



The Scoop on Nutrition: Understanding the Nutritional Landscape of Frozen Desserts

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Ice-Breaker: *My Favorite Frozen Dessert*

When you think of your favorite frozen dessert, what is the first thing that comes to mind?

Ice-Breaker: My Favorite Frozen Dessert

- **Location:** Raspados el Paraiso in Tucson, AZ
- **Frozen Dessert:** Reboltijo
 - Shaved ice, mango, pineapple, chamoy, tajin, lime, tamarind, Mexican candies



Nutrition in Frozen Desserts Matters

- Represent “indulgence”
- Opportunity for better nutrition
- **74% of Americans** say taste and health *equally* influence food choices (2025)
- Consumers seek enjoyment without compromise





What Counts as a Frozen Dessert?

Traditional Dairy

Ice cream, gelato, frozen yogurt

Fruit-Based

Sorbet, sherbet, açai bowls

Cultural Classics

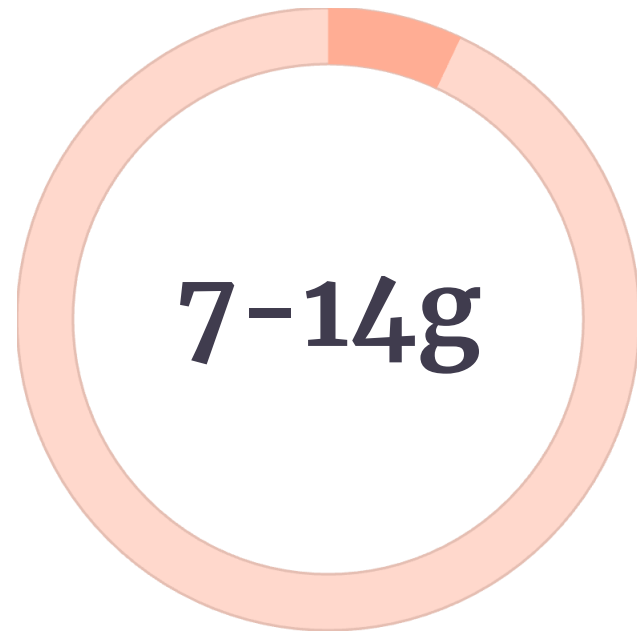
Kulfi, mochi, halo-halo, açai bowls, mangonadas

