g fresh or canned
Vegetables	2.5	1 cup cooked or salad
Fats and oils	3	5g canola/olive oil or margarine
Alcohol and treats	2 units/week	150ml wine or 430kJ treat



exercise.” While both groups showed clinically effective weight loss, the HP diet was more effective and weight regain was less evident in the follow-up part of the trial.

Helen O’Connor suggests that the better results for the HP diet may be due to the lower hunger and greater satiety reported by women on the HP diet. O’Connor commented that the lower glycaemic load of the meals on the HP diet may promote satiety and make compliance easier.

Initially, says Helen O’Connor, young women expressed disbelief that they could eat the amount of meat prescribed by the HP diet and still lose weight. Yet once they learned how to cook it and started to see the weight loss results, they found they enjoyed the meat, and missed it when it wasn’t part of dinner.

- Unlike most studies where the mean weight loss increases in the 6–12 month follow-up period, the mean loss in this study was maintained in both groups with a trend for additional loss in the HP group.
- Lean mass was retained in both groups, with a loss of less than 1kg.
- Iron and zinc intakes were higher on HP but both diets met the EAR. Ferritin levels tended to fall on HC but were better maintained on HP (P=0.02) suggesting HP was better able to meet the iron requirements of participants.
- Participants completing the trial on both diets had changes in food behaviours consistent with successful weight management. However, those on the HP diet tended to experience less hunger and desire to eat, a faster rate of improvement in self worth and overall,

a pattern supporting lower tendency to binge and emotional eating.

Comments

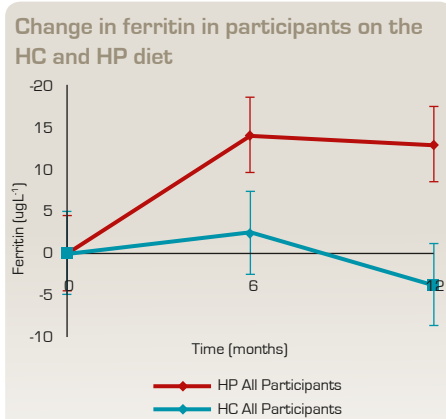
Weight loss of the magnitude found in the study suggests that weight management is faster and more effective in younger than in middle-aged women, particularly with a HP style diet, says Helen O’Connor. The difference in weight loss was a diet effect as both groups reported a similar amount of exercise. “We prescribed participants just 30 minutes of walking a day, so it’s possible weight loss results could be even greater with more

STOP PRESS

The results here on young women are consistent with the latest findings from the Diogenes Project. This study in 773 adults also found that a modest increase in protein content and a modest reduction in the glycaemic index led to an improvement in study completion and maintenance of weight loss.²

References

1. Poobalan AS et al. *Obesity Reviews* 2010;11:580–592
2. Larsen TM et al. *N Engl J Med* 2010; 363(22):2102–2113



Gen Y: unique challenges

Effective weight loss in young women requires an understanding of the lifestyle, expectations, and motivations of Generation Y.

For each generation there are special challenges which need to be considered when developing weight loss strategies. For Generation Y, new technology, social behaviours and individual expectations play an important role in weight management.

Quick results

Having grown up in a time when social media provides instant connections with friends, the internet offers immediate information, and the media promotes speedy 'makeover' style health changes, young women have an expectation that weight loss too will be fast and dramatic. Compounding an anticipation of instant success is a tendency towards impatience. This generation finds it difficult to look down the track and build foundations for something worthwhile in the future. This applies to their health as much as it does to their careers. They work to very short time-frames.

"Slow and steady is not a sexy message in the age of "World's Biggest Loser," says panel member, former magazine editor and Chair of the National Body Image Advisory Group, Mia Freedman.

