

# **Nutrition Update for Nurses: Research, Recommendations, and References You Can Use (Part 2)**

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# Nutrition Update for Nurses: Research, Recommendations, and References You Can Use

## Part 1:

- Overview and review of the Dietary Reference Intakes (DRI)
  - [https://ods.od.nih.gov/HealthInformation/Dietary\\_Reference\\_Intakes.aspx](https://ods.od.nih.gov/HealthInformation/Dietary_Reference_Intakes.aspx)
  - DRI Calculator: <https://www.nal.usda.gov/human-nutrition-and-food-safety/dri-calculator>
- Highlights and takeaways from the 2020-2025 Dietary Guidelines for Americans (organized by life stage)
  - <https://www.dietaryguidelines.gov>
- Dietary supplements – considerations and resources
  - Office of Dietary Supplements: <http://ods.od.nih.gov/index.aspx>  
<https://ods.od.nih.gov/factsheets/list-all/>
  - National Center for Complementary and Integrative Health: <https://www.nccih.nih.gov/health/dietary-and-herbal-supplements>

## Part 2:

- Nutrition information and resources – evaluating nutrition news and credible references
- Dietary considerations in treating obesity
- Overview of popular dietary approaches



# 9 FOODS THAT MAKE YOU FAT

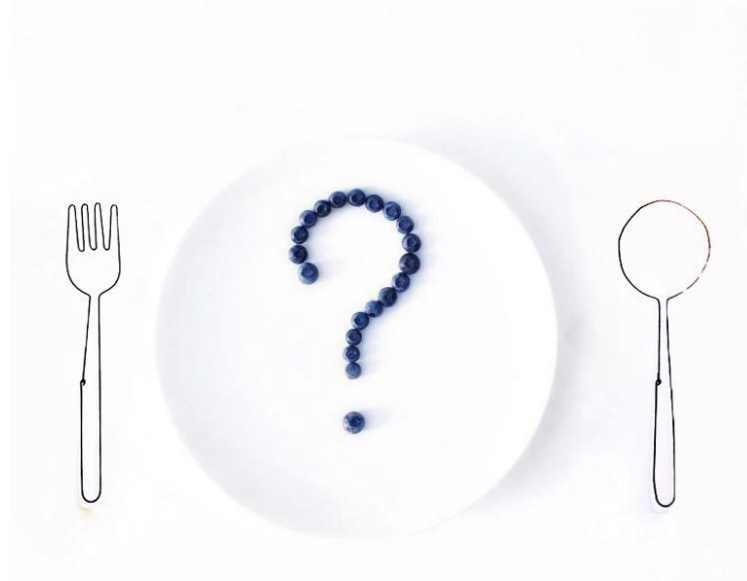
- |   |   |   |
|---|---|---|
| <b>Apples</b><br>It's a natural thing. Great nutrition.                             | <b>Donuts</b><br>Calorie dense and easy to eat!                                     | <b>Nuts</b><br>VERY calorie dense!  |
|    |    |               |
| <b>Nut Butters</b><br>200+ calories per serving!                                    | <b>Salads</b><br>Dressings and oils are FAT!  | <b>Saucy Wings</b><br>Calorie dense and high fat.   |
|  |  |             |
| <b>Avocados</b><br>Calorie dense and high fat.                                      | <b>French Fries</b><br>Lots and lots of calories and fat.                           | <b>Pizza</b><br>With a lot of "cheese" the caloric density is probably the highest in any food. |
|  |  |             |

# GOOD CARBS VS. BAD CARBS



# Where do you and your patients get nutrition information?

- Health Professionals
- Internet search
- Online websites
- News service
- Educators and classes
- Social media
- Friends and family
- Coaches and trainers
- Magazines and books
- Television and movies



# Intermittent Fasting “isn’t a magic diet trick after all”

- <https://www.sciencealert.com/here-s-what-that-controversial-new-study-on-intermittent-fasting-really-shows>
  - “As we have seen many times previously, this study confirms there is no one best diet for weight loss. It also shows small decreases in the window of time you're eating probably won't make a difference to weight loss.”



sciencealert Trending

(LunaKate/Getty Images)

HEALTH

## Here's What That Controversial New Study on Time-Restricted Eating Really Shows

CLARE COLLINS, THE CONVERSATION | 28 APRIL 2022

Results of a [new weight loss study](#) were published this week, leading to headlines proclaiming intermittent fasting "[isn't a magic diet trick after all](#)".

The researchers aimed to test whether adding a restriction on what time of day you were allowed to eat (or not) to the usual low calorie (or kilojoule) diet led to greater weight loss compared to just following a low calorie diet.

# Time Restricted Eating....

- April 21, 2022, New England Journal of Medicine
- ***Calorie Restriction with or without Time-Restricted Eating in Weight Loss***
  - <https://pubmed.ncbi.nlm.nih.gov/35443107/>
- Conclusions: Among patients with obesity, a regimen of time-restricted eating was not more beneficial with regard to reduction in body weight, body fat, or metabolic risk factors than daily calorie restriction



# Examples of nutrition in the news....

- **Jamie Pope Nutrition Prof** educational Facebook page
- <https://www.facebook.com/jamiepopenutrition>

Facebook post interface for Jamie Pope Nutrition Prof, dated March 30. The post text discusses headlines about artificial sweeteners and cancer risk, mentioning a 13% increase in cancers in individuals with higher intakes of artificial sweeteners. Below the text is an image of a clear plastic container filled with various colored packets of artificial sweeteners (pink, yellow, green, blue). Below the image is a table titled "Nonnutritive Sweeteners" with columns for Sweetener, Trade Name, Kcal/g, Sweetness Relative to Sucrose, and Uses and Highlights. The table lists six sweeteners: Acesulfame K, Aspartame, Neotame, Saccharin, Stevia, and Sucralose. At the bottom of the post, it shows 480 People reached and 119 Engagements, along with a "Boost with credit" button.