Plant-Based

Non-dairy alternatives and innovations

Macronutrient Composition

Typical nutritional profile per ½ cup serving



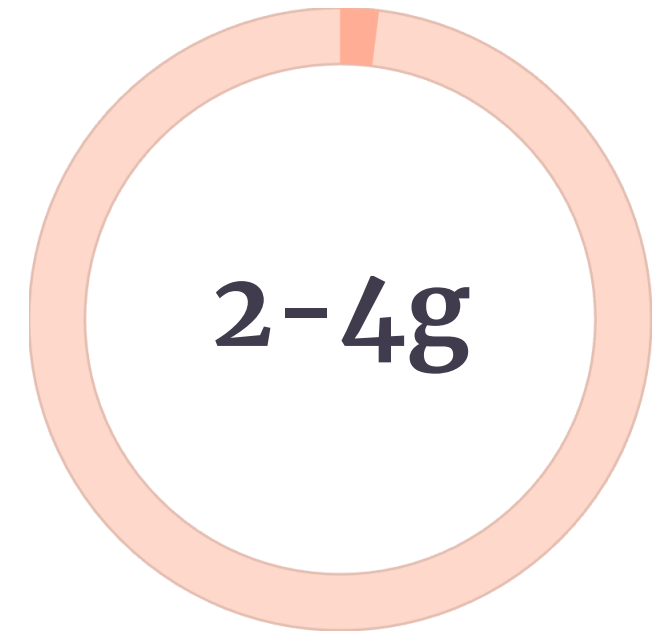
Fat

Varies by formulation



Carbohydrates

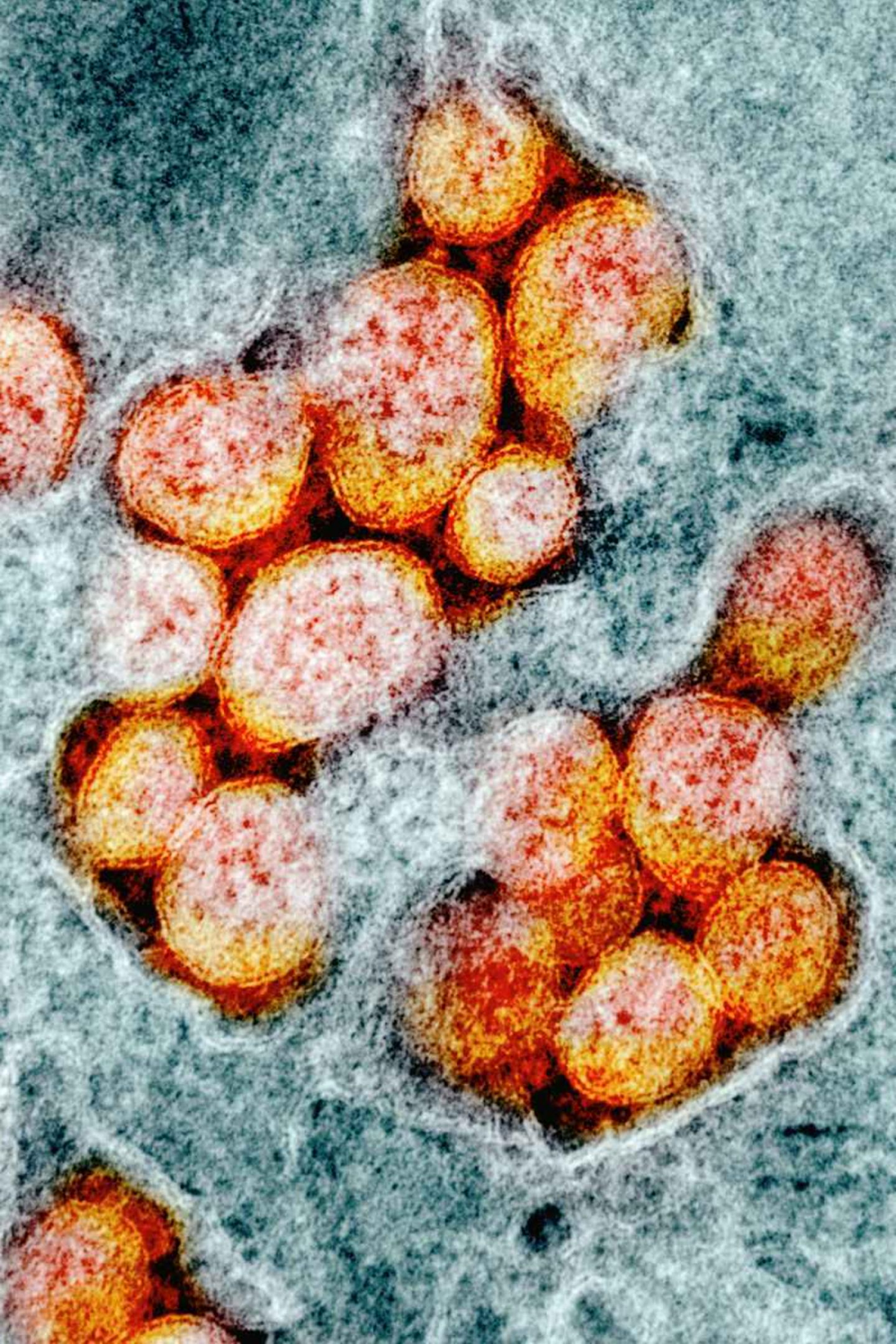
Primary energy source



Protein

Building blocks
Supports satiety

 **150-300 calories**/serving, depending on formulation



Fat Sources & Nutritional Quality



Dairy Fat

Cream, butter: rich mouthfeel, saturated fat (~60-70%), fat-soluble vitamins



Plant Oils

Coconut, palm kernel: tropical oils with unique melting properties
Higher unsaturated ratios, heart-healthy

