Review

Curiosities of Weight Loss Diets of the Last 60 Years

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Abstract
Lately, we've witnessed the emergence of obesity as a prominent concern for public health and the economy. This issue commands serious attention, impacting millions worldwide, particularly in the most developed nations. Practical approaches to tackling obesity involve tailored physical activity and dietary interventions overseen by qualified healthcare professionals. Nonetheless, some individuals opt for quicker routes, embracing dietary regimens that promise rapid and effortless weight reduction yet lack substantiated scientific backing. Given the potential hazards these approaches pose to well-being, this calls for immediate address, occasionally leading to unexpected and severe consequences. In this review, we aim to analyze the curiosities of popular diets embraced by adults from the 1960s to the present day, including the scientific justification that supports or contradicts their effectiveness.

Keywords
Diet; slimming; obesity; history

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1. Introduction

Since the late 20th century, obesity has been recognized as a global pandemic, encompassing a complex chronic condition marked by the excessive build-up of body fat. It can be considered one of the most severe medical problems in developed societies. Therefore, as such, it must be prevented and treated. In the majority of cases, obesity arises as a result of an imbalance between energy intake and expenditure, wherein the actual energy intake surpasses price [1]. Therefore, any effective weight loss program must meet this requirement: turn the balance, decrease intake, and increase energy expenditure. The obsession with losing weight is a reality in today's society, invaded by images of perfect bodies that continually invite us to lose weight and emulate the model.

In many cases, this social pressure can motivate the one who feels a kind of obligation to lose weight. The application of the internet and the appearance of social networks do not help the population obtain information based on scientific evidence, which can be a severe health problem. The number of diets that promise weight loss in an 'easy, fast and fun' way grows' which, in addition to being ineffective, can seriously endanger the life of the patient, as is reflected in a previous review [2] focused on humanity's first historical diet; called Spartan treatment, to diets of the end of 1950s. This study's objective is to review the curiosities of these slimming treatments for adults from the 1960s to the present, including the scientific justification that supports or contradicts their effectiveness.

2. Materials and Methods

Our study encompassed a comprehensive exploration of the literature, including "white" sources (which are papers published in peer-reviewed journals as are books, conference proceedings, and published journal papers), "grey" sources (which are essentially documents that have not been formally published and have commonly not been peer-reviewed, as are academic theses, organization reports, government papers, blogs, technical reports, data sets, preprints, lectures, e-prints and audio-video media), and "black" sources (which is published in academic, scholarly journals including concepts, ideas, and thoughts) [3]. We utilized various access tools, electronic resources/databases, search engines, and catalogues for each category to accomplish this. For "white" literature, we relied on sources such as CINAHL, Encyclopedia.com, Embase, LILACS, PubMed, Scopus, Virtual Health Library, and Web of Science. "Grey" literature was accessed through platforms like Google Scholar, New York Academy of Medicine's Grey Literature Report, Open Grey, Preprint repositories, Princeton University Library's Technical Reports, and Grey Literature. No language restrictions were imposed on publications. The Boolean strings chosen were ('diet' OR 'weight loss' OR 'weight loss treatment') AND 'adult', and the timeframe was limited from 1960 to 2023. We excluded irrelevant information to maintain the relevance of our manuscript. To ensure reliability and consistency, three reviewers (I.Z., N.S.O., J.M.S.) with expertise in medical and health evaluations and research methodology independently screened titles, abstracts, and full texts, assessed generalizability, and collected data using standardized and pilot-tested forms with detailed instructions. Records were considered by these reviewers against the inclusion/exclusion criteria, with papers judged as either (i) meeting the inclusion criteria for the review, (ii) not meeting the
inclusion criteria for the review but potentially helpful for background information, or (iii) not meeting the inclusion criteria for the review and not otherwise useful (e.g., irrelevant to the topic). In the case of any disagreements, a fourth reviewer (P.M.B.) was involved to resolve them. This review was developed according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement [3] (Figure 1).

![PRISMA Flow Diagram](image)

**Figure 1** PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) [3] flow diagram for records retrieved through our study's search and selection process.

3. Results and Discussion

3.1 Diets of the 1960s

During this timeframe, the rise of slimming clubs, commercially marketed weight-loss solutions, and fad diets were driven by a combination of factors, including acknowledging the connection between obesity and adverse health outcomes and societal beauty standards for women that emphasized lower body weights.

3.1.1 New Vegetarianism

Since the early 1960s, the evolution of vegetarianism saw the emergence of more exclusive practices and a renewed focus on the enjoyment of cooking. This transition was closely associated with the Animal Liberation Movement [4]. Additionally, in the 1940s, veganism was distinguished and excluded from the broader concept of vegetarianism [5]. In a meta-analysis of randomized controlled trials conducted by Huang et al. [6], it was observed that Vegetarian diet groups exhibited a significantly more significant weight loss (weighted mean difference: -2.02 kg) compared to those assigned to non-vegetarian diet groups, being this reduction more effective with vegetarian diets.
with energy restriction (ER) (-2.21 kg) versus without ER (-1.16 kg), and vegetarian diets with follow-up of <1 year (-2.05 kg) versus ≥ 1 year (-1.13 kg). Barnard et al. [7] discovered that these diets produced weight changes in specific scenarios more effectively in their systematic review and meta-analysis of clinical trials focusing on vegetarian diets. Specifically, they found that vegetarian diets were particularly efficient in studies with higher baseline weights, smaller proportions of female participants, older participants, longer durations, and studies where weight loss was the primary objective. In a 12-week randomized intervention study conducted by Turner-McGrievy et al. [8] involving African American adults, three different diet groups were examined: Healthy US-Style Eating Pattern, healthy Mediterranean-style eating pattern, and healthy Vegetarian eating pattern. The study observed significant weight loss within each group but did not find significant differences.

3.1.2 Meal Replacements

Meal replacements, such as a powder shake and a snack bar, each providing around 215 kcal/meal, have demonstrated successful implementation in multiple weight-loss trials and have been used to create a negative energy deficit [9]. The first research was studied in rats by Greenstein et al. [10] in 1960, with a liquid diet composed of amino acids, water-soluble and fat-soluble vitamins, glucose, salts, and ethyl linoleate (being the source of essential fatty acid). The aim of this previous study was applied to the Space Race that, years before, In the survey conducted by Gamble [11], physiological information about life raft ration studies was determined. However, its application in weight loss would arrive with Wadden et al. [12]. Nowadays, meal replacements have the capability to substitute one or multiple meals. A systematic review investigating meal replacements revealed a mean weight loss ranging from -2.2 to -6.13 kg compared to other diets that solely relied on support [13]. However, it is essential to note that meal replacements are not effective in achieving long-term weight loss, primarily because of physiological adaptations that lead to decreased energy expenditure [14].

3.1.3 The ‘Calories Don’t Count’ Diet

In 1960, Herman Taller, a Romanian-born American physician, introduced a weight loss approach based on a high-fat, low-carbohydrate diet emphasizing polyunsaturated fats like safflower oil. He published the controversial best-selling book "Calories Don't Count" [15]. The book mentioned a specific brand of safflower oil capsules that Taller claimed could aid the body in consuming other fats, although they held no actual value in treating obesity. Despite this, over $500,000 of these capsules were sold within the first eight months of their marketing. As a result, the author faced legal repercussions when a federal grand jury indicted him on mail fraud, conspiracy, and violation of the Food, Drug, and Cosmetics Act on March 11, 1964 [16]. According to Recker [17], the notion is put forth that calories don't count if they are not utilized.

3.1.4 Egg and Wine Diet

In 1962, Helen Gurley Brown, an influential American author, publisher, and editor-in-chief of Cosmopolitan magazine, incorporated a chapter titled 'The Care and Feeding of Everybody' in her book titled 'Sex and the Single Girl: The Unmarried Woman's Guide to Men' [18]. Despite her reputation for encouraging financial and romantic independence for women, she ironically
recommended a three-day diet plan consisting of ‘three fabulous little dinners and one semi-fabulous brunch.’ The diet involved consuming a hard-boiled egg with a glass of white wine and black coffee for breakfast, followed by more coffee, two hard-boiled or poached eggs, two glasses of wine at lunch, and a 150 g grilled steak with black pepper and lemon juice, along with more coffee and the remaining wine from the bottle for dinner. Brown claimed that this diet made women feel ‘sexy, exuberant, full of the joie de vivre’ and could result in a weight loss of 2.5 kg over three days. Nevertheless, Julie Stefanski, a member of various dietetic practice groups, including the Nutrition Educators of Health Professionals, Food and Culinary Professionals, and Dietitians in Business and Communications associated with the Academy of Nutrition and Dietetics, voiced criticism against the mentioned diet. Stefanski disapproved, stating, "This random menu (I don't even want to call it a diet) provides 1,103 kcal, with 43% of those calories coming from the alcohol calories in the wine!"

3.1.5 HCG Diet

In 1963, Dr. Albert T. Simeons published this diet based on an intake of 500 kcal/day supplemented with an injection of the hormone human chorionic gonadotropin (HCG) [20]. The author states it can be used for men and women, promising rapid weight loss (3 kg/week) and fat reduction in localized areas such as thighs, hips, and belly. The diet became popular during the 1970s and has regained strength in recent years, flooding the networks with the marketing of HCG in the form of drops, pills, ace, creams, and sprays. Among the drawbacks of this diet, it should be noted that it can cause the formation of gallstones, depression, headache, irregular heartbeat, and pulmonary embolism, among other complications [21].

3.1.6 Weight Watchers

A former housewife called Jean Nidetch launched Weight Watchers Inc. in May 1963. It provided a range of services, including weight loss and maintenance, fitness training, and mindset coaching, which is based on the weight loss support group to keep total daily points (each one was roughly 50 kcal) in a range determined by current weight. This diet has a higher-carbohydrate and higher-protein plan. Ma et al. [22] reviewed seven weight-loss goals with the dietary quality, known as the Alternate Healthy Eating Index, obtaining a score of 47.3 for this diet versus the Ornish diet with a value of 64.6. Gudzune et al. [23] concluded clinicians' efficacy in referring to Weight Watchers plan promised weight-loss results. Finkelstein and Verghese [24] observed that this plan was cost-effective versus nine weight-loss interventions. Pascual et al. [25] observed that long-term weight loss maintenance with this treatment was associated with a healthier diet pattern, as are consuming foods with higher micronutrient density.

3.1.7 The Humplik Diet

In 1964, Hein Humplik, a Viennese dermatologist, proposed a dietary treatment to lose weight [26] and re-written seven years later [27], in which he did not recommend a reduction in calories but an increase in them up to 6,000 kcal/day, divided into 10 shots a day. He divided foods into two categories: irrational and rational. He indicated that lean meats (not breaded or cooked with fatty sauces), fruits, and vegetables, when eaten, are faster to eliminate and, therefore, are
recommended since they help maintain or reduce weight. He referred to these as irrational foods. For example, breakfast on this diet could be tea, cold lean meat, pickles, and fresh fruit. Among rational foods, he included those rich in carbohydrates (such as pasta, cereals, bread, and sugar), alcohol, and dairy products, which he said should be avoided since they increase weight by accumulating fat. He assured that up to 15 kg could be lost in a month, basing this weight reduction on the fact that consuming a large amount of energy increases metabolic needs and deposited fats are finished to ensure a metabolic boost. However, this is a hypercaloric diet that leads to weight gain. In addition, the high intake of cholesterol and purines leads to an elevated risk of cardiovascular disease and gout [28]. With this diet, the false concept of ‘negative calories’ appeared for the first time.

3.1.8 Drinking Man’s Diet

In 1964, Robert Cameron, a well-known cosmetic executive aerial photographer, and his son Todd wrote [29] under the pseudonyms Gardner Jameson and Elliott Williams a paperback booklet entitled ‘The Drinking Man's Diet’ for $1. The booklet, which was around 50 pages long, claimed to be based on advice from an anonymous nutritionist and lawyer. The diet recommended consuming <60g carbohydrates/day and promoted weight loss by drinking alcohol with lunch and dinner. The authors claimed that the calories from alcohol did not count because they somehow disappeared in a mysterious metabolic process. A photograph of Dean Martin boosted the booklet’s sales, selling 2.4 million copies in 13 languages. Contrarily, Dr. Philip I. White, the Director of the Department of Nutrition at the American Medical Association, strongly criticized the "drinking man’s diet," stating that it lacks scientific foundation and is replete with errors. He further highlighted that individuals following these low-carbohydrate diets may initially experience a change in water balance, resulting in a minor weight loss. Dr. White pointed out that even the authors of the book themselves acknowledge that if a person consumes excessive food and alcohol, they will inevitably gain weight and become intoxicated [30].

3.1.9 Erna Carise’s Diet

Erna Carise, a renowned Viennese dancer, embarked on a European tour alongside Josephine Baker and Margaret Berndt during the late 1920s to the 1930s. In 1968, she launched the books ‘The Point Count Diet [31] and ‘Die Gastronomische Wunderdiät in Punkten’ (The Gastronomic Miracle Diet by Points) [32] in English and German, respectively. Some called this the diet of the dancer Margaret, probably referring to the other dancer who accompanied Erna Carise through Europe, Margaret Berndt, whose real name was Margarete Gertrud Samletzky. According to Erna Carise’s book, she suggests that weight loss is achievable through the consumption of high-caloric foods and a significant amount of alcohol. This, according to her, was a fun, effective, and alcoholic points diet, which was the only thing she got fitting [33]. In the late 1960s, the emergence of weight loss treatments started to gain prominence to focus on consuming as few calories as possible, regardless of the portion of food consumed. 1968 was productive regarding the appearance of diets without any scientific basis but with great following by the public, specifically females.
3.1.10 Antoine's Diet

After the publication of Albert Antoine's book 'L'art de maigrir' in 1968, this diet, referred to as a regime by the authors, gained significant popularity [34]. In this diet, each day is dedicated to a group of foods, during which you can consume as much as you want of the foods of said group, the sole condition being that you cannot mix them with other foods. Here is an example of this diet: on Mondays, you consume only meat, although as much as you desire; on Tuesdays, you eat only vegetables; on Wednesdays, you eat only eggs, and so on. This diet should be carried out for a week and repeated once a month. It promises a loss of 3-4 kg/week. It was assumed that this is an effective method to lose weight while preserving health because it respects digestion's biological function and food assimilation. On the contrary, this is a crazy diet, absurd and devoid of any scientific basis, and quite hypocaloric. It can impair the normal functioning of the intestine since the regimen includes days on which there is practically no consumption of fiber or carbohydrates (such as the day with meat) and others with an overload of them, as well as contributing to a vitamin deficit. In addition to being monotonous, the diet interferes with social life [1]. Interestingly, in 1947, a diet with the same name but a different treatment was studied by Kapp [35]. He carried out a treatment in fourteen patients with a daily average of protein (43 g), fat (32 g), carbohydrate (77 g), and 811 kcal, observing an average rate of loss of weight of about 1 kg/week.

3.1.11 The Stillman Diet

In 1968, five years before the Atkins diet (see section 3.2.1) made an appearance, the American doctor Irwin Maxwell Stillman published [36] a high-protein, substantially low-carbohydrate diet based on two phases: The first phase limits the diet to a series of recommended foods and drinks (lean meats, eggs, and low-fat cheeses) until one reaches the desired weight. The second phase begins by adding vegetables, fruits, and bread. The consumption of tea, coffee, and soft drinks without calories is accepted. The diet is divided into six small meals a day. It has been suggested that the American singer Karen Carpenter, of the famous Carpenter singing duo, began this diet in 1967, going from 65.7 to 41.3 kg, and died in 1983 from complications related to anorexia nervosa [37]. In 1974, a study [38] was carried out on 12 volunteers who lost an average of 3.1 kg between 3 and 17 days. However, the side effect was an increase in blood cholesterol (from 215 to 248 mg/100 ml).

3.1.12 Slimming World

In 1969, a company in the UK, led by group facilitators known as consultants, implemented an eating plan that incorporated principles of food satiety and energy density. Participants were encouraged to consume lower energy-dense foods in unlimited quantities while maintaining controlled portions of higher energy-dense foods [39]. Coe et al. [40] noted that individuals were assisted in making positive behavioral changes to support weight loss and sustain long-term weight loss maintenance.

3.1.13 The False Mayo Clinic Diet

During the 1960s, a diet commonly referred to as the "Mayo diet," "Mayo egg diet," or "Mayo reducing diet" gained popularity. However, it is essential to note that despite its name, the diet had
no affiliation with the renowned Rochester Clinic and was falsely attributed to it. The clinic had no involvement in the development or endorsement of the diet. The diet is based on a daily consumption between 600 and 800 kcal, and you are allowed to eliminate the consumption of dairy products but can consume eggs (4-6 a day), meat, and vegetable side dishes, as well as tea or coffee. It promises weight loss of up to 3.5 kg/week [41, 42]. Hoffman [43], as Chairman of the Committee on Dietetics from Mayo Clinic, indicated that none of them originated or were used in this non-profit American academic medical center. The diet underwent modifications in subsequent years and became known as the "cabbage soup diet" or the "sacred heart hospital diet." This diet is fad with low-calorie, high-fiber, and low-fat principles, which promises a weight reduction of up to 4.5 kg/week [44]. Sumalla Cano et al. [45] analyzed this diet observing an unbalanced percentage of macronutrients (47.65, 32.06 and 20.37% of fat, proteins, and carbohydrates, respectively) and all minerals and deficient in vitamins, including B1, B2, B3, B6, D, and E.

