PEPSICO Health & Nutrition Sciences

Empowered Education

The Truth About Trending Diets

Sub-title/Statement/Date

FOR FITNESS PROFESSIONALS





What is a Diet?

A "diet" can be defined in a variety of ways, with the two most common being: ¹

1. Kinds of food a person eats

2. Certain types or amounts of food prescribed to a person for a specific health reason or weight management



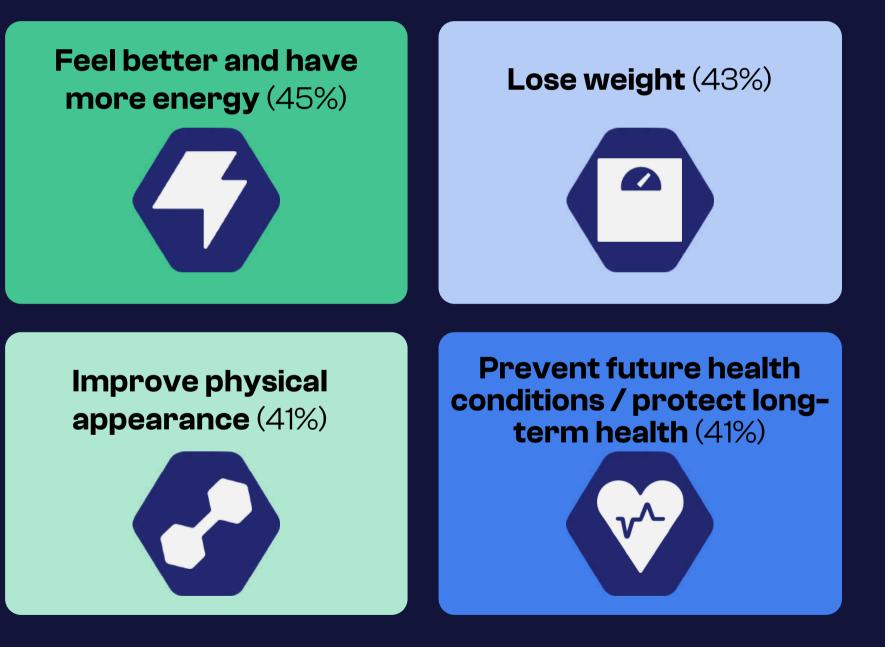




Top Reasons for Following a Specific Diet Eating Pattern²

54% of Americans have followed a diet or eating pattern in 2024²

Steady increase from 38% in 2019 (42% increase)²



Most Common Eating Patterns Followed in 2024²

| Diet | 2024 Prevalence (% followed) | 2019 Prevalence (% followed) | % change from 2019-2024 |
|------------------------------------|---------------------------------|---------------------------------|------------------------------|
| High protein | 20% | | |
| Mindful eating | 18% | | |
| Intermittent fasting | 13% | 9% | 44% |
| Calorie counting | 12% | | |
| Clean eating | 11% | 10% | 10% |
| Low-carb | 7% | 6% | 17% |
| Gluten-free | 7% | 6% | 17% |
| Mediterranean style | 6% | 5% | 20% |
| Flexitarian | 5% | 3% | 67% |
| Intuitive eating | 5% | | |
| Low-carbon footprint / sustainable | 4% | | |
| Ketogenic or high-fat | 4% | 6% | -33% |
| Weight-loss plan | 4% | 5% | -20% |
| Vegetarian | 3% | 3% | 0% |
| Plant-based | 3% | 5% | -40% |
| DASH eating plan | 2% | 2% | 0% |
| Cleanse | 2% | 2% | 0% |
| Vegan | 2% | 3% | -33% |
| Paleo | 1% | 3% | -67% w.pepsicoempowereded |

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What is a Fad Diet?



