

UPDATE IN WEIGHT LOSS DIETARY INTERVENTIONS

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INTRODUCTION

- Obesity is a serious global epidemic and is a significant burden to healthcare systems with costly financial implications.
- Obesity is a disease with a number of associated complications, such as cardio metabolic disorders, cancer, and sleep apnea, among others.
- It's also associated with a substantial burden of morbidity and premature death.
- Early intervention and effective weight maintenance methods are needed to improve patient outcomes and lower healthcare costs.

INTRODUCTION

- According to the CDC, it is estimated that half of American adults attempt to lose weight every year.
- About 80% of losing weight depends on diet and the rest on exercise.
- Weight loss can be attained with lifestyle programs that achieve a 500-750 kcal/day energy deficit or provide ~1,200-1,500 kcal/day for women and 1,500-1,800 kcal/day for men, adjusted for the individual's baseline body weight.
- There are so many available diet plans that it is difficult to decide which is best.
- The main reason to choose a plan is that it must be sustainable and effective.

8 BEST DIETS

- Intermittent Fasting
- Plant-Based
- Low Carb
- Paleo
- Low Fat
- Mediterranean
- Weight Watchers
- Dash

INTERMITTENT FASTING

- Intermittent fasting is a dietary strategy that cycles between periods of fasting and eating.
- It restricts the time you're allowed to eat, which is a simple way to reduce your calorie intake.
- This can lead to weight loss — unless you compensate by eating too much food during allowed eating periods.
- Physiologically, calorie restriction has been shown in animals to increase lifespan and improve tolerance to various metabolic stresses in the body.
- Although the evidence for caloric restriction in animal studies is strong, there is less convincing evidence in human studies.
- Proponents of the diet believe that the stress of intermittent fasting causes an immune response that repairs cells and produces positive metabolic changes.

Types of Intermittent Fasting:

1) The 16/8 Method

- Limits your calorie intake to 8 hours a day.
- Involves fasting 14-16 hours every day and restricting your 'eating window' to 8-10 hours.
- It is generally recommended that women only fast 14-15 hours, because they seem to do better with slightly shorter fasts.
- You can drink water, coffee and other non-caloric beverages during the fast.
- It is very important to eat mostly healthy foods during your eating window.

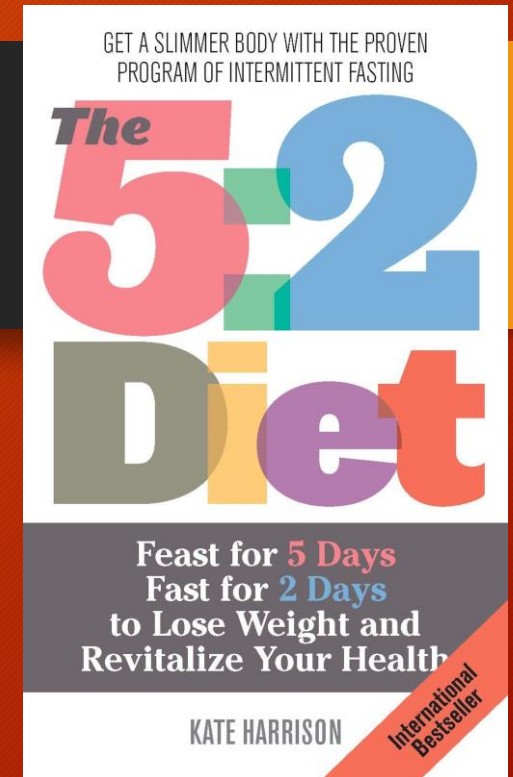


Types of Intermittent Fasting:

2) The 5:2 Diet

- Involves eating normally 5 days of the week, while restricting calories to 500-600 on two days of the week.
- On the fasting days, it is recommended that women eat 500 calories, and men 600 calories.
- There are no studies testing the 5:2 diet itself, but there are plenty of studies on the benefits of intermittent fasting.

MON	TUE	WED	THU	FRI	SAT	SUN
500	2000	2000	500	2000	2000	2000



Types of Intermittent Fasting:

3) Eat-Stop-Eat

- It involves a 24-hour fast, either once or twice per week.
- You can fast from breakfast to breakfast, lunch to lunch or dinner to dinner of the next day.
- Water, coffee and other non-caloric beverages are allowed during the fast, but no solid food.
- Eat normally during non-fasting days as if you hadn't been fasting at all.

