

The Benefits of Intermittent Fasting as an Alternative to Medical Therapy to Improve Health Status

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A b s t r a c t

Keyword :
Health,
Islam,
Intermittent fasting

Background: Health is a fundamental human need to be cared for. In order to maintain health of the body, there is one alternative medicine growing around the community, a therapy performed by the prophet Muhammad SAW or commonly known as *thibbun nabawi*. The example of the prophet's teaching and actions included in pillars of Islam is fasting. Fasting in addition to increase faith and taqwa, can also benefit from the fasting. **Objectif:** The purpose of this research was for communities to understand fasting and health relationships for the next time being practiced in live. **Methods :** The research method used is a literature review with the inclusion criteria being journals published in the last 10 years and the exclusion criteria being journals that are irrelevant and too old. **Results:** In a related journal, it was found that in fasting conditions the body will experience the process of autophagy, which is the process of cleaning various types of old, damaged cellular components such as organelles, proteins and cell membranes in the human body.. The detoxification process will occur naturally in the human body that regularly performs intermittent fasting, eventually improving its resistance. **Conclusion :** The conclusion is that intermittent fasting can improve health status, either improving body immunity and or disease treatment. It must also be offset by implementing a healthy lifestyle.

Kata kunci :
Kesehatan,
Islam,
Puasa

A B S T R A K

Latar belakang: Kesehatan merupakan kebutuhan mendasar manusia yang patut dijaga. Dalam rangka menjaga kesehatan, terdapat berbagai pengobatan alternatif yang tumbuh di lingkungan masyarakat, contohnya terapi yang dilakukan oleh Nabi Muhammad SAW atau biasa dikenal dengan istilah *Thibbun Nabawi*. Contoh pengajaran dan tindakan Nabi Muhammad SAW yang termasuk kedalam rukun islam adalah puasa. Ibadah puasa selain dapat meningkatkan iman dan taqwa, juga memiliki banyak manfaat dari sisi kesehatan. **Tujuan:** Penelitian ini bertujuan agar masyarakat khususnya yang beragama Islam dapat memahami kaitan puasa ala Nabi Muhammad SAW dengan kesehatan. **Metode:** Metode penelitian yang digunakan adalah kajian literatur atau *Literature review* dengan kriteria inklusi jurnal terbitan 10 tahun terakhir dan kriteria eksklusi adalah jurnal yang tidak relevan dan terlalu tua. Adapun sifat dari penelitian ini adalah analisis deskriptif, yaitu penguraian secara teratur mengenai kaitan puasa dengan kesehatan, kemudian diberikan pemahaman dan penjelasan agar dapat dipahami dengan baik oleh pembaca. **Hasil :** Penelitian ini memperoleh hasil bahwa menjalankan puasa akan menginduksi kondisi autofagi. Pada jurnal terkait ditemukan bahwa pada kondisi puasa tubuh akan mengalami proses autofagi, yang merupakan proses pembersihan berbagai macam komponen seluler lama yang rusak seperti organel, protein, dan membrane sel yang ada di dalam tubuh manusia. Pada kondisi kelaparan tersebut, tubuh akan berusaha untuk memakan sel-sel yang rusak yang masih ada di dalam tubuh. **Kesimpulan :** Ibadah puasa dapat meningkatkan imunitas tubuh, mengurangi terjadinya penuaan dini, dan menekan potensi berkembangnya sel-sel rusak seperti sel kanker karena terjadi regenerasi sel-sel dalam tubuh.