A fad diet can be defined as a "trendy dietary pattern known to be a quick fix for long term problems" ³

Indicators of Fad Diets / Fad Diet Red Flags^{3,4}

BIG PROMISES

Rapid weight loss

Miracle cures

Quick fixes – minimal work or effort

SPECIFIC FOOD COMBINATIONS / AVOIDANCES

Limitations & avoidance of entire food groups

Rigid menus and routines



LACK OF SCIENTIFIC EVIDENCE

Limited or inconsistent scientific evidence available

Based more on questionable information or stories

Simple conclusions drawn from complex science

Non-reputable sources

$\mathbf{F} = \mathbf{F} = \mathbf{F} + \mathbf{F} +$



Nutritionally inadequate

Due to missing food groups or extreme food restrictions



Changes are only short-term

Extreme diets are often not sustainable, leading to issues maintaining changes



Could be detrimental for those with chronic diseases

Doctors often aren't consulted so other conditions and/or medications aren't taken into consideration

C Drawbacks of Restrictive Diets

Calorie Restriction

Risk for low blood sugar – fatigue, light-headedness, fainting^{3,5}

Potential to lose muscle and bone mass instead of fat ^{3,5}

Food Group Restriction

The brain needs glucose (sugar from carbohydrates) to function properly³

Risk for vitamin & mineral deficiencies⁵

High amounts of nutrients to limit (i.e. saturated fat from animal protein)⁵



Quick Review of Trending Diets

- Intermittent Fasting
- **Clean Eating**
- 3

4

5

6

1

2

- Low-Carbohydrate / Keto
- Gluten-Free
- Plant-Based
- Paleo



GG Intermittent Fasting

2024 prevalence: 13%

44% increase in past 5 years²

What is intermittent fasting (IF)?

Involves restricting eating times rather than types or amounts of food eaten.⁶ The idea is when you are not fasting, you can eat whatever you want.

Followed by 13% of Americans recently surveyed, usually for weight loss purposes.²

3 types of intermittent fasting⁶

The 5:2 Diet

Regularly eating 5 days per week and fasting (or mostly fasting) on the other 2 days

Effectiveness:

Can lead to weight loss due to the average 20-25% calorie reduction often experienced Alternative Day Fasting (ADF)

or alternative-day modified fasting

Switching back-and-forth between days of fasting (or mostly fasting) and feeding

Effectiveness:

Any weight loss is related to calorie reduction. "Big eaters" generally don't lose weight because they often make up their calories on their feeding days

Time-Restricted Feeding (TRF)

Limits eating to a reduced window of time, typically <10 hours per day

(example: if you eat breakfast at 9:00 a.m., you need to stop eating at 7:00 p.m. to maintain a 10 hour fast window).

Effectiveness:

Appears to be the easiest method to maintain, so it could potentially be the most effective for weight loss and/or maintenance



What does the science say?⁶⁻⁹



Any weight loss is largely due to the decrease in calories during the fasting period.

However, overall effectiveness is not different from other low-calorie diet plans.

Scientific evidence is lacking

Many studies are on small groups of people or limited to animals (not generalizable) and for very short periods (longterm effects not known).

More research is needed regarding potential negative side effective, such as risk for nutrient deficiencies.

Bottom line⁶⁻⁹

Intermittent fasting is not currently a recommended treatment for weight loss or any other health condition.

Different diets can work better for different people, but the key is how well you follow the diet and how easy it is to maintain those habits long term.





2024 prevalence: 11%

10% increase in past 5 years²

What is clean eating?

Lack of a clear definition or regulatory guidance on what is considered "clean eating" with interpretations varying widely 10,11

Generally considered eating foods that are minimally processed and/or have simple ingredients without additives, preservatives, or other artificial ingredients.¹¹

Perceived health benefits & scientific evidence

Lack of a clear definition means research specifically on "clean eating" is limited

Diet Quality

- Most common reason for following "clean eating" pattern ^{11-13, 16}
- Available research did not find a significant difference in nutritional quality between less processed ("clean") food items and their more processed counterparts, but did find the "clean" items to be more expensive and have a shorter shelf life.¹³
- According to Center of Science in the Public Interest (CSPI), "clean label" does not mean a product is healthy, with many products marketed as being "clean" having very high levels of sodium, saturated fat, and sugar.¹⁵



Common perceptions

"Clean eating" trend may stem from lack of awareness of ingredient names or purposes, leading to an interpretation that they are not natural or healthy.¹