Market researcher Dorothy Dudley, Research Director at Ipsos Marketing, who has researched the weight loss habits of young women, says that the promise of instant results has great appeal, and also explains the significant attrition rate among this age group. "Often testimonials have hooked young women to join up to a particular program," she says, "and when the same outstanding results don't happen for them they drop out". These expectations for speedy 'lose a dress size this weekend' strategies make traditional healthy eating programs with their emphasis on avoiding a 'quick fix' seem boring.

Perhaps this explains the under-representation of young women at clinics. While they sign up for the fast promises of commercial weight loss centres and programmes they are less inclined to seek out professional advice. Professor Kate Steinbeck says that the mean BMI of young women making their first visit to the clinic at Royal Prince Alfred Hospital Metabolism and Obesity Services is 43 years.

Alcohol and social life

Drinking is an important aspect of the social life of young women and over-consumption of alcohol is common. Young people drinking too much is not news, but Professor Steinbeck says that for Generation Y, the drinking doesn't so much accompany social occasions, but tends to dominate. The primacy of alcohol in social situations leads to a number of weight-related outcomes. Coupled with the impact of the alcohol itself are its attendant side-effects: poor food choices both while drinking and in nursing a hangover the following day; and the disinclination to exercise with a hangover. "Sweetened alcoholic beverages are popular amongst young women which provides additional calories," says Professor Steinbeck, "and alcohol is always metabolised first, so that excess fat calories are more likely to be stored."

Restrained eating practices

Restrained eating is not practiced by young women alone, but once behaviours become entrenched at this age, they are likely to continue, and hence to continue causing problems. Restrained eating practices may go back to adolescence says Professor Steinbeck, and become entrenched as a cyclic pattern of behaviour that leaves women hungry and confused, undernourished and overweight. The consequent loss of self-esteem can lead to depression, and a sense of helplessness around food and weight.

Lack of food skills

The basic know-how required to plan, shop, prepare and cook a healthy meal is largely missing from the skills set of this group. Researchers involved in the University of Sydney study on weight loss in young women, told of answering calls from subjects in the study about what constituted a portion size; how to cook meat; and what to buy from the overwhelming range in the bread aisle of the supermarket.

Dr Helen O'Connor adds that a survey of Faculty of Arts students at Sydney University found they were able to quote healthy eating guidelines, but had limited 'process' knowledge about food selection or 'the how' of planning and eating a healthy diet.

Gen Y is growing into food independence at a time when cooks are 'celebrities' and there has never been more cooking presented on television. Yet food TV is primarily food as 'performance' rather than sustenance. Watching someone make a towering croque-en-bouche doesn't help you know how to stock a fridge with fresh foods that can be quickly and easily made into a range of dinners. This generation may have missed out on cooking skills at school or at home with more parents working, gender roles changing and more meals eaten out of the home. While the growth of Stephanie Alexander's kitchen garden program through primary schools is reaching a new generation of children with information and hands-on experience of growing, preparing and cooking fresh food, there was concern that Generation Y may have missed out.

Strength of peers

This generation is constantly connected to its peer group, whose opinions matter. Dr Janet Franklin, Senior Dietitian in Metabolism and Obesity Services, Royal Prince Alfred Hospital says that it can be difficult to convince young women that the advice of an expert has more credibility than that of a friend on Facebook. Health professionals need to work to build trust in the integrity and value of their message.

The importance of the peer group can work both in the individual's favour when it comes to health, and also as a saboteur, says Professor Steinbeck. How things work out depends on the individuals in the group and their health status. She also mentioned that any delay in social competency compared to peers and of "being out of step in the transition into adulthood" was a trigger for stress and a risk factor for overweight in young women. This factor puts the disabled and those with borderline mental disability at particularly increased risk.

Dorothy Dudley says that members of Generation Y, when it comes to weight loss strategies and exercise, prefer to mix in groups of a similar age, rather than with older women, as they feel that they have distinctly different needs and experience.

Weight gain: how big is the problem in young women?

The available evidence points to obesity levels in young women as a real concern, says Professor Steinbeck, endocrinologist, adolescent physician and Medical Foundation Chair in Adolescent Medicine at the University of Sydney at Children's Hospital Westmead.

