

Lifestyle Modifications for Obesity: Recommendations and Benefits

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In the United States (US), there is a critical need for effective lifestyle modification programs, as it is estimated that 74% of adults have body weight classified as overweight or obese.¹ Children and adolescents also experience obesity at an incidence of around 40%.¹ More weight loss drugs have received Food and Drug Administration (FDA) approval in the past year, and there is a renewed interest in lifestyle programs that should be used in combination with weight management pharmacotherapy. There are many health benefits to eating healthy foods and staying active. This newsletter will look at the evidence for lifestyle modification programs and discuss recommendations for nutritional options and physical activities to promote healthy weight management.

Health Conditions Affected by Overweight and Obesity

Obesity has been linked to increased incidence of many complications and numerous comorbid conditions. The most common health conditions associated with obesity are cardiovascular (CV) events. The leading cause of death in America is heart disease, with stroke being the fifth most common.¹ Heart disease (e.g., coronary artery disease), stroke, hypertension and high low density lipoprotein (LDL) cholesterol occur at a higher rate in those who have overweight (body mass index [BMI] of 25 to 29.9) or obesity (BMI of 30 to 39.9) body weights. Type 2 diabetes mellitus (T2DM) is also closely correlated with obesity, as 90% of adults with diabetes have a body mass index (BMI) indicating obesity. Breast and colon cancer are among the most common cancers and have higher incidences in those who have overweight body weights. Those with overweight or obesity are also at higher risk of osteoporosis, respiratory disease, liver disease, depression/anxiety, gastroesophageal disease, and skin conditions.^{1,2}

There are risk factors associated with having obesity or overweight, such as genetic predisposition and lifestyle choices. Some risk factors include: lower socioeconomic class, consumption of highly processed diet and added sugar, physical inactivity and stress.³

Benefits of Diet and Exercise on Cardiovascular Outcomes

The US Preventative Services Task Force (USPSTF) published recommendations in 2020 on the benefits of behavior counseling interventions for CV disease prevention in adults with CV risk factors and in 2022 in adults without CV risk factors.^{4,5} The recommendations were supported by high-quality systematic reviews and meta-analyses conducted by the Agency for Healthcare Research and Quality (AHRQ).^{6,7} Evidence demonstrated that healthy diet counseling interventions

improved daily nutritious eating as measured by saturated fat, fiber, fruit, and vegetable intake. Interventions promoting physical activity resulted in increased activity by approximately 33 minutes a week.⁶ Improvement in other important outcomes, such as CV benefits, are presented in **Table 1**.^{4,5}

In June of 2024 the USPSTF updated recommendation for children and adolescents who have high BMIs.⁸ For children who are 6 and older who have a BMI of 95th or greater percentile for age and sex, the USPSTF recommends comprehensive, intensive behavioral interventions. A comprehensive, intensive behavioral intervention that is comprised of at least 26 hours of counseling on diet and physical activity is recommended by USPSTF for weight loss.⁸

Table 1. Outcomes Related to Lifestyle Changes^{4,5}

Intervention vs. Control	Outcome	Result
Primary Prevention Patients		
Dietary counseling (n=47,179)	CVD outcomes (MI, stroke)	No difference
Physical activity (n=1,203)	Nonfatal CVD events	RR 0.27 (95% CI, 0.08 to 0.88)
	Fatal CVD events	RR 0.31 (95% CI, 0.11 to 0.93)
	Systolic blood pressure	MD -0.8 mm Hg (95% CI, -1.3 to -0.3)
	Diastolic blood pressure	MD -0.4 mm Hg (95% CI, -0.8 to -0.0)
	LDL cholesterol	MD -2.2 mg/dL (95% CI, -3.8 to -0.6)
Secondary Prevention Patients		
Behavioral counseling on nutrition and physical activity (n=52,174)	CV events (MI, stroke)	RR 0.80 (95% CI, 0.73 to 0.87)
	Systolic blood pressure	MD -1.8 mm Hg (95% CI, -2.5 to -1.1)
	Diastolic blood pressure	MD -1.2 mm Hg (95% CI, -1.6 to -0.8)
	LDL cholesterol	MD -2.1 mg/dL (95% CI, -4.1 to -0.2)
	Weight loss	MD -1.6 kg (95% CI, -2.1 to -1.1)
Abbreviations: CI = confidence interval; CV = cardiovascular; HR = hazard ratio; LDL = low-density lipoprotein cholesterol; MD = mean difference; MI = myocardial infarction. Key: * CVD outcomes include		

