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ABSTRACT

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INTERMITTENT FASTING: LITERATURE REVIEW WITH BIBLIOMETRIC ANALYSIS

Introduction. Intermittent fasting is a dietary approach that has gained phenomenal popularity in the last decade. Unlike traditional calorie restriction or restriction of certain foods, it is based on limiting the time during which food can be consumed.

The **aim of the work** was to conduct a literature review with bibliometric analysis of scientific articles on the topic of intermittent fasting.

Materials and methods. The authors searched the literature sources in the database using the keyword “intermittent fasting”. The built-in elements of the bibliometric analysis of the Scopus database and the VOSviewer program (version 1.6.20, <https://www.vosviewer.com/>) were used to analyse the quantitative and qualitative characteristics of the publications.

Results. Between 1946 and 2025, 3056 publications were published in the Scopus database with the keyword “intermittent fasting”, and their number has increased significantly over the past 10 years. During the bibliometric analysis of publications by the most common keywords, it was found that the most frequently encountered words together with the phrase “intermittent fasting” were such words as “diet”, “physiology”, “obesity”, “metabolism”, “body weight”, and “animal models”.

Conclusions. Intermittent fasting is characterised by a complex effect on the human body: it improves insulin sensitivity, stimulates autophagy, and regulates circadian rhythms. Intermittent fasting has a significant impact on body weight loss and may also reduce the risk of cardiovascular disease, as well as improve cognitive function. Despite the large body of research on the benefits of intermittent fasting, its safety remains questionable. Further long-term studies of this dietary approach in animal models and human populations are needed.

Keywords: intermittent fasting, diet, food restriction, weight control, physiology, metabolism, autophagy, bibliometric analysis.

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РЕЗЮМЕ

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ІНТЕРВАЛЬНЕ ГОЛОДУВАННЯ: ОГЛЯД ЛІТЕРАТУРИ З БІБЛІОМЕТРИЧНИМ АНАЛІЗОМ

Вступ. Інтервальне голодування – дієтичний підхід, який набув феноменальної популярності в останнє десятиліття. На відміну від традиційного обмеження в кількості спожитих калорій чи певних продуктів, воно базується в обмеженні часу протягом якого можна споживати їжу.

Метою роботи було провести огляд літератури з бібліометричним аналізом наукових статей на тему інтервального голодування.

Методи і матеріали. Автори провели пошук літературних джерел в базі даних за ключовим словосполученням «інтервальне голодування». Для аналізу кількісних та якісних характеристик публікацій були використані вбудовані елементи бібліометричного аналізу бази даних Scopus та програма VOSviewer (версія 1.6.20, <https://www.vosviewer.com/>).

Результати. У період з 1946 по 2025 рік в базі дані Scopus з ключовим словосполученням «інтервальне голодування» опубліковано 3056 публікацій, причому за останні 10 років їх кількість значно зросла. Під час бібліометричного аналізу публікацій за найпоширенішими ключовими словами було встановлено, що найбільш часто разом зі словосполученням «інтервальне голодування» зустрічались такі слова, як «дієта», «фізіологія», «ожиріння», «метаболізм», «вага тіла», «тваринні моделі».

Висновки. Інтервальне голодування характеризується комплексним впливом на організм людини: покращує чутливість до інсуліну, стимулює аутофагію, регулює циркадні ритми. Інтервальне голодування достовірно впливає на зниження маси тіла, та ймовірно знижує ризик серцево-судинних хвороб та сприяє покращенню когнітивних функцій.

Не зважаючи, на велику кількість досліджень про переваги інтервального голодування, його безпечність залишається під питанням. Необхідні подальші дослідження даного дієтичного підходу на тваринних моделях та людській популяції в довгостроковому періоді.

Ключові слова: інтервальне голодування, дієта, обмеженні в їжі, контроль ваги, фізіологія, метаболізм, аутофагія, бібліометричний аналіз.