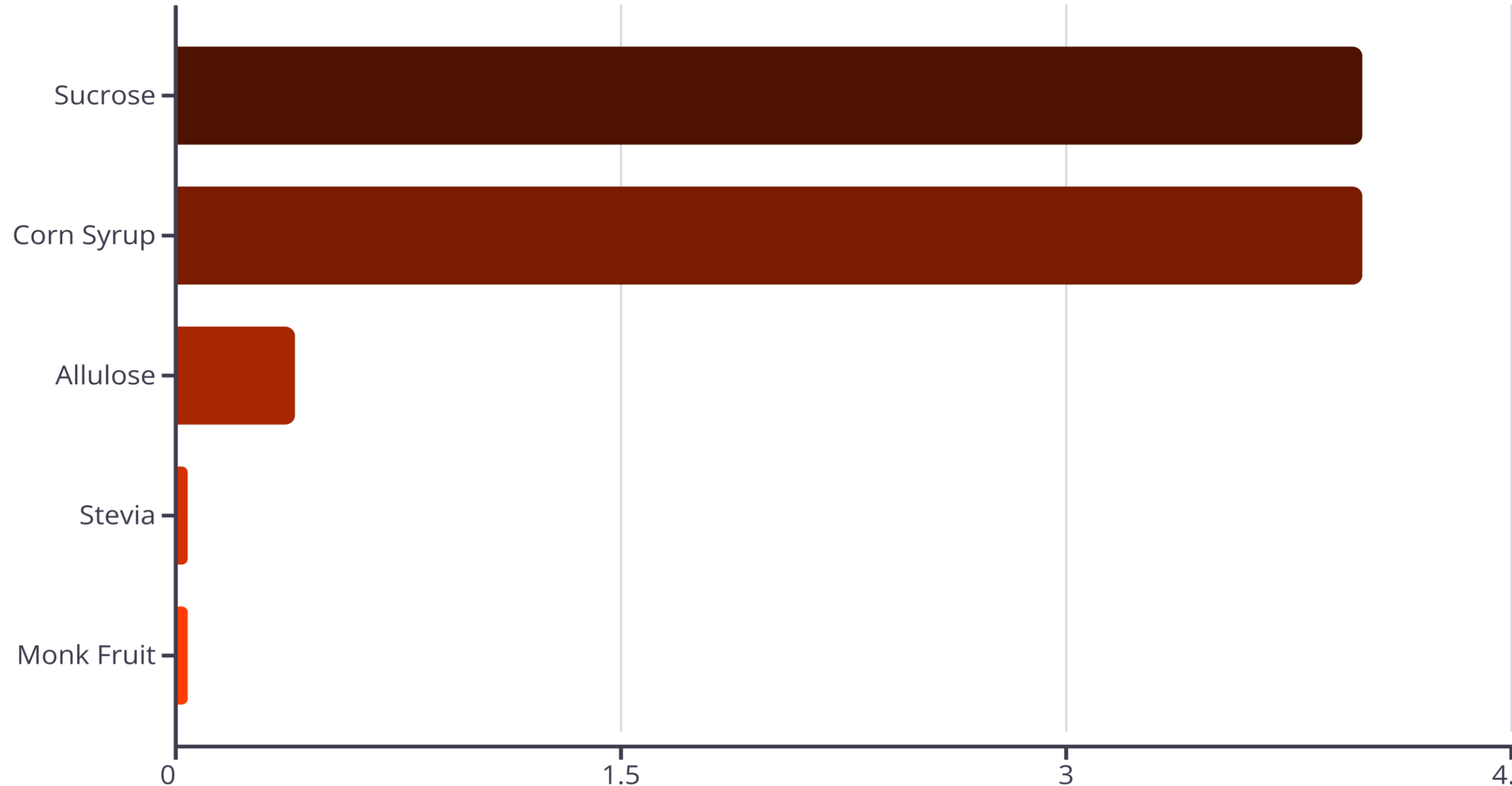


Reformulation

Healthier fat profiles: reduced saturated fat, increased unsaturated options

Innovation focus: Balancing nutrition, texture, and consumer expectations

Sweeteners & Caloric Balance



Glycemic Response of Sweeteners

Sweetener	Approximate GI	Glycemic Response Characteristics
Sucrose	65	<ul style="list-style-type: none">• Medium GI• Composed of 50% glucose and 50% fructose• Moderate blood glucose increases
Corn Syrup (regular)	75–90	<ul style="list-style-type: none">• High GI• Primarily glucose polymers• Rapid glycemic rise
High-Fructose Corn Syrup (HFCS)	50–56	<ul style="list-style-type: none">• Moderate GI• Fructose lowers glycemic response compared to pure glucose
Allulose	0	<ul style="list-style-type: none">• No glycemic effect• Not metabolized into glucose
Stevia	0	<ul style="list-style-type: none">• No glycemic effect• May improve glucose tolerance
Monk Fruit	0	<ul style="list-style-type: none">• No glycemic effect• Unrecognized by carbohydrate metabolism

Health & Trends



Reflection

When you're shopping, are you more motivated by claims of **added benefits** (i.e., added protein, probiotics) or **reduced negatives** (i.e., low sugar, no added sugar)?



