

## Counseling on the Importance of Maintaining Heart Health in the Month of Ramadan

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### ABSTRACT

Every year, Muslims observe fasting during the month of Ramadan, refraining from eating and drinking from sunrise to sunset for about a month. Fasting for more than 12 hours can be a concern, especially for people with certain diseases such as cardiovascular disorders. Unfortunately, the availability of research and medical guidelines on the safety of fasting in patients with heart disease is still limited, making it difficult for medical personnel, including doctors, to provide appropriate recommendations. Although there is now a risk classification to help assess whether a patient can fast, an examination of each individual's condition is still needed. Adjusting drugs based on their mechanism of action, half-life, and side effects is also very important so as not to worsen the patient's condition during fasting.

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## **INTRODUCTION**

Every year, Muslims around the world are required to fast for one month during the month of Ramadan. Ramadan is the ninth month in the Hijri calendar (lunar calendar), which makes it 11 days earlier than the Gregorian calendar each year. Fasting is done from sunrise to sunset, every day for one month. During fasting, Muslims are prohibited from consuming any food or drink until the time to "break the fast", which is when the sun has set or after the Maghrib call to prayer. On average, every Muslim is required to fast for 12-18 hours or more, depending on the season and the geographical location of a country.

The number of Muslims worldwide is estimated to be 1.93 billion, with Indonesia being the country with the largest Muslim population in the world, with 231.06 million people (86.7% of the total population of Indonesia). The large number of Muslims who are required to fast during the month of Ramadan raises certain medical concerns, such as dehydration and/or other diseases that may worsen during fasting. Although in its teachings, Islam does not require its followers who are physically or mentally unable to fast, it is sometimes a challenge for medical personnel, such as doctors, to advise/prohibit patients from fasting given the lack of research, guidelines, or expert statements regarding patient management, especially with cardiovascular disease, who wish to fast during Ramadan.

Heart disease remains one of the leading causes of death worldwide, including in Indonesia. According to the World Health Organization (WHO), more than 17 million deaths each year are caused by cardiovascular diseases, such as coronary heart disease, hypertension, and heart failure. An unhealthy lifestyle, unbalanced diet, lack of physical activity, and stress are the main risk factors that contribute to disorders of the cardiovascular system. The month of Ramadan provides an excellent moment to carry out healthy lifestyle interventions, especially through spiritual, social, and medical approaches. During this holy month, Muslims are required to carry out fasting, which includes refraining from eating, drinking, and other activities from dawn to sunset. Fasting is not only a spiritual worship, but can also be a natural way to improve the health of the body, including the cardiovascular system, as long as it is done in the right way. However, many people experience health problems during Ramadan due to changes in eating patterns, sleeping habits, and irregular physical activity. Foods consumed during sahur and breaking fast tend to be high in fat, sugar, and salt, which can increase the risk of hypertension and hyperlipidemia. This shows the importance of education and counseling efforts regarding the importance of maintaining heart health during Ramadan.

In 2020, the British Islamic Medical Association divided the risk of fasting in patients with heart disease into three groups, namely very high risk, high risk, and low/moderate risk [8]. In patients with very high risk, it is recommended not to fast; in patients with high risk, it is recommended not to fast, and in patients with moderate/low risk, the decision to fast is left to the discretion of medical opinion and the individual's ability to fast [9,10]. Heart health counseling during Ramadan is crucial because it targets holistic behavioral changes, involving physical, mental, and spiritual aspects. This effort also has the potential

to provide a deeper understanding of the relationship between fasting and heart health, while motivating individuals to adopt a sustainable, healthy lifestyle even after Ramadan ends. Based on the statement above, the Faculty of Medicine, Universitas Kristen Indonesia, carried out Community Service activities through counseling activities entitled "Maintaining Heart Health in the Month of Ramadan". The counseling activity was carried out in the Lobby of the Universitas Kristen Indonesia (UKI), General Hospital. The purpose of this Public Health Service activity is to increase public knowledge, especially patients of the UKI general hospital outpatient clinic, regarding how to maintain heart health while fasting during the month of Ramadan.

## **IMPLEMENTATION AND METHODS**

The purpose of this counseling is to increase public knowledge and awareness about the importance of maintaining heart health, especially during fasting in the month of Ramadan. This activity is expected to encourage participants to adopt a healthy lifestyle that supports heart health, such as a balanced diet, regular physical activity, and stress management.

The counseling activity "Maintaining Heart Health in the Month of Ramadan" is part of a public health service program that aims to increase public knowledge about the importance of maintaining heart health while fasting in the month of Ramadan. This activity is carried out in the form of direct education to hospital visitors through face-to-face delivery methods, using power point media that is displayed and presentations and interactive question and answer sessions with participants. The implementation schedule is in March 2025, the location of the counseling activity is: UKI general hospital Lobby with counseling participants being visitors and outpatients of UKI general hospital, number of participants are 50 participants.

The methods used in implementing counseling are as follows:

1. Interactive Lecture  
The material is delivered in the form of a presentation using a projector. Counseling is carried out in a communicative and interactive manner so that participants can understand the material easily. This session lasts for 45 minutes.
2. Discussion and Q&A  
After the lecture session, participants are given the opportunity to ask questions and discuss issues related to heart health during Ramadan. This session lasts for 30 minutes.
3. Light Simulation and Demonstration  
Examples of light physical activities that can be done during the fasting month to maintain heart fitness are demonstrated, such as simple stretching and light gymnastics. This session is guided by a health instructor and lasts for 20 minutes.