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INTRODUCTION

Intermittent fasting (IF) has garnered considerable attention from both scientists and the general public in recent years. It is based on alternating periods of eating and fasting, which is a significant departure from traditional dietary strategies that focus on constant calorie restriction [1, 2].

The concept of IF is not new; various forms of fasting have been practiced for millennia in different cultures and religions. However, it is only recently that the scientific community has begun to systematically investigate its potential health benefits and mechanisms of action [3, 4].

There are several main types of intermittent fasting, the most popular of which are the 16/8 method (16 hours of fasting and 8 hours of eating each day), the 5:2 scheme (5 days of normal eating and 2 days of severe calorie restriction), and alternate-day fasting (alternating between days of normal eating and days of minimal calorie intake) [5, 6].

The growing interest in IF has led to numerous studies suggesting its potential health benefits, including improved metabolism, reduced risk of chronic diseases, and even possible longevity [7, 8]. However, like any dietary approach, IF has its limitations and potential risks that require careful study [9]. In this article, we will review the current understanding of intermittent fasting, focusing on the physiological mechanisms of its effects on the body, its potential health benefits, and possible risks. We will also examine the latest scientific research in this area.

Aim: to conduct a literature review and bibliometric analysis of publications on the topic of intermittent fasting.

MATERIALS AND METHODS: the authors searched for the literature sources in the database using the keyword "intermittent fasting". To analyze the quantitative and qualitative characteristics of the publications, the built-in elements of the bibliometric analysis of the Scopus database were used. To analyze the keywords of the publications, a free program for visualizing bibliometric networks VOSviewer (version 1.6.20, <https://www.vosviewer.com/>) was used.

RESULTS AND THEIR DISCUSSION

Physiological mechanisms and effects on the body

Metabolic and hormonal changes

IF stimulates the production of growth hormones. Studies show that growth hormone levels can increase significantly during periods of fasting. Growth hormone plays a vital role in preserving muscle mass, stimulating lipolysis, and maintaining bone health, which may explain some of the positive effects of IF on body composition and metabolic health [2]. It is important to note that these metabolic changes may vary depending

on the duration and frequency of fasting periods, as well as individual characteristics [6]. For example, people with diabetes or other metabolic disorders may have different responses to IF compared to healthy people.

Autophagy

Autophagy is one of the most fascinating and potentially significant effects of IF at the cellular level. This natural process of cellular self-cleaning has profound health implications and may be a key mechanism through which IF exerts its beneficial effects on the body.

The term "autophagy" is derived from the Greek words "auto" (meaning "self") and "phagein" (meaning "to eat"), and literally translates to "self-eating." In the context of cell biology, autophagy is the process by which cells identify, sequester, and dispose of damaged, old, or dysfunctional components, including organelles and proteins [10]. This process can be compared to a cellular garbage collection and recycling system.

Autophagy plays a critical role in maintaining cellular homeostasis and health. It helps remove toxic protein aggregates that can build up over time and contribute to neurodegenerative diseases such as Alzheimer's and Parkinson's [11]. In addition, autophagy helps remove damaged mitochondria (a process known as mitophagy), which can improve cellular energy metabolism and reduce oxidative stress [12].

Impact on Circadian Rhythms

Circadian rhythms are the body's internal biological "clocks" that regulate numerous physiological processes over an approximately 24-hour cycle. These rhythms influence many aspects of our health, including the sleep-wake cycle, hormone secretion, body temperature, metabolism, and even mood [13]. IF is closely linked to circadian rhythms and can have a significant impact on their regulation.

The central circadian clock is located in the suprachiasmatic nucleus of the hypothalamus and is synchronized primarily with the light cycle. However, peripheral tissues such as the liver, muscle, and adipose tissues also have their own circadian clocks that can be coordinated by other signals, including food intake [14].

Restricting the timing of food intake, which is often part of IF protocols, can help align these peripheral circadian clocks. For example, restricting one's eating to a specific time window (as in the popular 16/8 method) can help establish a clear rhythm for metabolic processes [15].