Nutritional Benefits of Frozen Desserts



Calcium & Vitamin D

- Essential for bone health
- Dairy-based options provide 10-15% DV/serving



Emotional Well-Being

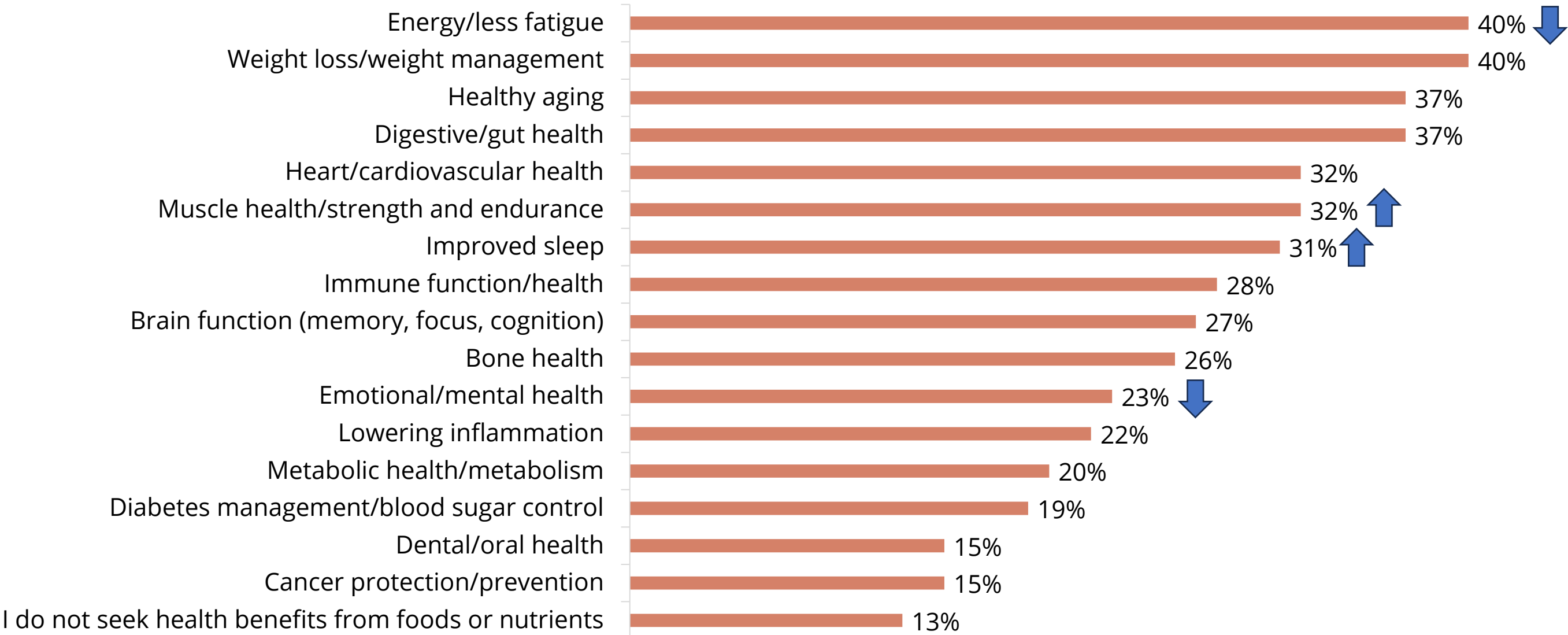
- Portion-controlled fun food
- Supports mental health and food enjoyment



