Considerations for Registered Dietitians: The Effectiveness and Safety of Meal Replacements in the Treatment of Obesity

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INTRODUCTION

Only about half of the 70 percent of the population that is overweight or affected by obesity think that they are overweight[1] , and less than one-third of the population know that obesity is the second leading cause of cancer.[2] Given this alarming lack of awareness, it is reasonable to believe that the average person does not fully understand how obesity affects metabolic parameters. Similarly, they may be unaware that a small, manageable weight loss of just five percent of their weight can decrease their risk for chronic diseases while simultaneously improving energy, mobility, and self-confidence.[3]

Despite its prevalence, obesity is a preventable disease. Increased knowledge of nutrition, greater variety in weight loss options, wider selections of healthy food options, and technological conveniences offer an extensive range of weight loss opportunities to accommodate virtually any lifestyle and weight loss goal. Still, weight loss remains a difficult undertaking, especially for those who have already made multiple, futile attempts. To promote compliance and thus increase likelihood of success, weight loss programs must go beyond diets to incorporate more holistic approaches that include every day behavioral changes to motivate participants and increase their likelihood of maintaining weight loss.

To ensure more positive outcomes for patients with obesity, counselling and education concerning the effects of excess weight are key components to any weight loss program. To start, primary care physicians must overcome their hesitancy to engage patients who are overweight or obese in a dialogue about their health and well-being and help them identify appropriate options. Specifically, Registered Dietitian Nutritionists (RDN) should be included as critical members on any weight loss team. These trained professionals must meet rigorous standards set by both the Commission on Dietetic Registration and the Academy of Nutrition and Dietetics. They can design programs to meet not only the nutritional needs of their patients, but also provide support and encouragement to help them manage their weight loss challenges.

MAKING GOALS ATTAINABLE

While physicians recognize obesity as a disease, too often they are reluctant to make a formal diagnosis and instead simply recommend that patients reduce calories and increase physical activity.[4] To provide the level of care and treatment necessary to comprehensively address the concerns and challenges patients with obesity face, collaboration with a registered dietitian nutritionist is critical. In addition to core skills in counselling, education, nutrition, and meal planning, RDNs provide evidence-based care, leadership, and care coordination.[5] They have the qualifications and experience needed to address the variety of behavioral changes required to optimize healthy weight loss. The expertise of RDNs is particularly important in the areas of counselling and dietary recommendations.

PERSONALIZED COUNSELING

Perhaps the most impactful contribution provided by RDNs is their counsel. RDNs customize diet programs for each individual based on their specific weight loss goals, health concerns, food preferences, physical ability, lifestyle, and psychological state. Taking time to assess patients' interest and motivation helps RDNs determine if they are likely to achieve success or if they may need greater guidance to empower them.[6] This allows them to better support patients as they navigate their own unique circumstances, including chronic illnesses, use of medication, food allergies, family commitments such as caring for children or aging parents, work and travel requirements (for example, dining out or restricted opportunities for exercise), and other individual issues.

The efficacy of dietitian-led weight loss and management is well-established. Research consistently reports that participants who are counselled by registered dietitians lose significantly more weight[7] [8] and experience improved health outcomes.[9] [10] Further, counselling has proven to be effective in various forms including group or individual sessions[11] or via telephone or mobile apps. This provides flexibility in approaches to accommodate the preferences and lives of every patient.

INDIVIDUALIZED WEIGHT LOSS RECOMMENDATIONS

Traditionally, RDN recommendations have focused on changes to diet and perhaps the reduction or elimination of certain foods. Combined with oversight and counselling, this approach encourages healthy eating and helps patients avoid falling prey to whatever fad diet may be in vogue (think cabbage soup or apple cider vinegar diets, or the more recent green juice diet). Although these diets may result in an initial reduction in weight due to loss of water and muscle rather than fat, they generally are ineffective and result in weight regain.[12]

People with obesity may be embarrassed or feel shame about their weight, making them hesitant to address their need for weight loss. Additionally, people who are overweight or suffer from obesity have likely tried a range of diets. Since each new attempt is increasingly difficult as the body fights to maintain its higher weight, they may be even more discouraged to make another attempt at weight loss.[13] RDNs take these challenges into account when developing a weight loss program. A full range of options that best meets the unique circumstances faced by people with obesity and acknowledges the stigma they face must be considered.

Among the most effective alternatives for people with obesity is the use of meal replacements. Meal replacements — substituting a prepared snack or shake in place of a meal — are an appropriate option in a weight loss plan for obese individuals. Medically-prescribed meal replacements are nutritionally balanced with requisite vitamins and minerals and their flexibility and convenience improves diet progress, particularly in providing critical nutrients that may be lost on traditional diets.[14] They are portion-controlled, convenient, require no preparation or clean-up, can be easily transported, and offer a range of flavors and products.[15] This addresses the concerns about meal preparation that discourages many people from attempting a weight loss program.