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INTRODUCTION

Allah SWT created humans on this earth for a noble purpose, namely to become a khalifah. The khalifah is tasked with carrying out His commands and avoiding His prohibitions. One of the commands of Allah SWT that must be carried out by humans in order to always be close to Him is to fast. Every act of worship, including fasting, which is commanded by Allah SWT for humans, always has a meaning. The intended meaning is a benefit that will definitely return to the person who runs it, which can be in the form of direct or indirect benefit, and/or benefits in this world and the hereafter. Physiologically, worship in Islam is not only about worshiping Allah SWT, because His divine nature will not decrease even if all humans on this earth do not worship Him. (1)

Fasting is a form of worship performed by Muslims and is an obligation that must be fulfilled, especially during the month of Ramadan. In addition to the obligatory fasting, there are sunnah fastings, including fasting for six days in the month of Shawwal, fasting every Monday and Thursday, fasting on the day of Arafah, fasting on the day of Ashura, fasting in the month of Sha'ban, and fasting on the 13th, 14th, and 15th of the month of Qomariyah. (2)

The basic principles of eating habits in Islam, namely halal, thayyib (good), and enough (nothing less and nothing more), are carried out in this intervention effort to be adopted by the community. The principles of thayyib and enough are in accordance with existing scientific evidence, especially according to the principle of intermittent fasting. Intermittent fasting or fasting done by fasting and stopping fasting for a certain period of time. In Islam, such a fast bears resemblance to the sunnah fasting of Monday and Thursdays and the fasting of David or one day fasting and one day without fasting.

(3) Intermittent fasting is also an alternative method of medication therapy that is being widely researched and popular. Because it has many effects or is beneficial both in terms of physical and psychological health for those who do and apply it. (2)

METHOD

Types of Research

This research method is literature review. Literature review is a systematic, explicit and reproducible method for identifying, evaluating and synthesizing works of research results and ideas that have been produced by researchers and practitioners. A literature review aims to make an analysis and synthesis of existing knowledge related to the topic to be researched to find empty space for research to be carried out. The nature of this research is descriptive analysis, namely the regular breakdown of the data that has been obtained, then given an understanding and explanation so that it can be well understood by the reader.

Inclusion and Exclusion Criteria

Study Type

The research methods taken in this scientific search are mixed methods study, cross sectional study, correlation analysis, and qualitative study with the inclusion criteria being journals published in the last 10 years and the exclusion criteria being journals that are irrelevant and too old.

This research uses a literature review method with a Narrative review type where researchers involve narrative explanations and descriptions of literature relevant to the research topic. In this research, the topic of the benefits of fasting to improve health status is used.

There were 10 articles used to conduct a literature review search, where to find suitable articles the method used was to use the research database method from articles in Google Scholar and also other electronic journal portals that matched the keywords used and met the inclusion criteria and specified exclusion.

Result Measure

The outcome measured in this scientific investigation was the effect of intermittent fasting as an alternative to medication therapy to improve the patient’s health status.

Literature Keyword Search Strategy

Search for published articles on Google, Google Scholar, Researchgate, and Mendeley using the selected keywords: intermittent fasting and medication therapy through fasting in English and Indonesian.

Google Search	https://www.google.co.id/?hl=id
Google Scholar	https://scholar.google.co.id
Research Gate	https://www.researchgate.net
Mendeley	https://www.mendeley.com/

Articles or journals that meet the inclusion and exclusion criteria are taken for further analysis. This literature review uses literature published in 2012-2022 which can be accessed in full text in pdf format and scholarly (peer reviewed journals). The criteria for the journals reviewed were research journal articles in Indonesian and English with the subject Intermittent Fasting Treatment Therapy. The criteria for the selected journal for review are journals in which there is the theme of intermittent fasting with its benefits as a therapeutic treatment.