Prevalence

When it comes to evidence on the prevalence of overweight and obesity in Australia's young women, there is a research gap. Nonetheless while the data is limited it suggests that rates of overweight in Australia's 18–25 year old women is close to that of the US, with the group at highest risk being those who live in rural and regional centres.¹

"When you look at the trends in overweight and obesity in population groups for which we do have data you see a rapid increase from the mid-'70s," says Professor Steinbeck. "It now appears that that trend may be levelling off but it's unclear whether that is through measurement error, the population having reached a new 'fat equilibrium' or the success of public health messages. We can't be sure, but whichever figure we choose to accept we can confidently say that any health issue that has a prevalence of more than 10% is a real concern, overweight included."

Studies also suggest that the pattern of weight gain is changing, with more women taking on an 'apple' body shape, rather than the more traditional, hip-heavy 'pear'. This central rather than peripheral fat is a known health risk. Professor Steinbeck suggests that this trend for an increase in waist size might be related to a reduction in exercise, coupled with the hormonal repercussions of having fewer children than women in the past.

Evidence from the long-running Women's Health Study suggests that the greatest gain in weight occurs in young adulthood.

Weight gain in the Australian longitudinal study on Women's Health³ (1996–2003)*

Age range	Weight change (g/yr)
Younger women (18–23)	+ 649
Middle aged (50–55)	+494

*Self reported body weight were collected in 1996, 2000, 2003

The causes of weight gain seem not to differ with age.

Risk factors for weight gain differed between young and middle aged women in the Women's Health Study²

Young women	Middle-aged women
High BMI at start of adulthood	Quitting smoking
Sitting > 4.5 hours per day	Hysterectomy
Regular take-away consumer	Menopause
Restrictive eating practices	Less than 150 minutes per week of physical activity
	High sitting time
	High BMI at start of middle age

Professor Steinbeck says it is reasonable to assume that the weight gain started back in adolescence. Fat levels increase throughout puberty due to the normal effects of oestrogen. How young girls manage this change in their body shape goes a long

way to predicting their weight status in adulthood. "Once obesity is established it is very unusual for that to change," says Professor Steinbeck. "Moving up on fat percentiles is much more common."

Professor Steinbeck believes that there are advantages to starting weight loss interventions in adolescence. Findings from 658 children participating in the Diogenes Project which focussed on weight loss in their parents, suggested that a higher protein/low GI family diet reduced body fat.⁴

Medical implications

"Most of the serious medical issues are waiting to happen down the track, but will most likely occur earlier than in their parents' generation," says Professor Steinbeck. Nonetheless there are immediate health consequences, including increased levels of iron deficiency. Obesity is linked to rises in hepcidin, which reduces the absorption of iron and its release from iron stores, and thereby contributes to iron deficiency. Iron deficiency symptoms may exacerbate the challenge of making the diet and lifestyle changes necessary for weight loss.

Polycystic Ovarian Syndrome (PCOS) is a common endocrine disorder and risk increases with obesity. Even without PCOS, excess weight causes problems with pregnancy and childbirth.

Overweight reduces levels of fertility, and also impacts on live birth outcomes. The more obese a woman is the more likely there will be pregnancy complications, from gestational diabetes to the need for intensive care for the baby. Children of mothers who are obese at their birth are more likely to be obese at five, and this is thought due to genetic and epigenetic phenomena.

References

1. Popkin B.M. *AJCN* 2010; 91 (suppl); 248S-8S
2. Ball et al *Int J Obesity* 2002
3. <http://www.alswh.org.au/AbstractConf.php?qsID=319>
4. Papadaki A et al. *Paediatrics* 2010; 126(5)
5. Yildiz et al *JCEM* 2008

Rate of weight gain in young women aged 30 years¹



Tips from the panel

in tackling obesity in young women

Get them in

Dr O'Connor's research group found that mothers were a conduit to recruiting young women for weight management. Reaching out through parents is also a way of getting started on the overweight problem earlier, which Professor Steinbeck says would be helpful. A peak of interest in weight loss is also seen in the early post-partum period and so this is a good time to target lifestyle change.