EVIDENCE-BASED SUPPORT FOR THE USE OF MEAL REPLACEMENT

The longitudinal Look AHEAD (Action for Health in Diabetes) study offered valuable insights regarding the use of meal replacements for overweight participants. The study was initiated to determine the effects of intentional weight loss on cardiovascular disease in overweight participants with type 2 diabetes. This nearly 10-year study used meal replacements for two meals and a snack each day for six months with the goal of achieving a weight loss of ≥ 7% of initial weight and an increase in physical activity to ≥ 175 minutes per week.

The program also included one individual and three group counselling sessions per month. Beginning in the seventh month and continuing through the first year, meal replacements were reduced to one per day, a group counselling session was dropped, and additional behavioral modifications were available. Ultimately the study goal of tracking cardiovascular disease was not met because there were fewer cardiac events than expected. However, there were significant findings in terms of weight loss and other health outcomes.

Participants in the intervention group lost significantly more weight than the control group (8.6% of initial body weight versus .7%) and benefitted from multiple health improvements. They also increased their physical activity and level of fitness. As with most cases of rapid weight loss, there was weight regain after the first year. However, intervention participants held a 6% weight loss at the end of the study compared to 3.5% for the control group.[16] [17] [18] The study concluded that meal replacements are safe and effective for weight loss in obese patients.

In addition to being an effective tool for weight loss, meal replacements also improve medical outcomes. Participants in a study who used meal replacements for dinner had significant improvements to body weight, BMI, waist circumference, body fat mass, and fat-free mass at 12-weeks, with additional improvements to blood glucose.[19] In another study, those using liquid meal replacements for one or two meals found significant improvement in glucose, insulin, triglycerides, LDL cholesterol, and systolic blood pressure.[20] A different study found that in addition to metabolic benefits, people who lost weight following a Very Low Calorie Diet (VLCD) meal replacement program for 12-weeks significantly reduced pain, symptom severity, depression, and fibromyalgia scores.[21]

The Look AHEAD study also identified extensive health benefits. Intervention participants experienced improved lipids and glucose biomarkers, improved blood pressure, less severe renal disease, lower liver fat, lower inflammation, less urinary incontinence, less knee pain, and reduced need for diabetes medication. Other areas of lifestyle improvement were less sleep apnea, improved quality of life, lower depression, improved sexual function, and reduced overall health costs.

DEBUNKING THE MYTH

Although the use of meal replacements has been questioned in the past, the effectiveness and safety of using meal replacements has been validated over their 50-year evolution. Research conducted over the past decade continues to support their efficacy for weight loss and improved health parameters.

More recently, the use of meal replacement for weight loss in people with obesity is being recommended by health care professionals. In their most recent position paper, the Academy of Nutrition and Dietetics advocates using “many different dietary approaches” to achieve weight loss or maintenance in overweight or obese adults, giving it their highest rating as a “strong, imperative” need. They further recognize the use of meal replacement plans, Low Calorie Diets (LCD), and Very Low Calorie Diets (VLCD) among the options they recommend.

DIETITIANS’ PERSPECTIVE

Similarly, RDNs are acknowledging the value meal replacements as a preferred option for obese patients. RDN Heather Boyd has spoken about the importance, safety, and effectiveness of meal replacements in the treatment of obesity. Citing from the Evidence Analysis Library (EAL) from the Academy of Nutrition and Dietetics, she notes the “strong, imperative” rating and the recommendation that, “For weight loss and weight

maintenance, the RDN should recommend portion control and meal replacements or structured meal plans as part of a comprehensive weight management program."

Boyd, who is also a Certified Specialist in Obesity and Weight Management and Certified Diabetes Educator, offers a checklist of questions to include in the meal planning process (e.g., "Do you find meal planning an unattainable task?" "Do you intend to measure and weigh your food but instead end up 'eyeballing' portions?"). Often, she suggests, meal replacements help patients manage their hunger while balancing nutritional needs. As part of her assessment and counselling she addresses questions about satiety and nutrition through detailed explanation of how and why meal replacements work. Jessica Crandall, RDN, a spokesperson for the Academy of Nutrition and Dietetics concurs, noting that "for clients who have had their brains fixated on food for so long, these liquid meal replacements work."[22]

As RDNs continue to keep current on the science of nutrition and RDN training programs spend more time discussing low calorie and very low calorie diets as part of their curriculum, a wider-range of weight loss and weight management options will be better understood.

CONCLUSION

Overcoming obesity is challenging, from accepting the diagnosis, through weight loss, to long-term maintenance. For patients with obesity, the high risk of chronic diseases combined with feelings of depression and frustration from repeated, failed attempts at weight loss further contribute to the physical and cognitive barriers they must overcome.

Combined with counselling by an RDN and increased physical activity, meal replacements are a recommended inclusion in a weight loss program. They help adults with obesity achieve the important, initial five percent weight loss that decreases risk factors for chronic diseases as a start to continued weight loss. Primary care physicians must be more proactive in candidly discussing obesity and its negative impact on health and should refer patients to a registered dietitian nutritionist who will create an individualized plan that considers each patient's unique circumstances. Directing patients to an RDN who will help them identify and meet their goals will best ensure the greatest likelihood of successful outcomes.

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