While a study of circadian rhythms during the religious fast of Ramadan found that the daily rhythm of melatonin secretion was not altered during fasting. However, this study was conducted after a maximum of two weeks of religious fasting, so its results may differ from the effects of prolonged intermittent fasting [16].

This is because many metabolic processes are naturally circadian. For example, insulin sensitivity, the activity of enzymes involved in glucose and lipid metabolism, and even the expression of genes related to metabolism, all change throughout the day [17]. Eating at the “wrong” times (such as late at night) can disrupt these natural rhythms and potentially lead to metabolic disorders.

However, it is essential to note that sudden changes in dietary patterns can temporarily disrupt circadian rhythms, and the body may require time to adjust to the new regimen [6]. This may manifest as temporary sleep disturbances, changes in appetite, or even mood. These symptoms typically resolve within a few days to a few weeks as the body adjusts to the new regimen. Overall, the effects of IF on circadian rhythms are complex and multifaceted. It may help harmonize peripheral circadian clocks, improve metabolism and sleep quality, and potentially contribute to overall health. However, as with many aspects of IF, the optimal regimen and long-term effects require further study. An individualized approach that takes into account personal circadian rhythms and lifestyle may be key to maximizing the potential health benefits of IF.

Potential Health Benefits and Risks

Weight Management

IF has shown significant potential for weight management and improving metabolic health. Numerous studies have shown that IF can be an effective method for weight loss and reducing body fat percentage [7, 8].

The mechanism of weight loss with IF is multifactorial and is not limited to a reduction in total caloric intake. During periods of fasting, the body switches to using fat stores as its primary energy source, which contributes to the depletion of these stores. This process, known as the “metabolic switch,” is a key aspect of IF and may result in more efficient fat burning compared to traditional diets with constant calorie restriction [1].

Additionally, IF can significantly increase insulin sensitivity, a crucial factor in maintaining metabolic health. Improving insulin sensitivity means that the body uses glucose more efficiently, which can help prevent the development of type 2 diabetes and other metabolic disorders. This is especially important in the context of the growing epidemic of obesity and diabetes in many countries around the world [4].

Research shows that IF may be particularly effective in reducing visceral fat, a type of fat that accumulates around internal organs and is associated with an increased risk of metabolic diseases [9].

IF may also affect levels of hormones related to appetite and metabolism. For example, it may reduce

levels of ghrelin (a hormone that stimulates appetite) and increase levels of leptin (a hormone that signals satiety) [18]. This may help people better control their appetite and reduce overeating.

Additionally, IF may offer further metabolic benefits that extend beyond weight loss. It may improve the function of mitochondria, the “powerhouses” of cells, increasing the efficiency of energy production and reducing oxidative stress [19]. This may have a wide range of positive health effects, from improving physical endurance to slowing the ageing process at the cellular level. Finally, it is important to emphasize that while IF can be an effective tool for weight management and improving metabolic health, it is not a one-size-fits-all solution. Individual differences in metabolism, lifestyle, dietary preferences, and medical conditions may affect the effectiveness and acceptability of IF for a particular person. Therefore, it is essential to approach IF individually, preferably under the guidance of a qualified healthcare professional or dietitian.

Cardiovascular and Neurological Effects

IF has shown potential to improve both cardiovascular and neurological health. These effects result from complex interactions between metabolic, hormonal, and cellular processes that are activated during periods of fasting.

In the context of cardiovascular health, studies show that IF can lower blood pressure, improve blood lipid profiles, and reduce markers of inflammation that are associated with increased risk of cardiovascular disease [20]. Lowering blood pressure is particularly important because hypertension is a major risk factor for heart disease, stroke, and other cardiovascular problems.

In terms of neurological effects, IF shows significant potential to improve brain health and cognitive function. One key mechanism underlying this effect is the stimulation of brain-derived neurotrophic factor (BDNF) production, a protein that plays a crucial role in the formation of new neurons and the maintenance of cognitive function [21].

