

AN ANALYTICAL STUDY ABOUT THE HEALTH BENEFITS OF FASTING

*Dr Najmul Sahar Ilyas¹, Dr Hafiza Maria Hassan Padhiar², Amber Mehar³¹ Senior Assistant Professor Islamic Studies, HOD General Education Department, Bahria University Health Sciences Campus Karachi, Sindh, Pakistan. ORCID: <https://orcid.org/0000-0001-7719-4323>² Lecturer, Government Degree College 11i North Karachi, Sindh, Pakistan. ORCID: <https://orcid.org/0000-0001-5440-9176>³ Senior Lecturer, Benazir Bhutto Shaheed University Lyari Karachi, Sindh, Pakistan. ORCID: <https://orcid.org/0009-0000-0799-1124>

ARTICLE INFO

ABSTRACT

Article History:

Received: April 09, 2025

Revised: April 30, 2025

Accepted: May 03, 2025

Available Online: May 07, 2025

Keywords:

Lifestyle Modalities

Intermittent Fasting

Metabolism

Novel Paradigm

Human Health

Funding:

This research journal (PIIJSS) doesn't receive any specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Copyrights:



Copyright Muslim Intellectuals Research Center. All Rights Reserved © 2021.

This work is licensed under a Creative Commons Attribution 4.0 International License.

Various lifestyle practices, including physical exercise and intermittent fasting, are gaining recognition as effective methods to improve health and well-being. For instance, the obligatory fasting observed during the lunar month of Ramadan is a religious observance in Islam that healthy individuals across the Arab World partake in each year. The daily avoidance of food and beverages (from sunrise to sunset) during Ramadan exemplifies intermittent fasting. Fasting or intermittent fasting is emerging as a new approach and is indicating potential long-term health advantages. This article examines the effects of fasting on human health, focusing specifically on body composition, metabolism, cardiovascular health, and mental wellness.

*Corresponding Author's Email: najmussahar2010@gmail.com

INTRODUCTION

Fasting is the voluntary abstention from food, drink, or certain activities for a specific period of time. It is often practiced for religious, spiritual, health, or personal reasons. The practice of fasting can vary in its rules and the length of time depending on the cultural or religious context. In the Qur'an, fasting is discussed in several verses, primarily in Surah Al-Baqarah. Below are the key verses that mention fasting:

"O you who have believed, decreed upon you is fasting as it was decreed upon those before you that you may become righteous."

This verse establishes the obligation of fasting for the believers, highlighting its purpose as a means of developing righteousness (Taqwa).

"Fasting is for a limited number of days. So whoever among you is ill or on a journey, then an equal number of other days. And Allah intends for you ease and does not intend for you hardship and [wants] for you to complete the period and to glorify Allah for that to which He has guided you, and perhaps you will be grateful."

The above verse intimates the duration of fasting and mention some exceptions for the people who are ill or those who are traveling. Those people might make up for missed fast days by giving Fidyah, which is a food or money donation to the needy. (International Diabetes Federation; 2021) (Al-Arouj et al. 2010) (Hassanein M et al. 2019) (Hajek P et al, 2012)

Following are some famous Hadiths (sayings of the Prophet Muhammad SAW) about fasting, which describe the significance of fasting in Islam.

THE OBLIGATION OF FASTING IN RAMADAN

Abu Huraira (RZ) narrated, The Prophet Muhammad SAW said:

“When the month of Ramadan Begins, the gates of Heaven are opened, the gates of Hell are closed, and the devils are chained.”

(Sahih al-Bukhari).

This Hadith emphasizes the importance of Ramadan, the gates of Heaven being opened, and describe that fasting is a source of spiritual advancement.

THE COMPENSATION OF FASTING

Hazrat Abu Huraira (RZ) narrated, The Prophet Muhammad SAW said:

“Each act of the son of Adam is for him, apart from fasting. It is for Allah, and he will reward it. Fasting is a shield. So, if somebody is fasting, he shouldn’t involve in sexual relations and should not act stupidly or communicate in a filthy way. If someone fights or abuses him, he should say, ‘I am fasting.’”(Sahih al-Bukhari)

This Hadith intimate the extraordinary reward that Allah offers for fasting and how fasting acts as a shield, guarding the soul from sins.

DIVERSE TYPES OF FASTING

1. Religious Fasting

This is typically executed for religious Practices and can assist as a means of worship, purification, or self-discipline. For Example:

- Fasting of Muslims (Fasting of Ramadan): Muslims fast from dawn until dusk daily during Ramadan, abstaining from food, drink, and several physical desires (such as smoking or sexual relationship). The purpose of fasting is to cultivate self-control, spiritual growth, and empathy for those in need.
- Fasting in Christianity: Many Christians engage in fasting during Lent, often sacrificing certain foods or activities to develop their connection with God.
- Fasting in Judaism: Observing fasts on Yom Kippur or during other religious occasions, which causes abstaining from food and drink for a fixed duration.

