


# Diet strategies for promoting healthy aging and longevity: An epidemiological perspective

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## Pontos fundamentais para o envelhecimento saudável e longevidade

1. Manter peso saudável ao longo da vida e restrição energética moderada se houver ambiente obesogênico (atual)
2. Prevenção de doença crônica: tipos específicos ou fontes alimentares de gordura, proteína e carboidratos são mais importantes que a quantidade desses nutrientes

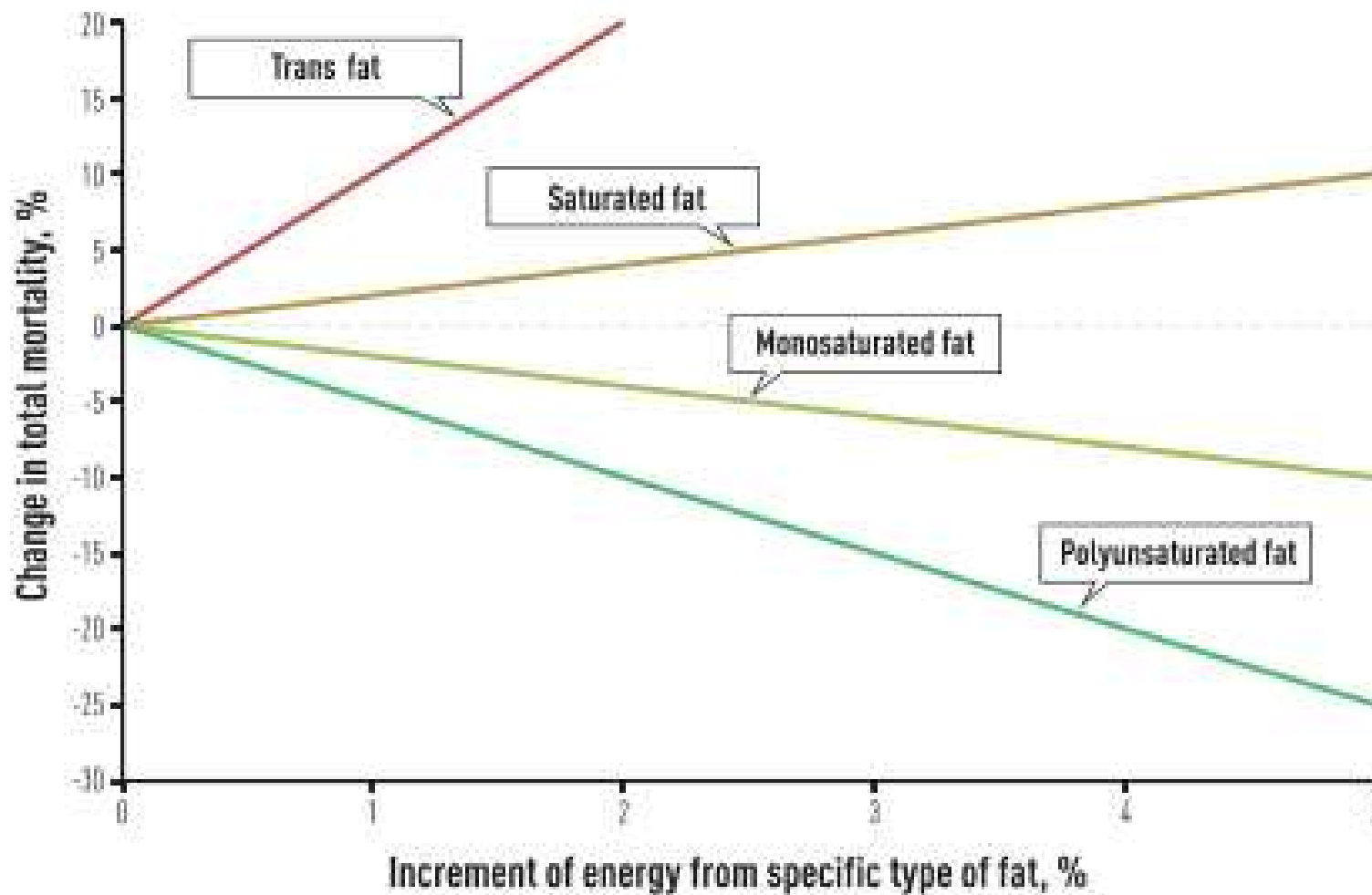
## Pontos fundamentais para o envelhecimento saudável e longevidade

3. Associadas com menor mortalidade: dietas tradicionais (ex: Mediterrânea, a Nórdica e de Okinawa) e padrões alimentares contemporâneos (dieta baseada em vegetais e DASH, Healthy plant-based diet index)

Predomínio de alimentos vegetais  
Limitar carne vermelha ou processada  
Uso de ervas e temperos

4. Combinar dieta saudável com outros fatores de estilo de vida pode prolongar a expectativa de vida 8 a 10 anos

# LIPIDEOS



## NHANES

Among individuals aged 50–65-year old, high protein intake was associated with a 75% increase in overall mortality and a fourfold increase in cancer and diabetes mortality during 18 years of follow up. The association was significant only for animal protein but not for plant protein. On the other hand, in individuals aged 65 or older, higher protein intake was associated with lower mortality.