Counseling on Lifestyle modifications

Lifestyle modification counseling has been shown to improve diet and physical activity.⁴ The intensity of the counseling is important and interventions that have multiple contacts (e.g., visits, telephone follow-up) with the patient have been shown to have more impact. Counseling can be done in groups, with one-on-one support, or as one-on-one visits. Components of successful lifestyle modification programs include⁴:

- A median of 20-30 contacts, with at least 16-36 hours of counseling, over a 24-month period
- Individual consultation which includes goal setting, problem solving, and self-monitoring
- Assessment of barriers to diet and physical activity changes

Dietary Recommendations

Food choices are a critical component of any lifestyle modification program. In general, a diet that is composed of fruits and vegetables, whole grains, fat-free or low-fat dairy, and lean protein is recommended.⁴ A reduction in saturated fats, sodium (1500-2300 mg or less a day), and sweets/sugars is emphasized. Alcoholic beverages should be limited to 2 drinks or less a day for men and 1 drink or less per day for females.¹ Caloric needs are usually based on gender and age, but should be tailored to the individual needs and circumstances, such as physical activity. Adult males generally require 2,200 to 3,000 calories daily compared to 1,600 to 2,400 calories a day for females.¹ Daily calorie needs for children 2-3 years of age range from 1000 to 1400 and increases with age. As children enter adolescence, 11-12 years of age, the daily recommended caloric intake is 1800 and 2200 calories.⁹

A systematic review and network meta-analysis on dietary programs studying weight and CV risk factor reduction at 6 months, evaluated popular diets implemented in people with overweight or obesity.¹⁰ Most macronutrient diets (e.g., emphasis on macro groups instead of calories) resulted in modest weight loss (2-5% of body weight). Popular diets that resulted in the most weight loss were Atkins (-5.5 kg), Zone (-4.1 kg) and Dietary Approach to Stop Hypertension (DASH) (-3.6 kg).¹⁰ Low-carbohydrate diets resulted in 4.63 kg weight loss and low-fat diets had an average of 4.37 kg weight loss.¹⁰ Systolic and diastolic blood pressure were also clinically and significantly improved. Common nutritional programs are described in **Table 2**.

A systematic review of commercial weight loss programs, lasting 12 months, were compared to no intervention/minimal education (e.g., printed materials only, health education [e.g., diet and exercise]) or sessions [3 or fewer] with a provider) or behavioral counseling in patients with overweight or obesity.¹¹ Out of 39 randomized controlled trials, those participating in Jenny Craig had the most weight loss (-4.9%) followed by Nutrisystem (-3.8%) and Weight Watchers (-2.6%) compared to control.¹¹ The Atkins

diet was associated with -0.1% to -2.9% more weight loss compared to counseling at 6 months. Very low-calorie diets (e.g., OPTIFAST, Medifast) resulted in 4.0% or greater weight loss than counseling programs.¹¹ A similar systematic review of trials lasting at least 12 months, also found Weight Watchers to be consistently associated with weight loss compared to control with a mean change of -3.5 to -6.0 kg vs. -0.8 to 5.4 kg (p<0.05), respectively.¹²

Table 2. Nutritional Programs Promoting Weight Loss

Intervention	Description
Dietary Approach to Stop Hypertension (DASH) ¹³	Daily and weekly nutritional goals limiting foods high in saturated fats and sugar-sweetened beverages and sweets and reduce sodium to 2,300 mg or less
Mediterranean diet ¹⁴	Fruits, vegetables, breads and other grains, potatoes, beans, nuts and seeds with olive oil as primary fat source and low to moderate intake of dairy, eggs, fish and poultry
Atkins Diet ¹⁵	Low carbohydrate diet incorporating protein, macronutrients, healthy fats and fiber
Zone Diet ¹⁶	Food choices focusing on reducing inflammation and preventing insulin spikes focusing on lean protein, vegetables, low sugar fruits and a small amount of healthy fats