Sometimes associated with other designations such as "non-GMO," or "organic," ^{11, 15}

| Nutrition | |
|-----------|---|
| Calories | Ξ |
| | |
| | |
| | |

Nutrition considerations

Compared to similar options not labeled as "clean", "clean" products and recipes have been shown to have

> HIGHER protein fiber fat

calories carbohydrates sugar sodium

SIMILAR

GGE Low-Carbohydrate/Keto

2024 prevalence: 7% (low-carb), 4% (keto)

10% increase in low-carb, 33% decrease in keto in past 5 years 2

What is a low-carbohydrate and/or ketogenic (keto) diet?

Restriction of carbohydrate intake at varying levels while promoting higher intakes of protein and fat.¹⁸⁻²⁰

PURPOSE / MECHANISM - induces nutritional ketosis¹⁸

Forces body to use fat instead of the preferred carbohydrates as main energy source

Perceived health benefits & scientific evidence

Most current research conducted with low-carb diets

Weight loss/gain

low-carb diets

Some evidence for significant weight loss with related to lower calorie intake, but results not significantly different when compared to other lower calorie diets^{18, 20-22}

Type 2 Diabetes

low-carb diets

Some evidence for significant improvements in some measures of diabetes management in the short-term (likely related to weight loss), but changes were not significant in the long-term or compared to normal or other diets ^{18, 22}





Heart Disease

Iow-carb diets Some evidence for significant improvements in cardiovascular risk factors (likely related to weight loss), but unclear if improvement is significantly different compared to other diets^{18,22}

Neurological conditions

keto diets

Limited, low-quality evidence for association with short-term seizure reduction in children (and some adults) with drug-resistant epilepsy ¹⁸



Rules

Recommendations for % daily calories from each macronutrient by diet¹⁸⁻¹

| | Carbohydrates | Protein | Fat |
|--------------------------------|---------------|---------|--------|
| Low-Carb | ~25% | 40-50% | 30-40% |
| Keto (very low-carb) | 5-10% | 20-25% | 70-80% |
| Normal (DGA) | 45-65% | 10-35% | 20-35% |

Nutrition considerations

Diet quality compared to normal control diet²

HIGHER protein fat (total and saturated)

calories sodium fiber vitamins A, E, & K minerals (folate, magnesium, & selenium)

LOWER



Gluten-Free

2024 prevalence: 7%

17% increase in past 5 years²

What is a gluten free diet?

Exclusion of products with the protein gluten, which gives structure and elasticity to certain grains, allowing them to maintain their shape²³

Commonly followed by individuals with celiac disease or gluten-intolerance – an autoimmune condition where an immune response to gluten causes damage to the small intestine, resulting in reduced nutrient absorption ²⁴

Perceived health benefits & scientific evidence



Weight loss/gain

- Moderate evidence for weight loss in healthy individuals (independent of calorie restriction)²⁵
- Some evidence for weight gain in celiac disease patients (due to improved nutrient absorption with small intestine healing)^{26,27}



Digestive health

Strong positive evidence in celiac disease patients only, related to healing of the small intestine²⁸



Neurological conditions

(Behavioral & seizure activity, Schizophrenia, MS, Autism)

Limited / no evidence

Chronic disease

(Risk of Cardiovascular Disease, Type 2 Diabetes)

Limited / no evidence



Rules & foods excluded

excludes any gluten-containing grains, primarily: ²³

Wheat



Barley







Nutrition considerations

Diet quality compared to normal control diet²

HIGHER calorie fat (total and saturated)

protein fiber vitamins & minerals (iron, folate, zinc, calcium)

_OWER



Plant-Based

2024 prevalence: 3% plant-based 6% Mediterranean, 5% flexitarian, 3% vegetarian, 2% vegan

In past 5 years: 20% increase in Mediterranean, 67% increase in flexitarian, 33% decrease in vegan, no change in vegetarian²

What is a plant-based diet?

While there is no universal definition of a "plant-based eating pattern," they generally include a variety of dietary patterns with varying degrees of lower animal-based foods.

