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Exploring the Benefits and Challenges of Monk Fasting, Leangains Protocol, and OMAD Diet: A PRISMA-2020 Review

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ABSTRACT: Intermittent fasting (IF) has gained popularity as a dietary approach, with various methods such as Monk Fasting, Leangains Protocol, and the OMAD diet attracting attention for their potential health benefits. This systematic review aims to evaluate the health benefits, challenges, and sustainability of these IF methods based on studies published between 2019 and 2024. The review will include peer-reviewed studies involving adult participants aged 18 years and above, focusing on outcomes related to weight loss, metabolic health, mental clarity, compliance, and potential adverse effects. The search strategy will encompass databases such as PubMed, Scopus, Google Scholar, and Cochrane Library. Preliminary analysis reveals that Monk Fasting may enhance insulin sensitivity, promote autophagy, and potentially extend lifespan. The Leangains Protocol is praised for aiding fat loss while maintaining muscle mass and improving metabolic flexibility. The OMAD diet, which restricts eating to one meal per day, is associated with weight loss and improved insulin sensitivity. However, challenges such as adherence, potential nutrient deficiencies, and social constraints have been reported. This review will provide a comprehensive understanding of the efficacy, safety, and sustainability of these IF methods, enabling individuals and healthcare providers to make informed dietary choices and fostering the development of personalized nutrition strategies.

KEYWORDS: Intermittent fasting, Monk Fasting, Leangains Protocol, OMAD (one meal a day) diet, Sustainability.

I. INTRODUCTION

Intermittent fasting has emerged as a popular dietary trend, with various methods and protocols gaining attention for their potential health benefits. IF involves alternating periods of fasting and eating, with duration and frequency varying depending on the specific approach [1]. Fasting, a traditional practice of modern relevance, presents numerous advantages for individuals navigating today's fast-paced world. By incorporating fasting into our daily routines, we can reap its transformative benefits and improve our physical, mental, and spiritual wellbeing. Fasting is essential for our fast-paced lives because it promotes detoxification and cellular regeneration. When we consume food, our bodies are constantly engaged in digestion, leaving little time for deep cleaning and rejuvenation. By periodically abstaining from food, we allow our digestive system to rest and our cells to engage in autophagy, a natural process in which damaged or dysfunctional components are broken down and recycled. This can improve the overall health, increase energy levels, and bolster the immune system. Moreover, fasting may significantly promote longevity and reduce the risk of developing chronic diseases. Studies have indicated that regular fasting may aid in regulating blood sugar levels, reducing inflammation, and enhancing cardiovascular health. By giving our bodies a break from the constant supply of nutrients, we allow our cells to activate protective pathways that can delay the onset of age-related diseases and prolong our health. Monk Fasting, Leangains Protocol, and the OMAD diet are notable IF methods. Monk Fasting, inspired by the eating habits of monks, involves consuming one meal per day, typically in the evening [2]. The Leangains Protocol, developed by Martin Berkhan, consists of a 16-hour fasting window followed by an 8-hour eating window [3]. The OMAD diet involves consuming only one meal per day with no restrictions on timing [4]. Although research has investigated the physiological effects of IF [5], limited qualitative research has explored the experiences of individuals who have practiced these specific methods. This study aims to fill this gap by providing an in-depth understanding of

the perceived benefits, challenges, and sustainability of the Monk Fasting, Leangains Protocol, and OMAD diet from practitioners' perspectives.

II. RELATED WORK

Rationale:

Examining the advantages and drawbacks of monk fasting, the Leangains Protocol, and OMAD Diet are essential, given the growing popularity of intermittent fasting as a dietary approach. Comprehending these methods enables one to evaluate their health implications, feasibility, and potential hazards, helping individuals and healthcare providers to make well-informed dietary choices [1]. Through a systematic review of existing evidence, we can identify knowledge gaps, dispel misconceptions, and offer comprehensive insights into the efficacy and safety of these fasting protocols, ultimately fostering better health outcomes and personalized nutrition strategies. By incorporating the latest research findings into our analysis, we can further refine our understanding of the benefits and potential drawbacks of different fasting protocols and provide tailored recommendations for individuals seeking to improve their health through nutritional interventions.

Objectives:

- 1.To evaluate the health benefits associated with the Monk Fasting, Leangains Protocol, and OMAD Diet, including their effects on weight management, metabolic health, and cognitive function.
- 2.To identify and analyze the challenges and potential risks of the Monk Fasting, Leangains Protocol, and OMAD Diet, focusing on compliance.
- 3.The three fasting protocols were compared in terms of their sustainability, overall effectiveness, and suitability for different populations.