480 People reached      119 Engagements      Boost with credit

Nonnutritive Sweeteners				
Sweetener	Trade Name	Kcal/g	Sweetness Relative to Sucrose	Uses and Highlights
Acesulfame K	Sunnet, Sweet One	0	200X	Long-lasting and heat-stable. It is used in a wide variety of products, particularly in sugar-free beverages and desserts.
Aspartame	Equal, NutraSweet	0	160-220X	Widely used in sugar-free soft drinks. Composed of two amino acids (aspartic acid, phenylalanine). Can withstand elevated temperatures for only a brief period but is destroyed at baking temperatures. When in solution, it is not as stable as other sweeteners.
Neotame	Used infrequently	0	7,000-13,000X	Very similar in structure to aspartame. Much greater stability in solution and can withstand high temperatures encountered during baking.
Saccharin	Sweet'N Low, Sugar Twin	0	300X	Discovered in 1878. Widely used in sugar-free soft drinks and as a tabletop sweetener. Can be used in baking without losing its sweetness. Once listed as a possible carcinogen, it has since been shown not to cause cancer in humans.
Stevia	Pure Via, Truvia	0	250X	Rebaudioside A (rebaudioside A) is the active compound that is isolated from the leaves of the South American plant stevia. Approved for use in the United States in 2008. Used primarily in beverages, as a tabletop sweetener, and in yogurt. It is heat-stable.
Sucralose	Splenda	0	600X	It is made from sucrose by replacing 3 'OH groups with chlorine. It is used as a tabletop sweetener, and it is widely used in beverages where it is remarkably stable over long periods. It is also used as a tabletop sweetener.



# Evaluating Online Health and Nutrition Information

- Who runs or created the site? Can you trust them?
- What is the site promising or offering? Do its claims seem too good to be true?
- When was the information written or reviewed? Is it up to date?
- Where does the information come from? Is it based on scientific research?
- Why does the site exist? Is it selling something?
- <https://www.nccih.nih.gov/health/finding-and-evaluating-online-resources?nav=govd>



Google Search

I'm Feeling Lucky

# Suggestions to determine credible sources of nutrition information

- Websites, magazines, television, media
  - Be wary of:
    - Sources trying to sell a product
    - Sources using dramatic, scare tactics, or unrealistic claims
    - Claims based on antidotes and “expert” advice
    - Sites ending in “.com”
  - **Turn to:**
    - Sources referencing peer-reviewed, published data and credentialed scientists in the field
    - Scientific consensus statements and recommendations
    - **Sites ending in “.gov,” “.edu,” or “.org”**
    - Suggestion: “[Google](#)” topic of interest, go to News tab, select article from credible news source, and skim article for link to research article on which story is based

# Sources for credible nutrition information

- Academy of Nutrition and Dietetics  
<https://www.eatright.org/>
  - Position Papers of the Academy of Nutrition and Dietetics  
<https://www.jandonline.org/content/positionPapers>
  - Nutrition.gov <https://www.nutrition.gov/>
  - Dietary Guidelines for Americans  
<https://health.gov/dietaryguidelines/>
  - National Institutes of Health  
<https://www.nih.gov/>
  - U.S. National Library of Medicine Medline Plus <https://medlineplus.gov/>
  - Harvard School of Public Health  
<https://www.hsph.harvard.edu>
  - Health organizations (AHA, ADA, ACS)
- Scientific literature data base
- PubMed  
<https://pubmed.ncbi.nlm.nih.gov/>
  - National Institutes of Health Office of Dietary Supplements  
<https://ods.od.nih.gov/factsheets/list-VitaminsMinerals/>
- Nutrition news sources
- Nutrition and Dietetics Smart Brief  
[https://www2.smartbrief.com/signupSystem/subscribe.action?pageSequence=1&briefName=eatrightpro&campaign=in\\_brief\\_signup\\_link&utm\\_source=brief](https://www2.smartbrief.com/signupSystem/subscribe.action?pageSequence=1&briefName=eatrightpro&campaign=in_brief_signup_link&utm_source=brief)
  - Medical News Today Diet/Nutrition  
<https://www.medicalnewstoday.com/categories/nutrition-diet>
  - Science Daily  
<https://www.sciencedaily.com/news/top/health/>
  - EurekAlert! Science News  
<https://www.eurekalert.org/bysubject/medicine.php>
  - International Food and Information Council  
<https://foodinsight.org/your-covid-19-resource-for-food-safety-and-nutrition/>