Fortification Potential

- Probiotics
- Fiber
- Protein
- Functional ingredients

Health Benefits Americans Seek From Their Diet



[TREND 2022-2025] N4 Which of the following health benefits, if any, are you seeking to get from foods, beverages, or nutrients? Select all that apply (n=3000). Note: Arrows indicate statistical significance vs. 2024. Differences in parenthesis indicate statistical significance vs. 2022. Note: "Other" (1%) is no shown

Top 4 Health Benefits Sought from Food by Generation

Gen Z	Millennial	Gen X	Boomer
45% Energy/less fatigue	42% Energy/less fatigue	41% Energy/less fatigue	45% Healthy aging
40% Weight loss/weight management	40% Weight loss/weight management	39% Digestive health/gut health	41% Weight loss/weight management
38% Improved sleep	36% Improved sleep	39% Healthy aging	37% Digestive health/gut health
37% muscle health/strength and endurance	36% Digestive health/gut health	38% Weight loss/weight management	36% Heart/Cardiovascular health

Rise of Non-Dairy Delights

Nutritional Considerations

- Lower in protein than dairy-based (0-3 g vs. 2-4 g)
- Fat content varies widely by base ingredient
- Often fortified
 - Calcium, vitamins B12 and D
- May contain added stabilizers for texture
- Sugar content comparable to traditional products

Common Plant Bases



Almond

Low calorie, subtle flavor



Coconut

Rich texture, higher fat



Oat

Creamy, fiber-rich



Soy

Protein-rich option

Health-Focused Innovations



Protein Fortification

- High-protein ice creams (12–20 g/serving)
- Use whey isolates, milk protein concentrate, or plant proteins
- ~ 6-20 g protein/serving
- Satiety and muscle recovery



Probiotic Enhancement

- Live cultures (*Lactobacillus acidophilus*, *Bifidobacterium*)
- Frozen yogurt and fermented plant-based options



Sugar Reduction

- Allulose and tagatose provide sweetness with minimal glycemic impact
- Fiber-based bulking agents maintain mouthfeel and volume

Practical Applications



Servings vs. Portions: What's the Difference?



1/2 cup
FDA Standard
Official serving size

48%
Portion Underestimation

2X
Typical Consumption
Average actual portion

~300
Calories
In common portion

Portion Control & Mindful Eating

01

Standard Serving

½ cup (65-70g) provides guidance without excess calories

02

Visual Cues

Package design and serving suggestions guide appropriate consumption

03

Mindful Enjoyment

Smaller portions savored slowly enhance satisfaction and reduce overconsumption



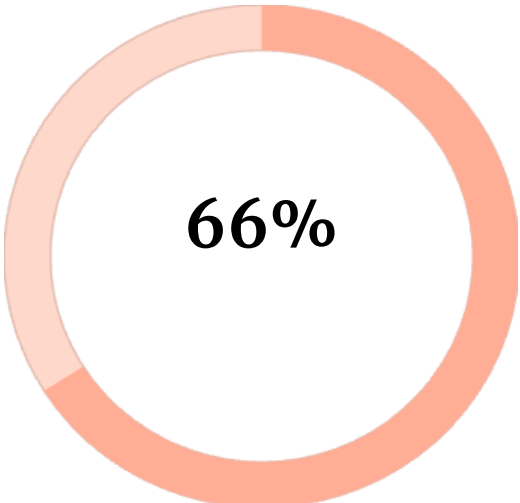
Pro tip: Pre-portioned products support calorie awareness and healthier habits



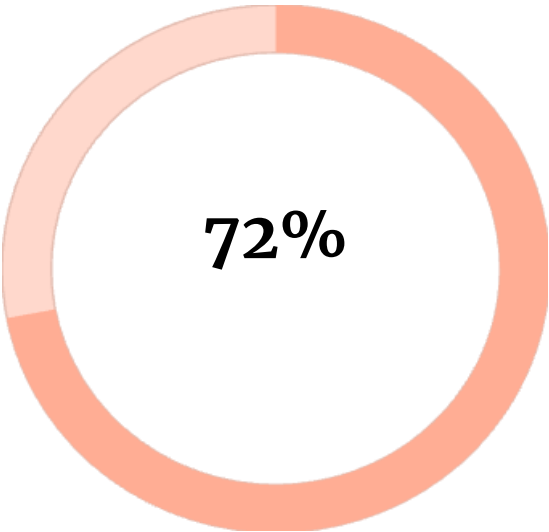
Reflection

What is the first thing you typically look for on a frozen dessert's nutrition label (i.e., calories, sugar, serving size, ingredients)?