3.2 Diets of the 1970s

During the 1970s, various trends and social changes played a crucial role in the emergence and popularization of diets. One of these trends was the growing awareness of the importance of overall health and well-being. Society began to place a more excellent value on their physical well-being and sought ways to stay healthy. At the same time, the beauty and aesthetic ideal of the era revolved around thinness and a slim figure. This aesthetic focus prompted individuals to take measures to lose weight and achieve the desired beauty standard. Diets and exercise programs became popular and widely accepted aspects of the culture of the time as people sought to maintain a fit and healthy lifestyle. During this period, 19 diets were included in this narrative review.

3.2.1 Atkins Diet

This decade is known for the Atkins diet, which, despite being the most famous of diets, is far from original because its precursor, the Banting diet, was published in 1863. In the 1960s, the American cardiologist Robert Coleman Atkins found a scientific article that recommended restricting foods rich in carbohydrates to produce weight loss and decided to test the theory, observing this effect. In 1972, he published a book entitled ‘Dr. Atkins’s Dietary Revolution [46] but did not know the biological mechanism by which this diet works. He advised people against consuming milk, fruits, almost all vegetables, bread, pasta, cereals, sugars, sweets, etc., meat, fish, eggs, sausages, some cheeses, fats and oils, viscera, and shellfish without limit. He promised weight loss of 1.5 kg/week. The scientific community was up in arms against him, indicating, among other things, that Atkins was not a specialist in nutrition and dietetics, in addition to the fact that this diet could cause cardiovascular diseases. That same year, the American Medical Association reported that this diet is biochemically incorrect and dangerous. However, for almost 30 years, the Atkins diet was not dismantled. Still, it was strengthened instead by two studies, Dr. Eric Wesman [47] of Duke University and Dr. Gary Foster [48] from the University of Pennsylvania, both in the USA. Two groups of patients, one on a hypocaloric diet and one on the Atkins diet were compared, and it was found that the latter had lost twice as much weight as the former. However, there was a lot of pressure since if foods rich in fiber were eliminated from the diet, it could lead to colon cancer in the long run. Given this, the book was reissued in the 1990s under the title ‘The New Dietary Revolution of Dr. Atkins’ [49], advising people to consume more significant amounts of vegetable
foods, increase fiber consumption, and slightly increase amounts of carbohydrates. At the beginning of the 21st century, a series of experiments were performed where it was observed that patients on the Atkins Diet consumed fewer calories, and it was thought that since there are few carbohydrates in the diet, it is the fat that controls appetite and has a satiating effect. In 2003, Dr. Arne Vernon Astrup, a researcher at the Department of Human Nutrition at RVA University in Denmark, also hypothesized that fats have a satiating effect, not knowing the actual biological mechanism of Dr. Atkins’s diet. Dr. Astrup conducted an extremely original study [50], establishing a supermarket in his university where people could get food for free. After taking time to select candidates, he found two groups, one on a carbohydrate-rich diet and the other on a high-protein, low-fat diet. The study's final results demonstrated that the group following the second diet, which consisted of consuming fewer calories, achieved an average weight loss of up to 5 kg more than the other group. This finding highlighted the satiating effect of proteins, which was observed for the first time. It is worth noting that initial weight loss in ketogenic diets is primarily attributed to using glycogen and body water. However, these diets have been associated with increased plasma cholesterol and uric acid levels, potentially leading to conditions such as gout. Additionally, individuals who discontinue the ketogenic diet often experience rapid weight regain as glycogen and water are replenished. On the other hand, Churuangsuk et al. [51] carried out a systematic review of the systematic reviews of low-carbohydrate diets for overweight and obesity, including studies of Dr. Atkins’s diet reflecting those two manuscripts had a conflict of interest as the salary of one author is funded by the Robert C. Atkins Foundation [52] and Atkins Nutritionals under contract to ex vivo [53]. On the other hand, a case report reflected those two patients using Atkins’s diet. It started cardiac arrest (and died) and coronary ischemia in a healthy 16-year-old teenage girl and an active 50-year-old who developed coronary ischemia, respectively [54].

3.2.2 NutriSystem

NutriSystem began in 1972 as a liquid protein diet producer but eventually shifted to a chain of weight loss centers, abandoned in the 1990s due to bankruptcy. It re-emerged in 1999 as an online meal delivery service, and customers can now order food assortments by telephone and online. NutriSystem also offers free weight loss counseling services, which less than 20% of customers utilize [55]. This treatment promises a weight reduction of up to 0.5-1 kg/week [56] or 2 kg/week [57]. This diet could be defined as a low-fat, reduced-calorie plan that emphasizes portion control and is based on the glycemic index [58]. This means the diet focuses on foods high in good carbs and fiber. Habowski et al. [59] suggested that the Nutrisystem program exhibited superiority over the self-directed DASH diet in weight loss and reduced waist, hip, chest, and total body circumferences within 4 weeks. However, it is essential to note that this study was sponsored by Nutrisystem Inc., which could introduce potential biases. On the other hand, several studies carried out were promoted by NutriSystem, such as Jenkins et al. [60], who observed that chocolate Nutrisystem shake and levels of fullness persisted for over 3.5 h, or Hudnall [61], who studied the controversial ‘flavor deprivation’ theory. According to this theory, overweight individuals overeat because they feel ‘deprived’ of flavor and crave more taste, odor, and texture in their food. As a result, NutriSystem has introduced five new ‘flavor heightened’ entrees, ‘flavor enhancers’, and ‘flavor sprays’ to their product line. However, some experts have disputed this theory, stating that there is currently no scientific evidence to support the effectiveness of this diet. As such, it remains
a subject of debate. Additionally, critics argue that NutriSystem’s approach fosters total dependence on its program rather than encouraging individuals to make informed food choices [61].

3.2.3 Richard Simmons Diet

Richard Simmons transformed by educating himself about nutrition, healthy eating, and exercise, leading to a successful weight loss journey. He later moved to Los Angeles, California, and opened his own weight loss and fitness club called ‘Slimmon’ in Beverly Hills. The Richard Simmons diet plan consists of three main components: a balanced and healthy diet, regular exercise, and motivation. The program focuses on achieving moderate weight loss and emphasizes consuming fruits and vegetables, with a minimum recommendation of seven daily servings. The daily caloric intake on the diet plan is a minimum of 1,200 kcal, with approximately 60% of calories coming from carbohydrates, 20% from fats, and 20% from proteins. It also includes two servings of low or non-fat dairy products each day. Richard Simmons provides various tools such as the ‘Deal-A-Meal’ and ‘FoodMover’ to assist in following the diet plan. The ‘Deal-A-Meal’ comprises cards in a wallet, each representing one serving of a food group. The ‘FoodMover’ is an updated version of the ‘Deal-A-Meal’ designed to fit into pockets or purses. The plan utilizes tabs for each serving of proteins, carbohydrates, and other food groups consumed throughout the day, along with windows for water intake. Cookbooks and a food diary are also available to help dieters record the foods they eat and the number of servings consumed. The exercise component involves performing one of Simmons’ exercise routines, designed to be safe and effective for people of all ages and fitness levels, including seniors and the very overweight. The routines incorporate upbeat music with moderately strenuous exercises to make them enjoyable and motivating [62, 63].

3.2.4 The Howard’s or Cambridge Diet

From 1973 to 1980, the biochemist Alan Howard at Addenbrookes Hospital worked with Baird’s team from West Middlesex Hospital to develop a low-calorie diet formula, initially known as ‘Howard’s diet’, designed for morbidly obese patients to medical supervision for a pre-existing medical condition and extended to patients on a non-prescriptive basis [64] being this last criticized by several experts [65, 66]. In parallel, Howard developed with a nutritionist and specialist in food chemistry called Dennis Jones to convert the research concept into a commercially viable formulation, which resulted, in 1979, in the USA, as ‘The Cambridge diet’ after the University due to its association with the university where it was developed [67]. In 1985, Howard published his book detailing the diet’s discovery, efficacy, and applications [68]. This initial Cambridge diet contained only 331 kcal/day with 34, 42, and 3 g of protein, carbohydrate, and fat, respectively, and the recommended daily amounts of vitamins and minerals associated with commercial products such as shakes, meal replacement bars, soups, and shakes. This diet had been studied in three uncontrolled case series [69-71] but not in controlled internal trials nor controlled external evaluations [72]. Furthermore, during these studies, Howard, the editor of the International Journal of Obesity and the leader of the Cambridge Diet, had an apparent conflict of interest as he profited from the diet. His friend Bray advised him to step down as the editor, but he initially refused until pressure from various professionals eventually led to his resignation from the journal in 1982 [73]. The British Dietetic Association listed possible adverse side effects, including halitosis, dry mouth, tiredness, dizziness, insomnia, nausea, and constipation. In addition, anyone who eats less than 600
kcal daily should be under medical supervision since some authors have linked this diet with sudden death [74].

3.2.5 The Astronaut Diet

This is a substantially low-calorie diet (between 400-500 kcal/day) lasting for 3 days. It promises weight loss of up to 3 kg in 3 days. Some forums and web pages indicate that this diet helps astronauts lose weight [75, 76]. However, there is no evidence of this statement in the scientific literature. The nutrition of astronauts started from the early days of the Mercury Program. It continued through the missions to the International Space Station, and the lowest calorific values of food consumed by astronauts showed a consumption of around 2,890 kcal/day. No one in the programs had been on a diet of 400-500 kcal/day (seven times below the average calories consumed in the agenda). In 1974, this diet was indicated for patients who were to undergo surgery [77]. Substantially low-calorie diets (between 450 and 800 kcal/day) are widely used in the preoperative period of bariatric surgery [78] since they reduce the rate of perioperative complications, the surgical time of the intervention, and hospital stay. However, they must be prescribed and followed under strict medical control [79].

3.2.6 OPTIFAST

It is a physician-monitored, all-liquid, very low-calorie diet designed for significant weight loss in a short amount of time. It is only intended for use by highly obese individuals and must be supervised by a trained doctor. Novartis Medical Nutrition Corporation produces the OPTIFAST line of products and associated diet plans. The OPTIFAST diet consists of four phases: screening, active weight loss, transition, and maintenance, with training provided for healthcare professionals who will monitor and support patients on the diet [80]. The diet began with premade drinks but has expanded to include soup mixes and nutrition bars, with options for adolescent patients and those undergoing gastric bypass surgery. Novartis provides general guidelines for administering the diet, but each clinic or physician may offer their specific program, making each patient’s experience different. Ard et al. [81] compared, in a multicenter clinical trial, the OPTIFAST program, which combines a comprehensive behavioral weight-loss intervention with the use of OPTIFAST meal replacements, has shown to result in greater clinically significant weight loss at 26 and 52 weeks compared to a well-established food-based behavioral intervention. Laudenslager et al. [82] reviewed several commercials for weight loss and indicated that studies on OPTIFAST have demonstrated its efficacy and safety in achieving weight loss over 12 months.

3.2.7 The Lutz’s Diet

In a book entitled ‘Life Without Bread: How a Low-Carbohydrate Diet Can Save Your Life’, the Austrian physician Dr. proposed a diet [83] high in proteins and fats and low in carbohydrates. It promises a weight loss of 1.5 kg/week. It is similar to the Atkins diet, although not as drastic with the limitation of carbohydrates.
3.2.8 The Diet of the Sleeping Beauty

It is a diet based on the premise that a poor night's sleep leads to weight gain and increased cardiovascular risks [84]. There would be no significant problem with this diet if it were not for the fact that this diet proposes sleeping more hours than usual, and to achieve this, sedatives are used [85], which can lead to an addiction to them.

3.2.9 The Paleolithic Diet

In 1975, Walter L. Voegtlin published ‘The Stone Age Diet’ [86], which maintains that human beings are carnivorous animals since the jaw is designed to crush and tear in vertical movements and that at this stage of evolution (the Stone Age), their diet was based on fats and proteins, with small amounts of carbohydrates. Thus, he proposed consuming the foods available in the Paleolithic period, lasting for approximately 2.5 million years and ending with the development of agriculture around 10,000 years ago, was primarily based on the consumption of meat, fish, fruits, vegetables, nuts, and roots. This diet excluded grains, legumes, dairy products, salt, refined sugars, and processed oils. A few years later, a group of Emory University researchers under S. Boyd Eaton and Melvin Konner brought this diet to the medical community's attention at a scientific [87] and informative [88] level. By reviewing the scientific advances, it has been observed that the Paleolithic diet has revealed several benefits. Randomized controlled trials have started to confirm the value of hunter-gatherer diets, especially in certain high-risk groups. These studies have shown favorable outcomes of the Paleolithic diet compared to routinely recommended diets. However, the data are inconclusive, and it is probably one of the diets that have not generated a clear position, even among nutrition professionals. Such a divergence is also observed in the scientific literature. For example, in 2016, a comparison carried out by Swedish researchers [89] of ad libitum (administration depends on the will of the patient) Paleolithic diet with a conventional low-fat diet during a two-year intervention showed that in the Paleolithic diet, there was a significant and persistent effect of fat on the liver. Still, it was not associated with alterations in insulin sensitivity. In the same year, in a study conducted by the same group [90], it was observed that the Paleolithic diet not only improves fat mass and metabolic balance but also shows positive effects on insulin sensitivity, glycemic control, and leptin levels in individuals with type 2 diabetes. Interestingly, the study also found that supervised physical exercise did not significantly enhance these outcomes. However, exercise did play a role in preserving lean mass and improving cardiovascular capacity, particularly in men. In a systematic review and meta-analysis conducted by Ghaedi et al. [91], the effects of a Paleolithic diet on cardiovascular disease risk factors were examined. The findings suggested that the Paleolithic diet positively affected cardiovascular disease risk factors. However, the evidence was not deemed conclusive, highlighting the need for more well-designed trials to investigate this diet's impact further.

3.2.10 Cookie Diet

In 1975, a South Florida physician, Sanford Siegal, developed a cookie based on several amino acids to control his patient's hunger and to lose 5-7.8 kg/month. This diet has a consumption of 800 kcal/day distributed in six cookies (around 500 calories) together with a dinner of approximately 300 calories. This diet encompasses several weight loss treatments such as ‘the Smart for Life Cookie
Diet’, ‘R&D Diet Cookie’, and ‘Dr. Siegal’s Cookie Diet’ and ‘Hollywood Cookie Diet require 4 to 6 cookies/day and sometimes in addition to other food [92]. From 2002 to mid-2006, Siegal opened franchised weight loss centers in the USA and Canada but ended in August 2006 by bankruptcy [93]. In 2009, a website falsely claimed Kim Kardashian had indicated that she had seen positive results with this diet. She tweeted that Siegal falsely promoted that she was on the cookie diet. This diet raised the case of Siegal versus Kardashian, where he filed suit against Kardashian in a Florida state court, claiming the statements were false and defamatory. American socialite Kardashian sent a cease-and-desist order to Siegal, demanding the link was removed [94]. On the other hand, this author published other books, including ‘Dr. Siegal’s Natural Fibre Permanent Weight Loss Diet [95] and ‘Hunger Control Without Drugs: The Doctor’s Appetastic Diet’ [96].

3.2.11 The Okinawa Diet

In 1976, the Okinawa Centenarian Study, also called the Living Centenarian Study, was initiated by Makoto Suzuki along with Craig and Bradley Willcox to reveal the secrets of the elders’ successful aging in the Ryukyu Islands, which the Japanese prefecture of Okinawa, has the highest concentration of centenarians worldwide, some of them 110 years old and older [97], resulting in its designation in the controversial (due to that controlled studies into the blue zones are lacking [98, 99]) concept called as ‘Blue Zone’ which are regions, together with Sardinia (Italy), Nicoya (Costa Rica), Icaria (Greece) and Loma Linda (California, USA). The first studies [100] providing related data are from 1983, which led to the publication of the related book [101]. This diet is based on the traditional Okinawa cuisine, which is low in calories and includes a high consumption of vegetables and legumes (mainly soybeans), moderate consumption of seafood, and low consumption of dairy products, meat, and derivatives, in addition to average consumption of alcohol and low intake of calories [102]. Reference is made to eating more monounsaturated fatty acids than saturated ones and consuming carbohydrates with a low glycemic index and foods with phytonutrients (in the form of antioxidants and flavonoids) [103]. Tesche and Xuan [104] discussed the inclusion of shell ginger (Alpinia zerumbet) in this diet, highlighting its botanical name and rich phytochemical content. They emphasized that shell ginger belongs to the ginger family (Zingiberaceae) and possesses antioxidant and antiobesity properties. The longevity in Okinawa is confusing due to verifying whether or not people are older (many records did not survive during WWII) [105]. Hokama and Binns [106] demonstrated that male longevity is ranked 26th among the 47 prefectures of Japan, which does not support the evidence of the blue zone.

