Which diet is best?

10 Most Famous Fad Diets

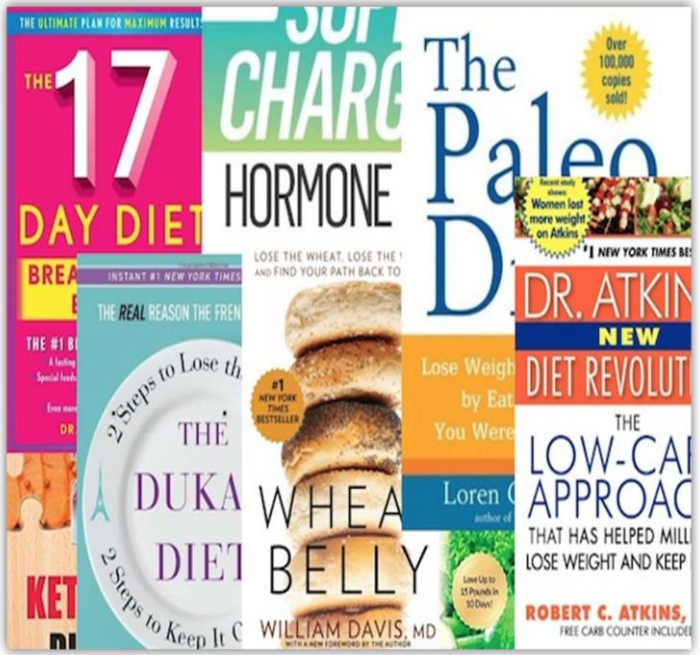
- 1. South Beach diet
- 2. Weight Watchers diet
- 3. Mediterranean diet
- 4. Zone diet
- 5. Atkins diet (New Atkins diet revolution)
- 6. Paleolithic diet
- 7. Volumetrics diet
- 8. Raw food diet
- 9. Macrobiotic diet
- 10. Blood groups diet

Basics

- Best for what?
- **Negative energy balance** is necessary for weight loss
- All diets on average induce weight loss
- Manipulation of macro nutrients
- Meal replacements
- Food focused
- Food groups
- Timing or combination
- Disease management, and other reasons

Fad Diets

- There is a guru
- Central theories
- Set of rules with some merit
- Seldom evidence-based
- Burst onto the scene
- Huge publicity and support in the media
- Uptake by celebrities



- Rules are tightly adhered to by first wave of followers
- Rules makes it difficult to eat as much as before
- Next phase : wider set of people join + cookbooks + food industry + environment
- Next wave of devotees not so committed – choosing bits and pieces
- Results disappear

How to recognise a fad diet

1. Promise quick weight loss
2. Limit food selections and dictate specific rituals (structure)
3. Use testimonials from famous people
4. They bill themselves as cure-alls
5. They often recommend expensive supplements
6. No attempts are made to change eating habits permanently
7. Use scientific jargon and terms
8. They are generally critical and skeptical about the scientific community

Cons of fad diets

- May eliminate one/ or more food groups or nutrients
- Quick weight loss: often loss of muscle
- Not sustainable; leads to regain of weight
- Often lead to more weight gain than initial loss
- Severe restriction can lead to binge eating at times

How diets work?