They focus on unrefined whole grains, fruits, vegetables, legumes, nuts & seeds while reducing or eliminating meat, dairy foods, eggs, or other animal by-products. 29, 30

Perceived health benefits & scientific evidence

A growing body of research suggests, but does not yet prove, plant-based eating patterns support positive health outcomes. Most studies have been conducted with vegan, vegetarian, and Mediterranean dietary patterns. More research is needed to determine the impact of other plant-based eating patterns and determine the reason behind these benefits.



Weight loss/gain

- Plant-based eating patterns may be associated with weight loss, decreased weight gain, and improved body composition due to lower calorie intake and increased satiety from a high fiber diet.³²
- A large amount of research suggests people following vegetarian diets without calorie restriction may lose more weight than non-vegetarian groups.³³

Cancer

- Analysis of several studies suggests plant-based eating patterns may be associated with lower risk of cancer - 8% lower with vegetarian diets and 15% lower with vegan diets.³⁶
- While the mechanism is not well understood, this is likely due to the high consumption of fiber, antioxidants, and other nutrients found in plant foods, along with the reduced intake of fat from animal products.³⁷







- A large, long-term study suggests eating less animal products is associated with a lower the risk of type 2 diabetes.³⁴
- Research also suggests vegan diets may be helpful in diabetes management, including better glycemic control and decreased use of medication.³⁵

Digestive & gut health

- The high fiber content of plant-based eating patterns may help promote overall digestive health.³⁸
- Emerging research suggests plant-based eating patterns promote the development of a more diverse gut microbiota, though more research is needed to determine how this impacts overall health.³⁹



Types of Plant-Based Diets^{29,3}

| roous included / Excluded | | | | aca | | |
|---------------------------|---|---------------------------|---------|----------|-------|---------------------------------|
| Diet | Description | Beef, Poultry, Pork | Seafood | Dairy | Eggs | Other animal by- products |
| Vegan | Entirely plant-based, excluding all animal and animal-derived products and ingredients | × | × | × | × | × |
| Vegetarian | Excludes all animal products with varying degrees of exclusion for animal-derived products | × | × | Maybe | Maybe | Maybe |
| Mediterranean | Stems from traditional meals in Mediterranean countries, characterized by high consumption of vegetables, fruits, whole grains, and healthy fats | Limited | | Moderate | | \checkmark |
| Flexitarian | Semi-vegetarian eating pattern that reduces meat consumption & occasionally incorporates more plant- based dishes or meals | Moderate | | ~ | | \checkmark |

Nutrition considerations

While plant-based eating patterns can be healthful, not all plant-based foods are nutrient-dense. Individuals should be mindful of an eating pattern that ensures adequate nutrient intake (especially **high-quality protein, zinc, iron, calcium, vitamin D, and vitamin B12** which are often under-consumed with plant-based diets) while limiting excess saturated fats, sodium, and added sugars.^{29,30}





2024 prevalence: 1% (least popular)

67% decrease in past 5 years²

What is a paleo diet?

Diet similar to **Paleolithic pre-agricultural, hunter-gatherer** periods^{40,41} i.e. focus on foods that can be hunted, fished, or gathered (meats & seafood, fruits & vegetables)⁴¹

Characterized by: higher protein, moderate to higher fat, lower carbohydrate^{40,41}

Perceived health benefits & scientific evidence

Weight loss

Some evidence for significant short-term weight loss (due to lower calorie intake)^{42,43}



Heart Disease

Inconsistent improvements in risk factors compared to normal diet^{42,44}

+

Type 2 Diabetes

Moderate evidence for significant improvement in some measures of diabetes management (likely related to weight loss), but changes are not significantly different than those seen in normal diets with the same decrease in calories.^{42,44-46}



Rules & foods excluded⁴⁰

FOCUS ON

Protein foods (meat & seafood), unsaturated fats, and fresh fruits / vegetables as main source of carbohydrates

FOODS EXCLUDED

Grains, legumes, dairy, potatoes, processed foods, artificial sweeteners



Nutrition considerations

Diet quality compared to normal control diet ^{41,44-46}

HIGHER protein fiber vitamin A, C, E, B5, B12 fat (total & unsaturated)