EAT STOP EAT							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
12AM							
4AM							
8AM							
NOON							
4PM							
8PM							
12AM							



Other Types of Intermittent Fasting

4) Alternate-Day Fasting (ADF):

- Fasting every other day.
- Some versions allow 500 calories during the fasting days.
- Can be very difficult and may be extreme.
- In a small 8-week study, there was 6% weight loss, significant decrease in LDL and TG, and decreased systolic BP with ADF. (*Varady KA et al. Am J Clin Nutr 2009;90(5):1138)

5) The Warrior Diet:

- It involves eating small amounts of raw fruits and vegetables during the day, then eating one huge meal at night.
- Basically, you "fast" all day and "feast" at night within a 4 hour eating window, and mostly whole unprocessed foods.

INTERMITTENT FASTING (IF): EVIDENCE-BASED

- In a review of studies, IF was shown to cause 3-8% weight loss over 3-24 weeks, which is a significantly greater percentage than other method. *(Barnosky AR et al. Transl Res 2014;164(4):302-11)*
- In a small 8-week study on athletes, IF using the 16/8 Method, resulted in decrease in fat mass with preservation of muscle mass if done in conjunction with resistance training *(Moro T et al. Transl Met 2016;14:290)*
- Another systematic review of several studies suggest both Alternate-Day IF and daily caloric restriction are equally effective in decreasing body weight and fat mass, although IF may be more effective for the retention of lean mass. *(Varady KA et al. Obes Rev 2011;12(7):e593)*
- A systematic review of 40 studies found that intermittent fasting was effective for weight loss, with a typical loss of 7-11 pounds over 10 weeks, and in those that compared with continuous calorie restriction, there was no difference in weight loss. *(Seimon et al. Moll Cell Endocrinol 2015; 418:153-72)*

INTERMITTENT FASTING: EVIDENCE-BASED

- In a recent study of sedentary, overweight older adults, a 4-week IF using the 16/8 Method, there was a modest weight loss but significant improvement in walking speed and quality of life, with a high adherence rate. *(Anton SD et al. Nutrients 2019, 11, 1500)*
- A just released study of 19 women with metabolic syndrome, a 3-month IF using a 10-hour eating window (8am to 6pm), there was a 3% weight loss, caloric reduction (even though no caloric restriction) and decrease in body fat, BP, LDL, A1c and waist. It appears due to sustaining a strong circadian rhythm. *(Wilkinson MJ et al. Cell Metab Dec.5, 2019)*

CAUTION

- In general, intermittent fasting is safe for most healthy adults.
- It is not recommended in people that use medications that require food intake, hypoglycemics, those with low body weight, or an eating disorder, as well as pregnant or breastfeeding women, and growing adolescents.
- Skipping meals and severely limiting calories can be dangerous for people with certain conditions, such as diabetes. People who take medications for blood pressure or heart disease also may be more prone to electrolyte abnormalities from fasting, and may require dose adjustments.

PLANT-BASED DIETS

- Vegetarianism and veganism are the most popular plant-based diet versions, which restrict animal products for health, ethical, and environmental reasons.
- The number of U.S. consumers identifying as vegan grew from 1% to 6% between 2014 and 2017, a 600% increase, according to Global Data.



VEGETARIAN DIET VS. VEGAN



- A **Vegetarian Diet** excludes any meat, poultry, game, fish, shellfish or by-products of animal slaughter.
- **Vegetarian diets** contain various levels of fruits, vegetables, grains, nuts and seeds.
- The inclusion of dairy and eggs depends on the type of vegetarian diet.
- A **Vegan Diet** can be viewed as the strictest form of vegetarianism that attempts to exclude all forms of animal exploitation and cruelty as much as possible, be it from food, clothing, science or entertainment, and to avoid the global greenhouse gas pandemic with the raising of cattle.
- Therefore, a **Vegan Diet** not only excludes animal flesh, but also dairy, eggs and animal-derived ingredients. These include gelatin, honey, carmine, pepsin, shellac, albumin, whey, casein and some forms of vitamin D3.



PLANT-BASED DIETS: EVIDENCE-BASED

**Dinu M et al. Crit Rev Food Sci Nutr
2017;57(17):3640*
**Chen Z et al. Eur J Epidemiol
2018;33(9):883*

- Vegans tend to have a lower BMI than vegetarians and seem to gain less weight as they age.
- A large meta-analysis by Dinu M. et al*, reported a significant reduced levels of BMI, total cholesterol, LDL, and glucose levels in vegetarians and vegans versus omnivores.
- Also, showed a significant protective effect of the vegetarian diet in the incidence and/or mortality from ischemic heart disease and incidence of total cancer, and in the vegan diet a reduced risk of total cancer.
- In a large cohort from the Rotterdam Study of the Netherlands+, it was found that a more plant-based and less animal-based diet may lower risk of insulin resistance, prediabetes and Type 2 diabetes.