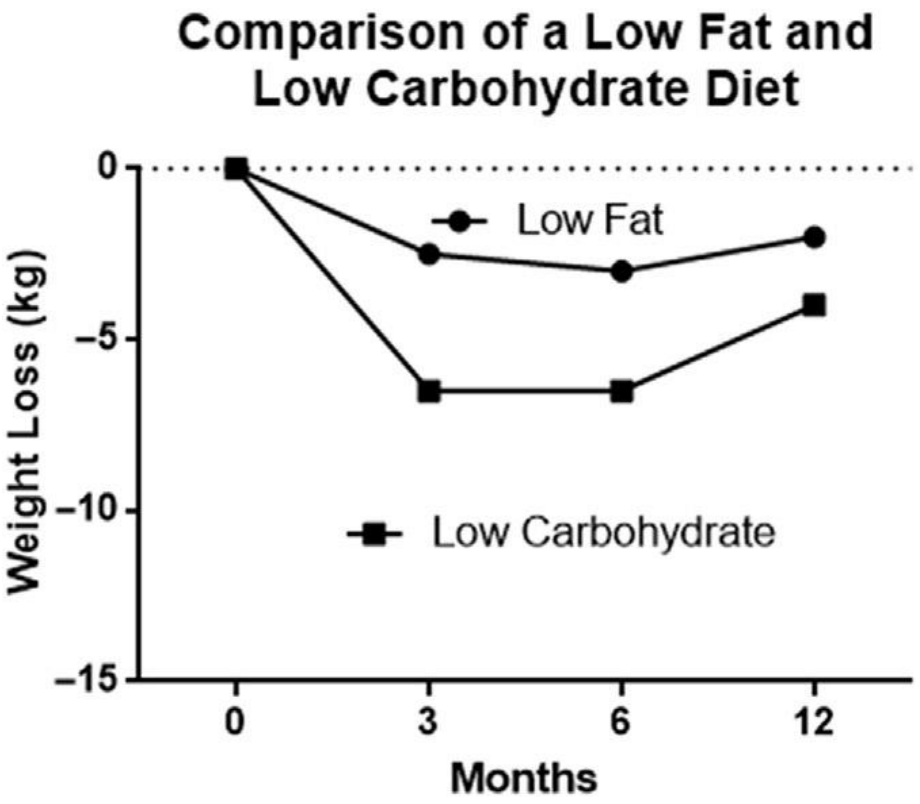
Diet Name	Short Description	How it Works
Low Carb	Eat fewer carbs and more foods rich in protein and fats	By creating a caloric deficit
Ketogenic	Eat almost no carbs, some protein and mostly fats	By creating a caloric deficit
Low Fat	Avoid foods high in fats and eat mostly protein and carbs	By creating a caloric deficit
Intermittent Fasting	Restrict your eating period to only a few hours every day	By creating a caloric deficit
Weight Watchers	Points based system to help with portion control	By creating a caloric deficit
Paleo	Eat only minimally-processed "paleolithic" foods	By creating a caloric deficit

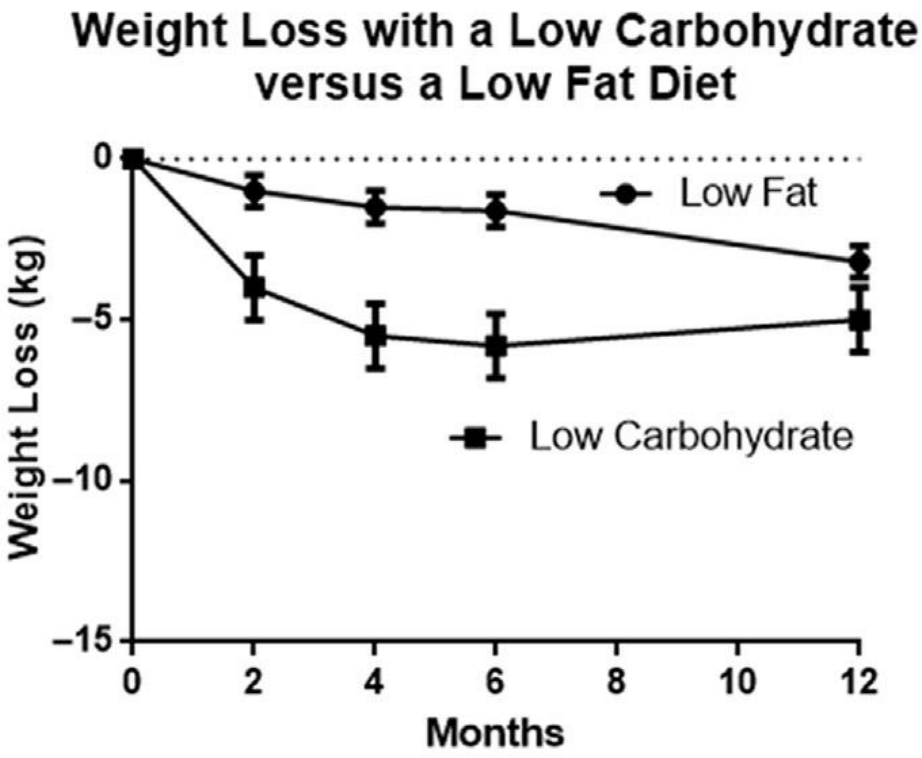
Dietary Pattern	Defining Characteristics	Rationale
Low CHO 	Restriction of CHO from all sources Carbohydrate: 20% (100-125 g/d) Protein: 25%–40% Fat: 55–65%	Widespread interest and use Associated with substantial literature