# Credible sources of nutrition information

Government and Private Agencies/Credentialed Expert Advice		Publications	
Source	Examples	Source	Examples
<b>Nonprofit, Professional Health Organizations</b>	<ul style="list-style-type: none"> <li>American Heart Association</li> <li>American Cancer Society</li> <li>Academy of Nutrition and Dietetics</li> <li>American Diabetic Association</li> <li>American Institute for Cancer Research</li> </ul>	<b>Scientific, Peer-reviewed Journals</b>	<ul style="list-style-type: none"> <li>Obesity</li> <li>American Journal of Physiology: Endocrinology and Metabolism</li> <li>Diabetes Care</li> <li>American Journal of Clinical Nutrition</li> <li>Annual Review of Nutrition</li> <li>Journal of the Academy of Nutrition and Dietetics</li> <li>Journal of Nutrition</li> <li>British Journal of Nutrition</li> <li>Journal of the American College of Nutrition</li> <li>Journal of the American Medical Association</li> <li>European Journal of Nutrition</li> <li>Diabetes</li> <li>Lancet</li> <li>New England Journal of Medicine</li> <li>Journal of the American Medical Association</li> <li>Journal of Clinical Investigation</li> <li>Nature</li> <li>Science</li> <li>Public Health Nutrition</li> <li>International Journal of Sports Nutrition and Exercise Metabolism</li> <li>Medicine &amp; Science in Sports &amp; Exercise</li> </ul>
<b>Scientific Organizations</b>	<ul style="list-style-type: none"> <li>National Academy of Science</li> <li>American College of Sports Medicine</li> <li>The Obesity Society</li> <li>Institute of Medicine (under National Academy of Science)</li> </ul>		
<b>Government Publications: Nutrition, Diet, and Health Reports</b>	<ul style="list-style-type: none"> <li>National Institutes of Health</li> <li>Surgeon General</li> <li>Food and Drug Administration</li> <li>Centers for Disease Control and Prevention</li> <li>United States Department of Agriculture (USDA) Food and Nutrition Information Center</li> <li>USDA Center for Nutrition Policy and Promotion</li> <li>NIH: National Center for Complementary and Alternative Medicine</li> </ul>		
<b>Registered Dietitians</b>	<ul style="list-style-type: none"> <li>Hospitals</li> <li>Public Health Departments</li> <li>Extension Service</li> </ul>		
<b>Other Nonprofit Organizations</b>	<ul style="list-style-type: none"> <li>Sense about Science</li> <li>HealthWatch-UK</li> </ul>	<b>Other</b> (Although not peer-reviewed, these publications rely on the expertise of the faculty within each of these universities for their content.)	<ul style="list-style-type: none"> <li>Tufts Health and Nutrition Letter</li> <li>Harvard Health Letter</li> <li>Berkeley Wellness Letter</li> </ul>

When searching the Internet for reliable information, you can limit your search to university and government websites by entering site.edu or site.gov, respectively.

# Resources: Academy of Nutrition and Dietetics

- Academy of Nutrition and Dietetics
  - <https://www.eatright.org>
  - Associate membership available to licensed NPs (\$70)
    - <https://www.eatrightpro.org/membership/membership-types-and-criteria/academy-associate>
    - <https://www.eatrightpro.org> (Member only resources and references)
- Nutrition and Dietetics SmartBrief
  - [Daily snapshot](#) of nutrition news and research
    - [https://www2.smartbrief.com/signupSystem/subscribe.action?pageSequence=1&briefName=eatrightpro&campaign=in\\_brief\\_signup\\_link&utm\\_source=brief](https://www2.smartbrief.com/signupSystem/subscribe.action?pageSequence=1&briefName=eatrightpro&campaign=in_brief_signup_link&utm_source=brief)
- Academy Position, Practice, and Consensus Papers
  - <https://www.jandonline.org/content/positionPapers>
- Evidence Analysis Library (EAL)
  - <https://www.eatrightpro.org/research/applied-practice/evidence-analysis-library>
  - This online resource is a growing series of systematic reviews and evidence-based nutrition practice guidelines
    - Key elements include an explanation of the scope, interventions and practices considered, summary of major recommendations and the corresponding rating of evidence strength



# Obesity, Race/Ethnicity, and COVID-19

- <https://www.cdc.gov/obesity/data/obesity-and-covid-19.html>
- Adults with excess weight are at even greater risk during the COVID-19 pandemic:
  - Having obesity increases the risk of severe illness from COVID-19. People who are overweight may also be at increased risk.
  - Having obesity may triple the risk of hospitalization due to a COVID-19 infection.
  - Obesity is linked to impaired immune function.
  - Obesity decreases lung capacity and reserve and can make ventilation more difficult.
  - A study of COVID-19 cases suggests that risks of hospitalization, intensive care unit admission, invasive mechanical ventilation, and death are higher with increasing BMI.
  - The increased risk for hospitalization or death was particularly pronounced in those under age 65.
  - More than 900,000 adult COVID-19 hospitalizations occurred in the United States between the beginning of the pandemic and November 18, 2020. Models estimate that 271,800 (30.2%) of these hospitalizations were attributed to obesity.
- Prevalence of Obesity and Its Impact on Outcome in Patients With COVID-19: A Systematic Review and Meta-Analysis
  - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7947815/>

# IFIC 2021 Food and Health Survey

<https://foodinsight.org/2021-food-health-survey/>

## Fewer Americans dieted in 2020 in order to lose weight, although it still ranks #1

Women and older consumers are more likely to have started a diet in order to protect their long-term health



Women are more likely than men to have tried a diet due to wanting to lose weight, wanting to protect their long-term health, and wanting to improve their physical appearance

**61%** of people ages 65+ tried a diet due to wanting to protect their long-term health/prevent future health conditions (vs. 30% ages 18-49)

**20%** of parents with children under 18 tried a diet because they wanted to follow the Dietary Guidelines/MyPlate recommendations (vs. 6% of those without children <18)

(REVISED TREND) Q29. Which of the following motivated you to make an effort to adopt a new eating pattern/diet? Select all that apply. (Of those who tried a diet, n=390)

\*New addition in 2021



# ACC/AHA Guidelines for the management of overweight and obesity in adults

- Critical Questions (CQ) posed:
  - In overweight or obese adults, *what is the comparative efficacy/effectiveness of diets of differing forms and structures or other dietary weight loss strategies in achieving and maintaining weight loss?*
  - During weight loss or maintenance after weight loss, what are the *comparative health benefits or harms* of the aforementioned diets and dietary strategies?