PLANT-BASED DIETS: EVIDENCE-BASED

- A systematic review of 11 trials concluded that plant-based diets were associated with significant improvement in emotional well-being, physical well-being, depression, quality of life, general health, HbA1c levels, weight, total cholesterol and low-density lipoprotein cholesterol, compared with several diabetic associations' official guidelines and other comparator diets. *(Toumpanakis A et al. BMJ Open Diabetes Res Care;2018, 6(1))*
- In the EPIC-Oxford Study (the largest detailed study of diet and health), it was reported that fish-eaters, vegetarians and especially vegans have lower BMI than meat-eaters. High protein and low fiber intakes were the factors most strongly associated with increasing BMI. *(Spencer EA et al. Int J Obes Relat Metab Disord 2003;27(6):728)*
- In a recent publication of the EPIC-Oxford study, vegetarians had a 22% lower rates of ischemic heart disease than meat eaters, although vegetarians had higher rates of haemorrhagic and total stroke. *(Tong TY et al. BMJ 2019;366)*

CAUTION

- An insufficient intake of nutrients such as omega-3 fatty acids, calcium, and vitamins D and B12 for which fortified foods or supplements must be consumed.
- Children at risk of growth failure if not properly supplemented.
- The increased stroke risk found in the EPIC study.
- Choline deficiency needed as essential nutrient for brain cell membranes.
- Beware of refined flour and sugar, (potatoes, white rice, white bread) inclusion in the diet that can interfere with weight loss and make the diet unhealthy.

A vibrant collage of various healthy foods arranged on a wooden surface. The collection includes fresh fruits like strawberries, blueberries, raspberries, and an orange; vegetables such as broccoli, asparagus, green beans, bell peppers, tomatoes, cucumbers, and eggplants; and proteins including salmon fillets, chicken breasts, and various nuts and seeds. There are also bowls of olive oil, a whole avocado, and a small bowl of hummus. The overall theme is a balanced and nutritious diet.

- Low-carb diets are among the most popular diets for weight loss. It is often referred to as a “fad diet” in the popular press, despite the fact that it has been around for more than a century.
- Before the discovery of insulin, people with diabetes could expect to live several years with what was then a uniformly fatal disease if they adhered to a strict low-carbohydrate diet.
- And, in the 1920’s, a ketogenic diet was used to treat epilepsy.
- Low-carb diets restrict your carb intake in favor of protein and fat.
- It usually emphasizes meats, fish, eggs, nuts, seeds, vegetables, fruits, and healthy fats.

Definition of Low carb diets

- Moderate carb diet
 - has moderate protein/fat
(ie. South Beach, Zone)
- Low carb diet
 - 26-44% carbs (130-225 gms/d)
- Very low carb diet
 - moderate protein/high fat
(ie. Keto diet, initial stage of Atkin's)
 - 10-25% carbs
(50-130 gms/d)
 - < 10% carbs (< 50 gms/d)
 - 70-80% fat
 - 15-20% protein

VERY LOW-CARB DIETS



- They're typically higher in protein than low-fat diets, which is important, as protein can help curb your appetite, raise your metabolism, and conserve muscle mass, if a higher protein content is maintained.
- In very-low-carb diets (<50gms per day) like the keto diet, your body begins using fatty acids rather than carbs for energy and in the first few days.
- The initial weight loss that occurs with low-CHO diets is largely attributable to the loss of body water, not fat loss. This is due to ketonuria-induced natriuresis, deficiency of renal absorption of sodium due to low insulin levels, and glycogen depletion that results in loss of body water.

LOW-CARB DIETS: EVIDENCE-BASED

- Many studies indicate that low-carb diets can aid weight loss with *ad libitum* intake and without feelings of deprivation and hunger.
- But, according to the 2013 American Heart Association/American Cardiology/The Obesity Society (AHA/ACC/TOS) Guideline for the Management of Overweight and Obesity in Adults, research has **NOT** demonstrated any advantage of a very low-CHO diet on weight loss at 6 months compared with a calorie-restricted, low-fat diet.
- Several systematic reviews and meta-analyses have shown that:
 - has a significantly greater weight loss compared to low-fat diets if the prescribed diet is hypocaloric and the study duration is short-term (<6 months)
 - found no significant change in A1c, FBS or insulin levels, although several trials have found a greater reduction in diabetes medications compared to low fat diets
 - can significantly increase energy expenditure. (Ebbeling CB et al. BMJ 2018;363:K4583)

LOW-CARB DIETS: EVIDENCE-BASED

- It has been proposed that, by lowering insulin levels, low-CHO diets may inhibit hepatic cholesterol synthesis, but in some cases, a low-carb diet may raise LDL levels, and this response cannot be predicted in any one individual. So there are conflicting results on the effect on cholesterol, and it appears to depend on type of fats and carbs ingested (higher saturated fat and animal-derived protein).
- Generally, low carb diets decrease triglycerides and increase HDL (at least short term), compared to low fat diet.
- Baseline and follow-up lipid assessments are essential for individuals following low-CHO and very-low-CHO diets to identify extreme responses.
- In terms of BP control, low carb diets have produced inconsistent effects on blood pressure.