LOWER

sodium saturated fat vitamin D calcium potassium

Science Takeaways



Much of the evidence for weight loss with any diet can be largely explained by a calorie deficit⁴⁷

Our bodies utilize the energy from food to support normal body functions

When we consume less energy than our body needs, we lose weight



Often, diets cut out key nutrients and food groups, which can be harmful to our health long term 4

> Always consult your physician or registered dietitian nutritionist (RDN)





Following healthy eating patterns is the best way to ensure you are getting the right nutrients you need at an appropriate caloric level 48

> The Dietary Guidelines for Americans provide a general framework and tips for healthy eating (see next slide)

Key Points of a Healthy Dietary Pattern Dietary Guidelines for Americans⁴⁸

| Follow a healthy dietary pattern at every life stage | Custom nutrient - bevera |
|--|--|
| To meet nutrient needs, help achieve a healthy body weight, and reduce the risk of chronic disease | Allow choic preferences, budgeta |
| Focus on meeting food group needs with nutrient-dense foods and beverages while staying within calorie limits | Limit foods higher in a saturated |
| Including a variety of fruits, vegetables, grains, dairy, protein, and oil | And limit al |

nize and enjoy -**dense** food and rage choices

ces to reflect personal s, cultural traditions, and ary considerations



Is and beverages added **sugars,** I **fat, and sodium**

alcoholic beverages

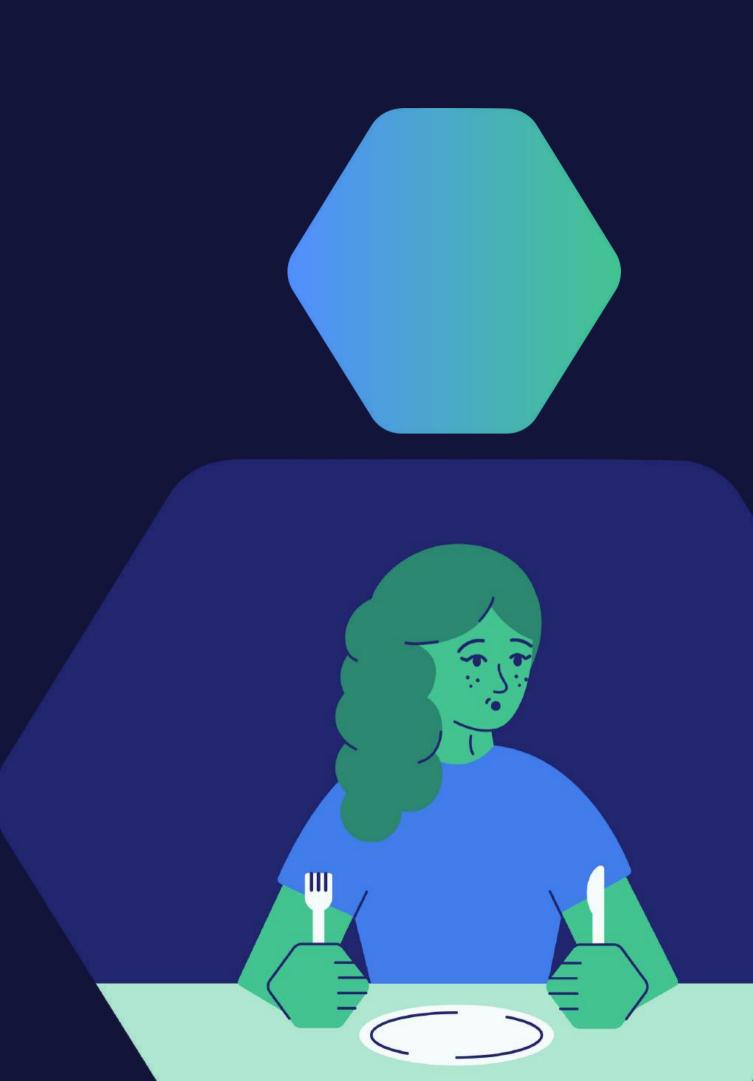


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