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CARNIVOROUS DIET, MOUNJARO AND INTERMITTENT FASTING: THE HARMS OF NEW DIETARY TRENDS AND THEIR IMPACT ON HEALTH

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Abstract: This study focuses on the critical analysis of new and popular dietary and pharmacological trends: the carnivorous diet, intermittent fasting and the use of new GLP-1/GIP receptor agonists, such as tirzepatida (the active ingredient in Mounjaro, often associated in public perception with drugs such as Ozempic). The aim is to investigate and expose the harms, risks and scientific limitations associated with these practices, contrasting them with the benefits widely publicized in the public sphere. The study methodology consisted of a Bibliographic Review carried out from February to June 2025, using the PubMed database. Five studies were selected that met the inclusion criteria: articles in Portuguese, English, Spanish and French, published between 2015 and 2025. The results show that the carnivore diet, despite its popularity, is based on anecdotal evidence and poses significant risks to cardiovascular and nutritional health, such as increased LDL cholesterol and lack of fiber. Intermittent fasting shows modest efficacy in weight loss, no better than continuous calorie restriction, while imposing risks such as hypoglycemia and side effects that compromise adherence. Tirzepatide, on the other hand, shows revolutionary efficacy in weight reduction, but at the cost of a high incidence of gastrointestinal adverse events and an increased risk of serious conditions such as pancreatitis and cholecystitis, with its long-term cardiovascular safety still to be established. It is concluded that, although attractive, these trends carry a significant burden of harm that defies the narrative of simple and safe solutions. The adoption of these practices can expose individuals to adverse health consequences, making a more critical and informed approach by health professionals and the public essential.
Keywords: Carnivore Diet; Mounjaro; Intermittent Fasting; Public Health; Nutrology.

INTRODUCTION

The contemporary search for quick and effective solutions for weight management and the control of chronic diseases has boosted the popularity of new and sometimes radical dietary and pharmacological trends. In a scenario marked by disenchantment with conventional approaches and the power of digital narratives, individuals are actively seeking strategies that promise transformative results. This race for wellness, however, often overlooks the potential harms, scientific uncertainties and long-term health impacts, generating a crucial debate about the safety and sustainability of practices that, although popular, lack robust validation and may pose a silent threat to public health.

One of the most extreme examples of this trend is the carnivore diet, a dietary pattern that proposes the almost total elimination of plant-based foods. Promoted heavily on social media, its adherents report benefits such as significant weight loss and remission of autoimmune and inflammatory conditions. However, this approach defies decades of scientific consensus on the importance of dietary variety. The potential harms are alarming and include a theoretically high risk of deficiencies in essential vitamins such as C and K, minerals and beneficial phytochemicals such as polyphenols, as well as an adverse lipid profile, with an increase in LDL cholesterol. The evidence base supporting it is anecdotal, coming from self-reported studies with strong selection bias and no objective measurements, which makes it impossible to separate the effects of the diet from other lifestyle factors or the simple placebo effect (Lennerz, *et al*., 2021).

At the same time, intermittent fasting (IF) has re-emerged as a popular strategy, focusing on restricting eating time. The practice is associated with promising mechanisms, such as synchronization with circadian biology and modulation of the gut microbiota. However, this practice is not consistently shown to be superior to continuous calorie restriction, and it is not without risks. Side effects such as dizziness, weakness and headaches are common, and the risk of hypoglycemia is a real concern, especially for patients with diabetes who use insulin or sulphonylureas. Long-term sustainability is questionable, and its effects on important clinical outcomes, such as the incidence of cardiovascular disease or cancer, remain largely unknown, illustrating a deep gap between the popularity of the practice and long-term scientific evidence (Patterson; Sears, 2015).

In the pharmacological field, the arrival of drugs such as tirzepatide (Mounjaro) represents a watershed, offering weight losses that can exceed 20% of initial body weight, approaching the efficacy of bariatric surgery. Its mechanism of dual agonism (GLP-1/GIP) gives it undeniable power in glycemic control and in inducing satiety. However, this remarkable efficacy is not without a significant physiological cost. Gastrointestinal adverse events such as nausea, vomiting and diarrhea are so frequent that they become an almost expected feature of treatment, and there is an increased risk for serious conditions such as acute pancreatitis and cholecystitis compared to placebo and other therapies. Long-term cardiovascular safety, a cornerstone for any metabolic treatment, is still under intense investigation, making its use a complex decision that must carefully weigh up the immediate benefits against the potential risks, especially for patients who intend to use it only to lose weight, without a real need (Qin, *et al*., 2024).

Taken together, the carnivore diet, intermittent fasting and tirzepatide represent a double-edged sword in the modern health landscape. Each of these approaches offers a powerful promise of control over the body and health, but carries with it a set of harms,

uncertainties and adverse effects that cannot be ignored. The uncritical adoption of these trends, often driven by anecdotal reports and aggressive marketing, can expose individuals to serious and unforeseen consequences. Therefore, a critical and in-depth analysis of the risks and true impact of these strategies on health is a pressing need to guide safer and more informed choices for both the general public and health professionals.