Research Questions:

- 1.What are the health benefits of the Monk Fasting, Leangains Protocol and OMAD Diet?
- 2.What challenges and potential adverse effects have been reported for each of these fasting protocols?
How do these fasting protocols compare their sustainability, compliance, and overall effectiveness?

III. METHODOLOGY

This rigorous methodology uses a systematic review to comprehensively synthesize existing evidence on this topic. It involves systematically searching, selecting, and appraising relevant studies from peer-reviewed literature.

Study Design:

Inclusion Criteria: This systematic review will encompass studies published in peer-reviewed journals between 2019 and 2024, involving adult participants aged 18 years and above. Specifically, the focus is on studies examining the Monk Fasting, Leangains Protocol, or OMAD Diet. This review will analyze outcomes related to both health benefits, such as weight loss, improvements in metabolic health, and enhanced mental clarity, as well as challenges, including issues of compliance and potential adverse effects associated with these fasting protocols. Additionally, this review will explore the possible long-term effects of these fasting protocols on overall health and well-being. Furthermore, this review will also investigate the impact of these fasting protocols on various health indicators, such as metabolism, inflammation, and cardiovascular health.

Exclusion Criteria: This systematic review will exclude non-peer-reviewed articles, editorials, and commentaries, ensuring the inclusion of only rigorously researched and peer-reviewed studies. Furthermore, to ensure consistency and ease of understanding, articles published before 2019 and those not written in English were excluded from the analysis. The review will focus solely on fasting protocols aligned with the Monk Fasting, Leangains Protocol, or OMAD Diet, excluding studies exploring alternative fasting methods to maintain specificity and relevance to the research objectives. The significance of these fasting protocols in achieving health and weight loss goals will be assessed, while examining the potential limitations and drawbacks of each method. The results of these assessments will be used to determine the most effective fasting protocols for achieving health and weight loss goals, while minimizing the potential limitations and drawbacks associated with each method.

Search Strategy:

Database	PubMed	Scopus	Google Scholar	Cochrane Library
Keywords	Monk Fasting, Leangains Protocol, OMAD Diet, Fasting benefit	Monk Fasting, Leangains Protocol, OMAD Diet, Fasting challenges	Monk Fasting, Leangains Protocol, OMAD Diet	Monk Fasting, Leangains Protocol, OMAD Diet, Fasting challenges

Table 1. Keyword search.

IV. EXPERIMENTAL RESULTS

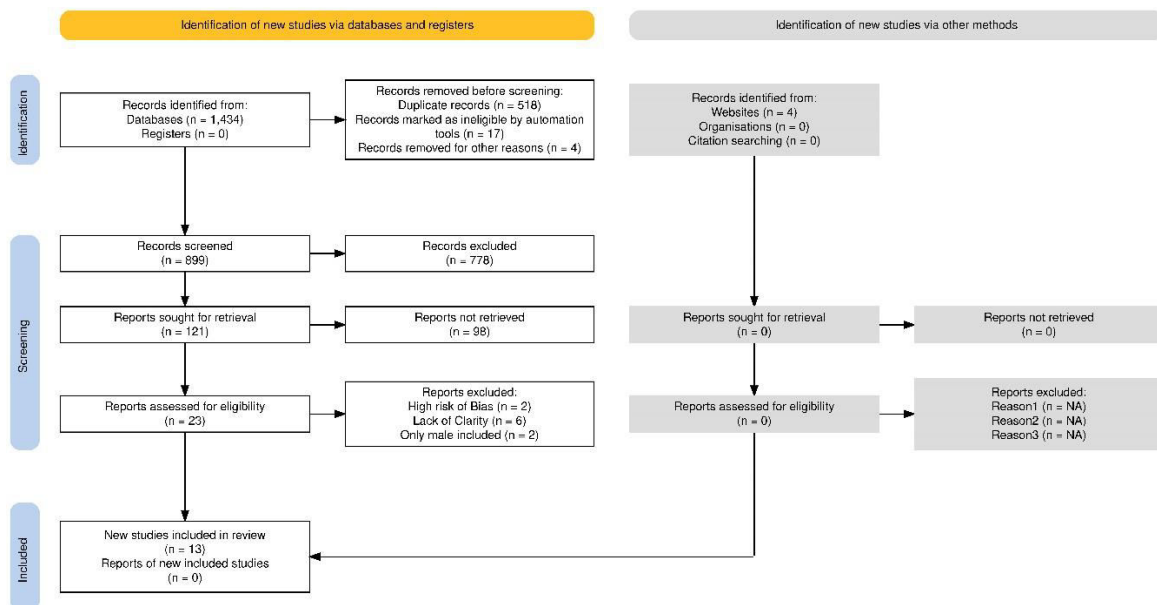


Fig.1 PRISMA flow chart 2020 [6]

The analysis revealed several key themes related to each IF method's benefits, challenges, and sustainability.