Patient Resources

1. My Plate: <https://www.myplate.gov>
Interactive, visual representation of appropriate food quantities and nutritious food recommendations
2. USDA Nutrition and Health guidance: <https://www.dietaryguidelines.gov>
3. Centers for Disease Control and Prevention: <https://www.cdc.gov/healthyweight/index.html>
Healthy weight, physical activity and nutrition guidance
4. Atkins diet: www.atkins.com
5. Jenny Craig: www.jennycraig.com
6. Nutrisystem: www.nutrisystem.com
7. DASH Diet: <https://www.nhlbi.nih.gov/education/dash-eating-plan>
8. Weight Watchers: <https://www.weightwatchers.com>
9. Zone: www.zoneliving.com

Physical Activity

Physical activity helps decrease risk for chronic diseases, such as diabetes, CV disease, and depression, compared to those that are inactive.¹ Consistent physical activity also leads to improved mental health and reduced stress. In most studies general physical activity recommendations are 90-180 minutes per week of moderate to vigorous activity. Guidelines recommend that adults get at least 150-300 minutes weekly (20-40 minutes daily) of moderate-intensity aerobic activity in addition to muscle-strengthening activities ¹ Weight bearing activities have been shown to improve joint mobility, reduce fractures and improve coordination. The emphasis is on consistently having an exercise routine and less on types of exercises, even small changes such as walking daily or taking the stairs can provide benefit.

Guideline Recommendations

Guidelines advocate nutritional counseling and physical activity for all patients with overweight or obesity. Specific recommendations for people to reduce the risk of CV disease have been published (Table 3).

Table 3. Guideline Recommendations for CV Risk Reduction

Guideline	Nutritional Recommendation	Physical Activity Recommendation
American Association of Clinical Endocrinology and American College of Endocrinology ¹⁷	<ul style="list-style-type: none"> - 5 servings or more of fruits and vegetables - Grains (whole) - Fish - Lean meats - Limited reduced saturated fats, trans fats and cholesterol - Plant stanols /sterols (~ 2 grams/day) - Soluble Fiber (10-25 g/day) 	- 30 minutes of moderate-intensity physical activity 4-6 times weekly
American Association of Clinical Endocrinologists and American College of Endocrinology ¹⁸	<ul style="list-style-type: none"> - Minimize sugars and refined carbohydrates - Avoid trans fats - limits alcohol use - emphasizes fiber 	- Employ a physical activity program
VA/DoD: The Management of Adult Overweight and Obesity ¹⁹	- meal replacement (e.g., shake, protein bar, or meal) is a suggested option	- Physical activity as part of a CLI (e.g., aerobic, resistance, and/or lifestyle physical activity)

	- low carbohydrate diet is recommended over a low-fat diet	
VA/DoD: The Diagnosis and Management of Hypertension	<ul style="list-style-type: none"> - Dietician led DASH diet or Mediterranean diet if patient has additional CV risk factors, such as hyperlipidemia - Limit salt content to 2,300 mg daily or less - Limit daily alcohol to no more than 1 oz for men or 0.5 oz for females 	- 30-45 minutes of aerobic exercise, at least four times a week, using a self-monitoring device to document compliance
Abbreviations: CLI – comprehensive lifestyle intervention; VA/DoD – Veterans Administration/Department of Defense		

Conclusion

There are many different lifestyle programs to assist with weight management for people living with overweight or obesity. The combination of diet and exercise counseling have demonstrated reductions in CV events, blood pressure, cholesterol and weight. Many popular weight loss programs have resulted in weight loss up to 12 months. Consistent physical exercise has both physical and mental health benefits. Diet and exercise modifications to promote healthy weight should continue to be emphasized even if pharmacotherapy for weight loss is initiated.

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