METHODOLOGY

This study is a literature review carried out between February and June 2025. For the literature searches, the Virtual Health Library (VHL) was accessed, in the USA National Library of Medicine (PubMed) database. To carry out the literature search, the Health Sciences Descriptors (DeCS) were used separately, with the aim of investigating different related therapeutic and dietary approaches. Initially, the term "Tirzepatide" was searched, followed by the descriptor "Intermittent Fasting". In a third step, the term "Carnivora" was searched in order to locate studies related to carnivorous diets. The inclusion criteria were: articles in Portuguese, English, Spanish and French; published between 2015 and 2025 and which addressed the themes proposed for this research, mainly studies of the type (review, meta-analysis, randomized controlled clinical trials), made available in full. The exclusion criteria were: duplicate articles, which did not directly address the proposal studied or free full text and which did not meet the other inclusion criteria . After applying the inclusion and exclusion criteria, a total of 5 studies were selected to make up the collection.

RESULTS AND DISCUSSION

An in-depth analysis of the available scientific evidence on carnivorous diets, intermittent fasting and the use of tirzepatide reveals a clear and worrying pattern: the benefits, although sometimes measurable and widely publicized, are often accompanied by a significant set of risks, methodological limitations and adverse effects that are systematically minimized in the popular narrative. The following discussion breaks down the results of each approach, using data from the studies provided to expose the dangerous gap between the promise of a simple solution and the complex reality of its impacts on human health.

The Carnivore Diet brings illusory benefits and ignored harms, the results presented by adherents of the carnivore diet are mostly methodologically fragile, based on self-reports and insufficient to support their safety claims. In a population-based study, participants reported high satisfaction, weight loss and subjective improvement in general well-being and inflammatory conditions (Lennerz, *et al*., 2021). However, this data is marked by an inescapable selection bias, as it only captures the experiences of highly motivated individuals who adapted to and persisted with the diet for more than six months. This methodology, by its nature, systematically excludes the population that abandoned the practice due to adverse effects, adherence difficulties, costs or lack of results, painting a misleadingly positive picture.

The improvement in allergic or digestive symptoms, for example, can simply be attributed to the mass elimination of food groups, an exclusionary effect that could be achieved with less extreme and more nutritionally complete approaches. From a clinical point of view, the discussion about its harms is alarming and multifaceted. The lipid profile observed in the study, although showing favorable levels of HDL and triglycerides, also includes an increase in LDL cholesterol (Lennerz, *et al*., 2021). This is a causal and well-established risk factor for atherosclerotic cardiovascular disease, acting as a potential cardiovascular time bomb for long-term exercisers.

The total absence of dietary fiber, a component universally recommended by health guidelines, has direct and negative implications for intestinal health, altering the composition and function of the microbiota and increasing the risk of chronic constipation, dysbiosis and, potentially, inflammatory bowel diseases and colorectal cancer. More alarming is the risk of nutritional deficiencies, such as vitamin C, potassium, magnesium and a wide range of phytochemicals with antioxidant and anti-inflammatory action. And although clinical vitamin C deficiency (scurvy) was not observed in the study by Lennerz *et al.* (2021), the absence of immediate symptoms does not mean the absence of physiological damage, contributing to a state of chronic vulnerability to disease. Thus, the carnivore diet is a high--risk experiment, devoid of robust scientific foundation and antagonistic to the principles of healthy and sustainable nutrition.

On the other hand, Intermittent Fasting (IF) represents modest efficacy and real clinical risks. Although it has more consistent results, its effectiveness is often overestimated and its risks underestimated. A systematic review of 27 clinical trials showed that the practice results in weight loss, ranging from 0.8% to 13.0% of initial weight, and can lead to improvements in biomarkers such as fasting glucose and insulin sensitivity. However, a critical analysis reveals an inconvenient truth: when compared directly with continuous calorie restriction (CCR) in 12 studies, intermittent fasting showed no significant superiority in weight loss or adherence. This strongly suggests that its main mechanism of action is, in most cases, a simple reduction in total calorie intake, rather than a magical or superior metabolic effect linked to the timing of eating (Patterson; Sears, 2015). The idea that IF positively reprograms circadian gene expression, although promising in animal models, lacks robust and long-term evidence in humans (Bueno, *et al.*, 2018).

Discussion of its harms is crucial for safe clinical practice. The intervention is associated with a number of side effects that impact quality of life, such as dizziness, weakness, headaches, bad breath and sleep disturbances, consistently reported in trials (Bueno, *et al.*, 2018). The most serious risk, however, is hypoglycemia, especially in patients with type 2 diabetes who use insulin or sulfonylureas. Specific studies in this population show the need for strict medication adjustment protocols, such as reducing the insulin dose by up to 70% on fasting days, to mitigate this potentially fatal risk (Patterson; Sears, 2015).

This contradicts the perception of IF as a "natural" and safe intervention for everyone. Furthermore, the sustainability of the practice is a real challenge, with drop-out rates as high as 25% in some studies, and the regaining of lost weight after discontinuation is a documented reality. Therefore, while intermittent fasting can be a useful tool for some individuals under supervision, it is far from a risk-free panacea, and long-term clinical trials are urgently needed to validate its effects on hard clinical outcomes, such as the incidence of cardiovascular disease or mortality (Patterson; Sears, 2015).