3.2.12 The Lemonade-and-Maple-syrup Diet

A naturopath named Stanley Burroughs created this diet, part of the so-called detox. He first launched the book [107] in 1976. The diet involves fasting for ten days or more and ingesting a drink based on lemon juice with maple syrup and cayenne pepper syrup, accompanied by herbal tea, laxatives, and water with sea salt. After ten days, some foods can be gradually incorporated, such as vegetable broths and vegetable and fruit soups. The diet promises weight loss of 5 kg/week. However, it causes protein, vitamin, and mineral deficiencies, halitosis (bad breath), fatigue, insomnia, dizziness, and hypotension [1]. In 1984, Burroughs was convicted by the California Supreme Court [108] of illegally selling cancer treatments, practicing medicine without a license, and second-degree murder of Lee Swatsenbarg, a cancer patient who followed this treatment.
3.2.13 The Liquid Protein Diet

In 1977, an osteopath known as Robert Linn published a book entitled ‘The Last Chance Diet: When Everything Else Has Failed: Dr. Linn’s Protein-Sparing Fast Program’ [109], which explained a controversial diet called the Liquid Protein Diet, based on massive protein intake a liquid-based hydrolysate of collagen proteins, obtained explicitly from cowhide. This diet promised weight loss of about 27 kg in three months. In 1976, the Food and Drug Administration (FDA) prohibited this type of diet because the diet leads to a lack of essential amino acids. This diet is said to have caused several deaths [110] and, years later, was linked to cardiac arrhythmias [111] and cardiac arrest, resulting in 32 out of 44 fatalities [112].

3.2.14 Jaw Wiring

In 1977, Rodgers et al. [113] applied jaw wiring to treat obesity for the first time, reflecting a loss of 25 kg/6 months as the average. Still, more than 70% of studied patients regained weight after discontinuing jaw wiring, and being obtained similar results by Ramsey-Stewart and Martin [114] and Castelnuovo-Tedesco et al. [115]. The method is based on two brackets attached to the upper and lower teeth (without anesthesia or surgery) and connected through a thin wire to maintain the jaw properly. Supports and cable are arranged to keep the lower jaw semiclosed and in a rest position, allowing moderate movement that helps the patient to speak clearly but prevents them from chewing solid food, forcing the patient to adhere to a liquid diet, allowing them to lose weight but also leading to a loss of macro- and micronutrients. Curiously, Rodgers et al. [113] implemented a weight gain psychological intervention involving the utilization of a nylon cord that was wrapped around the waist of the participant's Jaw wiring, hypothetically due to that no report in the scientific literature has been published, causing aspiration of vomitus due to that patient cannot adequately open their mouth, it can pose serious health risks such as asphyxia, aspirating pneumonia, or even death [116].

3.2.15 Scarsdale Diet

At this juncture, it is necessary to discuss the ‘Scarsdale diet’, not so much because of the originality of its dietary treatment but because the book sales skyrocketed. A book [117] on this diet was published in 1978 by the American Cardiologist Herman Tarnower and the writer of self-help books Samm Sinclair Baker. The diet is similar to the Atkins diet but emphasizes eating fruits and vegetables more. It promises weight loss of up to 2 kg/week. The book was initially unsuccessful, but sales soared when Tarnower was murdered by his mistress and private school principal, Jean S. Harris [118]. In 1983, a study [119] presented the clinical case of a patient who had developed a disease called variegate porphyria (autosomal dominant liver disease secondary to a deficiency of protoporphyrinogen oxidase activity that can present acute neurological manifestations and cutaneous photosensitivity) due to carbohydrate restriction [120] during the three weeks on the Scarsdale diet.

3.2.16 Nibbling Diet

In 1978, an American journalist, writer, and roving editor for Reader's Digest, Stanley Lawrence Englebardt, published this diet [121] characterized by consuming multiple small and frequent meals
(also referred to as grazing, picking, nibbling, and snack-eating) throughout the day. The problem with this diet is the excellent variety of snacks-eating/day in literature, including 3-5, 9, 12, 13, 17 snacks/day in the studies of Verboeket-Van De Venne and Westerterp [122], Rashidi et al. [123], Jenkins et al. [124], Murphy et al. [125] and Jenkins et al. [126], respectively. Furthermore, the meals' composition was not defined in some previous papers. From our viewpoint, standardizing the food composition is helpful to understand better multiple meal effects on weight loss and biomarkers, including cholesterol, insulin, and glucose levels.

3.2.17 The Pritikin Diet

In 1979, a book titled ‘Pritikin’s Program for Diet and Exercise’ [127], written by inventor Nathan Pritikin, along with writer Patrick McGrady, was published discussing diet and moderate aerobic exercise (or cardio). Nathan Pritikin associated this diet with creating the Pritikin Longevity Center (today called the Pritikin Longevity Center & Spa), where eating, exercise, and spa activities occur. The diet is based on reducing fat and increasing complex carbohydrates and fiber, selecting foods such as fruits, vegetables, whole grains, legumes, and even skim milk, and reducing the intake of lean meat or fish to small amounts. The diet avoids stews or fried foods and recommends raw, steamed, roasted, or boiled food. On this diet, you can add spices, drops of lemon, or aromatic herbs to dishes. The diet promises weight loss of up to 1.8 kg/week. In 1985, an extensive review [128] was published on the effects of some diets and physical exercise on chronic diseases, and in this review are several articles on the Pritikin Diet that indicate that this diet can help prevent cardiovascular diseases, type diabetes 2, hypertension, and obesity. Among the drawbacks are flatulence and monotony. In this review, five articles were discarded, which could reflect a conflict of interest. In America, this diet has become substantially successful to the point that some restaurants offer unique ‘Pritikin Menus’ for those who want to stay true to their diet while away from home.

3.2.18 The Hilton Head Metabolism Diet

This diet was developed by Peter M. Miller, PhD, in 1979. He proposed that consuming five small meals daily and engaging in the appropriate type and amount of exercise can boost metabolism, leading to weight loss. Peter M. Miller is a professor at the Medical University of South Carolina and founded the Hilton Head Health Institute on Hilton Head Island in South Carolina. This diet incorporated valuable insights gained from working with patients at the Institute, a weight loss and lifestyle modification retreat where patients can go to lose weight and learn new health and wellness skills. The diet plan involves a six-week weight loss phase followed by a two-week weight maintenance phase, typically low in fat, including a variety of fruits and vegetables, carbohydrates, and lean meats, and also recommends strength training exercises, walking, and taking multivitamins and calcium supplements. The patient is limited to approximately 1,000 kcal/day during the weight loss phase, with increased caloric consumption allowed on the weekends. Miller's psychological and emotional help is also a vital aspect of the diet, as he seeks to help patients overcome feelings of shame and discomfort about their weight or appearance [129]. Lynn [130] conducted a comprehensive literature review on this diet, specifically focusing on the advantages of understanding an individual's resting metabolic rate (RMR). The study explored factors influencing the metabolic rate and included a data analysis comparing the measured RMR with estimated RMR.
and other health-related factors. The aim was to gain insights into the impact of RMR on weight management and overall health.

3.2.19 The Israeli Army Diet

Not officially connected with the Israeli Army, this diet involved ‘surviving’ by eating a single type of food for two consecutive days: two days of only cheese, two days of salads, two days of poultry, etc. [131]. It is a monotonous diet that can compromise health and that we do not recommend for a group that performs extreme physical activity like the army.

### 3.3 Diets of the 1980s

During the 1980s, there was a significant rise in the fitness culture, with people striving to achieve a toned and athletic body. The concept of "dieting" gained substantial relevance during this decade. Many became more conscious of their dietary choices and sought to control their weight. Celebrities and public figures became influential in promoting specific diets and endorsing weight loss strategies, further fueling public interest and participation. During this period, 17 diets were included in this narrative review.

#### 3.3.1 Herbalife

In 1980, Mark R. Hughes, a seller of diet products, founded Herbalife Nutrition®, which develops nutritional products for weight management, among others. This treatment has sparked controversy, primarily due to concerns regarding potentially harmful ingredients in certain products, perceived misleading marketing claims, and unorthodox distribution methods [132]. Some of the initial products offered by Herbalife included ma huang (\textit{Ephedra sinica}), a plant that contained ephedrine. Ephedrine was commonly used as an appetite suppressant, as well as for treating conditions such as asthma, hay fever, congestion, and low blood pressure [133]. Herbalife faced various controversies and legal issues over the years. After consumers reported adverse reactions and the company's insurance premiums increased, Herbalife removed ephedrine from its products. The U.S. Food and Drug Administration (FDA) [134] ultimately banned the sale of ephedra-containing supplements in 2004 due to safety concerns. In the mid-1980s, Herbalife faced complaints from consumers experiencing symptoms such as constipation, diarrhea, headaches, and nausea. Initially, Herbalife officials instructed distributors to attribute these symptoms to eliminating toxins from the body caused by using their products. However, the FDA took action against Herbalife in 1982 for making unsubstantiated claims about the effectiveness of their products in treating various conditions. The FDA required Herbalife to remove the ingredients of mandrake and poke from their products [135]. The Canadian Department of Justice also filed criminal charges against Herbalife for false medical claims and misleading advertising practices in 1984. The California Department of Health, California Attorney General, and FDA also filed a civil lawsuit against the company in 1985, accusing Herbalife of misleading consumers, improper product claims, and operating an illegal "endless chain" scheme. Herbalife settled the lawsuit by paying $850,000 in costs, fees, and penalties. In 2000, Herbalife's founder, Mark Hughes, died from an overdose of alcohol and doxepin, a psychoactive drug with antidepressant and anti-anxiety properties [136].
3.3.2 Medifast

1980 Dr. William Vitale founded Jason Pharmaceuticals 1980, primarily as a medically supervised weight loss program. The Medifast diet plan, marketed by this company, is a low-fat, low-carbohydrate, and low-calorie program that relies on nutrient-dense meal replacement foods. While Medifast still offers this option, only about 10% of its customers use it under mandatory medical supervision. Due to this, medical care is not required. It is recommended. The Medifast diet offers a variety of more than 50 meals. The plan is a low-calorie program that typically involves a daily intake ranging between 800 to 1,000 kcal/day. During the weight loss phase, individuals follow a 5 & 1 meal plan consisting of five portion-controlled, nutritionally-balanced Medifast meals and one Lean & Green meal. This last meal includes a lean protein source and a portion of vegetables. The poor protein portion can be five ounces of cooked lean beef, pork, or lamb or seven ounces of cooked chicken, turkey, fish, or seafood. The Green portion consists of two cups of salad greens with 1/2 cup of raw vegetables and 1-2 tablespoons of low-carb salad dressing. Alternatively, one and one-half cups of low-carbohydrate cooked vegetables can be substituted for the salad greens (excluding carrots, corn, peas, potatoes, and Brussels sprouts during the weight loss phase). This combination of portion-controlled Medifast meals and a lean protein with vegetables in the Lean & Green meal helps provide a balanced and reduced-calorie approach to weight loss [137]. In a randomized controlled trial conducted by Shikany et al. [138], it was observed that the group following the Medifast diet achieved significantly more significant reductions in both body weight and fat than the group adhering to a food-based diet. This indicates the effectiveness of the Medifast program in promoting weight loss. Another variation of the Medifast program, known as the Medifast 4 & 2 & 1 Plan, was evaluated by Coleman et al. [139]. This study focused on the program implemented at one of the 21 Medifast Weight Control Centers. The results showed that the Medifast 4 & 2 & 1 Plan was effective for weight loss, preservation of lean mass, and improvement in cardiometabolic risk factors. This highlights the Medifast program’s positive outcomes in terms of weight management and overall health improvement.

3.3.3 Slim-Fast Optima Diet

In 1980, this diet was a weight-management program and a trademarked brand of diet products. The Slim-Fast diet plan is categorized as a liquid meal replacement diet based on consuming a low-calorie diet for weight loss. Slim-Fast Foods, the manufacturer of the products, was acquired by Unilever N.V. in 2000. The Slim-Fast line was modified in the early 2000s with the introduction of the Slim-Fast Optima Hunger Control Shakes, which replaced sugar with an artificial sweetener and added an extra gram of fat to help dieters feel fuller for longer. The Slim-Fast Optima diet plan involves substituting Slim-Fast products for two meals per day, having a sensible dinner, and engaging in 30 minutes of physical exercise daily. The program has several specialized diet products catering to specific dietary needs, including lactose-free and low-carb options. The company behind Slim-Fast funded an independently conducted study demonstrating the product’s efficacy in promoting weight loss [140]. The study you mentioned involved independent academic researchers and spanned over 27 months. The initial phase of the study compared a control group following caloric restriction with everyday foods to an intervention group that consumed two partial meals and snack replacements with Slim-Fast each day. After this phase, both groups were assigned one partial meal and one daily snack replacement. At the end of the study, it was found that the
intervention group had achieved and maintained a weight loss of 11.3% of their initial weight, whereas the control group only achieved a 5.9% weight loss. Additionally, further follow-up over an additional 2 years (4 years in total) revealed that the group assigned to meal replacements during the initial 3-month phase had a more significant weight loss of 3.3% compared to the regular food group, which had a weight loss of 0.8%. Furthermore, participants who maintained a 7% weight loss experienced significant improvements in glucose, insulin, triglycerides, and systolic blood pressure. These findings suggest that meal replacements, such as those provided by Slim-Fast, can effectively promote weight loss and improve various metabolic markers associated with cardiovascular health [141].

3.3.4 The Beverly Hills Diet

Judy Mazel was an aspiring American actress who failed miserably, blaming this fact on her weight problem. For this reason, she decided, without any professional health training, to write a book [142] in 1981, which soon became a bestseller, allowing her to set up a slimming clinic. She claimed that individuals following her program could achieve weight loss of up to 1.16 kg/week. This diet was a 42-day eating regimen, which began with 10 days of consuming only fruit, raw or as juice. From day 11, you can eat bread and corn, while protein is consumed from day 19. You cannot mix carbohydrates and protein in the same meal; the total diet is six weeks. You lose weight because it is a substantially low-calorie diet (about 800 kcal/day). In one part of the book, she offers the following unscientific theory: ‘As long as food is fully digested, fully processed through the body, you will not gain weight. It’s only undigested food stuck in your body, for whatever reason, that accumulates and becomes fat…’ ([142], p. 14-15). The American Medical Association [143] declared it as ‘the latest and perhaps the worst entry in the diet-fad derby. The diet’s major tenets fly in the face of all established medical knowledge about nutrition.’ In 1996, she slightly modified her treatment and published ‘The New Beverly Hills diet’ [144], where found 21 open-choice meals in the 35-day regimen she indicated was followed by many Hollywood stars, such as Jack Nicholson, Jodie Foster, Liza Minnelli, Sally Kellerman, Engelbert Humperdinck, Linda Gray and others ([144], pp. 4,24). In 1982, a physician known as Fox [145] published a book entitled ‘The Beverly Hills medical diet’ that recommended a low-fat regimen high in complex carbohydrates and gentle exercise.

3.3.5 F-plan Diet

In 1982, the book The F-plan [146] appeared in England and was written by Audrey Eaton, founder of Slimming Magazine. This book recommended a high fiber intake (hence F-plan) from cereals and fruit. This book prescribed a high fiber intake (hence F-plan) from cereals and fruit, an allowance of skimmed milk, and a selection from a set of recipes that are low in fat and use a lot of legumes and based on restricting the intake to 1,000 kcal/day. For a change, the foods have a British ring: damsons, blackberries, runner beans, and Hovis (flour and bread). The disadvantages include wind, excessive flatulence in the first weeks, and consumption of foods that require more time to chew and swallow. If not associated with increased water intake, the diet can cause intestinal problems [147]. Fairweather-Tail and Wright [148] concluded that this diet does not hurt rats' Fe, Zn, or Ca metabolism. However, their authors recommended that the long-term effect on Fe status warrants a more detailed investigation. In 2006, she published an improved version of this diet,
called ‘The F-2 diet’ [149], which claims to be faster and more effective. The author initially devised this diet after discovering the properties of fiber [150].

3.3.6 Jenny Craig Diet

In 1983, Jenny Craig and her husband, Sidney Craig, founded Jenny Craig, Inc. in Australia. They developed a program combining individual weight management counseling with a menu of frozen meals and other foods distributed through its centers or shipped directly to clients. It helps participants lose 0.45-0.91 kg/week through an energy-reduced diet of 1,200-2,000 kcal/day [151]. Gudzune et al. [23] conducted a review of overweight and obese adults enrolled in the Jenny Craig program for 12 months. The study found that the Jenny Craig program participants. Additionally, Finkelstein and Kruger [24] reported that individuals following the Jenny Craig program spent an average of $22 per day on food (around $8,030/year).