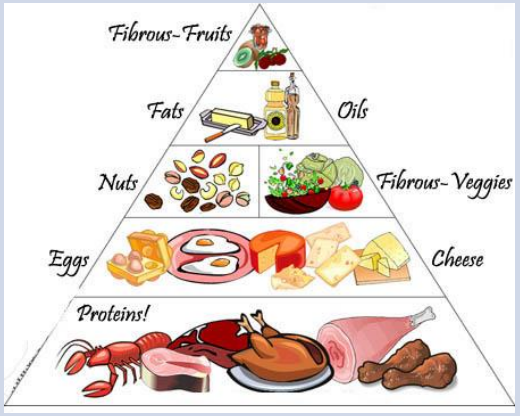
- Short to medium duration – quick weight loss (? water vs fat)
- Long term - same weight loss at 6 months
- Uncertainty about longer-term effects on health outcomes
- ? Replacement with protein (Atkins) or fat (banting)
- Truly low CHO – limits vegetables, fruits, whole grains, beans and legumes
- Ketosis causes loss of appetite
- Not practical for long-term use
- Strength of evidence: low

Dietary Pattern	Defining Characteristics	Rationale
Low fat	Restriction of total fat from all sources Carbohydrate: 65% Protein: 10%–20% Fat: 10–19%	Long-standing, widespread interest and use Extensive research literature