LOW-CARB DIETS: EVIDENCE-BASED



- Both the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD) now recommend a low-carb eating pattern as a viable option for people with DM or preDM, and support the short-term use of these types of diet for weight loss.
- The Indiana Diabetes Reversal Study is being carried out by Hallberg SJ et al. since 2015 that seeks to demonstrate the therapeutic effects of implementing a well-formulated low carb lifestyle program over 2 years in patients with type 2 diabetes, pre-diabetes, and metabolic syndrome.
- Their pilot 1-year study in diabetics, published in Apr 2019, reported a 12% weight loss and 1.3% A1c reduction, with over 90% showing a reversal of diabetes progression.* But, there was a 10% increase in LDL. (Also -40% hsCRP, -24% TG, +18% HDL)

* Hallberg SJ et al. *Diabetes Ther* 2018;9(2):583

Review of Current Evidence and Clinical Recommendations on the Effects of Low-Carbohydrate and Very-Low-Carbohydrate (including Ketogenic) Diets for the Management of Body Weight and other Cardiometabolic Risk Factors

A Scientific Statement from the National Lipid Association

Carol F. Kirkpatrick, PhD, RDN, CLS, FNLA, Julie P. Bolick, MS, RDN, CD, CLS, FNLA, Penny M. Kris-Etherton, PhD, RDN, CLS, FNLA, Geeta Sikand, MA, RDN, CLS, FNLA, Karen E. Aspry, MD, MS, FNLA, Daniel E. Soffer, MD, FNLA, Kaye-Eileen Willard, MD, FNLA, Kevin C. Maki, PhD, CLS, FNLA

Highlights:

- Low- and very-low-carbohydrate diets are not superior to other weight loss diets.
- May have advantages on appetite and reduced triglyceride and diabetes medication.
- Mixed effects on low-density lipoprotein cholesterol levels.
- No clear evidence for advantages related to other cardiometabolic risk markers.

J Clin Lipidol 2019; 13(5):689-711

May severely restrict nutrient-dense foods that offer CV benefits.
May be reasonable for short periods of time (<6mo), but long term compliance is challenging and long-term benefits and risks are not fully understood.

CAUTION

- In the first few days, some individuals may experience the “keto flu” that may occur as the body adapts to using ketone bodies for fuel. It may last a few days to one week, and include lightheadedness, dizziness, fatigue, difficulty exercising, poor sleep, and constipation.
- Should not be recommended in persons with familial hypercholesterolemia since may have a genetic predisposition to increase LDL in low carb diets.
- Also, patients with severe hypertriglyceridemia or hyperchylomicronemia should never practice a ketogenic diet since may precipitate pancreatitis.
- You can't have cheat days because you have to start all over again to get yourself back to ketosis.
- And careful upon filling up on low carb vegetables because you can easily go over the 15gm limit per meal.
- Diabetics who decide on following low carb diets must be medically-supervised for the potential need for medication adjustment to avoid hypoglycemia.
- Those on SGLT2 inhibitors should discontinue the medication because of the risk of normoglycemic ketoacidosis.
- Also, those on antihypertensives should monitor their BP for possible reduction in meds, especially diuretics may need to be discontinued.

CAUTION

- Using data for almost 25,000 participants from the National Health and Nutrition Examination Survey (NHANES), we found that individuals on the lowest-carbohydrate diet had the highest risk of overall (hazard ratio [HR] 1.32; $p < 0.001$), cardiovascular (HR 1.50; $p < 0.001$), cerebrovascular (HR 1.51; $p < 0.001$) and cancer (HR 1.36; $p < 0.001$) mortality.
- In a 25-year follow up study from the ARIC cohort published in 2018*, it was found that both high and low % of carbs in diet were associated with increased mortality, with minimal risk observed at 50-55% carbohydrate intake.
- Low carbohydrate dietary patterns favouring animal-derived protein and fat sources, were associated with higher mortality, whereas those that favoured plant-derived protein and fat intake, were associated with lower mortality, suggesting that the source of food notably modifies the association between carbohydrate intake and mortality.

* Seidelmann SE et al.
Lancet 2018;3(9):PE419

Caution

- As research studies on some low-carb eating plans generally indicate challenges with long-term sustainability, it is important to reassess and individualize meal plan guidance regularly for those interested in this approach.
- This meal plan is not recommended at this time for women who are pregnant or lactating, people with or at risk for disordered eating, or people who have renal disease, and it should be used with caution in patients taking SGLT2 inhibitors due to the potential risk of ketoacidosis.

