



Commercial Products and Programmes in Obesity Management

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KEY MESSAGES FOR HEALTHCARE PROFESSIONALS



- **The commercial weight-loss industry is enormous. Clinicians should familiarise themselves with the commercial obesity-management offerings in their vicinity as well as the Health Service Executive self-management interventions that support individuals living with a chronic condition, including obesity¹.**
- **Criteria have been published to evaluate whether a commercial programme is safe and potentially effective (i.e., offering a combination of nutrition, physical activity and behaviour change support; with realistic weight-loss goals of 0.5–1.0 kg per week; a long-term weight-maintenance approach; a good safety profile; and reasonable costs).** A checklist for clinicians has been developed as a resource to support this chapter (Appendix: Clinician's Guide — The 10 safety criteria for commercial weight-management programmes).
- **None of the weight-loss products from the commercial industry that were studied in randomised control trials of more than 12-weeks duration were shown to produce clinically meaningful weight loss.**
- **Some commercial programmes that combine nutrition, physical activity and support can be used to induce modest weight loss.** Some programmes have also shown improvement in glycaemia in patients with obesity and diabetes but no effect on lipids or blood pressure have been demonstrated.

RECOMMENDATIONS



1. For adults living with overweight or obesity, some commercial programmes exist which should achieve mild to moderate weight loss over the short or medium term, and a mild reduction of glycated haemoglobin values over a short term in adults with type 2 diabetes compared to usual care or education, However, none of those programmes are currently available in Ireland².
2. We do not recommend the use of over-the-counter commercial weight-loss products for obesity management, owing to lack of evidence (Level 4, Grade D)³.
3. We do not suggest that commercial weight-loss programmes be used for improvement in blood pressure and lipid control in adults living with obesity (Level 4, Grade D)⁴.

KEY MESSAGES FOR PEOPLE LIVING WITH OBESITY



- **The commercial weight-loss industry is flourishing and is often characterised by unrealistic advertising.**

Before participating in a commercial programme or using a commercial weight-loss product, people with obesity should ensure that the approach is safe and potentially effective (a combination of nutrition, physical activity and behaviour-change support; realistic weight-loss goals of 0.5–1.0 kg per week; a long-term weight-maintenance approach; a good safety profile; and reasonable costs).

- **People living with overweight or obesity should be very cautious of weight-loss programmes that:**
 - i) promise weight loss without nutrition or activity**
 - ii) promise weight loss while eating as much food**

as you want; iii) promise reduction of weight from particular locations on the body; iv) promise overly rapid loss (for example: losing 30 pounds in 30 days); or v) include before and after photos and personal endorsements that seem too good to be true.

- **Many natural weight-loss products and food supplements for weight loss are available without a prescription but none of these have been proven to provide clinically meaningful weight loss in high-quality scientific studies.**
- **Some commercial programmes have been shown to be effective to produce modest weight loss. These are not always the most suitable option for everyone but are generally considered safe.**

Introduction

“An intensive study of medical frauds and fads made over a period of nearly twenty years has convinced me that in the whole realm of quackery there is no field that is more easily worked nor one that offers greater financial returns to the medical swindler than that devoted to the exploitation of ‘cures for obesity’” (Arthur J Cramp, MD, 1929)⁵.

The commercial weight-loss industry is enormous. The size of the diet and weight-loss/management market in Europe is expected to be worth USD 8325.16 million (EUR 7337.97 million) by 2026 from USD 5549.39 million (EUR 6467.84 million) in 2021 with an annual growth rate of 8.45% during the forecast period⁶. There is no shortage of commercial obesity management programmes, products and promises that consumers can access without prescription or medical advice. According to research and analyses for Ireland, the market size for weight management continues to decline. This has been attributed to a more skeptical consumer attitude towards the weight-loss industry and a greater awareness of this chronic disease⁷. It is as true now as it was in 1929, some “cures for obesity” are undeniably exploitative.

While healthcare professionals (HCPs) cannot be expected to be familiar with all of the direct-to-consumer obesity-management goods and services, developing an awareness of what is readily available to their patients in their local geographic area is worthwhile. It is also worthwhile to gain some familiarity with some of today’s more popular commercial weight-loss initiatives.

