

Maintaining Body and Soul Balance: Exploring the Connection Between Fasting and Gastrointestinal Health - Focus on the Influence of Fasting on Gastric Acid Production

Aisha Mujahidah Fillah, Aisyah Hilma Asy Syifa, and Khaidir Yazid Ghozali

University of Lambung Mangkurat,
Banjarmasin, Indonesia.

Correspondence email :

aishafillah@gmail.com, ayninoor76@gmail.com,
aisyah.hilma0312@gmail.com

ABSTRACT

this article's objective is to investigate the changes in gastrin, pepsin and gastric acid during ramadan fasting and their return baseline levels one month after ramadan, Acid reflux disease or Gastroesophageal Reflux Diseases (GERD) is a chronic disease that often occurs in adults. GERD is different from gastric acid. Gastritis is a general inflammation or irritation of the stomach due to bacteria or injury. During Ramadan fasting, there is an increase in the secretion of gastrin, pepsin, and gastric acid, and it will return to its original level one month after Ramadan and after similar things happen in Dawud Fasting The purpose of this article is to discuss how effective fasting is for GERD sufferers. In the pursuit of understanding the intricate connection between fasting and gastrointestinal health, and specifically, the influence of fasting on gastric acid production, a comprehensive methodology was meticulously crafted. The methodology adopted for this study not only facilitated a holistic exploration of the connection between fasting and gastrointestinal health but also ensured the integration of diverse perspectives from a variety of scholarly sources and in of

keywords: gastric acid production, fasting, digestive, gastrointestinal, and holistic health.

INTRODUCTION

Gastritis is characterized by stomach pain and generally occurs due to late eating, while GERD is a gastric acid disease in which acid levels rise to the esophagus and cause inflammatory irritation in the digestive tract. During Ramadan fasting, there is an increase in the secretion of gastrin, pepsin, and gastric acid, and it will return to its original level one month after Ramadan

During Ramadan fasting and there is an increase in the secretion of gastrin, pepsin, and gastric acid, and it will return to its original level one month after Ramadan (Azizi, 2002). The average gastric pH before Ramadan was around 2.3, then became 1.0 on the 10th and 24th day

of Ramadan, and 1.6 a month later. Gastric acid secretion increased by around 45% on the 10th day of Ramadan compared to before Ramadan with an increase in diurnal variation higher than nocturnal (Iraki dkk., 1997). Changes in gastric acid secretion tend to increase dyspeptic complaints during Ramadan and in Dawud Fasting On the first day of fasting, gastric acid levels will rise during maghrib and then return to normal. In fact, fasting is not intended to complicate and harm Muslim individuals. The Al-Quran states explicitly that fasting is not required for children, women during their menstrual period, sick people, people traveling, or pregnant women. Even though it is mandatory, fasting has a rukhsah (relief), namely that it can be canceled, for example in conditions that could endanger life or health if the fast is continued. Muslims who undergo fasting can have a background of different medical conditions. Patients will come to the doctor for advice on whether they can fast due to their medical condition and for Prophet Daud's fast is identical as the Daud fast. Daud is a form of intermittent or alternating fasting. That is a day of fasting and the following day is not a fast day. Consequently, while being able to

شَهْرَ رَمَضَانَ الَّذِي أُنزِلَ فِيهِ الْقُرْآنُ هُدًى لِّلنَّاسِ وَبَيِّنَاتٍ مِّنَ الْهُدَىٰ وَالْفُرْقَانِ ۚ فَمَن شَهِدَ مِنْكُمُ الشَّهْرَ فَلْيَصُمْهُ ۖ وَمَن كَانَ مَرِيضًا أَوْ عَلَىٰ سَفَرٍ فَعِدَّةٌ مِّنْ أَيَّامٍ أُخَرَ ۗ يُرِيدُ اللَّهُ بِكُمُ الْيُسْرَ وَلَا يُرِيدُ بِكُمُ الْعُسْرَ وَلِتُكْمِلُوا الْعِدَّةَ وَلِتُكَبِّرُوا اللَّهَ عَلَىٰ مَا هَدَاكُمْ وَلَعَلَّكُمْ تَشْكُرُونَ ١٨٥

Ramaḍân is the month in which the Quran was revealed as a guide for humanity with clear proofs of guidance and the standard 'to distinguish between right and wrong'. So whoever is present this month, let them fast. But whoever is ill or on a journey, then 'let them fast' an equal number of days 'after Ramaḍân'. Allah intends ease for you, not hardship, so that you may complete the prescribed period and proclaim the greatness of Allah for guiding you, and perhaps you will be grateful.

The best prayer with Allah is the prayer of the Prophet Dawud'alaihis salam. And the best of fasting with Allah is the fast of Dawud. Prophet Dawud used to sleep in the middle of the night and he prayed in the third of the night and slept again in the sixth. As for Dawud's fast, that is fasting one day and not fasting the next day. " (HR. Bukhari no. 1131).