Caution

- Those with diabetic kidney disease (with albuminuria and/or reduced eGFR) should aim to maintain dietary protein at the recommended daily allowance of 0.8 g/kg body weight/day.
- Individuals who consume meals containing more protein and fat than usual may also need to make mealtime insulin dose adjustments to compensate for delayed postprandial glycemic excursions.
- There is inadequate research about dietary patterns for type 1 diabetes to support one eating plan over another at this time.

THE PALEO DIET



- The concept of Paleolithic diet started in the 1970s, and its popularity soared after the publishing of the book *The Paleo Diet: Lose Weight and Get Healthy by Eating the Foods You Were Designed to Eat* by Loren Cordain in 2002, that promotes eating the same foods that your prehistoric hunter-gatherer ancestors allegedly ate.
- Since then, the public has shown a tremendous interest in this diet, also called the “cave man diet” or “Stone Age diet.” Many cookbooks have been published claiming to have Paleolithic recipes.
- It’s based on the theory that modern diseases are linked to the Western diet, as proponents believe that the human body hasn’t evolved to process legumes, grains, and dairy.
- Perhaps one of the most popular misconceptions is that our ancient ancestors were mainly carnivores when, in fact, they mostly ate a plant-based diet. group and food availability.
- Scientists and anthropologists have gathered evidence from archeological remains that demonstrates the Paleolithic diet most likely consisted of the following: plants, animals (as per some estimates, animals contributed to 3% of diet), seafood in coastal regions, and insects and their products like honey.

PALEO DIET



- ***Allowed:*** Fresh lean meats, fish, shellfish, eggs, nuts, seeds, fruits, vegetables, olive oil, coconut oil, and small amounts of honey. Certain root vegetables like sweet potatoes and cassava may be allowed in moderation because of their high nutrient content.
- ***Not Allowed:*** Whole grains, cereals, refined grains and sugars, dairy products, white potatoes, legumes (peanuts, beans, lentils), alcohol, coffee, salt, refined vegetable oils such as canola, and most processed foods in general.
- Calorie counting and portion sizes are not emphasized.

PALEO DIET: EVIDENCE-BASED

- There has not been enough evidence-based studies on a paleolithic diet as compared to some of the other diets.
- *Whalen KA, et al.* have done studies on the Paleolithic Diet, comparing it to the Mediterranean Diet. In one study of over 2,000 people Paleo diet decreased their all-cause mortality, decreased oxidative stress, and also decreased mortality from cancers, specifically colon cancers.
- Another study by *Blomquist C, et al.* involved women who were postmenopausal and also overweight. They found that a Paleolithic diet decreased lipogenesis promoting factors, improved insulin sensitivity, and reduced circulating triglycerides.

THE PALEO DIET: EVIDENCE-BASED



- Numerous studies have shown that the paleo diet can aid weight loss and reduce visceral fat.
- In a 2015 review and meta-analysis by *Manheimer et al*¹, a paleo-style diet led to improved symptoms of metabolic syndrome compared to US guidelines diet, including greater weight loss, reduced WC, decreased BP, increased insulin sensitivity, and improved cholesterol. However these studies were of short duration (<6 months) with a small number of participants (<40).
- Research also suggests that the Paleo diet may be more filling than popular diets like the Mediterranean diet and low-fat diets, probably due to its high protein content.

¹ Manheimer EW et al. *AmJClinNutr* 2015; 102(4):922-32.

THE PALEO DIET: CAUTION

- Though the paleo diet is healthy, it restricts several nutritious food groups, including legumes, whole grains, and dairy, and may increase the risk of deficiencies such as calcium, vitamin D, and B vitamins.
- Furthermore, the exclusion of whole grains can result in reduced consumption of beneficial nutrients such as fiber.
- Health concerns of a high meat intake that has been linked to risk of death, CVD and DM.
- The restrictive nature of the diet may also make it difficult for people to adhere to such a diet in the long run.
- This diet first used by our human ancestors may have been good for the digestive tract but most people were dead in their 30s-40s and so, of course, they never developed any serious chronic disorders.

LOW-FAT DIETS

- Since the 1970's, health authorities have recommended a low-fat diet because fat provides about twice the number of calories per gram, compared with protein and carbs.
- Dietary guidance has almost universally advocated reducing the intake of total and saturated fat, with the emphasis shifting more recently from total fat to the replacement of saturated fat with polyunsaturated fats and the elimination of trans fat.
- Although recent studies have raised some questions about the validity of these guidelines, most health authorities have not changed their position.