Evidence for these various products and services, however, is at times scant and at other times challenging. Limitations of the research to date include a disproportionate representation of females compared with males in commercial weight-management programme trials, imbalance in socio-economic status representation and lack of reporting on risk factor measures for chronic disease prevention, such as blood pressure (BP), lipids, quality of life and glycated haemoglobin (HbA1c). It is perhaps most challenging when it comes to the evaluation of obesity-management-service provision. The efficacy of a service is in some part, if not large part, dependent on the service providers’ skills. Furthermore, with many commercial programmes the service being provided changes, and hence what might have been shown to be true for one iteration of a programme may not necessarily be applicable to future iterations. Take, for example, WW[®] (formerly Weight Watchers). There have been many

studies exploring various aspects of the programme's outcomes. Since 1997, the Weight Watchers® programme has changed eight times. In December 2017, Weight Watchers® launched the freestyle programme, which replaced the Smart Points programme launched just two years prior. In September 2018, the company changed its name from Weight Watchers® to WW® (WW® Reimagined) and declared its new focus was no longer weight loss, but overall health and wellness, and revealed a new tagline: "Wellness that Works." In December 2021, WW International, Inc. acquired WW Ireland and ceased all workshops (in-person and virtual) and other business operations in Ireland. At the time of writing this chapter, the future offerings of WW® programmes in Ireland are unclear. In the meantime, Irish customers can avail of digital tools with WW GBR Limited⁸.

In considering obesity-management programmes, the American National Institutes of Health published a short guideline⁹ for both patients and practitioners, detailing what to look for in a safe and successful obesity-management programme, including:

- Behavioural counselling, including the use of food and activity records;
- Discussion around social determinants of health and their impact on weight;
- Discussion around the risks and benefits of medications for obesity management;
- Ongoing feedback, monitoring and support from the programme;
- Weight loss goals of 0.5–1.0 kg weekly;
- A component specifically designed to address maintaining lost weight; and,
- Long programme durations⁹.

People should be extremely cautious of weight-loss programmes that:

- Promise weight loss without nutrition and activity;
- Promise weight loss while eating as much food as you want;
- Promise spot reduction of weight from particular locations;
- Promise overly rapid loss (for example, losing 30 pounds in 30 days); and/or,
- Include before and after photos and personal endorsements that seem too good to be true.

Commercial products and programmes

The focus of this chapter is commercially available weight loss products and programmes that are offered outside of the Irish healthcare service. These products and programmes can vary greatly

and can include everything from food supplements to commercial weight-loss programmes that include meal replacements. Some of these options may require purchase of the programmes' foods or supplement products. There may also be fees for professional services.

For the purpose of this review, the commercial weight-loss products and programmes available in Ireland will be categorised as follows:

- **Food supplements for weight loss:** These are foodstuffs to supplement the normal diet that are concentrated sources of nutrients or other substances with a nutritional or physiological effect, alone or in combination. They are marketed in dose form, namely capsules, pastilles, tablets, pills and other similar forms; sachets of powder, ampoules of liquids, drop-dispensing bottles and other similar forms of liquids and powders; and they are designed to be taken in measured small-unit quantities (Directive 2002/46/EC). This chapter considers food supplements purported for weight loss.
- **Meal-replacement programmes for weight loss:** This chapter considers products presented as a replacement for meals e.g., snack and food-based products, such as bars and soups, etc.
- **Weight-loss programmes:** Programmes offered directly to consumers in person and/or online through group or individual participation, also includes self-directed programmes. Costs vary based on level of services accessed. These programmes may also include branded food products which are an additional cost to the consumer.
- **Commercially available alternative therapies:** These include non-food-based therapies claiming to induce weight loss.

Food supplements for weight loss

Perhaps the most widely available of the products and services purported to help with obesity management are food supplements for weight loss. Available in pharmacies, supermarkets and health food shops across the country and online, these products abound. It is important to note that there is a growing body of evidence that many dietary supplements are adulterated. A recent paper published in JAMA (Journal of the American Medical Association) Network Open, assessing American supplements, found more than 700 contained unlabelled pharmaceutical ingredients³. The inclusion of these ingredients puts users at risk for both side effects and drug interactions. Though it is difficult to quantify the degree of morbidity supplements and adulterated supplements may confer, a 2015 study published in the New England Journal of Medicine reported that they are responsible for over 23,000 emergency room visits annually in the US¹⁰. In Ireland, all food supplements which are placed on the Irish market require statutory notification to the Food Safety Authority of Ireland. These products are required to comply with the requirements set out in Directive 2002/46/EC and S.I. No. 506 of 2007. Environmental Health Officers working in the HSE supervise establishments manufacturing and marketing food supplements in Ireland. Appropriate enforcement action may be

taken if non-compliant food supplements are identified during official controls¹¹.