3.3.7 Cleveland Clinic 3-day Diet

The origins of the Cleveland Clinic diet remain shrouded in mystery as no official publications or privately circulated versions of it are available. Consequently, dating this diet and tracing its genesis is an arduous task. While some reports suggest that the Cleveland Clinic diet began to gain popularity around 1985, the Oregon Health and Science University has issued a disclaimer indicating that a precursor to this diet, known as the University of Oregon Medical School diet, has been circulating throughout the Pacific Northwest since 1923 [152]. Various hospitals and medical centers' cardiology departments have been credited with developing the Cleveland Clinic diet. According to reports, patients with excessive weight who were slated for heart surgery used this diet to slim down before their operation. The diet restricts caloric intake to between 600 and 1,100 kcal/day [153]. Mainstream physicians and dietitians do not endorse the Cleveland Clinic diet. The American Heart Association (AHA) and hospitals associated with the cabbage soup diet have issued official disclaimers stating that they do not endorse this diet [154]. In 2003, the Oregon Health and Science University noted that the "hot dog" version of the Cleveland Clinic diet is nutritionally inadequate and advised against its use [155].

3.3.8 Fit for Life

In 1985, Harvey (a specialist in woodcarving, with a certificate in nutrition from the American College of Health Sciences in Austin, a correspondence school and not accredited in the university education system) and Marilyn Diamond (same certificate in nutrition, but with a degree in linguistics from the University of New York) devised a method to lose weight that according to them is not based on a diet (hence the name anti-diet) but on modifying the way of eating, without counting calories [156]. They recommended the consumption of fruits (three hours before or after meals), vegetables, and whole meal flours; moderating fats and limiting dairy products; and not drinking water with meals because it dilutes the gastric juices of the stomach, preventing proper digestion. According to them, carbohydrates and proteins should never be consumed in the same meal because their digestion makes it challenging to assimilate their nutrients. This diet promises weight loss of up to 2 kg/week. Herbert [157] has published the pseudoscientific character of the book. On the other hand, MacLean et al. [158] developed a healthy lifestyle intervention called "Fit
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for LIFE" in collaboration with prison staff for delivery to incarcerated men. The study focused on the feasibility testing of delivering the intervention through prison physical education departments. However, it is essential to note that this intervention is not directly related to the subject discussed in this section.

3.3.9 Six-Day Body Makeover

In 1985, The Six Day Body Makeover was developed by Michael Thurmond. It promises to help people lose a dress or pant size in six days through a strict diet and exercise plan designed to boost metabolism. Thurmond grew up in Los Angeles and struggled with obesity, but eventually became a competitive body-builder and developed the Six Week Body Makeover program in San Francisco in 1985, which later led to the development of the Six Day Body Makeover, which involved identifying the patient's body type through a questionnaire, and providing a specific meal plan that is low in calories and high in protein and complex carbohydrates. Patients are required to eat frequently and drink 12 glasses of water a day while avoiding dairy products. The guidelines recommend low-intensity exercise for at least 5 days and include ‘abdominal breathing’ exercises to help with weight loss, increased energy levels, and overall fitness improvement [159]. To date, there is no research study available on this diet.

3.3.10 The Rotation Diet

In 1986, Dr. Martin Katah [160], professor of psychology at Vanderbilt University in Nashville (USA), developed a diet that involved three days of consuming 600 kcal/day, followed by 4 days of finishing 900 kcal/day, and 1 week of consuming 1,200 kcal/day. Obviously, during the first days, it is not a balanced diet. The book is based on three fundamental pillars: diet, exercise, and behavior modification. The same author found it challenging to maintain the discipline and commitment to adhere to the program [161] consistently. Subsequently, he developed other diets (we classified this author in the category of ‘poli diet maker’, which we have defined as a person or people who created and written several diets and books throughout his/her/their life/lives) as 'The T-Factor Diet' [162] and 'The Tri-Color Diet: A Miracle Breakthrough in Diet and Nutrition for a Longer, Healthier Life' [163].

3.3.11 Victoria Principal's Diet

Between 1978 and 1991, a television series called Dallas became a success. They catapulted many of its protagonists, including the actress Victoria Principal, the sister-in-law of Larry Hagman (the famous character of J.R. who would appear with his Texan hat and his ambivalent smile). In 1987, she launched the book entitled 'The Diet Principal' [164], where she promised weight loss of up to 5 kg/week based on salads and limiting fruit and dairy products to an unbalanced diet. Dr. Varela Moreiras [165] stated about this diet that 'her author, a well-known film actress whose knowledge of nutrition is unknown to us, advises against following the diet during menstruation.'

3.3.12 The Montignac Diet

After struggling for years against being overweight, a former French executive known as Michel Montignac began to investigate a method to lose weight efficiently and, lastingly, reduce the risks
of heart failure and prevent diabetes. In 1987, he published ‘Je mange donc je maigris ou: Les secrets de la nutrition’ based on the new concept of glycemic index (GI) and applied it to lose weight being a low-GI (GI<50) and low-fat–high-protein diet [166]. He classified food into seven groups: protein (meat, fish, and eggs), foods rich in carbohydrates (rice, potatoes, and pasta), legumes, vegetables, fruits, nuts, and fats. He says fruit at the end of meals is a ‘true poison.’ So fruits should be eaten alone and between meals (because this prevents fermentation of the fruit in the intestine, loss of vitamins, and alteration in protein metabolism, a statement considered false today at a scientific level).

In contrast, proteins cannot be combined with carbohydrates in the same meal. Nuts and fats should be avoided until day 14 of the dietary treatment. The diet promises weight loss of up to 1.25 kg/week. Dumesnil et al. [167] reflected that this diet induced a spontaneous 25 and 35% decrease in daily energetic intake and plasma TG levels, respectively, with a significant increase in LDL-cholesterol particle diameter and marked reductions in plasma insulin levels. Bush and Lane [168] detected that the use of Montignac’s method affecting vitamin D intake was significantly below the UK Reference Nutrient Intake (RNI) micronutrient recommendations applied in female adults. In addition, Van der Pant et al. [169] preferred a conventional diet based on caloric restriction with less consumption of saturated fatty acids, including physical activity, compared to the Montignac diet.

3.3.13 The Moon Diet

In 1988, Rolando Ricci, an Argentinian orthopedic, created this diet, also known as The Werewolf diet. However, its authorship is disputed, with him versus Bruce Ackerberg, Gabriele Daddo Carcano, and Oscar Eduardo Blotta. However, this diet, independently by the authors, is the same based on performing a fast coinciding with the start of a new lunar phase, with solid foods prohibited during the fast. Only liquids such as vegetable broths, herbal teas, fat-free homemade broths, and a minimum of 2 liters of water are allowed. For the duration of the fast, sugar, salt, soft drinks, coffee, dairy, soy drinks, chewing gum, syrups, or juices are not allowed for packed fruits. Furthermore, fasting is carried out two days a month, the first during the phase change to the Full Moon and the second at the beginning of the New Moon [170]. There is not scientific literature that verifies this diet.

3.3.14 Fat Flush Diet

In 1988, a certified nutrition specialist called Ann Louise Gittleman [171] developed the Fat Flush diet as a weight-loss and detoxification program to increase metabolism, reduce water retention, and promote fat loss. The program is based on the idea that consuming the right combination of foods and eating more frequently can boost the body's metabolism and lead to efficient fat-burning. Caloric intake on this diet ranged 1,100-1,600 kcal/day [172]. Unlike low-fat diets, the Fat Flush Diet emphasizes eating the right fats, carbohydrates, and proteins to maximize fat burning. However, the liver and lymphatic system must be detoxified before the body can burn stored fat effectively. Gittleman indicated that there are five ‘hidden factors’ that hinder weight loss, lower energy levels, and affect overall health, including a liver overloaded with toxins, food sensitivities, and intolerances, fear of consuming fats, excess insulin caused by high-carbohydrate foods, and cortisol levels that can be regulated by meal timing. Gittleman's diet plan gained popularity after the release of her
bestselling book, ‘The Fat Flush Plan’, and was further publicized in the 2006 film ‘Last Holiday’ featuring Queen Latifah [173], but she never used it in real life [174]. The fat-flush diet is comprised of three distinct phases. The initial phase lasts two weeks and is a highly restrictive cleansing diet aimed at jumpstarting weight loss. The second phase is less stringent and continues until the desired body size or weight is achieved. The final phase, Phase 3, is a low-carbohydrate diet that can be followed long-term for weight maintenance [175]. There is not scientific literature that verifies this diet.

3.3.15 The D’Adamo Diet and The Blood Type Diets

In 1989, the naturopath Peter J. D’Adamo launched a book entitled ‘The D’Adamo Diet’ [176], which promised a weight loss of up to 1.25 kg/week prescribing a low-fat, vegetarian diet to all his patients but suggested that a diet based on blood type might have health benefits. His son, a naturopathic practitioner in 1996, published ‘Eat Right for Your Type’ [177], where each person must eat one type of food or another depending on their blood type (A, B, O, AB). For the first, cereals, legumes, and vegetables are recommended; for foods of animal origin, he recommended eating fish and avoiding meat. For group B, meats are indicated. For group O, he suggested, for example, seafood and spinach, and for the last blood group, dairy was recommended. A systematic review conducted by Cusack et al. [178] in 2013 examined the blood type diet and concluded that there is currently no evidence to support the claimed health benefits of this diet. Additionally, in 2014, a study conducted by expert researchers from the Department of Nutritional Sciences at the University of Toronto (Canada) [179] involved 1455 subjects and found no association between blood type and the effectiveness of different diets.

3.3.16 The Los Angeles Weight Loss Program

In 1989, Vahan Karian founded the LA Weight Loss Centers, Inc., which uses a weight loss program that provides personalized counseling (in-person or online one-on-one meetings), meal plans, and exercise guidelines to its patients, who consumed regular foods available at supermarkets to obtain healthy meals. Patients who follow the online program can submit their favorite recipes to the ‘LA Chef’ and receive instructions on creating a healthier version of their favorite foods. Separate from their regular weight loss plan, LA Weight Loss Centers offers ‘The Man Plan’, aimed at men with an enormous appetite. LA Weight Loss Centers has faced legal disputes, including a settlement with the New York State Attorney General in 2002 over allegations of false claims about the cost of their weight loss program, slow refunds, and failure to post the bond required for health club service providers. Similarly, in 2005, the company's settlement was comparable to that of the Washington State Attorney General [180].

3.3.17 The Modern Western Diet

The classical Western diet is an evolution between two revolutions (including Neo-lithic and Industrial processes), helping the introduction of staple foods (meats, sugar, salt cereal grains, and dairy products) [181]. After the industrial revolutions, the Modern Western diet appeared with the new food processing methods that added refined foods (sugars and vegetable oils) to the classical Western diet. Since 1980, the prevalence of obesity has indeed increased significantly in numerous
countries worldwide. This rise in obesity rates is a concerning global trend observed in both developed and developing nations. In fact, in more than 70 countries, the prevalence of obesity has doubled over this period [182, 183]. This diet is connected to various chronic diseases, including cancer [184], diabetes [185], and cardiovascular [186] diseases, among others.

3.4 Diets of the 1990s

The 1990s continued with the fitness culture, concern for physical appearance, and the relevance of the concept of "dieting." Dietary approaches such as low-fat, high-carbohydrate diets were promoted, and the food industry played a significant role in promoting "low-fat" products. During this period, 17 diets were included in this narrative review.

3.4.1 The BFMNU Method

In the early 90s, Dr. Pietro Marco Boselli (biologist, physiologist, biochemist, and bio-mathematician, former professor of Biology and Physiology at the Catholic University of Brescia and of Biology and Modelling of Nutrition at the University of Milan) observed that the energy content of the diets did not explain the state of body mass achieved. Many different mass states could correspond to the same intake. The same mass states could be compared to varying inputs of food energy. In 1995, he theorized the ‘Biologia e Fisiologia Modellistica della Nutrizione Umana’ (BFMNU) method through a bio-mathematical valuable model for understanding the temporal trends of metabolic processes, calculating their speeds and, based on these, determining the optimal diet [187, 188]. The method, taught in refresher university courses (1999-2008) and master's degree (2009-2014), applies to everyone without limitations of sex, age, physiological and pathological state. The short- and medium-term success index stands at about 75%, and it is applied to several physiological and pathological situations, including in treating obesity [189].

3.4.2 Chrono diet

Chrono diet [190] was conceived and published by the Italian physician Mauro Todisco in 1991 and is based on the principles of chronobiology, where all human functions have a rhythmic pattern, better known as biorhythm or biological clock. So far, so good. The problem is the foundation of the diet, which argues that the timing of food intake is critical to success, regardless of the amount consumed. This diet indicated, but was not scientifically justified, the ‘food clock’, according to which the patient is prohibited from eating fruits and sugars after 5:00 p.m., to the detriment of protein consumption [191]. The diet lasts a month and promises a weight loss of up to 1 kg/week. According to its author, it is especially indicated for adolescents. This diet should not be confused with the so-called chrononutrition discussed below.

3.4.3 The Hawaii Diet

A scientific publication carried out in 1991 by Dr. Terry Shintani [192], within the Waianae Diet Program study in Honolulu County (Hawaii), reflected that when this population followed a traditional diet for 21 days, i.e., a diet low in fat (7%), high in complex carbohydrates (78%), and moderate in protein content (15%), with the warning that they could eat to satiety, it caused an average reduction of caloric intake from 2,594 to 1,569 kcal/day, a weight loss of 7.8 kg (or 2.6
kg/week), and a decrease in blood pressure and serum cholesterol (from 5.76 to 4.95 mmol/L). This study was carried out without external funding (therefore, it was free of conflict of interest) and won, a year later, the US National Award from the Ministry of Health. In 1999, Dr. Shintani launched a book [193] in which he modified the percentages of the macronutrients to 77% carbohydrates, 12% fats, and 11% proteins of the total caloric value. In 2001 [194], a study confirmed the beneficial effects of this diet, including weight reduction, among others. However, it is a substantially unbalanced diet in terms of the percentage of macronutrients and can cause health problems for a long time.

3.4.4 Carbohydrate Addict’s Diet

This diet [195], developed by research scientists Rachel Heller and Richard Heller and published in 1991, emphasized low-carb (around 23%) [196] foods with around 1,476 kcal/day [197], which is based on the theory that specific individuals may experience intense cravings for high-carbohydrate foods due to an overproduction of insulin by the pancreas, which can contribute to weight gain. This approach consists of two main steps: reducing the consumption of high-carbohydrate foods and regulating insulin levels through dietary supplements. According to the Hellers, who developed this diet, carbohydrate addiction is characterized by intense hunger, craving, or desire for foods rich in carbohydrates, as well as a recurring and escalating need for starchy foods, snacks, junk foods, and sweets [198]. The diet plan allows for two complementary meals, one reward, and a snack. The complementary meal consists of one serving of meat, two cups of low-carb vegetables, or two cups of salad. On the other hand, the reward meal should consist of equal portions of protein, low-carb vegetables, and high-carb foods, including a dessert. The inclusion of a reward meal aims to provide some flexibility and satisfaction while still adhering to the principles of the diet. To help individuals determine if they have a carbohydrate addiction, the Hellers have developed a self-administered quiz that can assess their likelihood of being a carbohydrate addict.

3.4.5 The Rafaella Carrà Diet

In 1993, the well-known Italian singer, songwriter, dancer, actress, and television presenter popularized the diet that bears her name, with the theory of not mixing carbohydrates with proteins. She accompanied the diet with a book of recipes [199]. The Spanish Nutrition Foundation and the Institute of Nutrition and Eating Disorders of the Community of Madrid [191] point out the irrationality of some proposals, such as if ‘you eat before eight in the morning (unextendible limit) you will not get fat’ (thus, you can have a succulent breakfast, with pastries, sugar, bread, butter, jam, fruit, coffee, eggs, ham, yogurt, chocolate, etc., in short, everything prohibited but it is essential to finish breakfast before eight in the morning) or ‘the fruit consumed two hours before or after the main meals so that it does not gain weight.’

3.4.6 The Ornish Diet

The American Dr. Dean Michael Ornish is a clinical professor of medicine at the University of California and founder and president of the Preventive Medicine Research Institute. He has worked on preventing coronary artery disease and other chronic diseases. The individual's approach focuses on several techniques, including smoking cessation, moderate exercise, stress management (such
as yoga and meditation), psychosocial support, and diet. His response to this last tool is reflected in the book ‘Eat More, Weigh Less’ [200], published in 1993, based on a diet based on fruits and vegetables, legumes, and whole grains, restricting the intake of oils, sugar, nuts, dried fruits, high-fat foods, and industrialized products and prohibiting proteins of animal origin. The food is limited to a single main course, lacking a starter and dessert. This diet is accompanied and supported by support groups to lose weight. He and colleagues reflected [201] that his diet, weight loss, regular exercise, and meditation were associated with regression of coronary atherosclerotic disease. Anderson et al. [202] found that transitioning from a reference American diet to the Ornish diet increased serum triglyceride values by 74mg/dL. Furthermore, Dansinger et al. [203] compared four popular diets, the Ornish diet one of them, observing that all studied diets helped in modest weight loss and cardiac risk factor reductions, and Gardner et al. [204] found that premenopausal overweight and obese women who followed the Atkins diet, which had the lowest carbohydrate intake, experienced comparable or more favorable metabolic effects compared to the Ornish diet. On the other hand, Anton et al. [205] reviewed clinical trials available that showed that this treatment in obese subjects produced an average weight loss of 3.5 and 3.2% after six months and 12 months, respectively.