Executive summary: Guidelines (2013) for the management of overweight and obesity in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and the Obesity Society published by the Obesity Society and American College of Cardiology/American Heart Association Task Force on Practice Guidelines. Based on a systematic review from the Obesity Expert Panel, 2013. *Obesity*, 2014 Jul;22 Suppl 2:S5-39 <https://pubmed.ncbi.nlm.nih.gov/24222017/>

# ACC/AHA Guidelines for the management of overweight and obesity in adults

Evidence Statement (ES1): *To achieve weight loss, an energy deficit is required*

- Techniques for reducing energy intake:
  - *Specification of energy intake target less than that required for energy balance*
    - Usually 1,200 – 1,500 kcal/day for women/1,500 – 1,800 for men
      - Adjusted for individual body weight and activity level
  - *Estimation of individual energy requirements* according to expert guidelines and prescription of an energy deficit of 500-750 kcal/day or 30% energy deficit diet
  - *Ad libitum approaches*, in which a formal energy deficit target is not prescribed, but lower calorie intake achieved by restriction of particular food groups or provision of prescribed foods

# ACC/AHA Guidelines for the management of overweight and obesity in adults

ES2: *A variety of dietary approaches can produce weight loss in overweight and obese adults*

- Higher-protein
- Low-calorie
- Low-carbohydrate
- Low-fat vegan style
- Low-fat (20% cal)
- Low-glycemic load
- Lower-fat (<30% cal)
- Macronutrient-targeted
- Mediterranean-style
- Moderate-protein (12% cal)
- AHA-style Step 1 diet

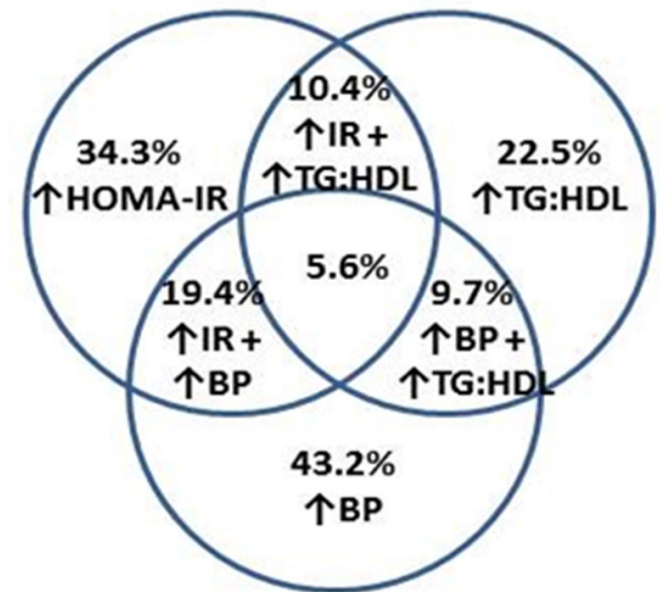
# When may weight loss be indicated?

- Guidelines indicate reduced risk with weight loss for individuals with a BMI of 30 or greater or if overweight with two or more other risk factors
  - Elevated waist circumference
  - Cardiovascular disease
  - Family history of cardiovascular disease
  - Smoking
  - Hypertension
  - Diabetes
  - Physical inactivity
  - Age (men 45 years or older; women 55 years or older or postmenopausal)

# ACC/AHA Guidelines for the management of overweight and obesity in adults

## *Matching Treatment Benefits With Risk Profiles*

- Counsel overweight and obese adults with cardiovascular risk factors that even modest, sustained weight loss of 3%–5% produce clinically meaningful health benefits, and greater weight losses produce greater benefits
  - Sustained loss of 3%–5%...
    - ↓triglycerides
    - ↓blood glucose and hemoglobin A1c
    - ↓risk of developing type 2 diabetes
  - Greater weight loss....
    - ↓BP
    - Improve LDL–C and HDL–C
    - Further ↓blood glucose
    - ↓need for medications to control BP, blood glucose, and lipids



# Beyond BMI: metabolically healthy obesity?

- ***Metabolically Healthy Obesity***
  - <https://pubmed.ncbi.nlm.nih.gov/32128581/>
- Obesity contributes to reduced life expectancy, impaired quality of life, and disabilities, mainly in those individuals who develop cardiovascular diseases, type 2 diabetes, osteoarthritis, and cancer. However, there is a large variation in the individual risk to developing obesity-associated comorbid diseases that cannot simply be explained by the extent of adiposity. Observations that a proportion of individuals with obesity have a significantly lower risk for cardiometabolic abnormalities led to the concept of metabolically healthy obesity (MHO). Although there is no clear definition, normal glucose and lipid metabolism parameters-in addition to the absence of hypertension-usually serve as criteria to diagnose MHO. Biological mechanisms underlying MHO lower amounts of ectopic fat (visceral and liver), and higher leg fat deposition, expandability of subcutaneous adipose tissue, preserved insulin sensitivity, and beta-cell function as well as better cardiorespiratory fitness compared to unhealthy obesity. Whereas the absence of metabolic abnormalities may reduce the risk of type 2 diabetes and cardiovascular diseases in metabolically healthy individuals compared to unhealthy individuals with obesity, it is still higher in comparison with healthy lean individuals. In addition, MHO seems to be a transient phenotype further justifying therapeutic weight loss attempts-even in this subgroup-which might not benefit from reducing body weight to the same extent as patients with unhealthy obesity. Metabolically healthy obesity represents a model to study mechanisms linking obesity to cardiometabolic complications. Metabolically healthy obesity should not be considered a safe condition, which does not require obesity treatment, but may guide decision-making for a personalized and risk-stratified obesity treatment.
- ***Metabolically Healthy Obesity Redefined***
  - <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2779690>

# There are three primary treatment options for obesity

- Behavioral/lifestyle intervention, dietary modifications, and increased physical activity
- Antiobesity medications
  - In combination with diet and exercise
  - Variety of actions—promoting satiety, metabolic effects, nutrient absorption
  - <https://www.niddk.nih.gov/health-information/weight-management/prescription-medications-treat-overweight-obesity>
- Weight loss (bariatric) surgery for extreme obesity

# Treatment of Obesity in Primary Care

<https://pubmed.ncbi.nlm.nih.gov/29156186/>

- The studies reviewed demonstrate that the **interventions most likely to produce clinically important weight loss** are those that provide **high-intensity counseling**.
- Given the **behavioral and biological challenges** involved in maintenance of weight loss, PCPs should be **open to the idea of using medications and surgery to treat obesity**. To the extent that PCPs themselves are open to these therapies, they will truly be **treating obesity in the same way they treat other chronic medical illnesses**.
- Whether or not a PCP becomes an expert in the treatment of obesity, she or he should **show respect and empathy** in discussing the topic with patients.
- **Positive reinforcement of success** with patients is very important, including **redefining success** (5%–10% loss of initial body weight), encouraging efforts at maintenance of weight loss, and **refocusing on improvement in weight-related conditions, not body mass index alone**.
- The physicians who will have the greatest success in managing obesity will be those individuals who are most adept at **engaging patients in behavioral treatment, providing patient-centered counseling, and using biological tools when necessary to produce long-term weight loss**.