2. Intermittent Fasting (IF)

This current health trend comprises of switching between eating and fasting episodes. Popular methods include fasting for 16 hours daily, leaving an 8-hour gap for meals (16/8), or engaging in 24-hour fasts two times a week. Persons who practice intermittent fasting target for various health benefits, such as cracking pounds or improving metabolic health.

3. Conditional Fasting

Some persons may fast to stimulate detoxification or other health benefits. This type of fasting can be executed for shorter intervals (like skipping meals or fasting for 12-16 hours) and is thought to provide aids such as weight decrease, enhanced insulin sensitivity, and improved cellular repair.

KEY FEATURES OF FASTING

• Abstaining from Food and Drinks

Best fasting observes, whether for physical or spiritual aims, involve not consuming food and drinks for an identified duration. This practice supports in reorganizing the body’s metabolism, increasing digestion, and decreasing calorie consumption.

• Psychological and Spiritual Advantages

In religious perspective, generally Fasting inspires individual to focus on discipline, reflection, and personal development.

• Relaxation for the Digestive System

During Fasting our Digestive system takes a break, this break helps the body to detoxify and relax itself.

PHYSICAL & RELIGIOUS ADVANTAGES

• Physical Advantages

Fasting habit can contribute to weight reduction. It also improved the body metabolism, Insulin sensitivity and cellular redevelopment. It may also boost heart function, support intellectual function and improve the lifestyle and could increase lifespan.

• Religious Advantages

Fasting frequently adopts a feeling of humbleness, gratitude and empathy towards others. It strengthens the belief of a person, promotes self-discipline and purify their thoughts and actions.

Generally, Religious/ Muslim fasting is a multi-dimensional practice that holds both physical and

spiritual importance. This practice is influenced by the spirit & purpose behind it.

Intermittent Fasting (IF) and Muslim Fasting during Ramadan, provide various health benefits. Though the rigorous approaches and schedules may differ, both the fasting approaches comprises of interchanging periods of abstaining from food and eating, which can substantially impact the body. Here is some health advantages associated to both methods of Fasting.

HEALTH BENEFITS OF INTERMITTENT FASTING (IF)

It is a dietary technique that substitutions between eating and fasting break. Common practices include the 16/8 technique (which contains 16 hours of fasting followed by an 8-hour intake period) or the 5:2 process (where individual eats normally for five days and confines calorie consumption for two days).

1. Improved Insulin Sensitivity

Intermittent fasting has established the ability to develop insulin sensitivity, supporting in the controlling of blood sugar levels. This reduces the possibility of increasing Type 2 diabetes by decreasing insulin levels and enhancing the body's capability to cope sugar proficiently.

2. Reduction of Weight and Fats

Intermittent fasting helps in weight reduction by dropping calorie intake and improving metabolism. When person fasts, the body shifts from consuming glucose to burning deposited fat for energy, it enables the body to reduce fat. It also improves the discharge of norepinephrine, a hormone that stimulates fat burning, in this way the body further contribute in the breakdown of fat.

3. Cellular Restoration and Longevity

During the observance of fasting, cells generate autophagy, a tool that permits the body to remove damaged cells and produce new ones. This process is considered to lower the possibility of certain illnesses and support to the reduce speed of aging. (Mihaylova, M. M. et al, 2018).Some researches show that intermittent fasting may help to develop lifespan by fostering cellular restoration mechanisms. (Cuervo et al, 2017)

4. Improved Cardiac Health

The Intermittent fasting (IF) technique can improve cardiac health by lowering down blood pressure,

cholesterol levels, triglycerides, and inflammation indicators, so that there is a less possibility of Heart-related diseases. (Allaf M et al, 2021)

5. Enhanced Brain Function

- a. Intermittent fasting enables the possibility to increase the levels of brain-derivative neurotropic factor (BDNF), a protein that maintained brain health and mental performance.
- b. it may also reduce the possibility of developing neurodegenerative disorders such as Alzheimer's and Parkinson's disease. (Wilhelmi de Toledo et al, 2020)

6. Enhanced Mental Sharpness and Concentration

Numerous individuals have noted greater mental sharpness and better focus during fasting intervals, probably due to stabilized blood sugar levels and improved brain performance.

7. Hormonal Advantages

Fasting boosts the release of growth hormone, which significantly contributes to fat loss, muscle development, and overall athletic performance. (Longo et al, 2021)

HEALTH BENEFITS OF MUSLIM FASTING (RAMADAN FASTING)

Ramadan fasting, a form of intermittent fasting is observed from dawn to sunset for a month each year. While the approach is rooted in spiritual and religious practices, it also provides several health benefits:

1. Detoxification

Observing fast during Ramadan enables the body to cleanse itself, as refraining from food and drink for extended durations aids in removing built-up toxins. The liver, kidneys, and digestive system operate more efficiently while fasting.