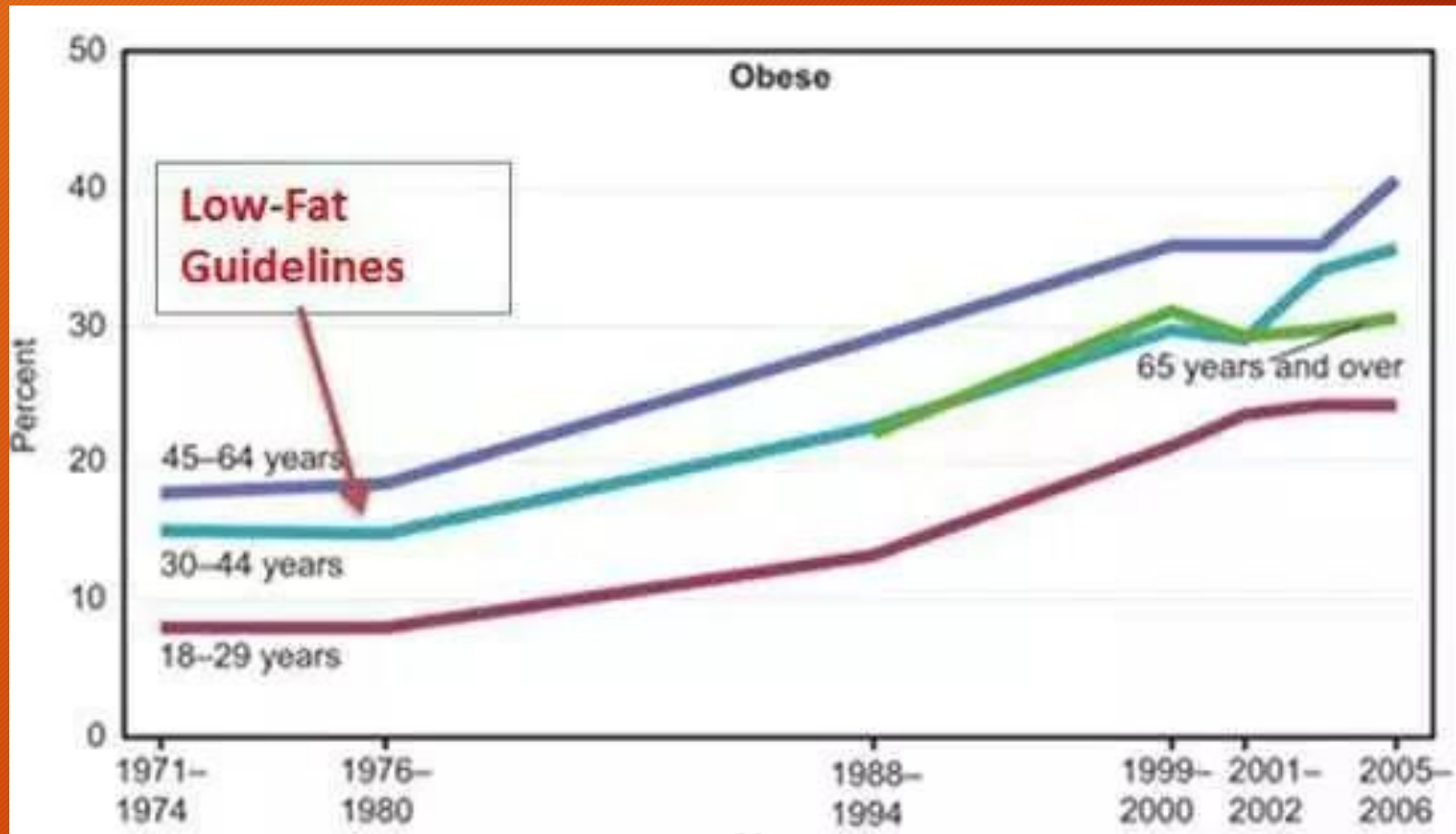
LOW-FAT DIETS

- The medical literature is still full of articles arguing opposing positions.
- In 2017¹, after a review of the evidence, the American Heart Association Presidential Advisory strongly endorsed that “lowering intake of saturated fat and replacing it with unsaturated fats, especially polyunsaturated fats, will lower the incidence of CVD”.¹
- Three months later, the 18-country observational Prospective Rural Urban Epidemiology (PURE) Study² concluded much the opposite: “Total fat and types of fat were not associated with cardiovascular disease, myocardial infarction, or cardiovascular disease mortality”.

¹ Sacks FM et al. *Circulation* 2017;136(3):e1

² Dehghan M et al. *Lancet* 2017;390(10107):2050

The introduction of the low-fat guidelines seems to have marked the beginning of the obesity epidemic.