IF may also affect brain metabolism, promoting more efficient energy use by neurons. During periods of starvation, the brain may switch to using ketone bodies as an alternative energy source, which may have neuroprotective effects [22]. IF may also reduce oxidative stress in the brain, which is considered a key factor in the development of neurodegenerative diseases.

Studies also indicate the potential of IF to improve mood and reduce symptoms of depression and anxiety [23]. This may be due to both biochemical changes in the brain (e.g., increased serotonin levels) and psychological effects, such as a sense of control over one’s diet and body.

It is essential to note that while numerous studies on the neurological effects of IF have been conducted in animal models, a growing body of human research is also yielding promising results. However, more long-term studies are needed to fully understand the effects of IF on brain health and cognitive function in people of all ages and with different health conditions.

Potential Effects on Lifespan

One of the most intriguing aspects of IF is its potential effects on lifespan. Although most studies in this area have been conducted in animal models, the results are encouraging and open exciting avenues for further research [13].

The mechanisms by which IF may affect lifespan are complex and multifaceted. One key mechanism is through the reduction of oxidative stress [3]. Oxidative stress occurs when an excessive amount of free radicals accumulates in the body, which can damage cellular structures, including DNA. IF may stimulate the production of antioxidant enzymes that neutralize free radicals, thereby reducing oxidative damage to cells.

Another important mechanism is the enhancement of autophagy, a cellular “self-cleaning” process [7]. During autophagy, cells remove damaged or old components, which may prevent the accumulation of toxic proteins and dysfunctional organelles. This is particularly important in the context of ageing, as the efficiency of autophagy typically declines with age. IF may stimulate this process, potentially slowing some aspects of cellular ageing.

IF may also affect key signalling pathways associated with ageing. For example, it may inhibit mTOR (mechanistic target of rapamycin), a protein that regulates cell growth and metabolism [14]. Chronic activation of mTOR has been linked to accelerated ageing, while its inhibition may promote longevity.

Additionally, IF may activate AMPK (AMP-activated protein kinase), an enzyme that plays a crucial role in regulating energy metabolism [24]. Activation of AMPK has been linked to many processes that may promote longevity, including increased insulin sensitivity and improved mitochondrial function.

IF may also influence the expression of longevity-related genes, such as sirtuins [25]. Sirtuins are a group of proteins that play essential roles in regulating metabolism, DNA repair, and stress resistance. Activation of sirtuins has been linked to the slowing of ageing processes in organisms ranging from yeast to mammals.

Another potential mechanism by which IF may affect lifespan is through the reduction of chronic inflammation [7]. Chronic low-level inflammation, often referred to as “inflammation,” is considered a significant factor in the ageing process and the

development of age-related diseases. IF may reduce markers of inflammation in the body, potentially slowing some aspects of the ageing process.

It is worth noting that while animal studies have shown promising results regarding the effects of IF on lifespan, extrapolating these results to humans is challenging. Human ageing is a highly complex process influenced by a multitude of factors, including genetics, lifestyle, and environment.

Furthermore, conducting long-term studies on the effects of IF on human lifespan is challenging due to both ethical and practical reasons. However, studies on the impact of IF on biomarkers of ageing and the risk of age-related diseases in humans may provide valuable information about the potential effects of IF on ageing processes. It is also important to highlight that the impact of IF on lifespan may not be direct, but rather indirect through its effects on various aspects of health. For example, the improvements in metabolic health, reduced risk of cardiovascular disease, and improved cognitive function observed with IF may contribute to increased lifespan and improved quality of life in older age.

Risk groups and warnings

Despite the potential benefits of IF, it is essential to be aware that this approach may not be suitable or even hazardous for certain groups of people. Understanding these risks and limitations is critical for the safe and effective use of IF.

Pregnant and lactating women are one of the main risk groups [26]. During pregnancy and breastfeeding, a woman’s body requires additional nutrients to support fetal development or milk production.

IF can lead to inadequate intake of essential nutrients, which can negatively affect the health of the mother and child. Additionally, hormonal changes during pregnancy and lactation can make it more difficult for the body to produce IF.