Though it is beyond the scope of these guidelines to review all available products, there are some, sold either on their own or as an ingredient in a polypill, which are worth briefly mentioning as their prevalence underscores their more widespread use and availability.

Fibre-based products

Dietary fibre is thought to contribute to weight loss through a variety of mechanisms, including delaying gastric emptying — which in turn increases satiety and reduces dietary intake — and binding food, causing excretion of calories¹².

Glucomannan

Glucomannan is a soluble fibre isolated from the konjac tuber plant that is thought to delay gastric emptying and in turn increase satiety and reduce dietary intake¹². A recent systematic review of six short, randomised control trials (RCTs) came to the conclusion that there was limited data to support that glucomannan supplementation may help to reduce body weight, but not body mass index¹³.

PGX®

PGX®, or PolyGlycopleX, is a highly viscous fibre that is purported to help decrease appetite, manage body weight, and improve glucose, insulin and cholesterol metabolism¹⁴. A 2015 meta-analysis of double-blinded RCTs looking at PGX® concluded that the available evidence does not indicate that PGX® causes reduction in body weight, though it may cause reductions in both total and low-density lipoprotein (LDL) cholesterol¹⁵. A 2017 meta-analysis of soluble-fibre supplementation as a whole on obesity management found that, while supplementation did associate with weight loss (2.52 kg), caution in interpretation should be exercised given the “considerable between-study heterogeneity” found¹⁶.

Chitosan

Chitosan is a polysaccharide thought to reduce the absorption of dietary fat from the gastrointestinal tract¹⁷. A 2008 Cochrane systematic review assessing 15 trials including 1219 participants found that chitosan supplementation led to 1.7 kg greater weight loss, which it described as “minimal and unlikely to be of clinical significance”^{18,19}.

Psyllium

Psyllium is a plant-based fibre, with both water insoluble and water soluble versions. The latter is sometimes called ispaghula husk. Weight loss has been reported in three studies of psyllium. However, the evidence in these studies is weak due to lack of reporting of outcomes in place or healthy eating groups or information on other lifestyle interventions which may have contributed to the weight loss^{20,21}.

Garcinia cambogia

Garcinia cambogia is a small fruit popular in cooking in Southern

India, that is also purified and marketed to offer obesity management, appetite control and more. Its putative mechanism of action involves the inhibition of citric acid lyase by way of its hydroxycitric acid²². To date, the RCT data are sparse, short term and of small size. A 2012 meta-analysis concluded that there is little evidence to support the use of garcinia cambogia¹⁰. There is also concern for liver toxicity consequent to the use of garcinia cambogia and garcinia cambogia-containing supplements; a 2018 literature review reminded physicians to actively monitor patients taking these products²³.

Green tea extract

The bioactive components of green tea are their polyphenols (catechins), whose proposed primary mechanism of action involves increasing energy expenditure and fat oxidation²⁴. Reviews of green tea catechins in obesity management have not demonstrated clinical efficacy with either weight loss²⁴ or weight-loss maintenance²⁵.

Chromium picolinate

Chromium picolinate is said to stimulate neurotransmitters responsible in eating behaviours²⁶ improving glucose metabolism and insulin sensitivity²⁷. A 2013 Cochrane review concluded that there was no current, reliable evidence to inform treatment decisions as to the use or safety of chromium picolinate supplementation for the treatment of obesity²⁸.

Conjugated linoleic acid

Conjugated linoleic acid is a term used to describe a group of fatty acids that are produced naturally in the digestive tracts of ruminants, pigs, chickens and turkeys²⁹. Its purported anti-obesogenic properties are thought to stem from its impact on lipid metabolism and consequent reduction in body fat³⁰. A recent system review of 13 trials found that conjugated linoleic acid supplementation reduced body weight on average by a “not clinically relevant” 0.52 kg³¹.