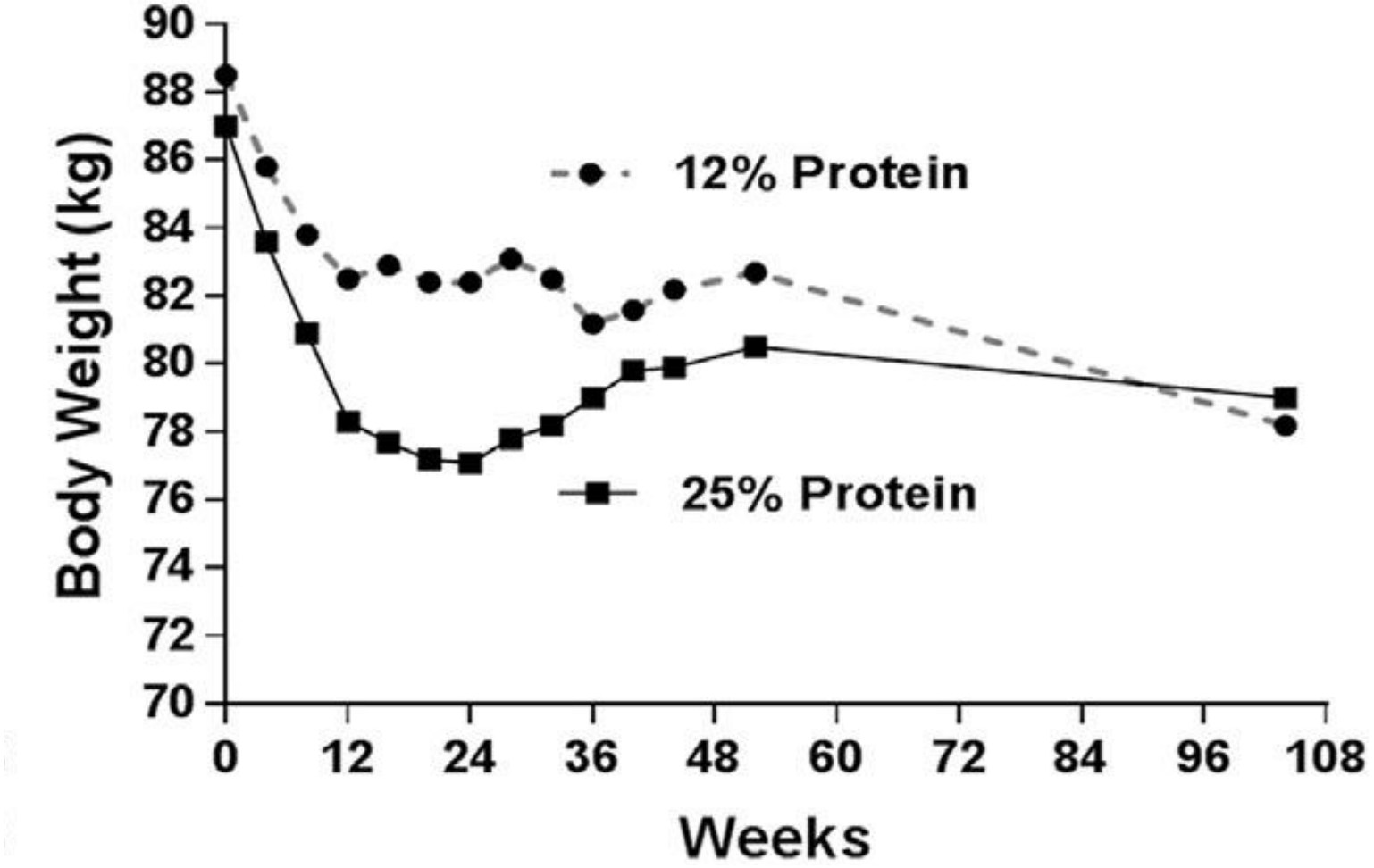
- Intervention trials – benefits from dietary fat restriction (weight and health)
- Criticism – Dietary fat intake did not decline, rather energy intake increased (processed fat-reduced foods)
- High fiber intake – vegetables, fruits, whole grains, beans, legumes, nuts and seeds
- *Lower cancer risk, greater diet quality and control of BW*
- Low fat plant based (vegetarian) – cardio-protective
- No decisive evidence for superiority to diets higher in healthful fats
- Difficult to adhere
- Same weight loss at 6 months comparing <30% fat with >40% fat
- Strength of evidence: moderate


Comparison of a Low Fat and Low Carbohydrate Diet
Weight Loss (kg)
0
−5
−10
−15
Low Fat
Low Carbohydrate
0
3
6
12
Months


Weight Loss with a Low Carbohydrate versus a Low Fat Diet
Weight Loss (kg)
0
−5
−10
−15
Low Fat
Low Carbohydrate
0
2
4
6
8
10
12
Months

Dietary Pattern	Defining Characteristics
Higher protein 	Carbohydrate: 40%–50% Protein: 25%–40% Fat: 30%–40%