# ACC/AHA Guidelines for the management of overweight and obesity in adults

*Diet is a foundational treatment across all BMI categories*

## Guide for Selecting Obesity Treatment

Treatment	BMI Category (kg/m <sup>2</sup> )				
	25-26.9	27-29.9	30-34.9	35-39.9	≥40
Diet, Exercise, Behavior Tx	+	+	+	+	+
Pharmacotherapy		With co-morbidities	+	+	+
Surgery				With co-morbidities	+

The Practical Guide: Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. October 2000, NIH Pub. No.00-4084

# **Dietary modifications and increased physical activity are generally recommended to help people achieve and maintain a healthier body**

- Most “diets” result in reduced calorie intake
  - Studies show little variation in terms of weight loss
  - Some approaches more nutritionally sound and conducive to keeping weight off
- Losing and maintaining of 5% to 10% of initial body weight represents clinical success for most patients
  - Reduces risk of chronic disease and all-cause mortality

# Low Carb vs Low Fat?

- Low Carbohydrate and Low-Fat Diets: What We Don't Know and Why we Should Know It
  - <https://pubmed.ncbi.nlm.nih.gov/31726791/>
  - Overall, there is no conclusive evidence that the degree of weight loss or the duration of reduced weight maintenance are significantly affected by dietary macronutrient quantity beyond effects attributable to caloric intake.

# Differences in macronutrient composition do not convincingly favor any one diet

- Negative energy balance is necessary for weight loss, and all diets on average induce weight loss
  - Weight loss is highly variable with all diets
    - “All diets work when adhered to...”
    - Initial weight loss can predict amount lost and maintained up to 4 years
- Emerging data pinpointing genetic variability in the metabolic responses to variation in macronutrient intake
  - Lower-fat diets are associated with lower LDL-C
  - Higher-fat diets are associated with lower trig and higher HDL-C
    - Effects on lipids are generally related to the magnitude of the weight loss
    - Effects on blood glucose also related to weight loss
- Higher protein intake and lower fat intake may benefit in maintaining weight loss.

Bray, G.A, Siri-Tarino, P.W. (2016): The Role of Macronutrient Content in the Diet for Weight Management. *Endocrinol Metab Clin North Am.* 45 (3): 581-604

# Weight loss and maintenance strategies are both important in an intervention for sustaining long-term behavior change

- Macronutrient Content of the Diet: What Do We Know About Energy Balance and Weight Maintenance?
  - <https://pubmed.ncbi.nlm.nih.gov/27038809/>
  - The 2013 AHA/ACC Clinical Guideline for the Management of Overweight and Obesity recommends a reduced energy diet for weight loss regardless of the macronutrient content.
  - However, diet composition may affect the maintenance of weight loss. In general, a healthful dietary pattern with reduced portion sizes, low energy dense foods, and physical activity are successful for many.
  - Certain populations, such as those with insulin resistance, may find reductions in carbohydrate and higher levels of unsaturated fats to be more effective and promote greater adherence. Of importance is that metabolic adaptations following weight loss also may impact weight loss maintenance and should be considered in the transition from weight loss to weight stabilization.

# 1/2021 Review: *Dietary interventions for obesity: clinical and mechanistic findings*

- <https://pubmed.ncbi.nlm.nih.gov/33393504/>
- Dietary modification is central to obesity treatment. Weight loss diets are available that include various permutations of energy restriction, macronutrients, foods, and dietary intake patterns. Caloric restriction is the common pathway for weight reduction, but different diets may induce weight loss by varied additional mechanisms, including by facilitating dietary adherence. This narrative Review of meta-analyses and select clinical trials found that lower-calorie diets, compared with higher-calorie regimens, reliably induced larger short-term (<6 months) weight losses, with deterioration of this benefit over the long term (>12 months). Few significant long-term differences in weight loss were observed for diets of varying macronutrient composition, although some regimens were found to have short-term advantages (e.g., low carbohydrate versus low fat). Progress in improving dietary adherence, which is critical to both short- and long-term weight loss, could result from greater efforts to identify behavioral and metabolic phenotypes among dieters.

# Although there are many different ways to lose weight, healthy and effective approaches emphasize a variety of nutrient-dense foods with lifestyle changes

- Effective approaches
  - Increase physical activity
  - Reduce calorie intake with an emphasis on nutrient-dense foods
  - Eat a moderately low-fat diet (less than 30% of calories)
  - Eat a moderately high-protein diet (25% to 30% of calories)
  - Include plenty of nonstarchy vegetables, fruit, whole grains with high fiber, and lean sources of protein

# Energy density is the number of calories in a given volume of food

- **Energy density** (caloric-density)
  - Number of calories in a portion of food divided by the food's weight in grams
    - Example: 107 calories in 20 grams of potato chips
    - Energy density:  $107/20 = 5.4$
- **Fat, sugar, and alcohol increase energy density**
- **Fluid (water) and fiber decrease energy density**



1575 Kcal  
High Energy Density



1575 Kcal  
Low Energy Density



# Reducing energy density to aid in weight management

- Dietary Management of Obesity: Cornerstones of Healthy Eating Patterns
  - <https://pubmed.ncbi.nlm.nih.gov/29156179/>
  - Several dietary patterns, both macronutrient and food based, can lead to weight loss. A key strategy for weight management that can be applied across dietary patterns is to reduce energy density. Clinical trials show that reducing energy density is effective for weight loss and weight loss maintenance. A variety of practical strategies and tools can help facilitate successful weight management by reducing energy density, providing portion control, and improving diet quality. The flexibility of energy density gives patients options to tailor and personalize their dietary pattern to reduce energy intake for sustainable weight loss.