3.4.7 The South Beach Diet

In the mid-1990s, a cardiologist named Arthur Agatston, observing that his patients following the Atkins diet were losing weight, decided to rethink the treatment because, on principle, he refused to allow them to consume saturated fats or limit their intake of carbohydrates and fiber, and devised the so-called modified carbohydrate diet. During this time, he gave talks to patients about following the diet and, noting that he had a large number of followers in Miami Beach, he changed the name of the diet to the South Beach Diet, which he accompanied by the publication of the book [206] in 2003. The diet consists of three phases, where the proportion of carbohydrates is increased as the proportions of fat and protein decrease. There are recommended foods, including lean meats, vegetables, and monounsaturated fats, but there is no restriction on calorie intake. Additionally, he recommended five meals a day and included an exercise program. The first phase aimed at rapid weight loss (2.9 kg/week) by limiting foods that contain fiber. The British Dietetic Association [207] pointed toward this phase when highlighting the seriousness of the diet, which can cause halitosis, mouth dryness, tiredness, dizziness, insomnia, nausea, and constipation [208]. In 2008 [209], a clinical case was published of a 30-year-old patient who was hospitalized due to ketoacidosis resulting from this diet, where he lost weight for three weeks, at an average of 2.4 kg/week.

3.4.8 The Zone Diet

In 1995, the biochemist Barry Sears launched the book Entering the Zone [210], describing a physiological state of the body that he defines as ‘The Zone’ where the hormones control the so-called silent inflammation. According to Sears, this last concept is a chronic imbalance of essential nutrients in the cell that can cause various diseases. To avoid these diseases, he recommends meals where carbohydrates, proteins, and fats provide 40, 30, and 30% of the total caloric value, with omega-3 fatty acids essential for this diet. In 2014, Sears published the book ‘Mediterranean Zone’ [211], which focuses on consuming polyphenols in anti-inflammatory response. This diet has been applied in sports, where it is common for many professionals, without training in nutrition, to
continue recommending it to their athletes. In sports, ‘the zone’ is defined as that state of euphoria and apparent absence of effort in which mind and body work in unison and where the athlete can develop optimal performance due to a hypothetical increase in the production of prostaglandins E2 (prostacyclin) against thromboxanes and leukotrienes, since the former are anti-inflammatory and vasodilator, while the latter reduces oxygen transfer to cells, produce hypoglycemia, and increase lipid deposits. This diet, which is low in carbohydrates and the ‘zone’ concept, has been widely questioned. In 2003, a study [212] indicated that some of the studies were poorly controlled and that some success cases were mere anecdotes and unscientific rhetoric. This contrasts with the various studies carried out today. The latter [213] indicates that it improves glycemic control and reduces waist circumference and silent inflammation in overweight or obese patients affected by type 2 diabetes. The later study [213] suggests it improves glycemic control, reduces waist circumference, and decreases silent inflammation in overweight or obese patients with type 2 diabetes. In 2018, Kuchkuntla et al. [214] indicated that this diet effectively promotes weight loss and reduces metabolic parameters associated with an increased risk of heart disease. However, its superiority over other diets has not been conclusively proven.

### 3.4.9 Protein Power Diet

In 1996, Drs. Michael and Mary Dan Eades published the book Protein Power: The High-Protein/Low-Carbohydrate Way to Lose Weight, Feel Fit, and Boost Your Health-in Just Weeks!’ [215] focused on the fact that the amount of insulin is reduced if carbohydrate consumption is reduced. According to the authors, this hormone controls fat storage after ingesting this nutrient. The diet emphasizes the avoidance of carbohydrates and encourages the consumption of meat, eggs, cheese, fish, poultry, butter, oil, low-carbohydrate vegetables, salad dressings, and alcohol in moderation. There are no validated studies published on it, and St. Jeor et al. [216] indicated the weight loss is due to caloric restriction. Hoeger and Hoeger [217] indicated that nausea, bad breath, fatigue, constipation, and a lack of fiber, vitamins, and minerals may increase the risk of osteoporosis, coronary heart disease, and cancer. In 2000s, Drs. Eades published another book entitled ‘The 30-Day Low-Carb Diet Solution’ [218] based on their previous best-seller.

### 3.4.10 The Hollywood 48-hour Diet

In 1997, a self-proclaimed ‘diet counselor to the stars’ called Jamie Kabler created the Hollywood diet products after visiting a European Health Spa to manage his weight. He wanted to create an affordable product to help others lose weight and detoxify their bodies. This diet, also called the Hollywood 48-Hour Miracle Diet, is a complete food re-placement drink, being the product line expanded to include other dietary supplements and beverages such as the Hollywood 24-Hour Miracle Diet and the Hollywood Daily Miracle Diet Drink Mix Meal Replacement. The Hollywood 48-Hour Miracle Diet is an orange-colored drink (made of fruit juice concentrates, with no protein, 100 kcal, and 25 g, 20 mg, and 22 g of carbohydrates, sodium, and sugar, respectively, in each serving) intended for a 48-hour complete food replacement. This diet is very low-calorie (400 kcal/day) and requires medical supervision. Upon completing the initial diet, dieters are advised to substitute one meal/day with the Hollywood Daily Miracle Diet Drink Mix Meal Replacement, preferably dinner, for optimal results [219]. Health professionals warn that this diet causes nothing more than temporary fluid losses [220].
3.4.11 Optimum Health Plan

Dr. Andrew Weil graduated from Harvard University with a degree in biology in 1964 and later obtained his medical degree from Harvard Medical School in 1968. He designed ‘The Optimum Health Plan’ [221], a program that integrated principles from conventional and alternative medicine to promote physical and emotional wellness. While alternative medicine uses natural remedies, integrative medicine selects scientifically proven techniques from alternative and traditional medicine. The goal is to provide a holistic approach to healthcare that addresses the patient's physical and emotional needs. A revised and updated version of Weil’s diet was released in 2006 [222].

3.4.12 Negative Calorie Diet

The concept of harmful calorie foods, which suggests that certain foods require more calories to digest than they provide, is the basis of this diet. However, the origins of this idea are not well-established or transparent. A few years ago, it appeared on the website www.negativecaloriediet.com. According to the website, the diet has been available since 1997, but in 2007, this diet was available from the website as an 80-page downloadable e-book. Neither the website nor the book exists now. This diet proposed that consuming foods with low-calorie counts that are difficult for the body to break down would result in the body expending more energy to process the food than the actual calories. This diet is very low-fat with high carbohydrate and fiber content, 15% protein, 75% carbohydrates, and 10% fat [223]. Rezaeipour's research group compared this treatment to a low-calorie diet, observing that both showed a similar weight loss and lipid profile [223, 224]. An American celebrity chef, Rocco Dispirito, actualized this idea in the book The Negative Calorie Diet: Lose Up to 10 Pounds in 10 Days with 10 All You Can Eat Foods [225], promising to lose around 5 kg/10 days. However, Kamiński et al. [226] evidenced the most robust decrease for the negative-calorie food diet in Google Trends based on public interest in specific diets globally.

3.4.13 The Graschinsky Diet

In 1998, Dr. Carlos Graschinsky published his diet, known as the ‘Anxious Diet’, ‘Latin American Diet’, or ‘Antiobesity’ [227]. This diet is based on the physical activity of walking at least 1 hour/per day. Calories do not count (but spending the calories does), and it is planned from Monday to Friday, leaving weekend meals to free will. It promises a weight loss of 1 kg/week. In his book, he says that you must stop eating when you feel thirsty since, according to the author, this indicates that enough has already been eaten, a statement that currently has no scientific basis. There is not scientific literature that verifies this diet.

3.4.14 Subway Diet

Jared Fogle, a college student weighing 193 kg, created the Subway diet in March 1998, which helped him lose 110 kg in 11 months. He achieved this by eating two low-fat sandwiches from the Subway fast-food chain daily. Once he lost 45.4 kg, he added a 2.4 km/day walk to his routine. Fogle's weight gain had caused health issues like edema and high blood pressure. Although Subway did not endorse the diet, Fogle's success story led to him becoming a motivational speaker and a
prominent advocate in the battle against childhood obesity, and he even appeared in Subway commercials [228]. However, Fogle's reputation was tarnished in 2015 when he was arrested on charges related to sex with a minor and child pornography, affecting patronage of this company [229].

3.4.15 Frozen-food Diet

This diet was officially first introduced in Good Housekeeping magazine in September 1998 and has since evolved to include microwaveable meals and home-delivered options. It is a weight loss and weight control program, based on a consumption of 1,400 kcal/day, that relies on standardized portions of packaged frozen foods for convenience and time-saving. Furthermore, it requires 45 minutes of exercise four to five days per week [230]. However, a diet with the same name but different in this treatment was studied a year ago by the Eskimos. They traditionally employ methods such as drying their protein foods to preserve them for later consumption. In addition to cooking their foods, they also consume them in frozen form [231]. On the other hand, Taylor et al. [232] conducted a study on a five to eight-week intervention where participants consumed a 1,200 kcal frozen food diet. This was followed by computer-assisted therapy focusing on monitoring calorie and fat intake and exercise. The study found that this intervention significantly increased weight loss among participants who used computers for monitoring, goal-setting, and receiving feedback related to their weight and dietary habits.

3.4.16 The 20/30 Diet

In 1999, Dr. Gabe Mirkin, who was an assistant professor at the University of Maryland and a clinical associate professor of pediatrics at the University of Maryland School of Medicine at Georgetown University, together with the author Barry Fox, published [233] a diet based on the consumption of no more than 20 g of fat and 30 g of fiber and associated with moderate physical exercise. The diet is low in fat and fiber-rich foods, such as vegetables, fruits, and cereals, of which as many as desired can be consumed, up to a maximum content of 30 g of fiber. Curiously, the same author had published, mentioned above [143], an article justifying ‘The Beverly Hills Diet’ as scientifically unsound and potentially dangerous.

3.4.17 DietWatch

DietWatch is an internet-based weight loss program that helps patients achieve sustainable and healthy weight loss through healthy eating habits, regular exercise, and motivational support. The program was launched in 1999 and has been recognized with several awards for its exceptional internet content. It is operated by DietWatch.com, Inc., led by Jennifer May, a registered dietician, and Dr. Roger Gould, who created a program called Mastering Food that assists dieters in overcoming negative eating habits. DietWatch offers four meal plan options: a no-restriction plan, a reduced-carb plan, a heart-healthy Mediterranean plan, and a vegetarian one. Users can personalize their meal plans and access shopping lists tailored to their diet. The program also provides exercise and fitness plans, motivational tips, discussion boards, and valuable tools such as a food journal, daily calorie balance tracker, and nutritional information about different foods [234]. According to Butryn et al. [235], certain patients have a growing preference for using DietWatch.
over traditional, face-to-face programs. This may be due to several factors, including the lower cost of Internet-based programs the ability to access intervention resources at any time, eliminating the need for a set schedule. Additionally, transportation and child care arrangements are not required. Moreover, participants can enjoy a certain degree of anonymity, which can be helpful for those who feel self-conscious about their weight control efforts. Nowadays, the domain of DietWatch.com is for sale and is due to expire on 24 January 2023.

3.5 Diets of 2000s

During the 2000s-2011s, the fitness culture and concern for physical appearance remained strong, along with the relevance of "dieting." Dietary approaches such as low-carbohydrate and plant-based diets were promoted. There was an increased focus on organic and natural foods, and the food industry adapted to these trends by promoting products as "healthy" and "low in fat." During this period, 34 diets were included in this narrative review.

3.5.1 Suzanne Somers Weight Loss Plan

Suzanne Somers, a television actress with no formal training in nutrition, published her Weight Loss Plan in 2001. The diet program emphasizes the combination of foods over caloric restriction and is based on Somers' experience of learning to eat in France. The diet plan emphasizes reducing sugar and carbohydrate intake and consuming fresh, non-processed foods. The program has three stages - Level 1, Almost Level 1, and Level 2 - each allowing different food combinations. The diet is divided into four food categories: proteins/fats, vegetables, carbohydrates, and fruits, each with specific rules on when to eat them, which groups should be consumed together, and which should not. The diet permits all types of fats and meat products while excluding alcohol, avocados, nuts, olives, soy, and other specific foods during the initial stage. The program does not require calorie counting or portion control but instead focuses on consuming the correct foods in the right combinations to achieve weight loss goals [236, 237]. Offit [238] eviscerated to Suzanne Somers, over her previous [236, 237] and other books [239-241], for her different treatments, including i) anti-aging regimen, ii) use of bioidentical hormones or the forty-seven other remedies or that she used, and iii) application of glutathione into the skin over her liver to stimulate it.

3.5.2 Volumetrics Diet

In 2000, a biologist, physiologist, and chief of the Guthrie Chair in Nutrition at Pennsylvania State University, Barbara Jean Rolls, in collaboration with journalist called Robert A. Barnett, published 'The Volumetrics Weight-Control Plan: Feel Full on Fewer Calories [242], which will be the first of the 3 that would make up the Volumetrics series, under the motto: 'lose weight and keep it off, while controlling your hunger.' They introduce the concept of 'energy density as the concentration of calories in each portion of food, relating it to the satiety produced by said food. They discuss the concept of 'calories per bite', provide recommendations for avoiding energy-dense foods, and explain how nutrients such as fat, fiber, protein, and water affect energy density and satiety. The program includes tables to help users differentiate between foods with higher caloric density and less satiety and those with lower caloric density and greater satiety. This approach helps to unmask seemingly innocuous foods that are high in calories. The accompanying manual contains 60 simple
recipes, an exercise program, and behavioral strategies to support healthy eating habits. This book is followed by ‘The Volumetrics Eating Plan: Techniques and Recipes for Feeling Full on Fewer Calories [243], published by Dr. Rolls in 2005, which repeats the methodology of the first but includes testimonials from patients, as well as 125 new ones. In 2011, Rolls and Barnett [244] indicated that the addition of vegetable puree to sweet and savory foods decreased their energy density, resulting in a valid strategy for reducing caloric intake and promoting the consumption of vegetables, even in cases in which they did not are liked by the user, being camouflaged. However, more research is needed to determine its anti-obesity effect. In 2012, Dr. Rolls published her other best-selling book [245], together with consulting analyst and specialist in communications Mindy Hermann. The novelty concerning the previous ones is the 'Dr. Rolls 12-week Program', which offers 'guidelines for the user to establish new habits that allow them to lose weight and keep it off, feeling satisfied with fewer calories'; plus 105 new recipes. Foreyt [246] recommended this diet to consumers and nutrition professionals for its research-based, sensible, and easy-to-read approach to achieving and maintaining a healthy lifestyle. Mattes [247] observed this diet could maintain weight loss and control hunger, but compliance is limited. Muñiz Pedrogo et al. [248] carried out a study with this diet and analysis of gut microbiota, defining the success group previously as participants that lost at least 5% of the initial weight within three months, observing that the mean weight loss was 7.89 kg in the success group and 1.51 kg in the less than 5% weight loss group. Their results associated the success of an increased abundance of *Phascolarctobacterium* versus an increased abundance of *Dialister* and of genes encoding gut microbial carbohydrate-active enzymes in the other group, suggesting that increased capability for carbohydrate metabolism is associated with decreased weight loss in overweight and obese patients who are participating in a lifestyle intervention program. In our viewpoint, the motto 'feel full and satisfied' can confuse the user, who may eat more calories than necessary to achieve the desired weight loss. It would be a suitable method as long as a nutrition professional duly advises the patient.

3.5.3 The Dukan Diet

In 2000, Dr. Pierre Dukan published a book in France entitled ‘Je ne sais pas maigrir’ [249], where he proposed a diet divided into four phases: attack (between 3 and 10 days, where only proteins are eaten), the introduction to cooked vegetables (called the ‘cruise phase’); the consolidation phase (carbohydrates are introduced); and stabilization (balanced diet and protein 1 day/week). On January 24, 2014, Dukan was permanently removed from the order of doctors. According to the Agence de Presse Médicale, the decision was made following disciplinary proceedings against the doctor by the National Chamber of the Order of Physicians. Still, this sentence would have little effect because Dukan had already withdrawn from this body in April 2012, shortly after his retirement, in disagreement with its members [250]. The British Dietetic Association indicated that his diet is nutritionally imbalanced and rapid weight loss unhealthy [251]. The Position Statement Group of the Spanish Association of Dietitians-Nutritionists (SG-SADN) considered this method fraudulent, dangerous, and illegal, which is not useful for losing weight and poses a risk to public health [252]. A group of researchers from the University of Granada published [253] a study where they tested this hyperproteic diet (according to the first phase of the Dukan diet) on laboratory rats, which developed severe kidney problems, including the formation of kidney stones; a decrease of up to 88% in urinary citrate levels; and had a markedly more acidic urinary pH. In their study, Wyka
et al. [254] suggested that long-term following this diet could pose health threats. They specifically mentioned the potential risks of acquiring kidney and liver disease, osteoporosis, and cardiovascular disease. Freeman et al. [255] reported a case report of a 42-year-old Iranian woman who presented intractable nausea and vomiting after starting this diet. In Italy [256], the Dukan diet was the first commonly searched diet and consequent diet-related queries on Google before and during the COVID-19 pandemic.