- When consumers started believing that fat was the root of all evil, all kinds of low-fat junk foods flooded the market.
- Many of these foods were loaded with refined carbs, sugar and trans fat, which are associated with heart disease, diabetes, obesity and all those diseases the low-fat diet was meant to treat.

LOW-FAT DIETS

- In general, a low-fat diet involves restricting your fat intake to 30% of your daily calories, and saturated fat should not exceed 7-10%.
- Some very- and ultra-low-fat diets aim to limit fat consumption to under 10% of calories, and are mainly plant-based and limit meat and animal products.
- Studies show that people who reduce their calorie intake by eating less fat lose some weight.
- However, while low-fat diets appear to be as effective as low-carb diets for weight loss in controlled situations, low-carb diets seem to be more effective in free-living circumstances since they suppress appetite more effectively.

Dietary fat and cardiometabolic health: evidence, controversies, and consensus for guidance

Forouhi et al. BMJ 2018;361

Key messages

- Taken together, the evidence does not support a benefit of low fat diets for weight loss or prevention of overweight compared with low carbohydrate diets.
- For cardiovascular health, substantial evidence supports the importance of the type of fat consumed, not total fat intake, and the elimination of industrially produced trans fats.
- Much of the evidence suggests that the risk of coronary heart disease is reduced by replacing saturated fat with polyunsaturated fats (including plant oils) but not when carbohydrate is the replacement nutrient.
- Controversies remain about long term health effects of specific plant oils and of high fat, low carbohydrate diets, and research is needed to resolve these.
- The focus of dietary advice must be on the consumption of foods and overall dietary patterns, not on single nutrients.

THE MEDITERRANEAN DIET

- Interest in the Mediterranean diet began in the 1960s with the observation that coronary heart disease caused fewer deaths in Mediterranean countries, such as Greece and Italy, than in the U.S. and northern Europe.
- Though it was designed to lower heart disease risk, numerous studies indicate that it can also aid weight loss.



THE MEDITERRANEAN DIET



- The Mediterranean diet advocates eating more plant-based foods, like fruits, vegetables, nuts, seeds, legumes, whole grains.
- Eating fish, seafood at least twice a week.
- Substituting butter for extra virgin olive oil.
- Foods such as poultry, eggs, and dairy products are to be eaten in small amounts. Meanwhile, red meats are limited to occasionally.
- Additionally, the Mediterranean diet restricts refined grains, trans fats, refined oils, processed meats, added sugar, and other highly processed foods.

THE MEDITERRANEAN DIET

- Though it's not specifically a weight loss diet, many studies show that adopting a Mediterranean-style diet may aid weight loss.
- For example, an analysis of 19 studies found that people who combined the Mediterranean diet with exercise or calorie restriction lost an average of 8.8 pounds (4 kg) more than those on a control diet.
- For this diet to aid in weight loss, you must be vigilant of portions. Too much olive oil or nuts, too much red wine or ignoring exercise, will not let you lose weight.

THE MEDITERRANEAN DIET

EVIDENCE-BASED

- The Mediterranean diet encourages eating plenty of antioxidant-rich foods, and has been linked to reduced risks of heart disease and premature death.
- Multiple randomized controlled trials including patients with type 2 diabetes have reported that a Mediterranean-style eating pattern*, rich in polyunsaturated and monounsaturated fats, can improve both glycemic control and blood lipids.

** Estruch R et al. N Engl J Med 2018;378:e34
Bloomfield HE et al. Ann Intern Med 2016;165:491*

Mediterranean Diet and Cardiometabolic: A Systematic Review through Evidence-Based Answers to Key Clinical Questions

Nutrients 2019; 11(3):655

- A systematic review published this year on the evidence-based effects of the Mediterranean Diet, found:
 1. High-level of evidence in the primary and secondary prevention of cardiovascular disease and improves health in overweight and obese patients.
 2. Moderate-to-high evidence that prevents increases in weight and waist circumference in non-obese individuals, and improves metabolic syndrome and reduces its incidence.
 3. Moderate evidence in the prevention of type 2 diabetes.

NO RISKS WITH THIS DIET!!