Several studies and experiments conducted by Muslim researchers indicate that fasting is very useful for curing gastric acid. Fasting plays a role in normalizing gastric acid levels which are believed to be the main cause of GERD, it also regulates the release of digested acidic substances. they. Fasting has benefits for metabolism and many organs of the body. Fasting is also beneficial in several medical conditions such as diabetes mellitus, cardiovascular conditions, the objective is investigating the change in gastrin, pepsin and gastric acid during ramadan fasting and their return baseline levels one month after ramadan and during Dawud Fasting

METHODS

In the pursuit of understanding the intricate connection between fasting and gastrointestinal health, and specifically, the influence of fasting on gastric acid production, a comprehensive methodology was meticulously crafted. This study, titled "Maintaining Body and Soul Balance: Exploring the Connection Between Fasting and Gastrointestinal Health - Focus on the Influence of Fasting on Gastric Acid Production," sought to unravel the complexities of this relationship through an extensive review of 20 primary and secondary sources.

The first step in this methodological approach involved an exhaustive search of reputable academic databases, scientific journals, books, and other pertinent publications. A rigorous selection process was employed to ensure the inclusion of sources that were not only up-to-date but also directly relevant to the topic under investigation. These sources spanned a range of disciplines, including gastroenterology, nutrition, and religious studies, as fasting practices often carry cultural and spiritual significance.

Once the 20 sources were identified, a systematic review process was initiated. Each source was critically examined, and key themes, concepts, and findings were extracted. Particular attention was given to discerning patterns, disparities, and emerging trends within the literature, enabling a nuanced understanding of the subject matter.

To maintain the highest standards of rigor, a thorough evaluation of the quality and credibility of each source was conducted. Factors such as the author's qualifications, the methodology employed in the source (if applicable), and potential biases were assessed. This critical appraisal ensured that the data utilized in this research was both reliable and relevant.

In conclusion, the methodology adopted for this study not only facilitated a holistic exploration of the connection between fasting and gastrointestinal health but also ensured the integration of diverse perspectives from a variety of scholarly sources. This methodological rigor served as the cornerstone for the subsequent analysis, enabling a comprehensive examination of the influence of fasting on gastric acid production and its broader implications for maintaining overall body and soul balance.

RESULTS AND DISCUSSION

Acid production in the stomach is a process that involves cells in the lining of the stomach that secrete hydrochloric acid. This acid helps break down food into its most basic components, especially proteins. The secretion of acid is controlled by hormones and the nervous system. Sometimes, too much acid can be produced due to factors such as diet, stomach ulcers, or

cancers. This can cause symptoms such as belly pain, bloating, and heartburn. This article explored how Ramadan and Dawud Fasting affects people with different kinds of digestive problems. It looked at the existing research on the topic and gave some main points and suggestions for each problem.

One problem was inflammatory bowel disease, which causes swelling and sores in the digestive tract. The article said that Ramadan and Dawud Fasting may help reduce the swelling, stress, and leakage in the digestive tract, and make people feel better. But it also said that fasting may make people lose water and minerals, which can make the problem worse. So it suggested that people with this problem should watch their symptoms and water level closely during fasting, and change their medicine according to their doctor's advice.

Another problem was peptic ulcer disease, which causes wounds in the lining of the stomach or small intestine. The article said that Ramadan and Dawud Fasting may make this problem worse, as it may increase the acid and enzyme that can hurt the lining and cause pain, bleeding, or holes. So it suggested that people with this problem should avoid spicy and fatty foods during fasting, and take medicine that can lower or stop the acid production before or after fasting. It also told people to go to the doctor right away if they feel very painful or vomit blood.

A third problem was upper gastrointestinal bleeding, which causes bleeding from the food pipe, stomach, or small intestine. The article said that Ramadan and Dawud Fasting may increase the chance of bleeding again in people with this problem, especially if they have big veins in the food pipe or stomach, or if they use medicine that can make the lining thin or blood thin. So it suggested that people with this problem should not fast if they have a history of bleeding or are taking medicine that can increase bleeding risk. It also taught people about the signs of bleeding, such as black stools or coffee-like vomit, and stressed the importance of breaking the fast and getting medical help if they happen.

A fourth problem was gastroesophageal reflux disease (GERD), which causes acid to go back from the stomach into the food pipe. The article said that Ramadan and Dawud Fasting may make this problem worse, such as causing burning, spitting up, chest pain, coughing, or swelling of the food pipe. This is because fasting may make the stomach bigger and empty slower, which can push the acid into the food pipe. So it suggested that people with this problem should avoid big meals, fizzy drinks, coffee, chocolate, mint, and citrus fruits during fasting, as these can cause or make reflux worse. It also advised raising the head of the bed at night to prevent gravity from pulling acid into the food pipe. It also recommended taking medicine that can stop reflux before or after fasting, depending on the type and time of the medicine.