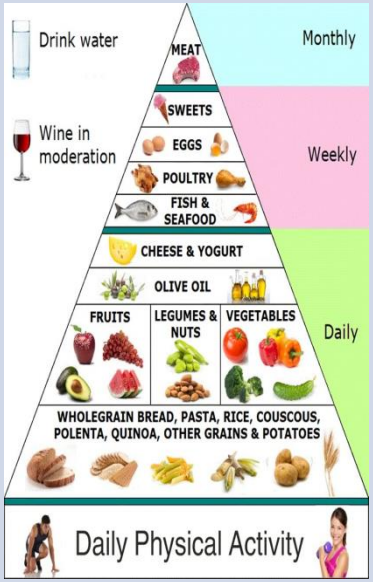
- Diet rigid and difficult to maintain
- Enough carbohydrates to avoid ketosis
- Same weight loss at 6 months comparing 25%–30% vs 15% protein
- Strength of evidence: high



Weight loss with 12% or 25% protein in individuals eating a 30% fat diet followed for 1 year and then re-evaluated after 2 years

Dietary Pattern	Defining Characteristics	Rationale
Low Glycemic	Limiting GL of overall diet Restricting food with high GI and/or high GL Exclusion of certain vegetables and many fruits Carbohydrate: 40–>55% Protein: 15%–30% Fat: 30%	Widespread interest and use Relevant to DM and related conditions Extensive research literature

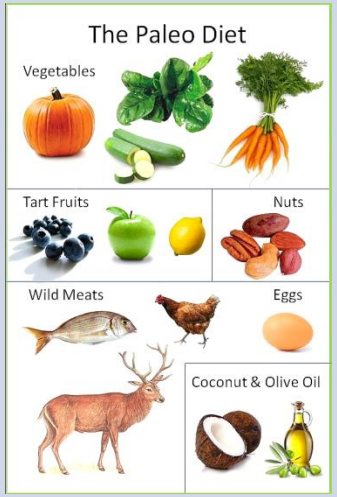
- Benefits in the areas of weight loss, insulin metabolism, diabetes control, inflammation and vascular function
- High-fiber, mostly plant-based approach
- Minimally processed, direct-from-nature foods and avoiding refined starch and added sugars
- Same weight loss at 6 months comparing high vs low glycemic load
- Strength of evidence: low

Dietary Pattern	Defining Characteristics	Rationale
Mediterranean 	Primarily plant-based foods: Fruits, veg, whole grains, legumes, nuts and seeds, beans and legumes, olive oil, selective dairy intake, fish and seafood, limited intake of meat, moderate intake of wine CHO: 35%–40% Protein: 12%–20% Fat: 40%–50% 25%–30% of energy from MUFA	Long-standing and widespread interest an use Extensive research literature

- Moderation, familiarity, palatability and pleasure as well as health
- Favourable effects on ratio of omega-6 and omega-3 essential fatty acids, high fibre intake and generous consumption of antioxidants and polyphenols
- Associated with ↑ longevity, preserved cognition and ↓ risk of cardiovascular disease
- Potential benefit over low-fat diets

Dietary Pattern	Defining Characteristics	Rationale
Mixed, balanced	Include both plant and animal foods Conform to authoritative dietary guidelines Carbohydrate: 55%–60% Protein: 15%–20% Fat: 20%–30% Usually 1200–1800 kcal/d	Long-standing and widespread interest and use Associated with extensive research literature

- Based on set pattern of selections from food lists using regular grocery store foods
- Low in saturated fat and ample in fruits, vegetables, and fiber
- Recommended reasonable weight-loss goal of 225–900 g/wk
- Many encourage dietary record keeping
- Meta-analysis showing DASH approach better than control or healthy diets

Dietary Pattern	Defining Characteristics	Rationale
Paleolithic 	Emulating the dietary pattern of our Stone Age ancestors Emphasis on avoiding processed foods and preferential intake of veg, fruits, nuts and seeds and lean meats Dairy and grains are excluded	Informed approximation of native human diet Growing, recent interest Associated with a substantial research literature

- Wide variety of interpretation
- Many pant foods and nearly all of the animal foods consumed during this time are now extinct
- Diet would be relatively low in fat, ow in starches and added sugars, high in vegetables, fruits, nuts and seeds and fiber and low glycemic