WEIGHT WATCHERS (WW)



- WW, formerly Weight Watchers, is one of the most popular weight loss programs worldwide and is one of the most well-researched weight loss programs available.
- WW ranked first both for “Best Weight Loss Diet” and for “Best Commercial Diet Plan” in the 2019 rankings from *U.S. News & World Report*.
- While it doesn’t restrict any food groups, people on a WW plan must eat within their set daily points that assigns different foods and beverages a value, depending on their calorie, fat, and fiber contents.
- Some foods—fruit and vegetables especially—have zero points. Foods full of simple sugar and fat tend to have high points value.
- The online tool assigns a certain number value to each food, even restaurant foods, to make it easy to stay on track.



weightwatchers
reimagined

MYWW PLANS

	Minimum Daily points	How many zero points?	Zero point foods
GREEN	30 daily points	100 zero point foods	fruits and non-starchy vegetables
BLUE	23 daily points	200 zero point foods	vegetables, lean proteins like chicken breast or ground turkey breast, most seafood and shellfish, beans, lentils, eggs, non fat dairy, and fruits
PURPLE	16 daily points	300 zero point foods	fruits, vegetables, most lean proteins, most seafood, fish, nonfat dairy, beans, lentils, eggs, tofu, whole grains, potatoes, whole-wheat pasta, brown rice, and oatmeal

To reach your desired weight, you must stay within your daily point allowance, a number based on your gender, weight, height and age.

Higher calorie foods use more points, so limiting those will reduce your overall energy intake and help you lose weight.

WW: EVIDENCE-BASED

- Many studies show that the WW program can help you lose weight.
- For example, a systematic review of 45 studies in 2015 published in *Annals of Internal Medicine* found that people who followed a WW diet lost 2.6% more weight compared to several other commercial weight loss programs.¹
- Another study published in 2017 in *Lancet* compared weight loss among those using self-help materials, WW for 12 weeks, or WW for 52 weeks. The 52-week program led to better results than the 12-week program, and the 12-week program had better results than the self-guided program.²
- Also, people who follow WW programs have been shown to be more successful at maintaining weight loss after several years, compared with those who follow other diets.

¹ Gudzone KA et al. *Ann Intern Med* 2015;162(7):501

² Ahern AL et al. 2017 *Lancet*;389

PROS and CONS of WW

PROS

- Balanced and flexible
- Teaches lifelong skills
- No foods are forbidden
- Slow and steady weight loss
- Tons of support and resources
- Reduces diabetes risk
- Promotes exercise
- Can sync your Fitbit

CONS

- Can be costly
- Counting points can be tedious
- Weekly weigh-ins are necessary
- Limited evidence for cardiovascular benefits
- Too much freedom for some people
- May lead to unhealthy dieting

THE DASH DIET

- Dietary Approaches to Stop Hypertension, or DASH diet, is an eating plan that is designed to help treat or prevent high blood pressure, which is clinically known as hypertension.
- It emphasizes eating plenty of fruits, vegetables, whole grains, and lean meats and is low in salt, red meat, added sugars, and fat.
- While the DASH diet is not a weight loss diet, many people report losing weight on it.

THE DASH DIET

- The DASH diet recommends specific servings of different food groups. The number of servings you are allowed to eat depends on your daily calorie intake.
- It is composed of 55% carbs, 18% protein and 27% fat (<6% saturated) and >30gms of fiber.
- The food options available on the DASH diet closely mirror the eating plan recommended in the U.S. Department of Agriculture's MyPlate, with a focus on whole foods, such as fruit and veggies; fat-free or low-fat dairy; whole grains; and lean meats, fish, and poultry.
- For example, an average person on the DASH diet would eat about 5 servings of vegetables, 5 servings of fruit, 7 servings of healthy carbs like whole grains, 2 servings of low-fat dairy products, and 2 servings or fewer of lean meats per day.

THE DASH DIET: EVIDENCE-BASED

- The DASH diet has been shown to reduce blood pressure levels and several heart disease risk factors. Also, it may help combat recurrent depressive symptoms and lower your risk of breast and colorectal cancer.*
- While the DASH diet may aid weight loss, there is mixed evidence on salt intake and blood pressure. In addition, eating too little salt has been linked to increased insulin resistance and an increased risk of death in people with heart failure.
- DASH is tried and true but if your goal is weight loss, DASH won't melt the pounds off quickly unless you restrict your calories too.
- It can be a safe, effective, and sustainable way to shed pounds, and simultaneously improve your health.

* Onvani S et al. J Res Med Sci
2015;20(7):707

CONCLUSIONS

- Studies have demonstrated that a variety of eating plans, varying in macronutrient composition, can be used effectively and safely in the short term (1-2 years) to achieve weight loss in people with diabetes.
- This includes structured low-calorie meal plans that include meal replacements and the Mediterranean eating pattern as well as low-carbohydrate meal plans.
- For adults with overweight and obesity, of the myriad of weight loss diets evaluated, there is no evidence that one single approach is consistently superior or ideal, and counseling and caloric restriction in conjunction with a comprehensive lifestyle intervention are recommended for achieving and maintaining weight loss.
- Any approach to meal planning should be individualized considering the health status, personal preferences, and ability of the person to sustain the recommendations in the plan.