2. Improved Digestive Health

Fasting provides the digestive system with a chance to rest and rejuvenate. When the body isn't continually processing food, it can heal, potentially leading to enhancements in gut health, including improved nutrient absorption. (Li, G. et al, 2017)

It can assist with problems such as indigestion, bloating, and heartburn, as the digestive system receives a rest from continuous processing.

3. Weight Loss and Fat Burning

Similar to intermittent fasting, fasting during Ramadan can result in weight loss due to decreased calorie consumption and a rise in fat-burning hormones. During the hours of fasting, the body transitions to burning fat, which encourages fat reduction. (Harris, L. et al, 2018)

4. Improved Blood Sugar Control

Observing fasts during Ramadan could aid in stabilizing blood sugar levels by lowering insulin resistance and enhancing glucose metabolism, akin to the impacts of intermittent fasting. (Yuan, X. et al, 2022)

5. Improved Cholesterol Levels

Research indicates that fasting during Ramadan could have beneficial impacts on cholesterol levels, potentially reducing total cholesterol, LDL (the harmful type of cholesterol), and triglycerides, while increasing HDL (the beneficial type of cholesterol). (Günbatır et al, 2023)

6. Reduced Inflammation

Fasting has the potential to decrease inflammation within the body. Long-term inflammation is associated with various health issues, such as heart disease, diabetes, and autoimmune disorders. The anti-inflammatory properties of fasting contribute to promoting overall well-being.

7. Mental Clarity and Focus

Numerous individuals claim to experience enhanced mental clarity during Ramadan, likely due to the mindfulness linked to fasting and the emphasis on spiritual practices such as prayer and contemplation. Additionally, fasting has been shown to boost mood and alleviate stress. (Karin Seidler et al, 2022)

8. Improved Spiritual and Psychological Well-Being

Fasting during Ramadan goes beyond merely refraining from eating and drinking; it serves as an opportunity for spiritual development, introspection, and a deeper connection with God. Numerous individuals find heightened feelings of thankfulness, compassion, and emotional stability during this time.

9. Improved Sleep Quality

During Ramadan, fasting frequently causes alterations in sleep habits, with numerous individuals

stating that their sleep quality improves throughout the month. While sleep might be somewhat disturbed because of early morning meals (suhoor) and late-night prayers (Tarawih), many find that their sleep enhances after they adapt to the fasting routine.

SIMILARITIES BETWEEN INTERMITTENT FASTING AND MUSLIM FASTING

1. Caloric Restriction

Both types of fasting often result in reduced calorie consumption, which can contribute to weight loss and overall health improvement.

2. Increased Fat Burning

Both methods promote fat burning by switching the body from using glucose as the primary fuel source to using fat after several hours of fasting.

3. Improved Insulin Sensitivity

Both fasting practices improve insulin sensitivity, which helps in maintaining balanced blood sugar levels and reducing the risk of Type 2 diabetes. (Patterson, R. E. et al, 2015)

4. Spiritual Benefits

While intermittent fasting is mainly health-focused, both types of fasting help improve spiritual awareness and self-discipline. Ramadan fasting is a deeply spiritual experience, encouraging self-restraint, charity, and mindfulness.

5. Mental Clarity

Both types of fasting are associated with mental clarity and improved cognitive function, likely due to stable blood sugar levels and the reduction of inflammation in the brain.

CONCLUSION

Both intermittent fasting and fasting during Ramadan provide notable health advantages, such as enhanced metabolic health, weight management, improved digestion, increased cognitive performance, and healthier cardiovascular systems. Although intermittent fasting is typically practiced throughout the year, the benefits of Ramadan fasting are amplified by its spiritual, psychological, and emotional dimensions. Regardless of whether it's for health purposes or spiritual growth, fasting remains a timeless practice with established benefit