Capsinoid

Capsinoid and capsaicin are compounds found in chilli peppers. Two trials examined the use of capsinoids for weight loss; however, neither study reported greater weight loss in the intervention group compared with the placebo group^{32,33}.

Carnitine

Carnitine (L-carnitine and acetyl-L-carnitine are metabolically related) is a naturally occurring compound that can be found in most cells in the human body. It has enzyme-related activity that is reduced in obesity and theoretically it has been promoted as helpful for weight loss without any evidence of such. There are no clinical trials demonstrating clinical efficacy of this compound³⁴.

Herbal diuretics

Diuretics, such as dandelion root, have been used widely for weight loss. Although weight can be temporarily reduced, there are no evidence to suggest that diuretics can support weight loss.

Guarana, yerba mate and caffeine-related products

Caffeine is often promoted as increasing fat burning, and slowing down the rate at which carbohydrates are broken down in the gut.

Yerba mate (*Ilex paraguariensis*) and guarana (*Paullinia cupana*) are plant sources of stimulants caffeine and xanthine, respectively. There is little evidence to suggest that stimulants can cause weight loss.

Raspberry ketones

Raspberry ketones are chemically similar to the structures of capsaicin and synephrine-compounds suggested to alter lipid metabolism and thereby helping with weight loss. Limited research has been conducted on humans and there is no evidence of the effectiveness of raspberry ketones for weight loss³⁵.

Tumeric

Curcumin (diferuloylmethane) is the active ingredient of the spice turmeric (*Curcuma longa*). Several systematic reviews of RCTs conducted to evaluate the effects of curcumin supplementation on body weight found most studies were low-quality evidence for weight loss³⁶.

Coleus forskohlii

Coleus forskohlii (colf) is a member of the mint family. There is no evidence to suggest colf is better than placebo for weight loss³⁷.

Meal-replacement programmes for weight loss

Though it is beyond the scope of these guidelines to review all available programmes using meal-replacement products, there are some that are worth briefly mentioning as they are readily available over the counter and online. Caution should be applied when considering meal replacements for weight loss given the lack of evidence for these commercial products. Evidence on total meal replacement with medical supervision in weight management is covered in Chapter 8 [Medical Nutrition Therapy in Obesity Management](#). There are also stand-alone products, such as protein shakes, that are not used as a meal replacement, rather in addition to food to increase protein intake but there is little evidence to support their role in weight management.

Nutrisystem®

Nutrisystem® is a high-intensity commercial programme based on an individual counselling session, exercise plan, online tracking methods for food journaling and a low-calorie diet with meal replacement². In Ireland, the meal replacement products are available to purchase online; however, the supporting programme is not accessible. There is no evidence for the use of these products unsupported. One RCT compared Nutrisystem® with control/education, and two RCTs compared Nutrisystem® with behavioural counselling. Nutrisystem® resulted in 3.8% greater weight loss than control or education at three months². No trials continued to 12 months. Attrition was less than 20%, and no serious adverse events were reported. Compared to counselling, Nutrisystem® improved HbA1c by 0.3% at six months in patients with T2DM mellitus (T2DM), and 28% of participants had a reduction of oral hypoglycaemic medications^{38,39}. Compared to diabetes education, Nutrisystem® reduced HbA1c by 0.8% at three months for patients with T2DM⁴⁰. In head-to-head studies that compared Nutrisystem®

and Curves, no programme was shown to be superior regarding weight loss and waist circumference⁴¹. In a single trial, Nutrisystem® lowered systolic BP by 4.7 mm Hg more than counselling at six months. There was no difference in LDL, high-density lipoprotein (HDL), triglycerides (Tg) or total cholesterol at six months⁴. No trial reported 12-month results.