Children and adolescents should also avoid IF [27]. These age groups are actively growing and developing, and their bodies need a regular supply of nutrients. IF can potentially disrupt normal growth and development and can also lead to deficiencies in important vitamins and minerals.

People with diagnosed eating disorders, such as anorexia or bulimia, should avoid IF [28]. For this group, any dietary restrictions can exacerbate existing eating problems and lead to poor physical and mental health.

People with type 1 diabetes are also at high risk [29]. These individuals rely on exogenous insulin to regulate their blood glucose levels, and IF can result in hazardous fluctuations in blood sugar levels. Without close medical supervision and adjustment of insulin doses, IF can be dangerous for this group.

People who are underweight or malnourished should also avoid IF [26]. For these individuals, additional calorie restriction may lead to further weight loss and deterioration in overall health.

People with certain chronic medical conditions, such as liver, kidney, or heart disease, should be especially cautious with IF [27]. These conditions can affect metabolism and the body's ability to adapt to periods of fasting. Without proper medical supervision, IF can worsen the health of these patients.

Furthermore, even for healthy individuals, IF can have side effects, especially in the initial stages. These may include headache, irritability, difficulty concentrating, and fatigue. These symptoms usually resolve after a period of adjustment, but for some people, they may be severe enough to cause them to discontinue IF.

IF may also affect hormonal balance, especially in women [30, 31]. Some women report changes in menstrual cycles or worsening of premenstrual syndrome symptoms when using IF. This may be especially important for women who are planning a pregnancy or have fertility issues.

Considering these caveats, it is important to approach IF with caution and awareness. Before starting any new diet, including the IF diet, it is recommended to consult with a qualified healthcare professional or dietitian. This is especially important for people with pre-existing medical conditions or those at risk. An individualized approach that takes into account personal medical conditions, lifestyle, and health goals is key to the safe and effective use of IF.

Current Research and Its Limitations

IF has been the subject of intense scientific research in recent years. Clinical trials cover a wide range of aspects of IF, from its effects on weight and metabolism to its potential benefits for brain and cardiovascular health.

One of the largest studies, published in the *New England Journal of Medicine* in 2019 [1], provided a comprehensive review of the effects of IF on health, ageing, and disease. This study highlighted the potential of IF to improve metabolic health, reduce inflammation, and increase stress resilience at the cellular level.

Another important study, conducted by Patterson et al. [2], focused on the metabolic effects of IF. It has been demonstrated that IF can enhance insulin sensitivity, decrease leptin (a hormone linked to satiety), and increase adiponectin (a hormone that regulates glucose and fatty acid metabolism).

A study by Mattson et al. [3] focused on the effects of IF on brain health. It found that IF can promote neuroplasticity, improve cognitive function, and

potentially reduce the risk of neurodegenerative diseases.

A clinical trial by Sutton et al. [31] investigated the effects of early time-restricted feeding, a form of IF, on metabolism. Results showed improved insulin sensitivity, lower blood pressure, and reduced oxidative stress even without weight loss.

A study by Moro et al. [32] examined the effects of IF on body composition and health indicators in trained men. It found that IF can help reduce fat mass while preserving muscle mass, as well as improve some health markers, such as blood glucose and lipid levels.

However, it is important to underscore that many of these studies were relatively short-term and conducted on small groups of participants. This highlights the need for larger, longer-term studies to fully understand the effects of IF.

In addition, some studies have focused on specific populations (e.g., people with obesity or diabetes), making it difficult to generalize the results to the general population. It is crucial to mention that different IF protocols (e.g., 16/8, 5:2, alternate-day fasting) may have different effects, and not all studies clearly distinguish between these protocols.

Despite these limitations, the overall trend of research suggests that IF may have potential health benefits. However, further research is needed to fully understand the long-term effects and optimal protocols of IF.