3.5.4 LEARN Diet

Brownell [257] developed the LEARN (Lifestyle, Exercise, Attitudes, Relationships, Nutrition), a lifestyle change program for weight control based on cognitive-behavioral psychotherapy. This diet recommended energy restriction of 1,200 kcal/d to lose 0.45–0.90 kg/week. The program is carried out for 18 weeks, and the sessions are weekly and in groups with between 10 and 20 participants. The duration of each of them is 90 min. For another 20 weeks, a weight maintenance program is used. Gardner et al. [258] studied LEARN and three other weight loss programs, observing that this diet had a carbohydrate, protein, and fat distribution at 49, 20, and 30%, respectively. Still, at eight weeks, a significantly higher proportion of individuals shifted towards intakes that may be at risk of inadequacy for certain nutrients, such as thiamine, vitamin E, magnesium, and calcium.

3.5.5 Dr. Shapiro’s Diet

In 2001, Dr. Howard M. Shapiro devised a varied diet [259], with all the macronutrients but reducing the quantities, accompanied by physical exercise that allows weight loss in 30 days. This diet is original in that it involves something already used professionally by dieticians–nutritionists in diet therapy clinics, the so-called equivalence tables accompanying the book, and where photographs and food combinations are shown to help readers identify foods low in calories compared to those that provide more energy value. These pictures do not imply a necessary translation into action by patients.

3.5.6 Dr. Haas Diet

In 2001, American physician Elson M. Haas, pioneer of integrative medicine (a treatment philosophy that combines alternative medicine practices with evidence-based medicine), together with journalist Cameron L. Stauth, launched a book [260] based on limiting protein and fat intake at the cost of increasing carbohydrate intake (up to 80%). It promises weight loss of up to 3 kg/week. It is an unbalanced diet lacking in benefits.

3.5.7 The Peanut Butter Diet

The peanut butter diet, created by Holly McCord, is a weight loss program that incorporates peanut butter into daily meals. This diet plan offers a variety of nutrients that contribute to lower cholesterol levels, reduced risk of heart disease, and diabetes prevention. It involves two different caloric intakes, one for men (2,200 kcal/day) and one for women (1,500 kcal/day). Studies indicate that calorie-controlled diets, including moderate amounts of fat like peanut butter, can effectively lose weight. The diet emphasizes portion control, allowing men to have three servings of peanut butter daily and women to have two servings daily. Each serving consists of two tablespoons of
peanut butter. By incorporating peanut butter into the diet in controlled portions, individuals can benefit from its nutritional profile while managing their calorie intake. The book recommends using a ping-pong ball as a visual cue to help with portion control [261]. Haslam [262] suggested that the peanut butter diet does lead to gradual weight loss, although weight loss may be faster if peanut butter is excluded.

3.5.8 The Perricone Diet

The Perricone diet, created by dermatologist Nicholas Perricone, is an anti-inflammatory and anti-aging diet that prioritizes salmon and nutritional supplements. It aims to promote weight loss, slow aging, and maintain a healthy weight. The foundation of the diet is fish, particularly salmon, which is rich in antioxidants and low in carbohydrates. Perricone's first book, ‘The Wrinkle Cure’ [263], introduced the diet and claimed that proper nutrition is the key to preventing and eliminating wrinkles, which expanded the weight loss treatment in several other books [264-266]. His subsequent books also outline the diet, each emphasizing a different aspect, such as skin care, acne, and weight loss. Regardless of its purpose, the Perricone diet focuses on consuming foods high in protein, omega-3 fatty acids, and antioxidants.

3.5.9 Warrior Diet

The Warrior Diet, developed by Ori Hofmekler in 2002, is a dietary approach that involves a specific eating pattern. Hofmekler, a former member of the Israeli Defense Force and an artist, created this diet. The Warrior Diet consists of a fasting period of 10 to 18 hours, during which only raw fruits, vegetables, or light protein foods like yogurt are consumed. Physical exercise is encouraged during this fasting period, and the main meal is consumed at night, typically in a large portion. This eating pattern aims to mimic the eating habits of ancient warriors and promote a balance between fasting and feasting. In addition, the diet includes a comprehensive exercise and fitness program. Hofmekler believes that undereating forces the body to rebuild and strengthen muscles, burn fat, and enhance the body's survival mechanisms. He argues that humans have an instinct to control their bodies and manipulate their survival through intuition [267]. According to Stauffer et al. [268], this diet is being promoted to the general public through popular media channels despite the lack of research-based evidence regarding its impact on resting energy expenditure.

3.5.10 The 3-D Diet

In 2002, the German designer Karl Lagerfeld supported the diet by Dr. Jean-Claude Houdret, a general practitioner specializing in nutrition, aesthetics, herbal medicine, and homeopathy. Furthermore, he is also a professor of medicine at the University of Paris and lent his body to a diet with physical exercise, low in calories, carbohydrates, and fats and high in mixed proteins, in which red meat is eliminated. The consumption of fish, crustaceans, and shellfish is encouraged. In his book [269] The 3-D Diet, also called ‘Karl Lagerfeld’s Diet’ or ‘Spoonlight Program’, Lagerfeld acknowledges the loss of 42 kg within a year [270]. The designer indicated that ‘if hunger appears, I can consume some homeopathic product’ [271].
3.5.11 Slim4Life

Slim4Life is a weight loss program established in 2002 that provides personal one-on-one sessions with diet counselors at its centers. The program is designed to offer guidance to people with specific health conditions such as diabetes, high blood pressure, and dietary restrictions and also caters to vegetarians [272]. Slim4Life centers focus on fresh foods with limited sugar and fats and offer suggestions for healthy eating when dining out. The program restricts dieters to fewer than 1,500 kcal/day, and various factors determine the specific number of calories. Although Slim4Life does not provide specific exercise recommendations, it encourages dieters to be active. The program does not require dieters to buy prepackaged meals but may encourage using nutritional supplements such as bars, mixes, and dietary supplements. Slim4Life is a weight loss program that aims to achieve substantial weight loss and support individuals in making long-term changes to their eating habits and behaviors. The program claims that its dieters lose weight at a rate of 1.3-2.3 kg/week, although its cost may exceed $600.00, which may be a barrier to entry for some people. While individual counseling can help address the needs and preferences of dieters, it is recommended that people considering a new diet should consult a medical practitioner. In 2015, a summary of verification results from a random audit reflected a weight loss of 1.7 kg/week [273], but no scientific literature verifies this diet.

3.5.12 Denise Austin’s Fit Forever

Denise Austin’s Fit Forever is an online program that offers personalized plans for healthy eating and an active lifestyle. The program provides customized exercise routines based on an individual’s body type, daily meal plans and recipes, and motivational assistance through support groups, testimonials, and information on creating a healthier lifestyle. The program has two primary components: diet and exercise. The diet plan offers diets that provide 1,400, 1,600, or 1,800 kcal/day based on an individual’s weight loss goals and activity level. The exercise program provides suggested exercises for beginner, intermediate, or advanced fitness levels, targeting different body areas. The program also emphasizes the importance of exercising in other ways, such as walking regularly [274]. There is no scientific literature that verifies this diet.

3.5.13 Dr. Phil’s Diet

In 2003, Dr. Phil McGraw, Ph.D., a psychologist and life strategist, developed a weight loss plan called the ‘Ultimate Weight Loss Solution’. It combines a healthy diet, exercise, behavior modification, and thinking differently about food. Dr. Phil’s diet involved a book outlining the diet plan and a line of diet products and supplement pills. The food products included flavored shakes and snack bars fortified with 24 vitamins and minerals. The products’ supplements were geared toward helping people with apple or pear body shapes. The products were only on the market for about one year. The introduction to Dr. Phil’s book follows his “down-to-earth” delivery style. He tells readers that seven critical pieces or keys help achieve long-term weight loss. The seven keys include correct thinking, healing feelings, a no-fail environment, mastery over food, high-response, high-yield foods, and exercise [275]. Dr. Phil’s son, Jay McGraw, authored a book with a similar plan written specifically for teenagers [276]. This book was also published in 2003.
3.5.14 Eating for Life

In 2003, Bill Phillips introduced the ‘Eating for Life plan’ through his book about consuming six small, low-fat meals a day, spaced two to three hours apart. The diet is high in protein and carbohydrates, with limited amounts of fat. Phillips, a former bodybuilder and CEO of EAS, a supplement company, developed the program. The Eating for Life plan is often used to aid in weight loss and to complement fitness or resistance training. The program permits moderate portions of all foods but urges dieters to make intelligent choices by planning meals ahead of time and keeping track of protein and carbohydrate intake. Phillips recommends drinking 10 cups of water daily, participating in weight or resistance training three times/week, and doing cardiovascular exercise three times/week. The Eating for Life plan may be ideal for individuals dedicated to weight training for overall health and fitness [277]. Arciero et al. [278, 279] demonstrated that this diet is efficacious for decreased body fat, abdominal fat, total and LDL cholesterol, glucose, insulin, and systolic blood pressure compared to a low-fat, calorie-restricted diet.

3.5.15 Personality Type Diet

This diet was developed by Dr. Robert Kushner and is based on the premise that each person has a unique personality and eating, exercising, and coping habits that influence their weight and overall health. The diet helps individuals identify their personality type and provides personalized strategies for incremental change that can lead to weight loss and better health. The diet consists of three main components: i) diet, which is focused on providing personalized nutrition recommendations based on an individual's personality type (i.e. a person who is a ‘stress eater’ may be advised to eat small, frequent meals throughout the day to help curb cravings, while a person who tends to overeat due to boredom may be encouraged to find healthy, enjoyable activities to occupy their time, exercise, and coping strategies), ii) exercise component is also personalized based on an individual's personality type (i.e. a person who is a ‘planner’ may be advised to schedule their workouts in advance and stick to a regular exercise routine, while a person who is more spontaneous may be encouraged to try new and exciting forms of exercise to keep things interesting) and iii) coping strategies component helps individuals identify and address their emotional triggers for overeating or unhealthy habits (i.e. a person who tends to overeat when stressed may be advised to practice relaxation techniques such as meditation or deep breathing to manage their stress) [280].

3.5.16 The Hamptons Diet

In 1994, internist Fred Pescatore began working as the medical director of the Dr. Atkins Center, leaving it in 1999 and opening a new center in 2003 [281], where he began to weave a new diet that is reflected in the published book the following year [282]. It is similar to the Mediterranean diet but involves eating more oily fish, lean meats, and fruits but less carbohydrates (restricting refined sugars) and moderate amounts of legumes and nuts. The diet takes its name from one of the most exclusive places on the East Coast of the USA: the Hamptons (hence, some also call it the millionaires’ diet).
3.5.17 The New Nordic Diet

This diet emerged as guidelines for Nordic chefs in 2004 and recommendations for the general public in 2012 to use locally grown food based on principles of health, gastronomic potential, sustainability, and Nordic identity. This diet increased the consumption of vegetables, pulses, fruits and berries, fish and seafood, and nuts and seeds, with exchanging refined cereals, butter, butter-based spreads, and high-fat dairy with wholegrain grains, vegetable oils, vegetable oil-based fat spreads, and low-fat dairy, respectively, and limiting processed meat, red meat, beverages, and food with added sugar, salt, and alcohol [283]. This diet's follow-up is related to low-grade inflammation, less body fat and healthier weight development, favorable pregnancy outcomes, and less risk of colorectal cancer. World Health Organization indicated that this diet is similar to the Mediterranean diet regarding health-promoting properties [284].

3.5.18 Garaulet Method

In 2004, Marta Garaulet Aza had a doctorate in Pharmacy and a Master's in Public Health from Harvard University and is currently Professor of Physiology and Physiological Bases of Nutrition at the University of Murcia. Her studies have focused on chronobiology, nutrigenetics, and obesity. Her method is based on the principles of the Mediterranean Diet, but with one caveat: she adapts it to our country in a personalized way for each patient and with group therapy [285]. Four fundamental pillars are established within these groups [286]: diet, physical exercise (aerobic activity such as walking, running, cycling, or swimming for 15-30 minutes a day and a frequency of 2-3 times a week), food education (with 20-minute classes) and behavior techniques (positive reinforcement, self-monitoring, and stimulus control) [287].

3.5.19 The Biggest Loser

The Biggest Loser is one of the most famous American reality televisions, which began in 2004 and where participants can win $250,000 by losing the most weight through a grueling exercise (up to six hours a day of strenuous exercise) and restrictive eating regimen [288]. Hall [289] suggested that this treatment was not sustainable, and he proposed that a relatively modest permanent lifestyle involving a 20% caloric restriction and 20 minutes of vigorous exercise per day can help individuals maintain significant weight loss. In our viewpoint, the use of media could reinforce obesity stereotypes and help to weight stigma, as is demonstrated by Domoff et al. [290] and Mayer and Mayer [291].

3.5.20 Rosedale Diet

In 2004, Dr. Ron Rosedale created The Rosedale diet, a low-carbohydrate and low-protein diet that aims to stabilize levels of the hormone leptin in the body. Dr. Rosedale practices metabolic medicine, which emphasizes the role of diet, stress reduction, and other methods in altering metabolic activity without prescription drugs. He believes that many people with weight problems have become leptin-resistant, which has led to the development of his diet plan. The Rosedale diet involves a three-week period of severe restriction, during which only specific foods from Dr. Rosedale's ‘A list’ are allowed, and almost no carbohydrates are consumed while protein consumption is limited. A restriction of saturated fats is suggested, while unsaturated fats are...
encouraged. After the initial phase, foods from the 'B list' are reintroduced, and the second phase of the diet is intended to be followed for a lifetime to help maintain the body's leptin levels. The diet recommends exercising for 15 minutes a day, and many supplement recommendations are provided. The Rosedale Diet asserts that it can assist individuals in reducing fat mass without compromising muscle mass and achieve overall better health and well-being [292].

3.5.21 Weight Loss 4 Idiots

In 2004, an 11-day diet program called Fat Loss 4 Idiots or Weight Loss 4 Idiots was introduced by a company called ‘Internet Made Simple.’ The diet claims to boost fat loss by tricking the body's metabolism into burning fat by alternating the calories consumed daily. The program is customized based on the dieter's food preferences, and the meal plan is downloadable. The diet consists of four meals daily, with at least two and a half hours between meals. The program does not require counting protein or carbohydrate grams or calories; the dieter is encouraged to eat until complete. The diet claims to result in weight loss of up to 4 kg/11 days and allows for three 'cheat' days before restarting the diet. However, the diet provides no exercise recommendations or healthy lifestyle suggestions. The diet's claims are not supported by scientific evidence, and it is not a sustainable weight-loss solution [293].

3.5.22 The 3-hour Diet

In 2005, the Mexican personal trainer Jorge Cruise developed his diet based on the proper balance of macronutrients for 28 days, with the possibility of repeating cycles for people who do not achieve the appropriate weight. This diet recommends a daily caloric intake of 1,450 kcal, with the three main meals comprising 400 kcal each, two snacks 100 kcal each, and an after-dinner snack of 50 kcal. He promised weight loss of up to 0.9 kg per week. He justified that the basal metabolic rate can be increased if food is consumed every three hours, breakfast is consumed one hour after waking up, and one stops eating three hours before sleep. The consumption of eight glasses of water daily is recommended. He says fast food, some processed foods, and caffeine are okay occasionally. However, two drinks of water must be consumed for each cup of coffee, indicating that, in this way, the dehydrating effect of caffeine is avoided. In addition, this diet includes foods such as candy and cookie snack packs as part of the snack regimen rather than emphasizing fruit, vegetable, or dairy servings [294].