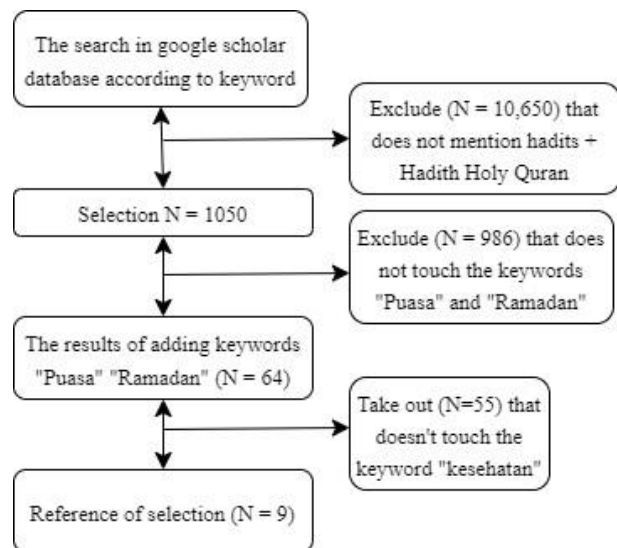
The search for reading sources in the preparation of this article is carried out from June – Nov 2023 from the google scholar database. Keywords that are keywords from

the abstract of this article (Intermittent+ fasting + Health + Islam) with limiting from 2010-2023. This keyword is added with keywords that are identical to Islamic studies.

From the acquisition of browsing the results, then sorted out which journals allow to be reviewed the article as a whole. Because there are some items appear as books that are sold and cannot be accessed completely by not paying or for nothing. Filtering is continued with articles whose themes are not related to the topic occupied, including English articles.

From the key words that ... Appeared 11,700 items consisting of articles, books, proceedings, patents etc. Then 10,650 articles were issued that did not mention the Quran and Hadith/Hadith at all, with the words 'fasting' and 'ramadan' the number of items shrunk to 64, to conclude the search with the word 'Health'. It can be derived with the additional key words fasting and Ramadan.

Research inclusion criteria can be seen in the following table:



Data Synthesis

The literature review was synthesized using the narrative method by grouping similar extracted data according to the results to answer the objective. Research journals that match the inclusion criteria are then collected and summarized including the name of the researcher, year of publication of the journal, research title, method and summary of result or findings. Analysis of the research conducted by describing it in a sentence. Then look for similarities and differences in each study as the subject of discussion to draw conclusions.

RESULT AND DISCUSSION

Fasting is a worship that is routinely carried out by muslims, especially every year in the month of Ramadan. Fasting is an activity of refraining from eating, drinking, and lust. Fasting has been practiced by muslims since thousands of years ago. Fasting it self in Islam is divided into several types, namely obligatory fasting, namely Ramadan fasting and sunnah fasting. However, along with the times and the many non-muslim practice fasting as a therapy for healing diseases. Fasting that is devoted to vuring this disease is commonly referred to as therapeutic fasting or intermittent fasting. Intermittent fasting is an effort to maintain a healthy lifestyle for the human body in order to maintain health. In fact, among muslims, therapeutic fasting is almost the same as sunnah fasting, except that therapeutic fasting is more focused on health goals and can be carried out by both muslims and non-muslims.

There is a basic principle of intermittent fasting, namely limiting food intake in the body, but it is still permissible to drink water that does not contain sugar or other additives. There are several types of intermittent fasting that are knows so far. The form of intermittent flashing that is often done is in the form of reducing the fasting time by 5:2 in one week, there are also those who fast 16 hours every day with

8 hours of eating time in a day. David's fast is classified as intermittent fasting 16:8, with reduced eating times when fasting. In carrying out intermittent fasting with sunnah fasting there are differences in drinking restrictions, the proportion of fasting time, and eating time that are not the same as David's fasting. In addition to the health effects that will be obtained, if sunnah fasting is intended as worship then you will get a reward. Intermittent fasting will induce autophagy. Detoxification will occur naturally in the human body that routinely does intermittent fasting, which in turn will make the immune system better. The result of the research showed that there were a significant reductions in body weight in humans who did intermittent fasting compared to those who did not do intermittent fasting.