Benefits: Intermittent fasting has become increasingly popular owing to its potential health benefits, with three notable methods being monk fasting, the Leangains Protocol, and the One Meal a Day (OMAD) diet. Monk fasting, involving extended periods of food abstinence, is believed to enhance insulin sensitivity, promote autophagy, and possibly extend the lifespan by triggering cellular repair and reducing oxidative stress [7]. The Leangains Protocol, created by Martin Berkhan, utilizes a 16:8 fasting-to-eating ratio, and is praised to aid fat loss while maintaining muscle mass. This method may also improve metabolic flexibility and hormone balance, particularly in terms of growth hormone and insulin regulation. The OMAD diet, which restricts daily calorie intake to a single meal, has been associated with increased fat oxidation and better glucose tolerance, with some studies suggesting cognitive benefits and enhanced cellular stress resistance [8]. Despite the potential advantages of these fasting methods, individual responses can vary based on factors such as age, sex, and health status, and long-term adherence may be challenging [9]. Each of these approaches to intermittent fasting offers unique benefits; however, further studies are needed to fully understand their long-term effects and optimal use.

Challenges: The participants also discussed the challenges faced while practicing IF. Common challenges include initial adaptation to fasting periods, social pressure to eat during fasting windows, and managing hunger and cravings. Monk Fasting and OMAD practitioners reported difficulties in consuming enough nutrients in a single meal, while Leangains Protocol followers sometimes struggled with overeating during the eating window [9]. Despite its rising popularity for its potential health benefits, intermittent fasting is accompanied by significant challenges. This analysis

explored the difficulties associated with three prominent fasting methods: monk fasting, the Leangains Protocol, and the One Meal a Day (OMAD) diet. Fasting involves extended periods without food, which can cause severe physiological stress. Prolonged fasting increases the risk of electrolyte imbalance, dehydration, and hypoglycemia [5]. Breaking long fasts can also trigger the refeeding syndrome, leading to hazardous metabolic shifts. The Leangains Protocol, characterized by a 16:8 fasting-to-eating window, presents difficulties in aligning mealtimes with social or work commitments. Some individuals find it difficult to consume sufficient nutrients within a restricted timeframe, which potentially results in suboptimal nutrition. The OMAD diet is particularly challenging, as all daily calories are consumed in a single meal. This approach may lead to overeating during designated meals, causing gastrointestinal discomfort. Achieving a proper nutrient balance and meeting micronutrient needs also becomes increasingly difficult when relying on just one meal per day [10]. Among these fasting methods, individuals may experience fatigue, irritability, and reduced cognitive function, especially during the initial adaptation phase. Hormonal imbalance and disrupted sleep patterns have also been reported. Although monk fasting, the Leangains Protocol, and the OMAD diet offer potential benefits, they also pose significant challenges that could affect adherence and overall health [11]. Further research is essential to devise strategies to mitigate these challenges and to identify individuals for whom these fasting methods may not be suitable.

Sustainability: The sustainability of each IF method varied among the participants. Some found their chosen method to be easily maintainable and incorporated it into their long-term lifestyles. Others have reported challenges in consistently adhering to fasting schedules, particularly during social events or travel. Participants emphasized the importance of finding an IF method that aligns with individual preferences and lifestyles for long-term sustainability. Sustainability in fasting protocols such as monk fasting, the Leangains Protocol, and the One Meal a Day (OMAD) diet hinges on the delicate balance between health benefits and long-term adherence. Monk fasting, often a practice of abstinence from food for extended periods, aligns closely with spiritual and meditative goals, fostering mental clarity and discipline, but requiring a strong psychological commitment that may challenge its longevity for some [12]. The Leangains Protocol, characterized by a 16-hour fast and an 8-hour eating window, offers a more flexible approach, integrating seamlessly into daily routines, making it a sustainable choice for those seeking weight management without extreme restrictions [13]. The OMAD diet, which condenses caloric intake into one daily meal, pushes the boundaries of traditional eating patterns and can be sustainable for individuals who thrive on routine and simplicity, although it may present nutritional challenges if not carefully planned. Each method's sustainability is personal and dependent on an individual's lifestyle, goals, and ability to maintain nutritional adequacy within the fasting framework.