Slimfast®

Slimfast® is a self-directed programme based on low-calorie meal replacement with online nutrition support and coaching text messages. Four RCTs compared Slimfast® with control/education and four RCTs compared Slimfast® to counselling. Results were mixed with most only reporting on completers. One study did not show any difference regarding weight lost between Slimfast® and control/education, but most of the studies showed a difference in weight loss between groups, ranging from -5.2% to -8.7% from six months to 51 months. Compared to behavioural intervention, Slimfast® showed a modest weight-loss difference, ranging from zero to -3.4% at three to 12 months. The attrition rate was not reported for most of the studies but, when reported it varied between 13% and 42%. No serious adverse effects were reported². At 12 months, there was no significant change in HbA1C between Slimfast® participants and the counselling group, but there was a greater reduction of oral hypoglycaemic medication (40% reduction for sulfonylurea and 29% reduction of metformin)³⁹. The comparison of WW® and Atkins® to Slimfast® did not demonstrate any difference on weight loss between the programmes, but Slimfast® participants had an average of 4.5 mm Hg lower systolic BP after six months compared to the Atkins® group⁴¹. At six months, one RCT found no significant difference in systolic and diastolic BP between Slimfast® and control/education. Most trials did not report the variance estimates for between groups difference, which limits our ability to report statistical significance for BP and lipids^{4,42}.

Weight-loss programmes

WW®

At time of writing this chapter, only the digital tools with WW GBR Limited are available to Irish customers. The evidence available to date mainly relates to in-person supported programmes. Although the WW® programme has varied over time, it relies mainly on a points-based food plan that is individualised according to sex/age/weight, using online tools (tracking, goal setting and social community) and support groups (wellness workshops) with weekly in-person meetings. The programme focuses on a low-calorie diet composed of conventional foods, encouragement to increase physical activity and behaviour-modification strategies⁴³.

Effect on anthropometric measures

A systematic review published in 2015 (using data from 2002–2014) evaluated 45 studies of commercial programmes of at least 12-weeks duration, including 39 RCTs. The population studied were adults with overweight or obesity. Six RCTs compared the WW® programme with usual care (which could be no intervention, printed materials or less than three counselling sessions with a provider), with 1850 participants in total. No adverse events were

reported. Although more weight loss was observed after three to six months (-2.5% to -7.9% absolute weight-loss difference between WW[®] and control), in the three large studies with one-year results (n = 200 to 772) the difference between percent weight change of the WW[®] group versus the control group at 12 months was 2.6% to 3.2%².

A recent RCT in the primary care context compared a brief intervention to 12 weeks or 52 weeks of the WW[®] programme. At 12 months, the brief intervention group had lost an average of 3.3 kg, the 12-week WW[®] group 4.8 kg and the participants in the 52-week WW[®] programme 6.8 kg. At 12 months, 57% of participants in the WW[®] 52-week programme had lost 5% of their initial weight compared to 42% and 25% of participants in the 12-week WW[®] programme and brief intervention group, respectively. Moreover, 10% weight loss was achieved in 30% vs. 15% vs. 9% of participants, respectively. Differences between groups remained significant at the two-year follow-up⁴⁴.

A small RCT (n = 46) also compared the WW[®] programme (17 weeks) with a nurse-led, clinic-based weight-loss intervention consisting of 12 individual weight-loss counselling sessions over 17 weeks plus the possibility of meal replacement and/ or pharmacotherapy. In that setting, the clinic-based intervention was more effective for weight loss (-4.0 kg vs. -0.4 kg)⁴⁵.

Effect on cardiovascular risk factors

A systematic review of RCTs studying commercial programmes from 2002–2014 was performed. There was no effect on systolic BP (three studies), half of the studies reported small effects on diastolic BP or small improvements in Tg, LDL and HDL. These studies, however, had a high risk of bias due to attrition⁴.

Effect on glycaemia

A recent RCT has compared the effect of WW[®] (n = 112) with a self-help programme developed by the National Diabetes Education programme (based on the Diabetes Prevention Programme trial intervention, n = 113). WW[®] participants lost more weight than controls at 12 months (5.5% vs. 0.2%) and had greater improvements in HbA1C and HDL⁴⁶.

In a RCT of 563 adults with T2DM, the WW[®] programme, combined with telephone and email consultations with a certified diabetes educator was compared with standard diabetes nutrition counselling and education. The patients in the WW[®] group showed greater weight loss (-4.0% vs. -1.9%), improved HbA1c (-0.32 vs. +0.16) and 26% could reduce diabetes medication vs. 12% in the standard care group. These patients also had significantly greater improvement in weight-related quality of life and a decrease in the diabetes distress score⁴⁷.