A study by Rynders et al. [33] conducted a systematic review and meta-analysis comparing the effectiveness of IF and mealtime restriction with continuous calorie restriction for weight loss. The results showed that IF may be as effective for weight loss as traditional calorie-restricted diets.

However, this study also found that IF may have additional metabolic benefits. For example, IF showed greater improvements in insulin sensitivity compared with continuous calorie restriction, even with similar weight loss. This may indicate that IF has unique metabolic effects that go beyond simple calorie reduction.

Another important study by Harvie et al. [8] compared IF (in the form of a 5:2 diet) with a traditional calorie reduction approach. It was found that both approaches resulted in similar weight loss, but IF showed greater reductions in insulin resistance and leptin levels.

A study by Varady et al. [34] compared alternate-day fasting (a form of IF) with a traditional low-fat diet. Both approaches resulted in similar weight loss, but IF showed greater reductions in fasting insulin and insulin resistance.

Importantly, these studies also found that some people may find IF more palatable and easier to follow in the long term compared to continuous calorie restriction. This could be a significant advantage, as long-term adherence to a diet is a crucial factor in achieving weight management success.

However, not all studies have shown the benefits of IF over traditional dietary approaches. For example, a study by Trepanowski et al., published in *JAMA Internal Medicine*, found no significant differences in weight loss or improvements in metabolic health markers between alternate-day fasting and daily calorie restriction over a 1-year period [35].

These mixed results highlight the need for further research to fully understand the relative benefits of IF compared to other dietary approaches. They also emphasize the importance of an individualized approach to selecting a weight management and health improvement strategy.

Despite the growing body of research on IF, several important limitations in the current scientific literature need to be considered when interpreting the results.

One major limitation is that many studies of IF have been conducted over a relatively short period, typically ranging from a few weeks to a few months. This limits our understanding of the long-term effects of IF, particularly regarding weight loss maintenance and its long-term health implications.

In addition, many studies have been conducted with small sample sizes, which may limit the statistical power and generalizability of the results. Some studies have also focused on specific populations (e.g., people with obesity or diabetes), making it difficult to extrapolate the results to the general population [36].

Another important limitation is that different studies use different IF protocols (e.g., 16/8, 5:2, alternate-day fasting), making it difficult to compare results across studies. Furthermore, it is not always clear whether the observed effects are the result of fasting itself or simply a reduction in overall caloric intake.

An additional limitation is that many studies rely on participants' self-reporting of adherence to the IF protocol and food intake [37]. This can lead to data inaccuracies, as people often underestimate their food intake or overestimate their adherence to the diet.

Given these limitations, several key areas for future research can be identified:

1. Longitudinal studies: Studies that track the effects of IF over many years are needed to understand its long-term effects on people's health and weight maintenance.

2. Larger samples: Studies with larger and more diverse samples of participants are needed to increase statistical power and generalizability of results.

3. Standardizations of protocols: Greater standardization of IF protocols across studies is needed to facilitate comparison of results across studies.

4. Mechanistic studies: Further research is needed to understand the precise mechanisms through which IF affects health, including molecular and cellular processes.

5. Personalized approaches: Studies that examine how individual factors (e.g., genetics, microbiome) influence the response to IF may help develop more personalized recommendations.

6. Comparative studies: More studies are needed that directly compare IF with other dietary approaches and lifestyles.

7. Studies in specific populations: More studies are needed to examine the effects of IF in specific populations, such as the elderly, athletes, or people with certain medical conditions.

8. Impact on quality of life: It is important to examine how IF affects quality of life, mood, and social aspects of eating.

Overall, while current research provides valuable information about the potential benefits of IF, many questions remain unanswered. Future research will help fill these knowledge gaps and provide a more complete understanding of the role of IF in human health and well-being.

Bibliometric analysis

In the period from 1946 to 2025, 3056 publications were published in the Scopus database with the keyword "intermittent fasting". If we analyze the number of publications by year, we can see that their number has increased significantly over the past 10 years (Fig. 1), which confirms the relevance of this topic.