Discussion:

These findings provide valuable insights into the real-life experiences of individuals practicing the Monk Fasting, Leangains Protocol, and OMAD diet. The reported benefits, such as weight loss and improved energy, are consistent with previous IF studies [2], [14]. However, the challenges and sustainability aspects highlighted by the participants underscore the importance of considering individual factors when adopting an IF approach. The limitations of this study include the small sample size and reliance on self-reported experiences. Future research could employ larger and more diverse samples and incorporate objective measures to further investigate the long-term effects and sustainability of these IF methods. The findings provide valuable insights into the real-life experiences of individuals practicing Monk Fasting, Leangains Protocol, and the OMAD diet. The reported benefits, such as weight loss and improved energy, are consistent with previous IF research [2], [14]. However, the challenges and sustainability aspects highlighted by participants underscore the importance of considering individual factors when adopting an IF approach. The study's limitations include the small sample size and reliance on self-reported experiences. Future research could employ larger and more diverse samples and incorporate objective measures to further investigate the long-term effects and sustainability of these IF methods.

Limitations and Future Research

The main limitations of this study include the small sample size and reliance on self-reported data. Future research with larger and more diverse samples and integrating objective measures, such as health markers, would provide a more comprehensive understanding of the long-term effects and sustainability of these IF methods.

V. CONCLUSION

This qualitative study explored the experiences and perspectives of Monk Fasting, Leangains Protocol, and OMAD Diet practitioners. The findings shed light on each approach's perceived benefits, challenges, and sustainability,

providing valuable insights for individuals by adopting the IF method. In conclusion, this study highlights the nuanced and varied experiences of individuals practicing Monk Fasting, the Leangains Protocol, and the OMAD diet. Although these intermittent fasting methods offer notable health benefits, including weight loss, improved energy, and potential longevity, they also present significant challenges that can impact adherence and long-term sustainability. These findings suggest that individual factors, such as lifestyle, psychological commitment, and nutritional planning, play a crucial role in determining the success of each fasting protocol. This study's insights emphasize the importance of personalized approaches to intermittent fasting, acknowledging that what works for one person may not be suitable for another. However, the study's limitations, including the small sample size and reliance on self-reported data, indicate the need for further research with larger, more diverse populations, and objective health markers. Such research would deepen our understanding of the long-term effects and sustainability of these fasting practices, helping refine dietary recommendations for those seeking to incorporate intermittent fasting into their lives.