**Summary of nutritional goals and practical dietary strategies for weight loss**

<b>Element</b>	<b>Nutritional Goal</b>	<b>Recommendation</b>
<b>Fat</b>	20 to 35% of total calorie intake	<ul style="list-style-type: none"> <li>•Fat is high in energy density. Choose appropriate portions of healthy fats to improve diet quality and meet nutritional needs. Substitute lower-fat foods for those higher in fat</li> <li>•Include monounsaturated and polyunsaturated fats</li> </ul>
<b>Protein</b>	10 to 35 % of total calorie intake	<ul style="list-style-type: none"> <li>•Include protein to create satisfying meals and meet nutrient needs.Include lean meats, poultry without skin, fish, eggs, legumes, tofu, and low-fat dairy products</li> </ul>
<b>Carbohydrate</b>	45 to 65% of total calorie intake	<ul style="list-style-type: none"> <li>•Switch to whole grains instead of refined grains. Examples include wheat, brown rice, oats, barley, corn</li> </ul>
<b>Fiber</b>	20 to 35 grams per day	<ul style="list-style-type: none"> <li>•Include fiber to help increase satiety. Add legumes, fruits, vegetables, and whole grains</li> </ul>
<b>Added Sugar</b>	Limit to less than 10% of total calorie intake	<ul style="list-style-type: none"> <li>•Limit foods and beverages containing added sugars.Main sources of added sugars are snacks, sweets and beverages</li> <li>•Nonnutritive sweeteners can be a substitute</li> </ul>
<b>Beverages</b>		<ul style="list-style-type: none"> <li>•Select low-calorie beverages.Water is the best choice</li> <li>•Limit intake of alcoholic beverages</li> </ul>
<b>Dietary Strategy</b>		<b>Recommendation</b>
<b>Monitor portions</b>		<ul style="list-style-type: none"> <li>•Choose appropriately sized portions to help meet daily energy requirements.Serve large portions of very low- and low-energy-dense foods</li> <li>•Serve smaller, less frequent portions of medium energy-dense foods</li> <li>•Limit portions of high-energy-dense foods</li> </ul>
<b>Increase the proportion of lower-energy-dense foods</b>		<ul style="list-style-type: none"> <li>•Lower-energy-dense foods provide satisfying portions to help increase satiety. Fill half the plate with fruits and vegetables</li> <li>•Start the meal with a first course broth-based soup or salad (pre-loading)</li> <li>•Substitute fruits and vegetables for higher-energy-dense ingredients</li> </ul>

# Considerations in dietary approach in treatment of overweight and obesity

- Individualize!
- Efficacy and safety of intervention
  - Weight loss
    - Short-term
    - Maintenance
  - Prevention and/or treatment of co-morbidities
    - Type 2 Diabetes
    - Lipid abnormalities
    - Elevated blood pressure
- Sustainability and adherence
  - Willingness/readiness for change
  - Barriers and obstacles to change
  - Support – professional and personal
  - Motivational Interviewing
    - collaborative conversation to strengthen a person's own motivation for and commitment to change
    - [https://www.umass.edu/studentlife/sites/default/files/documents/pdf/Motivational Interviewing Definition Principles Approach.pdf](https://www.umass.edu/studentlife/sites/default/files/documents/pdf/Motivational%20Interviewing%20Definition%20Principles%20Approach.pdf)



# U.S. News and World Reports “Best Diets”

<https://health.usnews.com/best-diet>

- **Best Diets Rankings** A panel of 27 nationally recognized experts in diet, nutrition, obesity, food psychology, diabetes and heart disease reviewed our profiles, added their own fact-finding and rated each diet in seven categories:
- How easy it is to follow (**sustainability**).
- Its ability to produce short-term weight loss.
- Its ability to produce long-term weight loss.
- Its **nutritional completeness**.
- Its **safety**.
- Its **potential for preventing and managing diabetes**.
- Its **potential for preventing and managing heart disease**.

## • Best Diets Overall

- #1 Mediterranean Diet
- #2 DASH Diet (tie)
- #2 The Flexitarian Diet (tie)
- #4 MIND Diet
- #5 Mayo Clinic Diet (tie)
- #5 TLC Diet (Therapeutic Lifestyle Changes) (tie)
- #5 Volumetrics Diet (tie)
- #5 WW (Weight Watchers) Diet (tie)



# U.S. News and World Reports “Best Weight Loss Diets”

<https://health.usnews.com/best-diet/best-weight-loss-diets>

- #1 The Flexitarian Diet (tie)
- #1 Volumetrics (tie)
- #1 WW (Weight Watchers) Diet (tie)
- #4 Vegan Diet
- #5 Jenny Craig (tie)
- #5 Mayo Clinic Diet (tie)
- #5 Ornish (tie)
- #5 Raw Food Diet (tie)
- #5 Vegetarian (tie)
- #10 DASH Diet (tie)
- #10 The Engine 2 Diet (tie)
- #12 Atkins Diet (tie)
- #12 Biggest Loser Diet (tie)
- #12 Mediterranean Diet (tie)
- #12 [Noom](#) (tie)
- #12 Nutrisystem (tie)
- #12 SlimFast Diet (tie)
- #19 [Keto](#) (tie)
- #19 Nordic Diet (tie)
- #19 Nutritarian (tie)
- #19 South Beach Diet (tie)
- #25 [Intermittent Fasting](#) (tie)
- #25 Modified Keto (tie)
- #31 Paleo Diet
- #35 Whole30 Diet