Other outcomes

In the United States, a cost-effectiveness review estimated that the average direct cost of each kilogram of weight lost with the WW[®] programme compared favourably to the use of the Jenny Craig[®] (a US-based programme, unavailable in Ireland) or pharmacotherapy⁴⁸. Cost effectiveness was also favourable in a study from the United Kingdom for a 52-week WW[®] programme⁴⁴.

In a recent RCT, participants in the WW[®] group lost significantly more weight after 12 months (-6.1 kg or 6.9% of baseline weight) than those in the usual care group who received weight-management advice by their primary care professionals (-2.6 kg). This was accompanied by a greater decrease in fat mass, waist circumference and improvement in HDL in the WW[®] group. There was also a trend for a decrease in medication cost in the WW[®] group⁴⁹.

Qualitative studies have confirmed that patients view the in-person WW[®] programme as an appropriate and medically pertinent intervention for obesity management. WW[®] participants value the support and motivation, ease of access and frequent contact provided in this programme⁵⁰.

Slimming World

Slimming World is a commercial programme featuring weekly community group meetings. Members are encouraged to do 30 minutes of physical activity and to eat low-energy-density food, plus extra calcium and fibre, with controlled amounts of high-energy-density foods⁵¹. The mean percent weight loss after three months was -4.4% according to a retrospective study done from the company's database. Higher levels of attendance led to greater weight loss⁵². One RCT showed that weight-loss achieved with Slimming World was not statistically different than exercise alone after three and 12 months^{51,53}. We did not find any data about improvement of metabolic outcomes.

Curves

Curves is a commercial programme offering a 30-minute resistance exercise circuit, interspersed with callisthenic exercises or Zumba four days per week, and associated weekly personal coaching sessions. Curves also recommends a low-calorie, high-protein diet. Participants have access to an online, individualised, weekly meal plan and daily motivational and educational videos. One study showed that Curves participants lost 1.8 kg more than WW[®] participants at three months. The other studies comparing Curves to Nutrisystem[®] and to Jenny Craig[®] did not show any significant difference for weight loss and reduction of waist circumference⁴¹. There is no data about the efficacy of this programme for reduction of lipids, BP or glucose³⁹.

Unislim

Unislim is a commercial weight-loss programme that offers classes hosted by trained peer leaders and consists of weigh-ins, motivational talks and lifestyle approaches to lose weight. Unislim has evolved as an Irish enterprise since 1972 to offer classes nationwide, launch a food brand of low-calorie meals and snacks (Gorge Us) and an app. There is a choice of online and/or in-person classes at 65 listed locations throughout Ireland.

Based on a preliminary search of academic literature, there is no available data about the efficacy of this programme compared to other weight-loss programmes or for the reduction of lipids, BP or glucose³⁹.

Motivation

Motivation is a commercial weight-loss programme that addresses diet and lifestyle behaviours through a personalised eating plan to promote ketosis and the use of cognitive behaviour therapy techniques to understand the motivation to eat⁵⁴. Motivation clinics are held throughout each region in Ireland with 15 centres currently listed⁵⁴. An initial assessment is followed by a number of plan options depending on the target rate weight loss advertised as 3.5–5 kg/month or 6.5–8 kg/month.

Motivation references the work of Dr Maurice Larocque as a scientific rationale for the weight loss programme's approach. A seminal piece of research is quoted that more than 82% of Motivation clients maintained their weight for more than four years⁵⁵. However, this research is now over 20 years old. Based on a preliminary search of academic literature, there is no available data about the efficacy of this programme compared to other weight-loss programmes or for the reduction of lipids, BP or glucose.

Commercially available alternative therapies

Acupuncture

Acupuncture involves the insertion of needles into different parts of the skin. It has been proposed that acupuncture affects the regulation of weight-related central nervous system neuropeptides⁵⁶ as well as adipokines⁵⁷. Multiple systematic reviews have been conducted to evaluate the benefits of acupuncture. Though some came to positive conclusions (including one that reported a 1.9 kg weight loss⁵⁸, one that reported acupuncture was safe⁵⁹ and one that it was more effective than lifestyle modification alone⁶⁰) their shared opinion is that the quality of trials included were low, limiting their conclusive abilities, and that rigorous, methodologically sound and long-term studies are needed. The most recent systematic review on this topic found i) that acupuncture plus lifestyle modification was more effective than lifestyle modification alone; ii) that acupuncture

alone was no more effective than sham acupuncture alone; and iii) when stratified by body mass index, acupuncture was found to be effective only in those with overweight, and not those with obesity⁶¹.