Get the message right

While most young women prefer not to be treated as simply 'one of the crowd', they also don't want to feel singled out as 'abnormal'. It is useful to talk about the experience of 'lots of people' said Kate Steinbeck, and to avoid 'medicalising' the issue.

Tailor the advice

Healthy eating advice needs to be made personal and positive. It is better to focus on nutrient-rich foods that need to be eaten, rather than foods to avoid.

Be flexible

This generation's desire for spontaneity and flexibility means that appointment scheduling needs to be flexible. For instance, a combination of formal appointments and a drop-in and wait service may be preferable.

Keep them in

Plenty of praise and encouragement is required. Intense daily contact may be necessary to support young women developing skills for healthy eating. "External monitoring is vital to success," said Dorothy Dudley, "and support needs to be empathic and credible."

Provide realistic strategies

"Alcohol needs to be part of the eating plan," said Dr Franklin, Senior Dietitian in Metabolism and Obesity Services, Royal Prince Alfred Hospital. "You can't isolate them socially by banning alcohol." You need to provide tips on how to manage intake and on the best drink choices. Likewise eating out should not be considered a treat for this age group, but a regular part of the week. Advice on how to treat a night out as

a proper main meal that provides a balance of protein, vegetables and carbohydrates may provide a useful weight management tool for this age group. "Achievable targets are important," said Dorothy Dudley, with enough 'treats' and 'time off' so that weight loss is not experienced as the priority of life, but merely as one aspect of it.

Address media misinformation

"You must tell them that the media sell a lie," said Mia Freedman, who claims that no picture of a celebrity gets into a magazine without being airbrushed, or 'stretched' first. The young women who read the magazines need to know that these are not images of reality. Claire Hewat, CEO of Dietitians Association of Australia urged dietitians to address other misinformation in the media about food and dieting and not to let myths go unchallenged.

Manage expectations

Media gives the impression that effective weight loss is speedy. Expectations for instant results need to be managed and effective targets set to give a sense of success. Dr Franklin also suggested that when providing weight loss advice to women with PCOS, it is worthwhile pointing out that Metformin is not a weight loss drug.

Treat the problem

A major difference between dealing with overweight in young men and in young women is that overeating in young women is often a response to a psychological or emotional issue. The root problem needs to

be identified and treated for success, and this requires trust between the client and the dietitian. Developing that trust may take time and patience.

Teach basic food skills

Assume limited expertise in preparing and cooking food. Advise on essential equipment for the kitchen and give advice on shopping lists and shopping frequencies. Show how to shop and cook to a budget and offer a range of easy meals that can be made in under 30 minutes.

Give up-to-date advice

Clare Hewat emphasised the role of dietitians in providing authoritative, up-to-date, evidence based advice. Claire noted that there is enough evidence to suggest that higher protein diets work well and maybe even better in some people. She said this was a particularly important message for the broader community, particularly in rural and regional areas where simple reduction of fat intake still seems to be what people think is all that is required to lose weight.

Get involved in research and health policy

There was consensus that there is a need for both more research on managing weight in young women and more policy direction. There are recommendations for children and for adults, but recommendations for this critical age group are missing. There are opportunities for dietitians to be involved in both of these areas.



This publication is published by Meat & Livestock Australia Limited ABN 39 081 678 364 (MLA). Care is taken to ensure the accuracy of information in the publication, however, MLA cannot accept responsibility for the accuracy or completeness of the information or opinions contained in the publication. Readers should rely on their own enquiries in making decisions concerning their interests. Reproduction in whole or in part of this publication is prohibited without prior consent of MLA. ©2010. Published May 2011.

Contact details: MLA Nutrition, Locked bag 991, North Sydney NSW 2059 Tel: 02 9463 9361 Fax: 02 9463 9173