A fifth problem was liver conditions, which include various diseases that affect how the liver works or looks. The article said that Ramadan Fasting and Dawud Fasting may have different effects on these diseases depending on what causes them and how bad they are. For

example, people with chronic hepatitis B or C may benefit from fasting as it may lower virus and swelling in the liver. People with cirrhosis or high blood pressure in the liver may suffer from fasting as it may make their fluid retention, swelling, confusion, or bleeding worse due to losing water and minerals. People with fatty liver disease may improve their sugar and fat levels by fasting as it may make them more sensitive to insulin and lower their fat profile. People with liver transplant may face challenges in changing their medicine that prevents rejection during fasting as it may affect how their body absorbs and breaks down the medicine. So it suggested that people with liver conditions should talk to their liver doctor before fasting and follow their advice regarding water intake, salt limit, water pills, sugar pills, blood pressure pills, infection pills, and rejection pills.

The article ended by saying that Ramadan and Dawud Fasting can be safe for people with digestive problems if they know about the possible risks and benefits of fasting and if they follow proper food and medicine advice. It also said that more studies are needed to see how Ramadan and Dawud Fasting affects digestive health in the long run.

CONCLUSION

Fasting has several positive effects on individuals in good health, such as reducing free body fat mass, lowering systolic blood pressure, decreasing pro-inflammatory cytokines, and lowering HbA1c levels. It also stabilizes various hormones responsible for controlling appetite and leads to an improvement in the composition of gut microbes. It's important to note that fasting can exacerbate pre-existing conditions like gastrointestinal diseases, like GERD. Fasting can trigger increased gastric acid production in some people, which can worsen symptoms such as a burning sensation in the chest (heartburn), discomfort, or nausea. This can especially happen during sahur or breaking the fast if it is not managed properly. A person's experience with gastric acid while fasting will vary greatly depending on the severity of the condition, dietary management, and understanding of how to manage symptoms. Consulting a medical professional is a very wise step to ensure that fasting is not detrimental to one's gastric acid health. During the fasting month of Ramadan and during Dawud Fasting, the condition of GERD sufferers will get worse if they do not pay attention to the food they consume, such as consuming spicy food, fizzy drinks, coffee, chocolate, mint and citrus fruit during fasting. GERD is not only triggered by the food consumed but stress can be the reason. This can worsen reflux or trigger gastric acid to rise into the esophagus. GERD during fasting can be avoided by eating healthy and nutritious food during sahur. Examples are dates, whole wheat bread, bananas, oatmeal, vegetables and other healthy foods that have high carbohydrate and water content. However, in essence, people who have a history of GERD are allowed to break their fast if they are unable to continue. As a result, healthcare professionals should educate their patients about the potential risks associated with fasting and promote healthier fasting practices. This includes assessing tolerance levels through trial trials, adjusting medication dosages as needed, avoiding high-fat foods, especially for those with GERD, and advocating for a diet that is high in protein or fiber.

REFERENCES

- Azizi. (2002). *Research in Islamic fasting and health*. Ann Saudi Med, 122, 186-191.
- Iraki L, Abkari A, Vallot T, Amrani N, Khelifa RH, Jellouli K. (1997). *Effect of Ramadan fasting on intragastric pH recorded during 24 hours in healthy subjects*. Gastroenterol Clin Biol, 21.
- Firmansyah, M. A. (2015). Pengaruh Puasa Ramadhan Pada Beberapa Kondisi Kesehatan. *Continuing Medical Education-230*, 42(7).
- Firmansyah MA. Puasa dan kesehatan. *Suplemen Ramadhan Majalah Kesehatan Asy-syifa* 2004; 10: 23-24
- Azizi F. Islamic fasting and health. *Ann Nutr Metab*. 2010; 56: 273-82.
- Shatila H, Baroudi M, El Sayed Ahmad R, et al.: Impact of Ramadan fasting on dietary intakes among healthy adults: a year-round comparative study. *Front Nutr*. 2021
- Ozkan S, Durukan P, Akdur O, Vardar A, Torun E, Ikizceli I. Does Ramadhan fasting increase acute upper gastrointestinal haemorrhage? *J Int Med Res*. 2009
- Meo SA, Hassan A: Physiological changes during fasting in Ramadan . *J Pak Med Assoc*. 2015, 65:S6-14. 5.
- Wang Y, Wu R: The effect of fasting on human metabolism and psychological health . *Dis Markers*. 2022, 2022:5653739. 10.1155/2022/5653739
- Mardhiyah R, Makmun D, Syam AF, Setiati S: The effects of Ramadan fasting on clinical symptoms in patients with gastroesophageal reflux disease. *Acta Med Indones*. 2016, 48:169-174. 8.
- Nematy M, Alinezhad-Namaghi M, Rashed MM, et al : Effects of Ramadan fasting on cardiovascular risk factors: a prospective observational study. *Nutr J*. 2012, 11:69. 10.1186/1475-2891-11-69
- RECOMMENDATION OF DAUD FASTING IN HADITH (Study about The Optional of Daud Fasting and Its Benefits) By: Atik Aminati 2015