Dietary Pattern	Defining Characteristics	Rationale
DASH Diet *Dietary Approaches to Stop Hypertension* 	Lots of fruits and vegetables Including whole grains, lean meats, fish, poultry, nuts and beans Great as a family eating plan	Clinically based, well researched diet Most current DASH diet has been proven to lower blood pressure, reduce cholesterol, and improve insulin sensitivity

- Long-term application
- Manageable
- Health benefits
- Better nutrition overall
- Does not outline a specific way to lose weight
- Some can find it difficult to adjust eating this much fiber
- Can lead to discomfort or bloating

Dietary Pattern	Defining Characteristics	Rationale
Raw Food Diet 	Raw fruits and vegetables Unpasteurized meats, fish, and dairy Foods can be warmed Organic Cooking makes foods “toxic” Most people aim for a 75-85% raw diet	Raw food diets consist of foods packed with vitamins and minimal animal fats Natural sugars provide plenty of energy Avoiding animal products and starchy carbohydrates is always a decently and ecologically superior way to live one’s life.

- Good for vegetarians, vegans, and gluten-free
- Could control blood pressure, and reduce risk of stroke, heart failure and other diseases
- Typically results in weight loss
- High in fiber, low in calories
- Resulted in favorable beta-carotene concentrations
- May need supplements
- Expensive ingredients and kitchen equipment
- Inadequate in essential nutrients
- More susceptible to food poisoning

Ketogenic diets: performance facts

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Studies >4 weeks LCHF or ketogenic diet

Overall effect on performance

Phinney et al 1983 (4 weeks)	↔	No difference in endurance capacity at low/ moderate intensity (62-64%VO_2max) in 5 subjects on a ketogenic diet versus a mixed diet.
Helge et al 1996 (7 weeks)	↓	Smaller training adaptations after 7 weeks with high fat versus high carbohydrate diet.
Fleming et al 2003 (6 weeks)	↓	Authors report small decrements in peak power output and endurance performance in the high fat diet group (not ketogenic).
Zajac et al 2014 (4 weeks)	↓	Ketogenic diet or mixed diet for 4 weeks in a cross-over design in off road cyclists. Reductions in peak power were observed after ketogenic diet.

Blood groups/ types diet

- D' Adamo (1996)(ABO blood type diet book)
- Each blood type processes food differently
- Each blood type contains the genetic message of the specific (recommended) diet and behaviour of our ancestors
- Improve health, well being and energy levels; reduce risk for developing NCDs
- No evidence to validate the purported health benefits *(Am J Clin Nutr., 2013)*

Can we say which is BEST?

- If diet denotes a very specific set or rigid principles: **NO**

- If diet means a more general dietary pattern: **YES**

Summary

- Lower-fat diets → associated with ↓ LDL
- Higher-fat diets → associated with ↓ TG and ↑ HDL
- Generally related to the magnitude of the weight loss
- Higher protein intake and lower fat intake → may benefit in maintaining weight loss

Are all calories the same?

- Strongest evidence: calories matter
- Focusing on food quality is an equally important
- Focus on eating high-quality foods in appropriately sized portions
- Food preparation

High-quality foods

- Unrefined, minimally processed foods
- Vegetables and fruits, whole grains, healthy fats and healthy sources of protein

Lower-quality foods

- Highly processed snack foods, sugar-sweetened beverages, refined (white) grains, refined sugar, fried foods, foods high in saturated and trans fats, and high-glycaemic foods such as potatoes

Quality counts

- Study of over 120,000 healthy women and men over 20 years
  - Food associated with weight gain: intake of potato chips, potatoes, sugar-sweetened beverages, and both processed and unprocessed red meats (processed foods higher in starches, refined grains, fats, and sugars)
  - Foods associated with weight loss: vegetables, whole grains, fruits, nuts, and yogurt

Choosing high-quality foods (and decreasing consumption of lower-quality foods) is an important factor in helping individuals consume fewer calories

And more …

- The study also found that the more group counselling sessions participants attended, the more weight they lost, and the less weight they regained..