3.5.23 CSIRO Total Wellbeing Diet

The CSIRO Total Wellbeing Diet (TWD) is a weight-loss and maintenance diet developed by the Commonwealth Scientific and Industrial Research Organization (CSIRO) in 2005. The CSIRO team, led by Dr. Manny Noakes, developed the TWD for overweight and obese women, and Dr. Grant Brinkworth was the exercise/nutrition physiologist on the team [295, 296]. This diet emphasizes high protein, low fat, and moderate carbohydrate intake, and is calorie-controlled, nutritionally balanced, and includes exercise. The TWD was developed based on eight years of research on diet composition, weight loss, and the risk of developing diabetes and heart disease, conducted at CSIRO's Human Nutrition Clinic. The diet was designed for overweight and obese women and later broadened to include male participants. It has been criticized for not being compared to high-
protein or high-carbohydrate vegetarian diets and for the high consumption of meat. Still, it has been popular in Australia, where protein-rich diets are standard. Despite concerns, the diet has been well-received and recognized, with the scientific team behind the research awarded the 2005 CSIRO Research Achievement Medal and the authors being internationally recognized scientists. Hendrie et al. [297] demonstrated that the program was effective for weight loss, particularly among participants who completed the program and actively utilized the platform and tools provided. Russell and Ferrie [298] evaluated health and environmental implications, reflecting that based on CSIRO’s studies, it has been found that a high-meat diet does not lead to more significant weight loss compared to a diet with moderate meat consumption. Therefore, a diet that promotes a liberal meat intake without considering its origin or environmental impact cannot be recommended as an environmentally responsible choice. According to Robertson [299], the observed study found no significant difference in weight loss between a high-protein meat-based diet and a control diet with lower protein content, except for a small subgroup of women with high triglyceride levels. The high-protein diet resulted in more significant weight loss over 12 weeks in that subgroup. He suggested that this diet ‘contributes to reducing obesity in Australia.’ However, Stanton and Crowe [300] justified that this claim is hype, not science, indicating that this diet is not a more viable option than current dietary recommendations.

3.5.24 Maker’s Diet

The Maker’s diet incorporates biblical dietary laws to promote physical, mental, spiritual, and emotional well-being. It was created by Jordan Rubin, who developed Crohn’s disease as a college student and found relief after changing his diet to align with biblical principles. The Maker’s diet comprises three phases spanning 40 days, with an additional maintenance phase to follow the guidelines for the rest of the patient’s life. Phase 1 is a detoxification phase intended to correct imbalances in the body, which lasts for the first 14 days. During this time, dieters restrict their sugar intake, artificial sweeteners, caffeine, and preservatives. Some dieters may experience mild discomfort, such as headaches and flu-like symptoms. Still, Rubin suggests that this is a sign that the body is returning to balance and eliminating toxins. Phase 2 spans days 15-28 and is meant to replace the dieter with optimal health. In this phase, restricted foods from phase 1 are gradually reintroduced. Phase 3 lasts from day 29 through day 40, and its goal is to help the dieter maintain optimal health. During this phase, more previously restricted foods are reintroduced [301]. Despite Rubin’s claims about the diet’s ability to detoxify the body, no scientific evidence supports this notion. Additionally, concerns have been raised about the supplements required or recommended in the Maker’s diet program, which are produced by Rubin’s company, Garden of Life, Inc. In 2004, the United States Food and Drug Administration ordered the company to cease making unsubstantiated claims about eight of its products and supplements. These claims were found in brochures, labels, and Rubin’s book, Patient Heal Thyself [302].

3.5.25 The ABS Diet

In some forums, it is said that the name of the diet comes from ABS breaks and that it can be identified as a diet that curbs obesity. Nothing is further from reality. It is a dietary treatment revolving around six meals a day, an exercise program focused on strength, and 12 food groups (nuts, legumes, spinach, and other vegetables, skimmed dairy products, cereals, eggs, lean meat,
peanut butter, olive oil, whole foods, protein shakes, and fruits). It is called ABS DIET POWER, and the acronym ABS corresponds to almonds and other nuts, beans and legumes, spinach, and other green vegetables. This diet allows the consumption of protein, fiber, calcium, and mono- and polyunsaturated fats, limiting the consumption of refined carbohydrates and saturated and trans fats. The book’s authors [303] are David Zinczenko, editor of Men’s Fitness magazine, and Ted Spiker, professor of journalism at the University of Florida. Curiously, Gough [304] analyzed contemporary newspaper’s representations of men, food, and health, being reflected in one of them that dieting is for girls and that the ABS diet indicated that ‘the message is obvious: this is the most butch diet in the world—and no one will think you’re girly for going on it. ABS Dieters combine their tough-guy grub in various enticing recipes, such as Macho Meatballs’. It is a sexist comment and not condemned. The curious thing about this case is that the authors did not speak out against this comment but instead published a version for women [305].

3.5.26 The Shangri-la Diet

Suppose you have had the pleasure of reading the novel Lost Horizons, by James Hilton. In that case, you will have recognized in the name of this diet the fictitious place described by this author, where the adventurers and explorers who try to reach the area do so to get the earthly paradise where permanent happiness reigns, and people are almost immortal. In 1980, psychology professor Seth Roberts of Tsinghua University in Beijing and professor emeritus of psychology from the University of California began to carry out self-experiments to end his insomnia, based on dozens of different variants of this diet, such as eating sushi and foods with low glycemic index and drinking vinegar [306]. In 2006, he named the diet after Shangri-La [307] because of his belief that the diet puts people at peace with food. His diet is based on a principle called ‘set point’, in which each person strives to maintain weight. This suggests that appetite increases when the actual weight is below the set point, whereas need decreases when the exact weight is above the set point. The diet achieves this by connecting weight control and associative learning. High-calorie foods raise the set point, while bland foods that are digested slowly lower the set point and, therefore, the weight. To date, there is no scientific study to support this diet. The author passed away on April 26, 2014, after suffering a heart attack while hiking near his home in Berkeley, California [308].

3.5.27 Fat Smash Diet

The Fat Smash Diet was developed by Dr. Ian Smith in 2006 as a four-phase weight loss program focused on creating lasting lifestyle changes in eating and physical activity. Initially designed for celebrities on the VH1 show Celebrity Fit Club, the program aims to reprogram the body’s relationship with food and physical activity by eliminating unhealthy habits and promoting healthy eating without excessive indulgence. The diet emphasizes wholesome, everyday foods like whole grains, fresh produce, lean meats, fish, poultry, and healthy fats. The four phases of the program include the detox, foundation, construction, and lifelong temple stages. Participants can make mistakes and return to the first stage for a week before progressing to the next step. Dr. Smith’s book contains over 50 simple and fast recipes, and the program incorporates a significant exercise component and stress management techniques. Dieters are advised to record their weight and BMI and take photographs of themselves before beginning the program [309].
3.5.28 Sonoma Diet

This diet is included in a weight loss program that prioritizes healthy and flavorful foods, taking inspiration from the culinary traditions of the Mediterranean coast and Sonoma region of California. It was developed by Connie Guttersen, a registered dietician with a background in nutrition and food science. The diet is structured into three waves, each with specific guidelines and recipes for meal preparation. The program emphasizes the consumption of 10 'power foods' high in nutrients and low in calories, which can help prevent disease and promote overall health. These foods include almonds, bell peppers, blueberries, broccoli, grapes, olive oil, spinach, strawberries, tomatoes, and whole grains. Portion control is enforced using the 'plate-and-bowl concept', which recommends using 18 cm plates and 2-cup bowls for meals. Additionally, the Sonoma diet encourages moderate wine consumption and provides a wine guide to assist dieters in selecting the appropriate wine to pair with each meal. Overall, the Sonoma diet seeks to promote healthy lifestyle habits through adopting healthy eating practices and weight loss.

3.5.29 The Chrononutrition Diet

Alain Delabos is the general director of the European Institute for Research on Nutrition and Health, professor at the Faculty of Pharmacy of Dijon (France), and the father of Chrono nutrition (his studies on this subject had begun 20 years before the publication of the book, which is based on the so-called circadian rhythms, where our body works based on a biological clock, which is located at the base of the brain and from where our sleep–wake cycle is controlled). The author also incorporates the concept of morphotype (a category in which an individual is classified according to their body shape), where diets are prepared based on the morphology of the patients (morphonutrition). The diet is not the same for a person with a weight overload due to overeating and for someone who suffers from localized fat accumulation. In 2016, Laermans and Depoortere developed the concept of chrononutrition specialized in obesity called chronobesity, which compromises health by favoring tumourigenesis and cardiovascular disorders. Furthermore, the Opera Prevention Project suggested this diet's efficacy in managing obesity. On the other hand, Muscogiuri et al. reviewed this diet in type 2 diabetes mellitus and cardiovascular diseases. Barrea et al. proposed a practical nutritional guide to help in weight loss through chrononutrition.

3.5.30 Kimkins Diet

In early 2007, an online diet called Kimkins gained popularity after being featured in columns in People's and Woman's World magazines. The diet was promoted by an author who used the pseudonyms 'Kim Drake' and 'Kimmer'. Based on the Atkins diet, Kimkins was a low-calorie (<800 kcal/day) and low-carbohydrate diet that promised significant weight loss of around two kilograms per week. In just one month, the diet generated $1.2 million in membership fees. However, in a surprising turn of events, staff members from the Kimkins website began publicly questioning the diet's safety. In response, a private investigator from AllianceAgent.com was hired to investigate the matter and discovered that Kimmer was a woman named Heidi Kimberly Diaz, who weighed around 135 kg. Diaz had used fake patient photos stolen from Russian bride websites to promote
her diet, and she had also encouraged patients with eating disorders to follow her plan. As a result, Kimkins was named the ‘Worst Product for 2008’ by the website healthyweight.net [318].

3.5.31 The Morning Banana Diet

In 2008, a Japanese pharmacist, Sumiko Watanabe, created a diet for her husband (Hamachi), who lost 17 kg. He gained popularity for the diet when he shared it on Mixi, one of Japan's most extensive social networking services. This diet is also called the ‘Asa-banana Diet’ [319] and is based on the consumption of a banana (or as many as you want) and room temperature water for breakfast, while for lunch and dinner (at 8 pm), it is possible to eat free. In addition, a snack is recommended after three o'clock, but no desserts after meals, and the user must go to bed before midnight. After a TV program showcased a singer who had successfully lost 6.8 kg in six weeks following the diet, there was a notable increase of 70-80% in weekly sales compared to the same period the previous year [320].

3.5.32 Sacred Heart Diet

This diet, also known by other names, such as the Spokane Heart diet, Cleveland Clinic diet, Miami Heart Institute diet, and the Sacred Heart Memorial Hospital diet, is a low-calorie, seven-day diet plan that involves eating specific foods each day, including an unlimited amount of a special soup [321]. While diet variations exist, they are all similar, with differences mainly in the soup’s ingredients. The origins of the diet are unclear, as several hospitals have denied any connection to it. The first day of the diet allows only fruits and soup, while the second day allows all vegetables except dry beans, peas, and corn. On the third day, fruits and vegetables are allowed except for a baked potato. The fourth day will enable bananas, skim milk, and soup. On the fifth day, beef and tomatoes are permitted, along with the soup, while the sixth day allows unlimited meat and vegetables. The seventh day allows for brown rice, unsweetened fruit juices, vegetables, and soup. The diet recommends drinking six to eight glasses of water daily, while tea, coffee, and unsweetened fruit juices are permitted, and alcohol is usually forbidden. However, no scientific evidence supports the claim that the diet helps with quick weight loss.

3.5.33 The Baby Food Diet

In its origins, there was no book on this diet. Still, it was popularized in 2010 by the Yellow Press, hypothesizing that Jennifer Aniston, who reportedly lost 3.1 kg/week, used this diet and rescued as a book by Packer [322], which is based on eating 14 jars a day and having a dinner of meat and vegetables, recommending that the jars should be, above all, based on oats and vegetables [85]. If the caloric value of each pot is around 70 kcal, the total daily energy is approximately 1,400 kcal/day [42]. In our viewpoint, this diet can cause vitamin or mineral deficiencies in the long run, which, together with the low amount of energy it provides, can cause fatigue.

3.5.34 Diogenes Diet

In 2010, a pan-European, randomized, controlled multicenter trial, the DioGenes study, explored dietary strategies to prevent weight regain in real-life settings after weight loss [323, 324]. This diet’s effectiveness suggested slightly increasing dietary protein content and carbohydrate reduction,
selecting low versus high carbohydrates. These studies found that a combination of a high-protein diet and low-carbohydrate intake successfully prevented weight regain and reduced dropout rates among adults who had lost 11 kg of weight. Even after the high-protein diet had been maintained for one year. Furthermore, the putative genes help this diet be particularly effective in 67% of the population [325].

3.6 Diets From 2011 to Date

From 2011 until now, dietary trends have included approaches such as the ketogenic diet and intermittent fasting, promoting the restriction of certain foods or altering eating schedules to achieve specific health and weight loss goals. Social media and mobile applications have played a significant role in disseminating dietary information. There has been an emphasis on mindful eating, sustainability, and options tailored to dietary restrictions. The food industry has responded with an increased supply of healthy foods and convenient options. During this period, 11 diets were included in this narrative review.

3.6.1 The Enteral Tube Diet

This diet was developed in 2011 by Oliver R. Di Pietro in his center in Miami, Florida (USA). It is known by the acronym KE (Ketogenic Enteral), also called the backpack diet, the tube diet, the nasogastric diet, or the nose-feeding diet. It consists of a two-phase treatment with a cost of $1,500. It begins with a 10-day hospital stay, where a nasogastric tube is inserted through the nose of the patient infused 800 kcal/day [326]. After this period, the patient has to continue with a personalized diet for two weeks. The author and collaborators carried out a study, with conflict of interest, where at day 10, patients with this diet had a reduction of -4.97 kg and -1.95 kg/m². In 2012, the prestigious SG-SADN published its position [327] in this regard, indicating that it is a method without scientific support, ineffective, fraudulent, and possibly illegal and that it could pose a risk to public health, causing long-term weight gain, loss of self-esteem, weakness, metabolic syndrome, bone fracture, gastrointestinal disorders, kidney damage, depression, changes in behavior, kidney damage, gallstones, rapid recovery of lost weight, increased number of binge eating episodes and eating and psychological disorders, infections, and the possibility of pulmonary aspiration, in addition to an increased risk of pneumonia.

3.6.2 The OMG Diet

This has nothing to do with some dietary nonsense based on genetically modified organisms. This diet was created in 2012, and the OMG stands for ‘Oh My God.’ That is, it is ‘the Oh My God diet!’ [328]. The author signs his book with the pseudonym ‘Venice A. Fulton’, but his true identity is Paul Khanna, a British personal trainer who participated as a supporting actor in the Harry Potter films [329]. It promises weight loss of nine kg in six weeks based on not eating breakfast; exercising on an empty stomach and, in the end, having black coffee, of course without sugar; showering or bathing in cold water (about 15 °C); eating a maximum of one piece of fruit a day (avoiding them entirely if possible); avoiding vegetables such as broccoli, since the carbohydrates contained in a serving of said food can be as harmful as those contained in a cola drink; blowing up balloons and toning the body with weights; eating protein with several carbohydrates similar to the space four iPhones
occupy; drinking green tea; and sleeping soundly [330]. To date, no standardized scientific study has been performed to evaluate this diet, and there is only the case of one person who performed it. She was Emily Jupp [331], an independent newspaper reporter who did not lose weight on this diet. Furthermore, dietitian and sports nutritionist Linia Patel, Dr. Christian Jessen, host of the series 'Embarrassing Bodies' and trainer Jay Darrell Ingleton discouraged this weight loss treatment [330]. From our viewpoint, this diet, which has the following slogan: 'You can get skinnier than your friends', could be especially dangerous, in addition to targeting the pre- and adolescent public.

3.6.3 Tongue Patch Diet

This diet is also known as the linguistic mesh diet, the sublingual mesh diet, the local mesh diet, the miracle patch, the Chugay patch, and the slimming lingual mesh diet. It was developed by Dr. Nickolas Chugay [332]. It involves placing a mesh of more or less rigid surgical material on the surface of the patient's tongue using staples or stitches, making it impossible to eat solid food. So, the patient must follow a liquid or semi-liquid diet for a period ranging between one and two months. It promises losses of up to 12 kg/month. According to its defenders, it is an innocuous and tremendously advantageous method, although they leave the responsibility for its effectiveness to the patients themselves (psychological side effects, consequence of not following the specialist's instructions, or cheating). It is striking that it is indicated even in 12-year-old children, in our opinion, its use in children of these ages could lead to eating disorders. Revenga [333] remembered that could be as ‘jaws wiring'; a method used to prevent the obese patient from opening his mouth.

3.6.4 Noakes Diet

In 2013, the South African scientist from the Division of Exercise Science and Sports Medicine at the University of Cape Town, Timothy David Noakes, better known as Tim Noakes, published a low-carbohydrate and high-fat diet that is permitted several food and beverage groups; i) eggs from free-range hens, ii) fish, iii) organic meat, iv) organic dairy products, v) vegetables especially leafy, vi) nuts mainly macadamias, walnuts and almonds, vii) fruits with a lower carbohydrate content and viii) water and unsweetened tea and coffee [334]. Schamroth [335] reflected a case report in which a patient, diagnosed with dyslipidemia during several years and received 5 mg/day of rosuvastatin, had a lipogram, after two months on the Noakes diet, raised total cholesterol and low-density lipoprotein cholesterol in 12.9 and 9.6 mmol/l, respectively. This author reflected the importance of closely monitoring lipid profiles to control potential risks. Furthermore, Naude et al. [336] questioned the argument that Noakes diet versus a balanced diet is better in weight-control, knowing that this section's diet has not been subjected to scientific validation.