Cryolipolysis

Cryolipolysis involves the targeted dissolution of adipocytes by way of directed cooling. A recent systematic review of 16 studies involving 1,445 patients concluded that cryolipolysis led to a 19.55% mean reduction of targeted subcutaneous tissue after 3.83 months of treatment, but that long-term follow-up data was lacking⁶².

Whole body vibration therapy

Whole body vibration therapy is proposed to contribute to weight loss by way of three theoretical pathways, including inhibition of adipogenesis and fat loss, increased energy expenditure during treatment and increased muscle mass. A recent review of the sparse literature surrounding whole body vibration therapy concluded that the available literature is both inconsistent and contradictory with respect to each of those proposed pathways⁶³.

Conclusion

This chapter has focused on the commercially available food products, supplements and programmes that are available to purchase in Ireland. The range of commercial offerings is huge, constantly changing and largely unregulated. Furthermore, the evidence for the effectiveness of these products and services is often limited and of poor quality. Before adhering to a commercial programme or using a commercial weight-loss product, people with obesity should ensure that the approach is safe, potentially effective and realistic to maintain. Therefore, we suggest the use of a checklist for clinicians to support their clients in making decisions about availing of weight-loss products and programmes.

The Commercial Products and Programmes in Obesity Management chapter is adapted from the Canadian Adult Obesity Clinical Practice Guidelines (the "Guidelines"), which Obesity Canada owns and from whom we have a license. ASOI adapted the Guidelines having regard for any relevant context affecting the Island of Ireland using the [ADAPTE Tool](#).

ASOI acknowledges that Obesity Canada and the authors of the Guidelines have not reviewed the Commercial Products and Programmes in Obesity Management chapter and bear no responsibility for changes made to such chapter, or how the adapted Guidelines are presented or disseminated. As Obesity Canada and the authors of the original Guidelines have not reviewed the Commercial Products and Programmes in Obesity Management chapter, such parties, according to their policy, disclaim any association with such adapted Materials. The original Guidelines may be viewed in English at: www.obesitycanada.ca/guidelines.

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Appendix:

Clinician's Guide — The 10 safety criteria for commercial weight-management programmes

Clients may ask about commercial weight-loss programmes as a supportive treatment option for weight management. The following criteria will aid a cautious discussion with the client regarding the safety and efficacy of such programmes.

#	Criteria	Yes/ No
1	Includes a behavioural approach to develop clients' knowledge and skills to manage weight-related habits.	
2	Nutrition advice is individualised. It does not involve very restrictive diets, limited foods or food groups, unusual combinations of foods or prescribe eating certain foods at certain times.	
3	Physical activity is promoted at a gradual, rather than at an injury-inducing rapid pace.	
4	Information and resources are provided on other weight-related behaviours e.g., getting enough sleep and managing stress	
5	Feedback, monitoring and support is provided throughout the programme by trained staff.*	
6	Encourages slow and steady weight loss, usually 1 to 2 pounds (0.5-1 kg) per week (though weight loss may be faster at the start of a programme).	
7	Includes a plan for weight maintenance.	
8	Does not promote diets < 800 kcal daily (very low-calorie diets) and diets < 1,200 kcal daily are supervised by a healthcare professional.	
9	Does not make outlandish claims such as "You will only lose fat" or "We can target problem areas".	
10	Information on outcomes is available, including percentage of clients who drop out, average percentage weight loss and average weight loss sustained following the maintenance programme.	

*Trained staff includes registered healthcare professionals (e.g., registered dietitians, psychologists, exercise specialists, health counsellors, social prescribers or professionals in training) with training in weight management. If non-healthcare professionals deliver the programme, they should be trained by a healthcare professional and follow structured evidenced-based weight-management protocols.

Adapted from: <https://www.niddk.nih.gov/health-information/weight-management/choosing-a-safe-successful-weight-loss-program> and [Weight Management Program Checklist - Obesity Canada](#)