REFERENCES

- [1]G. A. Soliman, "Intermittent fasting and time-restricted eating role in dietary interventions and precision nutrition.," *Front. public Heal.*, vol. 10, p. 1017254, 2022.
- [2]A. R. Barnosky, K. K. Hoddy, T. G. Unterman, and K. A. Varady, "Intermittent fasting vs daily calorie restriction for type 2 diabetes prevention: a review of human findings.," *Transl. Res.*, vol. 164, no. 4, pp. 302–311, Oct. 2014.
- [3]"The Leangains Guide - Leangains." [Online]. Available: <https://leangains.com/the-leangains-guide/>. [Accessed: 10-Aug-2024].
- [4]G. M. Tinsley and P. M. La Bounty, "Effects of intermittent fasting on body composition and clinical health markers in humans.," *Nutr. Rev.*, vol. 73, no. 10, pp. 661–674, Oct. 2015.
- [5]V. D. Longo and S. Panda, "Fasting, Circadian Rhythms, and Time-Restricted Feeding in Healthy Lifespan.," *Cell Metab.*, vol. 23, no. 6, pp. 1048–1059, Jun. 2016.
- [6]N. R. Haddaway, M. J. Page, C. C. Pritchard, and L. A. McGuinness, "PRISMA2020: An R package and Shiny app for producing PRISMA 2020-compliant flow diagrams, with interactivity for optimised digital transparency and Open Synthesis," *Campbell Syst. Rev.*, vol. 18, no. 2, p. e1230, Jun. 2022.
- [7]H. Üstündağ et al., "Exploring the Impact of Ketogenic Diet and Intermittent Fasting on Male Rats' Testicular Health: An Analysis of Hormonal Regulation, Oxidative Stress, and Spermatogenesis," *J. Food Biochem.*, vol. 2023, no. 1, p. 5562120, 2023.
- [8]J. Gudden, A. Arias Vasquez, and M. Bloemendaal, "The Effects of Intermittent Fasting on Brain and Cognitive Function.," *Nutrients*, vol. 13, no. 9, Sep. 2021.
- [9]D.-K. Song and Y.-W. Kim, "Beneficial effects of intermittent fasting: a narrative review.," *J. Yeungnam Med. Sci.*, vol. 40, no. 1, pp. 4–11, Jan. 2023.
- [10]"OMAD Diet: Benefits and Risks." [Online]. Available: <https://www.health.com/weight-loss/omad-diet>. [Accessed: 10-Aug-2024].
- [11]E. Hosseini et al., "Fasting diets: what are the impacts on eating behaviors, sleep, mood, and well-being?," *Front. Nutr.*, vol. 10, p. 1256101, 2023.
- [12]"Monk Fast for Weight Loss: Overview, Safety, 4 Benefits & Results." [Online]. Available: https://www.medicinenet.com/monk_fast_for_weight_loss_overview_and_safety/article.htm. [Accessed: 10-Aug-2024].
- [13]L. Huang et al., "Is time-restricted eating (8/16) beneficial for body weight and metabolism of obese and overweight adults? A systematic review and meta-analysis of randomized controlled trials.," *Food Sci. Nutr.*, vol. 11, no. 3, pp. 1187–1200, Mar. 2023.
- [14]M. Harvie and A. Howell, "Potential Benefits and Harms of Intermittent Energy Restriction and Intermittent Fasting Amongst Obese, Overweight and Normal Weight Subjects-A Narrative Review of Human and Animal Evidence.," *Behav. Sci. (Basel, Switzerland)*, vol. 7, no. 1, Jan. 2017.
- [15]A. Hindle and D. Rosen, "Physiology, Fasting," *Physiol. Mar. Mamm. Adapt. to Ocean*, pp. 231–253, Jul. 2023.
- [16]R. E. Patterson et al., "Intermittent Fasting and Human Metabolic Health.," *J. Acad. Nutr. Diet.*, vol. 115, no. 8, pp. 1203–1212, Aug. 2015.
- [17]"One Meal a Day Diet: Benefits, Risks, and More." [Online]. Available: <https://www.healthline.com/health/one-meal-a-day>. [Accessed: 10-Aug-2024].
- [18]E. C. E. Meessen et al., "Differential Effects of One Meal per Day in the Evening on Metabolic Health and Physical Performance in Lean Individuals.," *Front. Physiol.*, vol. 12, p. 771944, 2021.
- [19]V. D. Longo and M. P. Mattson, "Fasting: molecular mechanisms and clinical applications.," *Cell Metab.*, vol. 19, no. 2, pp. 181–192, Feb. 2014.

- [20]M. P. Mattson, V. D. Longo, and M. Harvie, “Impact of intermittent fasting on health and disease processes.,” *Ageing Res. Rev.*, vol. 39, pp. 46–58, Oct. 2017.
- [21]“about:blank 1/1,” no. 1, p. 22155760, 2024.
- [22]B. Kuramasuwan, N. Howteerakul, N. Suwannapong, and P. Rawdaree, “Diabetes, impaired fasting glucose, daily life activities, food and beverage consumption among Buddhist monks in Chanthaburi Province, Thailand,” *Int. J. Diabetes Dev. Ctries.*, vol. 33, no. 1, pp. 23–28, 2013.
- [23]K. S. Stote et al., “A controlled trial of reduced meal frequency without caloric restriction in healthy, normal-weight, middle-aged adults.,” *Am. J. Clin. Nutr.*, vol. 85, no. 4, pp. 981–988, Apr. 2007.
- [24]J. M. Monk et al., “Fish oil supplementation to a high-fat diet improves both intestinal health and the systemic obese phenotype.,” *J. Nutr. Biochem.*, vol. 72, p. 108216, Oct. 2019.
- [25]C. Giaginis, M. Mantzourou, S. K. Papadopoulou, M. Gialeli, A. Y. Troumbis, and G. K. Vasios, “Christian Orthodox Fasting as a Traditional Diet with Low Content of Refined Carbohydrates That Promotes Human Health: A Review of the Current Clinical Evidence.,” *Nutrients*, vol. 15, no. 5, Feb. 2023.
- [26]V. Sitprija and R. Suvanpha, “Low protein diet and chronic renal failure in Buddhist monks.,” *Br. Med. J. (Clin. Res. Ed)*, vol. 287, no. 6390, pp. 469–471, Aug. 1983.



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