The most popular publications on this topic included journals such as "Nutrients", "Frontiers in Nutrition", "Nutrition", "Cell Metabolism", and "Nutrition Reviews". Moreover, "Nutrition Reviews" had the very first publication dedicated to IF, and in recent years, the largest number of works has been published in the journal "Nutrients".

Among the leading researchers, Mattson, M.P. (Johns Hopkins University School of Medicine, United States) and Varady, K.A. (University of Illinois at Chicago, Chicago, United States) can be distinguished.

During the bibliometric analysis of publications by the most common keywords, it was found that the most frequently encountered words together with the phrase "intermittent fasting" were such words as "diet", "physiology", "obesity", "metabolism", "body weight", and "animal models" (Fig. 2).

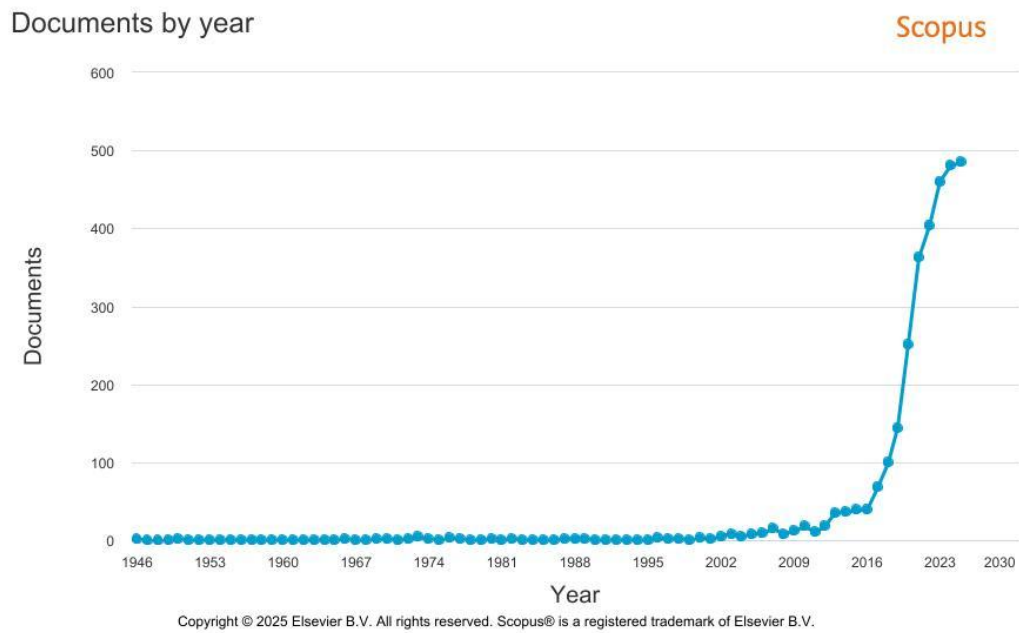


Figure 1. Analysis of the distribution of publications by year in the Scopus database for the keyword “intermittent fasting”