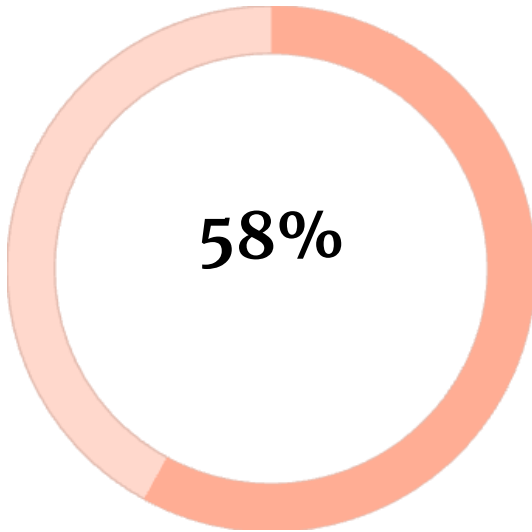
Ingredient Transparency: Consumer Priorities



Read Ingredients
Before purchase



Check Sugar
Content first



Prefer Natural
Stabilizers & colors

Source: 2025 Food & Health Survey: A Focus on Food & Nutrition. International Food Information Council; 2025. Accessed October 12, 2025. <https://foodinsight.org/>

Consumer Education: Health Claims



Key Labeling Terminology

Term	Legal Definition	Consumer Perception
"Natural"	No formal FDA definition for frozen desserts	No artificial ingredients
"Light/Lite"	≥50% reduction in fat or 1/3 fewer calories than reference	"Healthier" overall
"Reduced Fat"	≥25% less fat than reference product	Less calories (not always true)
"No Sugar Added"	No added sugars, but may contain lactose	"Sugar-free"

Decoding Labels

Reading Nutrition Facts

- Focus on **serving size first**
 - All values per serving
- Compare **total sugars** vs. **added sugars** (lactose vs. sweetener contribution)
- Use **% Daily Value** to quickly assess nutrient density:
 - 5% DV = low
 - 20% DV = high

Ingredient List Navigation

- Descending order by weight
- **First 3 ingredients** dominate formulation
- Watch for hidden sugars under multiple names:
 - Dextrose
 - Maltose
 - Corn syrup
 - Fruit juice concentrate

More Nutritious Frozen Dessert Ideas

Frozen Creations

Greek yogurt + frozen berries = instant fruit parfait

Blend frozen coconut milk = "nice cream"

Protein-Rich Options

Whipped cottage cheese + cocoa powder + honey = "protein ice cream"

Greek yogurt + peanut butter + banana = frozen energy bites

Smoothies & Smoothie Bowls

Frozen açai + spinach + almond milk + chia seeds

Frozen berries + banana + canned no salt added pinto beans

Frozen mango + carrots + ginger root + 100% orange juice + protein powder

Dairy-Free or Lower Sugar Alternatives

Blended frozen banana

Coconut yogurt popsicles with fruit purée

Cultural Inspirations



Kulfi (India)

- Dense
- Milk-based
- Rich in calcium
- Flavored with cardamom and saffron



Mochi (Japan)

- Rice flour coating adds fiber
- Portion-controlled format
- Matcha = polyphenol benefits



Halo-Halo (Philippines)

- Layered ingredients
- Textural variety
- Nutrient diversity



Açaí Bowls (Brazil)

- Antioxidant-rich base
- Functional toppings
- Versatile

Wrapping Up



Future Trends: 2025–2030



Personalized Nutrition

AI-driven formulations based on individual microbiome profiles and metabolic responses



Sustainability Integration

Carbon-neutral production, upcycled ingredients, regenerative agriculture sourcing



Functional Innovation

Precision fermentation proteins, postbiotics, next-gen prebiotics



Sensory Optimization

AI-assisted flavor development, texture prediction algorithms



Key Takeaways

Balance is Possible

Pleasure and nutrition coexist in well-formulated frozen desserts.

Consumers Are Informed

Modern shoppers demand transparency, quality, and health benefits

Innovation Drives Growth

Functional and sustainable ingredients clean labels meet diverse needs

**The Future is Functional,
Transparent, & Personalized**

Thank you! Questions?

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