There are several benefits of intermittent fasting for the health of the body and healing a disease, including the following:

a. Treating inflammatory disease

Fasting effectively helps treat digestive system ailments such as colitis and gallbladder swelling. Fasting helps the body system rest for a while. Fasting makes the body more stable because it brings peace of mind to the fasting person. Fasting is also able to cure inflammation in the stomach because it can help normalize stomach acid levels. Fasting affects the content of the gut microbiota, leading to an increase in lactate and acetate as well as a selective increase in the expression of monocarboxylic transporter 1 in beige cells. Fasting helps the body repair and regenerate cells while boosting the immune system, but it also reduces oxidative stress (OS) and inflammation. Periodic fasting (PF) stimulates stem cell-based regeneration as well as long-term metabolic effects. (4)

b. Overcoming obesity

Fasting can effectively stimulate the development of beige fat in white adipose tissue and can reduce obesity. Overweight

or obesity is triggered by high fat intake and low levels of physical activity. Prevention and treatment of obesity can be done by maintaining a balance between diet and physical activity. One of the management efforts used to lose weight is fasting. (5) Fasting is categorized as a dietary approach to limit daily calorie intake in both the short and long term. Both types of diet management, both the Ramadan fasting method and alternative fasting, can be used to limit daily calorie intake. Therefore it will help in preventing excess intake and ultimately in maintaining ideal body weight. The calorie requirement for each person reach 2,000-2,700 calories per day. If a person suffering from obesity can reduce the calorie content to 1,200 calories daily, then he can reduce his body weight by 5 kg during fasting in this blessed month. If that happens, of course it would be the best start to continue the diet program after Ramadan, either through intermittent fasting or other diet therapy.

c. Treating diabetes mellitus type 2

Glucose or sugar in the blood is the main source of energy for all body tissues. The normal level of glucose in the blood ranges from 70-110 mg/100 ml of blood on an empty stomach. Blood glucose levels will increase to 120-150 mg/100 ml of blood after eating or consuming carbohydrates and will return to normal after 2-3 hours. When fasting for 12-18 hours, this blood sugar level will decrease to the point of 60-70 mg/100 ml of blood. This decrease in blood sugar. (6) Islam has anticipated the possibility of diabetes through the words of the prophet Muhammad SAW.

عن أبي هريرة أن رجلاً كان يأكل أكلاً كثيراً فأسلم فكان يأكل
أكلاً قليلاً فذكر ذلك النبي صلى الله عليه وسلم فقال إن المؤمن
يأكل في معي واحد والكافر يأكل في سبعة أمعاء

Meaning: “From *Miqdam bin Ma’dikarib* said: I heard the messenger of Allah. Said: there is no worse container that a person fills than his own stomach. It is enough for a person to consume a few

mouthfuls of food to straighten his spine. If he can't, then he can fill a third of his stomach with food, a third for drinks, and the remaining third for his breath” (HR. Sunan At-Tirmizi).

d. Being anti-hyper sensitive therapy

A study by Salahuddin et al., (2014) revealed that Ramadan fasting therapy in lowering blood pressure in hypertensive patients. This is evidenced by the result of a study that showed that as many as 15 hypertensive patients experienced a decrease in blood pressure. Another study state that fasting is safe to do to lower blood pressure by not lowering it too below normal levels. According to research, (7) a routine of 5 days spent fasting every month continuously for 3 consecutive months helps in decreasing systolic. Fasting induces a sensation of hunger which causes a protective effect by preventing the release of catecholamines and minimizing blood flow in the blood vessels. This mechanism result in a decrease in sympathetic nerve impulses and causes a decrease in blood pressure and thus arterial and cardiac output. (8) Thus, fasting is categorized as a non-pharmacological method as an adjunctive therapy to control blood pressure in hypertensive starting complications of hypertension.