# Additional popular diet reviews

- Harvard School of Public Health The Nutrition Source
  - <https://www.hsph.harvard.edu/nutritionsource/healthy-weight/diet-reviews/>

The screenshot displays the Harvard School of Public Health The Nutrition Source website. The top navigation bar includes links for 'Current Students', 'Alumni', 'Faculty & Staff', and 'Friends & Supporters'. A search bar is located in the top right corner. The main content area features five diet review sections, each with a title and a brief description:

- Anti-Inflammatory Diet**: An anti-inflammatory diet is promoted as a remedy to battle inflammation in the body. A common belief is that "inflammation" is always bad. Although it produces unpleasant side effects, inflammation is actually a healthy response by our immune system. [Learn more about anti-inflammatory diets: how they work, potential pitfalls, and what the research says.](#)
- Clean Eating**: Once just a buzzword, "clean eating" is now a popular eating style. What it means will depend on who you ask. The terms clean eating and clean diets are not federally regulated in the U.S., so interpretation by consumers and the marketing of "clean" products by the food industry can vary widely. [Learn more about the potential pros and cons of this approach to eating.](#)
- DASH Diet**: The DASH (Dietary Approaches to Stop Hypertension) diet is sometimes prescribed by doctors to help treat high blood pressure, however numerous studies show wide-ranging health benefits of this eating pattern. [Learn more about DASH: how it works, potential pitfalls, and what the research says.](#)
- Gluten-Free for Weight Loss**: A gluten-free diet eliminates all foods containing or contaminated with gluten. As the sole treatment for the 1-2% of Americans who have celiac disease, this diet is not new. What is new—and driving these sales upward—is the use of a gluten-free diet for weight loss. [Learn more about a gluten-free diet: how it works, potential pitfalls, and what the research says about this strategy for weight loss.](#)
- Intermittent Fasting for Weight Loss**



On the right side of the page, there is a search bar with the text 'A to Z index' and 'Search...'. Below the search bar, there is a promotional banner that reads 'nutrition knowledge into daily practice!' with a 'MAKE A GIFT' button. Further down, there is a section titled 'The Nutrition Source | Update' with the text 'A monthly update filled with nutrition news and tips from Harvard experts—all designed to help you eat healthier. [Sign up here.](#)' Below this, there is a graphic for 'HEALTHY LIVING GUIDE' featuring various fruits and vegetables, with the text 'Explore the downloadable guide with tips and strategies for healthy eating and healthy living.'

# Additional popular diet reviews

- Forbes Health <https://www.forbes.com/health/body/>


**Forbes** HEALTH  
Healthy Body

Fitness **Nutrition** Sleep Dental Care Holistic Health Best Of's Reviews



### Your Guide To Vitamin D: Benefits, Best Sources And More

By **Leigh Weingus** Contributor




### What Is The Mediterranean Diet?

By **Nicole Gregory** Contributor


### Noom Diet Review: Pros, Cons And How It Works

By **Dawnielle Robinson-Walker** Contributor




### What Is The Keto Diet?

By **Alice Lesch Kelly** Contributor




### What Is The Carnivore Diet?

By **Lambeth Hochwald** Contributor



### What Is The GOLO Diet?

By **Ashley Laretta** Contributor



### Best Anti-Inflammatory Foods — Plus What To Avoid

By **Janis Jibrin, M.S., R.D.N.** Contributor

# “Almost like malpractice”: To shed bias, doctors get schooled to look beyond obesity

- Research has long shown that doctors are less likely to respect patients who are overweight or obese — terms that now apply to nearly three-quarters of adults in the U.S. The Association of American Medical Colleges plans to roll out new diversity, equity, and inclusion standards aimed at teaching doctors, among other things, how to treat patients who are overweight with respect.
- <https://khn.org/news/article/bias-doctors-obesity-education/>
- NBC News: Doctors seek to end bias against overweight patients  
<https://www.nbcnews.com/health/health-news/doctors-move-end-bias-overweight-patients-rcna29680>



# Talking to your patients about weight

- Patients prefer the terms “weight” and “BMI” when talking about obesity, and dislike the terms “fatness,” “excess fat,” and “obesity.”
- Be sensitive to cultural differences about weight, favorite foods, social norms and practices, etc.
- For example, patients who think they are at a normal weight within their culture might respond better to suggestions for maintaining, rather than losing, weight
- Ask about eating patterns in a nonjudgmental way
  - “I’d like to learn more about your eating habits. What kinds of foods and beverages do you eat and drink on a typical day?”
  - “What does ‘healthy eating’ mean to you?”
  - “Do you eat only when you’re hungry, or do you eat for other reasons as well, such as feeling stressed or bored?”
  - “When is the amount of food and beverages you eat and drink likely to change (for example, when you eat out or at work or family celebrations)?”
  - “How do you think keeping a journal will help you track how much you eat, drink, and exercise?”
- Questions about physical activity might include:
  - “When would be the best time of day or evening for you to be active?”
  - “What kinds of activities do you enjoy? Do you like walking? Seated aerobics? Do you prefer activities you can do alone, with someone else, or in a group?”
  - “How much time do you spend sitting each day? Would you like to try to work some physical activity into your daily routine?”