Tirzepatide (Mounjaro) represents an undeniable pharmacological breakthrough, with efficacy results that redefine the boundaries of obesity and diabetes treatment. Clinical trials have shown average weight losses of 16.5% to 22.4%, and impressive reductions in HbA1c (1.87% to 3.02%), outperforming other drugs in the same class, such as Semaglutide 1 mg (Karagiannis, *et al.*, 2024). This potency, however, is accompanied by a safety profile that requires extreme caution and an honest analysis of its physiological cost. The incidence of gastrointestinal adverse events is remarkably high and dose-dependent. A comprehensive meta-analysis confirmed that the risk of nausea, vomiting and diarrhea with

Tirzepatide is significantly higher in comparison with placebo, insulin and even other GLP-1 receptor agonists (Qin, *et al.*, 2024).

These effects are not just transient discomforts; they represent a significant barrier to adherence and can lead to treatment discontinuation, compromising its effectiveness in the real world. The harm, however, goes beyond the gastrointestinal tract. The same meta-analysis revealed an increased risk for serious conditions such as acute pancreatitis and cholecystitis (inflammation of the gallbladder) compared to placebo and insulin, especially at the higher doses of 10 mg and 15 mg (Qin, *et al.*, 2024).

Although the absolute incidence is low, the increase in relative risk is clinically relevant and requires close monitoring, especially in patients with pre-existing risk factors. In addition, long-term cardiovascular safety, although preliminary data does not point to an increase in major cardiovascular events (MACE-4), has not yet been definitively established, a doubt that hangs over its safety profile and will only be answered with the completion of studies (Karagiannis, *et al.*, 2024).

This positions tirzepatide not as a lifestyle solution, but as a powerful medical intervention, the use of which must be carefully assessed through an individualized risk-benefit analysis, recognizing that its extraordinary results are inseparable from its equally significant risks (Karagiannis, *et al.*, 2024).

Excessive exposure to these trends, often promoted by celebrities and digital influencers, reinforces an aesthetic culture of the thin body, with a strong psychological impact, especially among adolescents and young people. This social pressure can trigger anxiety, depression, low self-esteem and eating disorders such as anorexia, bulimia and binge eating disorder. The glamorization of extreme eating behaviours, in the name of "discipline" or "performance", hides the real costs of these practices on physical and mental health.

It is essential to consider that weight loss should not be seen as the main goal of any dietary intervention. The search for health and well-being should involve a broad approach, including a balanced diet, physical activity, adequate sleep, stress management and emotional support. Healthy weight loss, when necessary, should be the result of a sustainable lifestyle adapted to each person's reality, not quick fixes that are potentially dangerous and unsustainable.

FINAL CONSIDERATIONS

Analysis of the new dietary and pharmacological trends represented by the carnivore diet, intermittent fasting and tirzepatida, although still little explored, reveals that: the search for quick and transformative health results often overshadows a careful assessment of their harms and risks. Although each of these approaches has measurable benefits that fuel their popularity, they also carry a burden of adverse effects, scientific uncertainties and practical limitations that cannot be ignored.

The carnivore diet emerges as one of the most radical and dangerous of these trends. Its supposed benefits are supported by anecdotal and methodologically flawed evidence, while the risks of nutritional deficiencies, intestinal dysbiosis and increased cardiovascular risk are scientifically plausible and alarming (Lennerz, *et al.*, 2021).

Intermittent fasting, on the other hand, presents itself as a strategy of modest efficacy, whose weight loss results do not consistently surpass traditional calorie restriction, but which introduces risks such as hypoglycemia and side effects that impact quality of life, questioning its long-term sustainability and safety (Bueno, *et al.*, 2018).

Finally, although tirzepatide represents a revolutionary pharmacological advance, it illustrates the classic dilemma of modern medicine: its undeniable potency in weight loss and gly-

cemic control is inseparable from a significant profile of gastrointestinal adverse effects and risks for serious conditions such as pancreatitis, requiring careful weighing between benefit and harm (Karagiannis, *et al*., 2024).

Taken together, these three approaches demonstrate that there are no shortcuts free of health costs. The uncritical adoption of extreme diets or potent drugs, driven by social media success narratives and the promise of an easy solution, can lead to serious and unforeseen consequences. Health cannot be reduced to a single marker, such as body weight, but must be understood as a complex balance involving physical, mental and nutritional well-being. It is therefore imperative that both the public and health professionals adopt a more critical and informed stance in the face of these new trends. It is essential to promote education about the risks, encourage the search for robust evidence-based approaches and prioritize long-term safety and sustainability.

True innovation in health does not lie in radical and immediate solutions, but in the consistent application of proven nutrition and lifestyle principles, supported by carefully indicated and monitored medical interventions. Only in this way will it be possible to safely navigate the complex landscape of health trends, separating empty promises from genuine progress.

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