e. Controlling LDL in the body

Fasting is one of several ways to control LDL levels in the body. The results of the meta-analysis included 13 studies representing 740 healthy participants (500 men and 240 women). This shows that fasting has proven effective in reducing LDL levels in the body. (5) The result of the study proved that respondents who fasted during Ramadan experienced a decrease in body weight and a decrease in several biochemical parameters such as LDL levels compared to before Ramadan. Fasting changes a person's diet. For example, people who fast during Ramadan only eat twice day; once before dawn and the rest after sunrise. During Ramadan fasting, a

muslim also changes their lifestyle, such as physical activity and diet. The decrease in LDL levels that occurs as a result of Ramadan fasting is related to weight loss during fasting. This is basic evidence that fasting can be used for the prevention of disorders of diseases of the cardiovascular system. (8)

f. Maintaining endothelial elasticity

Fasting is beneficial in relation to the function of the vascular wall or endothelium. The usefulness of fasting can be seen from the result of previous studies. A total 21 people who were fasting experienced an increase in Vascular Endothelial Growth Factor (VEGF) and a decrease in asymmetric dimethylarginine (ADMA) levels. This is a marker associated with the dysfunctions of the blood vessel wall (endothelium). (9) Dysfunction of the blood vessel wall (endothelial) is a systemic disorder that is one of the factors associated with the pathogenesis of atherosclerosis. Endothelial dysfunction causes a decrease in the ability of the vessel wall to dilate. The cause is an imbalance between vasodilatation and vasoconstriction as one of the symptoms of endothelial dysfunction. Several studies have shown that fasting can increase nitric oxide levels in the cardiovascular system, which can affect blood vessel walls. Nitric oxide has a relationship with vascular endothelial growth factor and asymmetric dimethylarginine. Vascular endothelial growth factor increases nitric oxide which is used to maintain endothelial elasticity which causes endothelial dysfunction. (9) Meanwhile, asymmetric dimethylarginine decrease nitric oxide production which can cause endothelial dysfunction. (9) This suggests that fasting plays a role in maintaining the elasticity of the blood vessel walls so that it can prevent endothelial dysfunction. Both are the main factors for high blood pressure or hypertension. (8)

g. Increase body immunity

The effect of fasting on the immune system is that it can increase macrophage activity, reduce IgG but still within the normal range, beneficial effects on microbacterium T, and others. The benefits of fasting on human physiology can reduce the risk of diabetes, CVD, cancer, and aging. Ramadan fasting can also reduce body weight and fat mass. Especially in those who are overweight or obese. (10) Autophagy is a process of cleaning various damaged old cellular components such as organelles, proteins, and cell membranes in the human body. This process occurs when the body is in a state of starvation, so there is no longer enough supply of energy to maintain it. Autophagy can be accelerated when there is a decrease in nutrition or growth factors, hyperthermia, the onset of oxidative stress and the presence of pathogenic infections. The autophagy process balances homeostatic conditions in the human body. The condition of (starvation) that induces autophagy is a condition where there is no nutrition on the body's cells and not a condition of hunger that only exists in the mind (hunger to consume food). In this starvation cell condition, the body will try to eat the damaged cells that are still in the body. These damaged cells are collected in advance which are called (autophagy) which will later be fused with lysosomes. Various enzymes contained in lysosomes have the function of breaking down compounds such as proteins, DNA, or RNA. Autophagy will regenerate cells in the body so that the body's immunity will increase, reduce the occurrence of premature aging, and suppress the potential for the development of damaged cells such as cancer cells. This is of course also balanced by consuming nutritious food at the time of breaking the fast and dawn. Autophagy prevents cancer, helps reduce inflammation, reduces the incidence of premature aging, and prevents neurodegenerative disease.

CONCLUSION

Fasting devoted to healing disease is that intermittent fasting. For muslims, intermittent fasting is almost looks like sunnah fasting, except that intermittent fasting focuses more on health purposes and can be performed by muslims and non-muslims alike. The detoxification process will occur naturally in the human body that regularly do intermittent fasting accompanied by a healthy lifestyle, in the end make immune system better. So intermittent fasting contributes to improved health status, either to increase body immunity and or healing of disease. Intermittent fasting benefits to the healing of disease, including treating inflammation, overcoming obesity, treating diabetes, as antihypertensive therapy, controlling LDL in the body, and safeguarding endothelial elasticity.

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