3.6.5 Cotton Ball Diet

Consuming cotton balls soaked in juice to curb hunger and reduce food intake has gained popularity through platforms like YouTube, particularly among adolescent and teen girls [337]. However, it is crucial to understand that this diet is associated with severe and life-threatening health risks, as highlighted by Schaefer's research [338]. These risks include choking, malnutrition, intestinal blockages and obstructions, and toxicity from processing chemicals, including bleach.
3.6.6 The Mosley’s Diets

Michael Mosley is a BBC journalist, producer, and presenter known for his television programs on medicine and biology. The first diet published in 2013 by him and the journalist Mimi Spencer, a columnist on healthy lifestyle issues for various newspapers and magazines, such as the Observer, the Guardian, and the Times, is known as the 5:2 diet or Fast diet [339]. It is based on eating everything for five days and then decreasing caloric intake for two non-consecutive days (with caloric information for each of those 2 days of approximately 500 and 600 kcal, for women and men, respectively, where you eat foods rich in protein and fiber and avoid refined carbohydrates). He and other authors [340] indicated that this type of intermittent fasting improved weight loss, enhanced the cardiovascular health of overweight and obese individuals with type 2 diabetes, and reduced cardiovascular risk. Aaradji and Hansson [341] observed no difference in IGF-1, fasting glucose, or weight loss with the 5:2 diet compared with even energy restriction. Johnstone [342] indicated that the long-term effects of chronic food restriction in humans are still not fully understood. However, prolonged food restriction may lead to weight loss initially but can be challenging to sustain due to increased hunger. The sensation of hunger can become a limiting factor for maintaining food restriction over the long term. The second diet was called the ‘8-week blood sugar diet’ [343]. It was published in 2015 by Professor Roy Taylor, aiming to prevent and reverse type 2 diabetes (and stay off medication), losing weight fast, and reprogramming the body. Hindmarsh and Nicholls [344] recommended this book as a resource that may benefit patients wanting to go on a low-carbohydrate diet. Morris et al. [345] observed that this diet has evidence of clinically short-term improvements in glycemic control in patients with type 2 diabetes and weight. However, this article has a conflict of interest because one author; Clare Bailey, was a co-author in ‘The 8-week blood sugar diet recipe book’ [346]. Oliver and Andrews [347] applied this diet from a single general practitioner surgery observing that 339 out of 774 patients lost a median and mean weight loss of 2.5 kg (interquartile range 0.0-6.0 kg) and 3.3 kg, respectively. In 2017, he brought to light the book entitled ‘The Clever Gut Diet’ [348] where proven ways to lose weight, boost mood, and control cravings by feeding the ‘good’ bacteria, while staving off ‘bad’ bacteria that contribute to development several diseases and weight gain. However, there is no scientific literature published with this diet to date. In 2018, another book popped up, titled ‘The Fast 800’ [349], where the previous co-authors Claire Bailey and Justine Pattison published ‘The Fast 800 recipe book’ [350]. Finally, Mosley’s book, ‘Fast Asleep’ [351], came out in 2020 focused on regularly getting enough sleep to reduce the risk of depression, help fight chronic disease and improve memory. However, there isn’t a scientific literature relationship with this weight loss procedure.

3.6.7 The Every-Other-Day Diet

In 2013, Krista Varady, a professor at the Department of Kinesiology and Nutrition at the University of Illinois (Chicago), published a book entitled ‘Morning After Diet’ [352], based on following one day of restrictive diet based on 500 kcal (referred to as ‘diet day’), followed by one day with no caloric or nutrient restrictions (referred to as ‘holiday’). The book indicated that weight loss is five kg in four weeks (i.e., 1.25 kg/week). Although the book came out, in 2014, and the author had published a series of scientific articles that support her hypothesis before [353] and after [354] that date, the truth is that the best review [355] carried out to date on diets based on intermittent fasting suggests that although there are indications about the ability to lose weight on this diet,
some of the studies are not well designed and proper clinical trials are needed to verify the beneficial results or not of this diet and others that focus on intermittent fasting.

3.6.8 Nagumo’s Diet

In 2013, a Japanese medical surgeon, Yoshinori Nagumo, published ‘One Meal a Day’ based on two-phase method; i) a soup and another dish, based on eating the usual but reducing the size of the dishes. In this way, the calories are reduced, and ii) one day, one meal, where it is possible to eat everything, but using an ideal amount of food that was approximately 70% of the stomach capacity. In addition to this main meal, the use of drinks (all types of liquids), eating nuts, fruit, sugar-free cookies and eggs, and eliminating sweets and sugars are useful [356]. The perception of hunger activates the gene called ‘Sirtuin’, a life-governing gene only active when the stomach is empty. This gene was found to scan and repair all damaged cells and genes [357].

3.6.9 The Zero Belly Diet

In 2014, the same author of ABS diet published ‘Zero Belly Diet’ [358], an exercise program and diet focusing on nine ‘power foods’ to promote weight loss. These foods include fruits and vegetables, legumes, lean meats and fish, whole grains, healthy fats, protein-packed shakes, spices and dark chocolate. The program also eliminates less healthy options such as refined sugar and fatty meats, making it a nutritious program. However, the book also features a less surprising recipe book, with recipes such as ‘Elvis Fine Oatmeal’, ‘Mediterranean Dinosaur Salad’, ‘Quirky Turkey Burger’, and ‘Adult Goldfish’. The 7-day diet plan promises to help you lose belly fat in about 14 days. There is no scientific literature that verifies this diet.

3.6.10 Sirtfood Diet

British nutritionists Aidan Goggins and Glen Matten proposed a relationship between the previous gene and a new diet known as the sirtfood diet, which has been submitted to them [359]. The diet, which promises a loss of at least 3 kg in the first week, is based on two phases: i) during the first three days, food is composed of three green juices and one meal reaching up to 1,000 kcal/day. Subsequently, the food intake with two green juices and two dinners, from the fourth to the seventh day, is modified to 1,500 kcal/day. From now on, phase 2 begins and lasts for another 14 days, which includes one meal (dinner). The mechanism is based on Silent Information Regulator (SIRT) foods, rich in sirtuin enzymes, and soluble proteins that enhance metabolism, affecting calorie loss [360]. Dabke and Das [361] hypothesized that sirtuins may be altered under the ketogenic diet. Resveratrol is a bioactive compound that has the potential to modulate SIRTs, which are enzymes that are implicated in regulating metabolism and energy balance. While strong preclinical evidence supports resveratrol’s anti-obesity effects, the quality of studies supporting its use as an anti-obesity drug in humans is low, and its clinical relevance remains uncertain. Studies have shown that resveratrol has a small effect on weight loss in humans. Therefore, it could be considered an additional intervention when used with other weight loss interventions. Additionally, there have been no reported significant side effects associated with resveratrol. However, further high-quality clinical trials are necessary to determine the efficacy and safety of resveratrol as an anti-obesity drug. Therefore, while resveratrol shows promise as an anti-obesity drug, further research is needed
before it can be considered a recommended primary treatment for obesity. Although initial studies have suggested the positive effects of resveratrol on metabolism and body weight regulation, the current evidence is limited [362].

3.6.11 Protein Pacing Diet

In 2020, Dr. Paul Arciero published the book entitled ‘The PRISE Life: Protein Pacing for Optimal Health and Performance’ [363], which optimizes abdominal fat loss, increases lean muscle mass, fitness, performance, heart health, metabolism, and enhances mood with the least amount of time and effort. This treatment involved consuming protein-rich meals through supplements or whole foods at specific times throughout the day. These meals provide around 0.3 g of protein/kg bw/meal or more than 1.4 g protein/kg bw/day. This diet might be beneficial for weight loss and maintenance because it could increase energy expenditure and prevent the usual decrease in RMR that occurs with weight loss, as demonstrated by the abundance of related evidence-based research to support the diet [364-376].

3.6.12 Other Types of Intermittent Fasting

Although we have explained several types of intermittent fasting, as are Mosley’s, Every-Other-Day, Warrior, and Nagumo’s diets, we want to finalize this narrative review looking for other types of this treatment due to that many internet users are looking at this diet, as reflected in Google Trends (Figure 2).

![Figure 2](https://example.com/figure2.png)

**Figure 2** Interest over time as measured by Google Trends about ‘intermittent fasting’ worldwide.

Nowadays, there are several classifications of these diets suggested by several research groups; 1) Patterson et al. [377] indicated i) complete alternate-day fasting, ii) alternate-day fasting, iii) time-restricted feeding and iv) religious fasting, 2) Vasim et al. [378] grouped with frequency including i) every other day, ii) two days weekly, iii) every day (as are 12:12, 16:8, 18:6 and 20:4), iv) once a week and v) variable. Our group [379] carried out a systematic review of randomized clinical trials of this diet, applied in obesity, demonstrating that intermittent fasting is known to have beneficial effects on lipid profile, leading to a reduction in LDL cholesterol and triglycerides levels while increasing HDL cholesterol levels. Additionally, it has been associated with weight loss and a shift in the distribution of abdominal fat in individuals with type 2 diabetes and obesity. Moreover, intermittent fasting has been found to improve the control of glycemic levels and insulin sensitivity, which can be particularly beneficial for individuals with type 2 diabetes. According to scientific literature [380-384], this diet supported the beneficial effects of intermittent fasting on lipid profile,
weight loss, and glycemic control. However, like many of the diets explained in this review, it is essential to acknowledge that more research is needed to comprehensively understand the potential benefits and risks associated with the dietary approach of intermittent fasting.

4. Conclusions

Table 1 summarizes studied diets focused on in the published year. Furthermore, in this table, we have indicated diets based on three types of studies: i) peer-reviewed proven efficacy (this means that the research or analysis has been reviewed and evaluated by experts in the same field before publication. Peer review is a quality control measure used to ensure the validity and credibility of scientific research), ii) peer-reviewed unproven efficacy (this is contrary to the previous one), and iii) evidence-based weight loss (this term signifies that the weight loss approach is grounded in scientific evidence. It means that reliable research findings, clinical trials, and systematic reviews support the methods or techniques used for weight loss. Evidence-based weight loss interventions are considered more reliable and trustworthy because they are based on established scientific knowledge and empirical evidence). The number of diets that emerge yearly surpasses the possibility of conducting more comprehensive research. Generally, every year, at least one weight loss diet becomes popular among adults, and in some situations, several diets can appear in a single year. The widespread use of the internet has made it easy to access diets, many of which are not supervised by medical or nutritional professionals, posing a danger to both individuals and public health. Multiple authors can develop some diets, and an author may develop several diets, which we refer to as 'poli diet makers'. Most diet books were published by several publishers from New York City. After the success of their diet or books, many authors establish a foundation, such as the cases of Atkins and Noakes. According to Conley [385], many diets of our narrative review are based on the limited evidence available. Commercial weight loss programs founded on sound principles do not seem significantly more effective in the long run than any other scientifically based diet. Low-fat eating without energy restriction or weight goals may be equally effective. A successful diet program promotes healthy food habits, regular exercise, and enjoyment. In particular, a nutrition professional must develop a diet.

**Table 1** Summary of studied diets focussed on published years and books and studies that support/contradict its effectiveness together with diets that have been studied with peer-reviewed proven efficacy, unproven efficacy, and evidence-based weight loss.

<table>
<thead>
<tr>
<th>DIET NAME</th>
<th>YEAR</th>
<th>PUBLISHED BOOK</th>
<th>STUDIES THAT SUPPORT ITS EFFECTIVENESS</th>
<th>STUDIES THAT CONTRADICT ITS EFFECTIVENESS</th>
<th>DIETS WITHOUT SCIENTIFIC STUDIES</th>
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<td>1960</td>
<td>-</td>
<td>[6, 7]</td>
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<td>-</td>
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<td>Meal Replacements</td>
<td>1960</td>
<td>-</td>
<td>[12, 13]</td>
<td>[14]</td>
<td>-</td>
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<tr>
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<td>1960</td>
<td>15</td>
<td>-</td>
<td>-</td>
<td>X</td>
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<td>Year</td>
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<td>Egg and wine diet</td>
<td>1962</td>
<td>[18]</td>
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<td>1963</td>
<td>[20]</td>
<td>[21]</td>
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<td>1963</td>
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<td>[26, 27]</td>
<td>[28]</td>
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<td>1964</td>
<td>[29]</td>
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<td>Erna Carise’s diet</td>
<td>1968</td>
<td>[31, 32]</td>
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<td>[34]</td>
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<td>1968</td>
<td>[36]</td>
<td>[38]</td>
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<td>1969</td>
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<td>The false Mayo Clinic diet</td>
<td>1960</td>
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<td>[45]</td>
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<td>Atkins diet</td>
<td>1972</td>
<td>[46, 49]</td>
<td>[54]</td>
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<td>[59-61]</td>
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<td>[178, 179]</td>
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<td>Chronodiet</td>
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<td>[190]</td>
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<td>The Hawaii diet</td>
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Carbohydrate addict’s diet<sup>b</sup> | 1991 | [195] | - | - | X |
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The Ornish diet<sup>a</sup> | 1993 | [200] | [201, 203, 205] | - | - |
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The 20/30 diet<sup>b</sup> | 1999 | [233] | - | - | X |
DietWatch | 1999 | - | - | - | X |
Suzanne Somers weight loss plan<sup>b</sup> | 2001 | [236, 237, 239-241] | - | - | X |
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LEARN diet<sup>b</sup> | 2000 | [257] | - | [258] | - |
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Dr. Haas diet<sup>b</sup> | 2001 | [260] | - | - | X |
The peanut butter diet<sup>b</sup> | 2001 | [261] | - | - | X |
The Perricone diet<sup>b</sup> | 2000 | [263-266] | - | - | X |
Warrior diet<sup>b</sup> | 2002 | [267] | - | [268] | - |
The 3-D diet<sup>b</sup> | 2002 | [269] | - | - | X |
Slim4Life<sup>b</sup> | 2002 | - | - | - | X |
Denise Austin’s Fit Forever<sup>b</sup> | 2003 | [274] | - | - | X |
Dr. Phil’s diet<sup>b</sup> | 2003 | [275, 276] | - | - | X |
Eating for Life | 2003 | [277] | - | [278, 279] | - |
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<th>Reference Examples</th>
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<td>The New Nordic diet</td>
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<td>Garaulet method</td>
<td>2004</td>
<td>[285] [286, 287]</td>
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<td>2004</td>
<td>-</td>
<td>X</td>
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<td>Rosedale diet</td>
<td>2004</td>
<td>[292]</td>
<td>X</td>
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<td>Weight Loss 4 Idiots b</td>
<td>2004</td>
<td>-</td>
<td>X</td>
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<td>The 3-hour diet</td>
<td>2005</td>
<td>[294]</td>
<td>X</td>
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<td>CSIRO total wellbeing diet</td>
<td>2005</td>
<td>[295, 296] [297, 298]</td>
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<td>The Chrononutrition diet</td>
<td>2006</td>
<td>[311] [313-316]</td>
<td></td>
</tr>
<tr>
<td>Kimkins diet</td>
<td>2007</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>The Morning Banana diet</td>
<td>2008</td>
<td>[319]</td>
<td>X</td>
</tr>
<tr>
<td>Sacred Heart diet</td>
<td>2008</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>The Baby food diet</td>
<td>2010</td>
<td>[322]</td>
<td></td>
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<tr>
<td>DioGenes diet</td>
<td>2010</td>
<td>[323] [324, 325]</td>
<td></td>
</tr>
<tr>
<td>The Enteral tube diet</td>
<td>2011</td>
<td>-</td>
<td>[326, 327]</td>
</tr>
<tr>
<td>The OMG diet</td>
<td>2012</td>
<td>[328]</td>
<td>X</td>
</tr>
<tr>
<td>Tongue patch diet</td>
<td>2012</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>Noakes diet</td>
<td>2013</td>
<td>-</td>
<td>[335]</td>
</tr>
<tr>
<td>Cotton ball diet</td>
<td>2013</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>The Every-Other-Day diet</td>
<td>2013</td>
<td>[352] [353-355]</td>
<td></td>
</tr>
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Nagumo’s diet\textsuperscript{b} 2013 [356] - - X
The Zero Belly diet\textsuperscript{b} 2014 [358] - - X
Sirtfood diet\textsuperscript{b} 2017 [359] - - X
Protein Pacing diet 2020 [363] [364-374]

\textsuperscript{*}Diet that is studied with peer-reviewed proven efficacy\textsuperscript{a}, peer-reviewed unproven efficacy\textsuperscript{b} or evidence-based weight loss\textsuperscript{c}.

Author Contributions

Conceptualization, methodology, formal analysis, investigation and supervision, I.Z., P.M.B., N.S.O. and J.M.S.; writing—original draft preparation, I.Z.; writing—review and editing, P.M.B., N.S.O. and J.M.S. All authors have read and agreed to the published version of the manuscript. All authors have read and agreed to the published version of the manuscript.

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Competing Interests

The authors have declared that no competing interests exist.

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