# Talking to your patients about body weight and obesity

## *References*

- *Weight Gain in Women at Midlife: A Concise Review of the Pathophysiology and Strategies for Management*
  - [https://www.mayoclinicproceedings.org/article/S0025-6196\(17\)30602-X/fulltext](https://www.mayoclinicproceedings.org/article/S0025-6196(17)30602-X/fulltext)
- Other resources and links
  - <https://www.aanp.org/education/education-toolkits/obesity>
  - <https://www.niddk.nih.gov/health-information/weight-management/talking-adult-patients-tips-primary-care-clinicians>
  - <http://stopobesityalliance.org/wp-content/themes/stopobesityalliance/pdfs/STOP-Provider-Discussion-Tool.pdf>
  - <http://endocrinenews.endocrine.org/advise-consent-talking-to-obese-patients-about-their-weight/>
  - <http://biastoolkit.uconnruddcenter.org/toolkit/Module-2/2-01-HowToTalk.pdf>

# Communicating About Weight in Dietetics Practice: Recommendations for Reduction of Weight Bias and Stigma

- [https://jandonline.org/article/S2212-2672\(21\)00063-0/fulltext](https://jandonline.org/article/S2212-2672(21)00063-0/fulltext)
- Weight bias reflects negative societal attitudes based on body weight and may include judgments about a person's body shape or size if that size is not in concordance with societal expectations.
- People-first language (ie, the use of the phrase “person with obesity”) has gained support among the academic community and is endorsed by many professional organizations, including the Academy of Nutrition and Dietetics, and has shown promise as a way to decrease weight stigma.
- A recent systematic review on language used to discuss obesity indicated that words such as weight or unhealthy weight were the most accepted by a range of different groups when discussing weight, whereas the words obese and fat were least preferred

# Health at Every Size (HAES)

- **ASDAH: Association for Size Diversity and Health**
  - <https://asdah.org/health-at-every-size-haes-approach/>
- The Association for Size Diversity and Health (ASDAH) affirms a holistic definition of health, which cannot be characterized as the absence of physical or mental illness, limitation, or disease. Rather, health exists on a continuum that varies with time and circumstance for each individual. Health should be conceived as a resource or capacity available to all regardless of health condition or ability level, and not as an outcome or objective of living. Pursuing health is neither a moral imperative nor an individual obligation, and health status should never be used to judge, oppress, or determine the value of an individual.
- Centering this definition of health, the Health At Every Size<sup>®</sup> (HAES<sup>®</sup>) Principles and framework are a continuously evolving alternative to the weight-centered approach to treating clients and patients of all sizes. The HAES<sup>®</sup> Principles promote health equity, support ending weight discrimination, and improve access to quality healthcare regardless of size.

# **Intuitive Eating:** eating philosophy that focuses on listening to your body's cues on hunger and fullness and encourages people to reject the diet mentality of labeling foods as good or bad.

## **10 Principles of intuitive eating**

- <https://www.intuitiveeating.org/10-principles-of-intuitive-eating/>
- 1. Reject the Diet Mentality
- 2. Honor Your Hunger - Keep your body biologically fed with adequate energy and carbohydrates.
- 3. Make Peace with Food Call a truce, stop the food fight!
- 4. Challenge the Food Police .Scream a loud “NO” to thoughts in your head that declare you’re “good” for eating minimal calories or “bad” because you ate a piece of chocolate cake.
- 5. Respect Your Fullness - Listen for the body signals that tell you that you are no longer hungry.
- 6. Discover the Satisfaction Factor
- 7. Honor Your Feelings Without Using Food
- 8. Respect Your Body- Accept your genetic blueprint.
- 9. Exercise—move your body
- 10. Honor Your Health

# Intuitive or mindful eating

- Review Nov 2019: Mindful eating and common diet programs lower body weight similarly: Systematic review and meta-analysis
  - <https://www.ncbi.nlm.nih.gov/pubmed/31368631>
  - No difference compared with conventional diet programs in BMI or waist circumference
- Review Dec 2017: A structured literature review on the role of mindfulness, mindful eating and intuitive eating in changing eating behaviours
  - <https://www.ncbi.nlm.nih.gov/pubmed/28718396>
  - Mindfulness-based approaches appear most effective in addressing binge eating, emotional eating and eating in response to external cues. There is a lack of compelling evidence for the effectiveness of mindfulness and mindful eating in weight management.
- Review Oct 2014: Intuitive eating: an emerging approach to eating behavior
  - <https://www.ncbi.nlm.nih.gov/pubmed/25726186>
  - This approach may be a more promising and realistic alternative to address overweight and obesity than the conventional weight-loss treatments.
- Observational Study Aug 2019: Intuitive eating and gestational weight gain
  - <https://pubmed.ncbi.nlm.nih.gov/31330479/>
  - Intuitive eating appears to be associated with lower gestational weight gain but not babies' birth weight. It remains to be seen whether intuitive eating can be increased by educational interventions during pregnancy and thus have an impact on gestational weight gain.

# ***5/2022 Dietary Interventions to Treat Type 2 Diabetes in Adults with a Goal of Remission: An Expert Consensus Statement from the American College of Lifestyle Medicine***

- An expert panel representing seven medical societies issued 69 consensus statements focused on the importance of a plant-based diet in type 2 diabetes treatment and remission. The initiative was supported by the Academy of Nutrition and Dietetics. Topics covered by the statements included basic definitions, diet and remission in type 2 diabetes, weight loss, specific dietary elements, adjuvant and alternative treatment, monitoring and adherence, and payments and policy
- “diet as a primary intervention for T2D is most effective in achieving remission when emphasizing whole, plant-based foods with minimal consumption of meat and other animal products.”
- <https://journals.sagepub.com/doi/10.1177/15598276221087624>

# 5/2021 Review: *Diets and drugs for weight loss and health in obesity - An update*

- <https://pubmed.ncbi.nlm.nih.gov/34082399/>
- Among recommended diets are low-fat (LF) and low-carbohydrate (LC) diets, in addition to the Mediterranean diet and the intermittent fasting approach, all of which presumably being optimized by adequate contents of dietary fibers. A basic point for weight loss is to adopt a diet that creates a permanently negative and acceptable energy balance, and prolonged dietary adherence is a crucial factor.