This supports the idea that not only is what you eat important, but behavioural, psychological, and social factors are important for weight loss as well

Before commitment

- **MAYO clinic:**

Personal needs and key factors:

- Can you do this *forever?*
- Can you still eat my favourite food?
- Can your friends / family join?
- Do you need diet support from a group?
- Do you prefer using wright loss clinics?
- Do you prefer to go to weight loss group meetings?
- Can you afford this? (special foods and/ or supplements)
- Is it proven?

TABLE H8-1 The Claims and Truths of Fad Diets

The Claim:	You can lose weight with "exceptionally easy rules."
The Truth:	Most fad diet plans have complicated rules that require you to calculate protein requirements, count carbohydrate grams, combine certain foods, time meal intervals, purchase special products, plan daily menus, and measure serving sizes.
The Claim:	You can lose weight by eating a specific ratio of carbohydrates, protein, and fat.
The Truth:	Weight loss depends on spending more energy than you take in.
The Claim:	This "revolutionary diet" can "reset your genetic code."
The Truth:	You inherited your genes and cannot alter your genetic code.
The Claim:	High-protein diets are popular, selling more than 20 million books, because they work.
The Truth:	Weight-loss books are popular because people grasp for quick fixes and simple solutions to their weight problems. If book sales were an indication of weight-loss success, we would be a lean nation—but they're not, and neither are we.

The Claim:	People gain weight on low-fat diets.
The Truth:	People can gain weight on low-fat diets if they overindulge in carbohydrates and proteins while cutting fat; low-fat diets are not necessarily low-kcalorie diets. But people can also lose weight on low-fat diets if they cut kcalories as well as fat.
The Claim:	High-protein diets energize the brain.
The Truth:	The brain depends on glucose for its energy; the primary dietary source of glucose is carbohydrate, not protein.
The Claim:	Thousands of people have been successful with this plan.
The Truth:	Authors of fad diets have not published their research findings in scientific journals. Success stories are anecdotal and failures are not reported.
The Claim:	Carbohydrates raise blood glucose levels, triggering insulin production and fat storage.
The Truth:	Insulin promotes fat storage when energy intake exceeds energy needs. Furthermore, insulin is only one hormone involved in the complex processes of maintaining the body's energy balance and health.
The Claim:	Eat protein and lose weight.
The Truth:	For every complicated problem, there is a simple—and wrong—solution.

In the end…

Barriers to weight management (PHC)

- Confusion
- Mixed messages
- Google search on weight loss: 894 million entries
- Limited knowledge and understanding among health professionals

Obesity treatment: beyond the guidelines *(JAMA, 2019)*

- **A, B, C, D, E, F approach in PHC**

- **A**: Ask permission
- **B**: Be systematic
- **C**: Counselling and support
- **D**: Determine health status
- **E**: Escalate treatment when appropriate
- **F**: Follow up regularly

(Team approach)

Dietary fat and cardio-metabolic health

(BMJ, 2018)

- Substantial evidence : (i) type of fat and not total fat intake and (ii) avoidance of trans fats support cardio health
- Replacement of saturated fats with PUFAS reduces the risk for CVD
- Focus of advice should be on the consumption of foods and dietary patterns and not nutrients

Dietary CHO and mortality
(Lancet, Aug 2018)

- 15 428 Adults (US) (45-64 yrs)(25 yrs follow up)
- Low and high CHO intake: increased mortality
- Minimal risk: 55-60% CHO intake
- Low CHO intake with high fat and protein intake from **animal** sources: **higher** mortality
- Low CHO intake with high fat and protein intake from **plant** sources: **lower** mortality