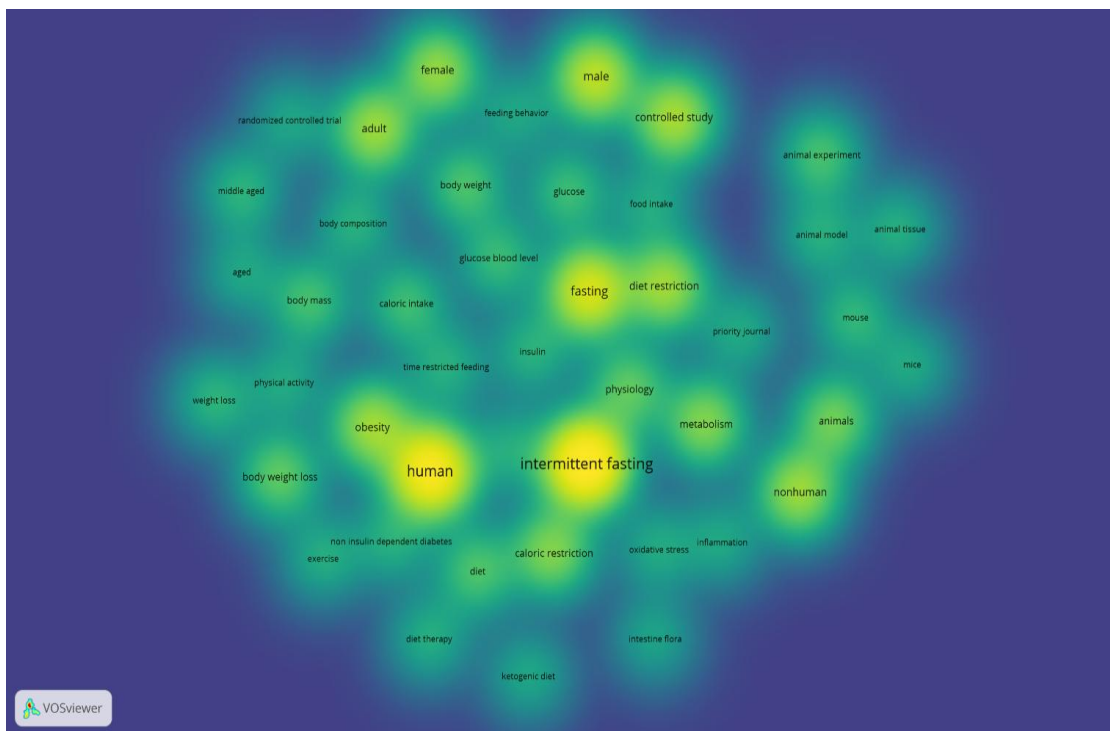


Figure 2. Keyword map created in the VOSviewer program environment

CONCLUSIONS

IF is an innovative approach to nutrition that has attracted considerable attention from both scientists and the general public. Our review of current ideas about IF allows us to draw the following conclusions:

1. Physiological mechanisms. IF induces significant metabolic and hormonal changes in the body, including improved insulin sensitivity, stimulation of autophagy

and modulation of circadian rhythms. These processes may underlie the potential health benefits of IF.

2. Potential benefits. Studies suggest that IF may help control weight, improve metabolic health, reduce the risk of cardiovascular disease, and potentially improve cognitive function. IF may also have effects on ageing and longevity, although these aspects need further study.

3. Risks and Warnings. Despite its potential benefits, IF may not be appropriate or even risky for certain groups of people, including pregnant women, children, people with certain chronic diseases, and eating disorders. It is important to consider individual characteristics and health status when considering IF.

4. Scientific Studies. While current studies provide valuable information about the effects of IF, many have limitations, including short follow-up periods and small sample sizes. More long-term studies are needed to fully understand the effects of IF.

5. Between 1946 and 2025, 3056 publications were published in the Scopus database with the keyword “intermittent fasting”, and their number has increased significantly over the past 10 years. During the bibliometric analysis of publications by the most common keywords, it was found that the most

frequently encountered words together with the phrase “intermittent fasting” were such words as “diet”, “physiology”, “obesity”, “metabolism”, “body weight”, and “animal models”.

Overall, although IF shows encouraging results in many aspects of health, it is important to approach this practice with caution and under the supervision of qualified medical professionals. Future studies will help us better understand the long-term effects of IF and optimize its use for different populations.

It is worth emphasizing that the field of IF research continues to actively develop, and our understanding of its effects and optimal protocols is likely to evolve as new scientific data emerge. Therefore, it is important to stay informed about the latest research and recommendations regarding IF.

AUTHOR CONTRIBUTIONS

Gordiienko H.R.: concept and design of the study, data acquisition, data analysis and interpretation, drafting of the article.

Sikora V.Z.: data interpretation, drafting of the article, critical review, final approval.

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CONFLICT OF INTEREST

Автори заявляють про відсутність конфлікту інтересів.

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