## PROTEÍNAS

In the substitution analysis, replacing animal protein sources (especially red and processed meats) with plant protein sources was associated with significantly **lower risk of all-cause mortality**. In a separate analysis, plant protein sources were also associated with **lower odds of cognitive decline** when compared with animal protein sources, although **adequate protein intake appears to be important** in the maintenance of cognition in older individuals [36].

## PROTEÍNAS

In the NHS and HPFS, an increase in 1 serving of processed and unprocessed red meat per day was linked to a 13% and 20% increased risk of mortality, respectively [37]. Replacing 1 serving of red meat per day with other foods, such as fish, poultry, legumes, nuts, low-fat dairy, or whole grains, was associated with a 7%–19% lower risk of premature death. Based on the estimates from statistical modeling, if all study participants in the cohorts had consumed less than a half serving of red meat (42 g) per day, 9.3% of deaths in men and 7.6% in women could have been prevented.



## CARBOIDRATOS

### Índice glicêmico

- Alimentos de baixo IG: < 55;
- Alimentos com IG médio: 56 a 69;
- Alimentos de alto IG: 70 a 100.

### Carga glicêmica

$$CG = \frac{IG \times \text{carboidrato (g)}}{100}$$

carbohydrate quality plays a more important role in chronic disease outcomes than carbohydrate amount. A series of systematic reviews and meta-analyses of data from large cohort studies have shown that high glycemic index or glycemic load diets (often containing higher amounts of refined grains, such as white rice and white bread, starchy foods such as potatoes, and sugar-sweetened beverages [SSBs]), are consistently associated with increased risk of weight gain, obesity, diabetes, CVD, some cancers, and mortality [60–64], whereas minimally processed grains, legumes, whole fruits, and non-starchy vegetables are protective against these conditions [65–68].

### SSBS: bebidas açucaradas

SSBs are a primary source of added sugars in many diets and have been consistently associated with **increased risk of chronic diseases and mortality**

### Edulcorantes

The association between **higher consumption of artificially sweetened beverages** (ASBs) and risk of mortality was less clear. Higher consumption of **SSBs** and **ASBs** was associated with a significantly **increased risk of frailty** [72].

## CARBOIDRATOS

SSBs promote weight gain and, consequently, elevate the risk of chronic diseases through multiple mechanisms [70]. These include the body's incomplete compensation for liquid calorie intake by not sufficiently reducing food intake at subsequent meals, hyperinsulinemia resulting from rapid absorption of large amounts of sugar, increased chronic inflammation, and potential neural pathways linked to food addiction.

Specifically, the high amount of glycemic load and fructose in SSBs can lead to accumulation of visceral adipose tissue and ectopic lipid deposition and increased risk of gout and nonalcoholic fatty liver disease [70].

# Alimentos vegetais ricos em polifenóis

POLIFENÓIS	FONTES
Flavonóides	Frutas, vegetais, chá, café, coco e soja
Lignanas	Sementes, grãos e vegetais
Ácidos fenólicos	Café, castanhas e frutas
Resveratrol	Uva e vinho

Azeite de oliva extra virgem

Taken together, the health benefits of polyphenol-rich foods, including coffee, tea, EVOO, blueberries, and avocados, are well supported by the convergence of evidence from observational cohort studies, small-scale RCTs, and mechanistic studies. In addition, emerging evidence suggests potential health benefits associated with culinary herbs and spices prevalent in global cuisines. Although further research is needed to

## Dieta Mediterrânea

- Principal source of culinary fat is olive oil
- Abundant plant-based foods (such as fresh fruit, vegetables, nuts, legumes, and whole grains)
- Moderate fish, poultry, and dairy products (mostly yogurt and cheese)
- Low red/processed meats and sweets
- Wine with meals in moderation

## **DASH**

### *Dietary Approaches to Stop Hypertension*

- Abundant fruits, vegetables
- Increase whole grains, nuts, and seeds
- Increase fat-free/low-fat dairy and reduce full-fat dairy products
- Poultry and fish in place of red and processed meats
- Limit sodium
- Reduce sugar-sweetened foods and beverages



## *Healthy plant-based diet index*

- Emphasizes high-quality plant foods, including whole grains, fruits, vegetables, nuts, legumes, vegetable oils, tea, and coffee
- Limits low-quality plant foods, such as fruit juices, refined grains, potatoes, sugar-sweetened beverages, and sweets/desserts
- Contains low amounts of all animal foods

# *Alternate healthy eating index (AHEI)*

## *Based on Harvard's Healthy Eating Plate*