REFERENCES

- Al-Arouj M, Assaad-Khalil S, Buse J, Fahdil I, Fahmy M, Hafez S, et al. Recommendations for management of diabetes during Ramadan. Update 2010. *Diabetes Care*. 2010;33(8):1895-902. <https://doi.org/10.2337/dc10-0896> PMID:206681575.
- Allaf M, Elghazaly H, Mohamed OG, Fareen MFK, Zaman S, Salmasi AM, Tsilidis K, Dehghan A. Intermittent fasting for the prevention of cardiovascular disease. *Cochrane Database Syst Rev*. 2021 Jan 29;1(1):CD013496. doi: 10.1002/14651858.CD013496.pub2. PMID: 33512717; PMCID: PMC8092432.
- Al-Quran (2:183)
- Al-Quran (2:184)
- Cuervo, A. M., Bergamini, E., Brunk, U. T., Dröge, W., Ffrench, M., & Terman, A. (2005). Autophagy and aging: the importance of maintaining "clean" cells. *Autophagy*, 1(3), 131–140. <https://doi.org/10.4161/auto.1.3.2017>
- Günbatar, N., Bulduk, B., Bezgin, S., Oto, G., Bayıroğlu, F., & Bulduk, M. (2023). The Effect of Moderate-Intensity Physical Exercise on Some Serum Inflammation Markers and the Immune System in Rats Fed Intermittent Fasting with a High-Fat Diet. *Medicina*, 59(9), 1687. <https://doi.org/10.3390/medicina59091687>
- Hajek P, Myers K, Dhanji AR, West O, McRobbie H. Weight change during and after Ramadan fasting. *J Public Health (Oxf)*. 2012;34(3):377-81. <https://doi.org/10.1093/pubmed/fdr087> PMID:22083256
- Harris, L., Hamilton, S., Azevedo, L. B., Olajide, J., De Brún, C., Waller, G., Whittaker, V., Sharp, T., Lean, M., Hankey, C., & Ells, L. (2018). Intermittent fasting interventions for treatment of overweight and obesity in adults: a systematic review and meta-analysis. *JBISIRIR-2016-003248* <https://doi.org/10.11124/JBISIRIR-2016-003248>
- Hassanein M, Al Awadi FF, El Hadidy KS, Ali SS, Ehtay A, Djaballah K, et al. The characteristics and pattern of care for the Type 2 diabetes mellitus population in the MENA region during Ramadan: An international prospective study (DARMENA T2DM). *Diabetes Res Clin Pract*. 2019;151:275-84. <https://doi.org/10.1016/j.diabres.2019.02.020> PMID:308255606.
- International Diabetes Federation. *Diabetes and Ramadan. Practical Guidelines*. Brussels, Belgium: International Diabetes Federation; 2021. <https://doi.org/10.17925/ee.2009.05.00.18>. Available from: <https://idf.org/our-activities/education/diabetes-and-ramadan/healthcare-professionals.html4>.
- Karin Seidler, Michelle Barrow, Intermittent fasting and cognitive performance – Targeting BDNF as potential strategy to optimise brain health. *Frontiers in Neuroendocrinology*. Volume 65, 2022, 100971, ISSN 0091-3022, <https://doi.org/10.1016/j.yfrne.2021.100971>
- Li, G., Xie, C., Lu, S., Nichols, R. G., Tian, Y., Li, L., ... & Gonzalez, F. J. (2017). Intermittent fasting promotes white adipose browning and decreases obesity by shaping the gut microbiota. *Cell metabolism*, 26(4), 672-685.
- Longo, V.D., Di Tano, M., Mattson, M.P. et al. Intermittent and periodic fasting, longevity and disease. *Nat Aging* 1, 47–59 (2021). <https://doi.org/10.1038/s43587-020-00013-3>
- Mihaylova, M. M., Cheng, C. W., Cao, A. Q., Tripathi, S., Mana, M. D., Bauer-Rowe, K. E., Abu-Remaileh, M., Clavain, L., Erdemir, A., Lewis, C. A., Freinkman, E., Dickey, A. S., La Spada, A. R., Huang, Y., Bell, G. W., Deshpande, V., Carmeliet, P., Katajisto, P., Sabatini, D. M., & Yilmaz, Ö. H. (2018). Fasting Activates Fatty Acid Oxidation to Enhance Intestinal Stem Cell Function during Homeostasis and Aging. *Cell stem cell*, 22(5), 769–778.e4. <https://doi.org/10.1016/j.stem.2018.04.001>
- Patterson, R. E., Laughlin, G. A., LaCroix, A. Z., Hartman, S. J., Natarajan, L., Senger, C. M., Martínez, M. E., Villaseñor, A., Sears, D. D., Marinac, C. R., & Gallo, L. C. (2015). Intermittent Fasting and Human Metabolic Health. *Journal of the Academy of Nutrition and Dietetics*, 115(8), 1203–1212. <https://doi.org/10.1016/j.jand.2015.02.018>
- Sahih al-Bukhari, Hadith 1899
- Sahih al-Bukhari, Hadith 1904
- Wilhelmi de Toledo, F., Grundler, F., Sirtori, C. R., & Ruscica, M. (2020). Unravelling the health effects of fasting: a long road from obesity treatment to healthy life span increase and improved cognition. *Annals of Medicine*, 52(5), 147–161. <https://doi.org/10.1080/07853890.2020.1770849>
- Yuan, X., Wang, J., Yang, S., Gao, M., Cao, L., Li, X., ... & Sun, C. (2022). Effect of intermittent fasting diet on glucose and lipid metabolism and insulin resistance in patients with impaired glucose and lipid metabolism: a systematic review and meta-analysis. *International journal of endocrinology*, 2022(1), 6999907.