#### 4. Distribution of Educational Leaflets

Participants are given leaflets containing important information about tips for maintaining heart health during Ramadan, including eating patterns during sahur and breaking fast, the importance of hydration, types of recommended sports, and signs of heart problems that need to be watched out for.

The materials presented in this activity include:

1. Briefly anatomy and function of the heart.
2. Risk of heart disease and its triggers.
3. Physiological changes in the body during fasting and their impact on the heart.
4. Guide to consuming healthy foods during sahur and breaking the fast.
5. Tips for carrying out safe physical activities while fasting.
6. Initial treatment if heart complaints arise while fasting.

## RESULTS AND DISCUSSION

Ramadan fasting has complex effects on the body, especially the cardiovascular system. In general, fasting can lead to lower blood pressure, cholesterol levels, and weight. Studies have shown that intermittent fasting, such as that practiced during Ramadan, can increase insulin sensitivity, lower triglyceride levels, and improve lipid profiles, all of which contribute to better heart health. Some of the challenges faced by people in maintaining heart health during Ramadan include:

1. Changes in Diet:  
The habit of eating large meals when breaking the fast can increase the workload of the heart.;
2. Lack of Physical Activity:  
Many individuals reduce physical activity because they are afraid of getting tired while fasting.
3. Irregular Medication Consumption:  
People with hypertension and chronic heart disease often do not take their medication on schedule due to changes in meal times;
4. Lack of Sleep:  
Disrupted sleep schedules can increase blood pressure and the risk of arrhythmias.

However, these positive results are highly dependent on diet and lifestyle during fasting. Consuming foods high in saturated fat, low in fiber, and high-sugar drinks during sahur and iftar can increase the risk of heart disease.

Ramadan fasting, which lasts for approximately 29–30 days, is a form of intermittent fasting that significantly affects the body's metabolic system. One of the most widely studied benefits is its effect on the cardiovascular system. Several studies have shown that Ramadan fasting can cause weight loss, total cholesterol levels, triglyceride levels, and systolic and diastolic blood pressure in healthy individuals and in patients with mild to moderate cardiovascular disease. At the physiological level, when someone fasts, the body begins to use energy reserves from fat and glycogen after glucose from food is depleted. This process causes a decrease in insulin levels and increases insulin sensitivity, which

has a positive impact on lipid profiles and blood glucose. In addition, there is a decrease in stress hormones such as cortisol and adrenaline if fasting is carried out calmly and with full spiritual awareness. This reduces the workload of the heart and improves the balance of the sympathetic and parasympathetic autonomic nerves. However, these positive physiological changes are highly dependent on eating patterns during sahur and breaking the fast. Excessive consumption of fatty, sweet, and salty foods can inhibit the benefits of fasting, even risking increasing blood pressure and blood fat levels.

**Risks and Challenges in Maintaining Heart Health During Ramadan:** Although fasting has the potential to be very beneficial for the heart, many individuals actually experience health problems during Ramadan. This is due to a lack of understanding about how to fast healthily. The main challenges include: **Changes in Diet:** Many people consume large amounts of food when breaking their fast, which causes a spike in blood glucose and fats and increases the burden on the heart suddenly; **Lack of Physical Activity:** Some individuals avoid exercise for fear of feeling weak or dehydrated, even though light physical activity such as walking or light exercise after breaking their fast is actually beneficial; **Irregular Use of Medication:** People with hypertension or heart failure who take medication regularly are often confused about when to take their medication during fasting; **Sleep Disorders:** Sleep patterns are disrupted due to waking up early for sahur and night activities such as tarawih, which can increase stress and blood pressure if not managed properly.

Health education activities for the community are a real form of academic involvement in providing promotive-preventive education regarding the importance of maintaining health, especially heart health during the month of Ramadan. The month of Ramadan brings significant changes to the eating, sleeping, and physical activity patterns of Muslims who are fasting. These changes can have certain impacts, especially for patients with cardiovascular disease. Heart health counseling during Ramadan should be based on the following principles: **Individualization:** Adapting education to the individual's health condition and lifestyle, **Effective Communication:** Using language that is easy to understand and non-judgmental, **Integration of Spiritual Values:** Linking the importance of maintaining health with religious values, **Community Approach:** Involving religious and community leaders in counseling

The education, which was held on Monday, March 10, 2025, in the Lobby of the UKI general hospital, aims to increase public knowledge about how to maintain heart health during fasting. This activity went smoothly and received a positive response from the participants. The education participants consisted of patients, hospital visitors, and health workers who were interested in deepening their knowledge about heart disease.

The counseling material was delivered by lecturers from the Faculty of Medicine and Health, who discussed comprehensively:

1. Introduction to heart function and types of heart disease.
2. The effect of fasting on heart health: between risks and benefits.
3. Guidelines for healthy sahur and iftar foods for the heart.
4. The importance of hydration and adequate rest.
5. Recommended physical activities during the fasting month.
6. Signs of heart problems that need to be treated immediately.

The education was presented by dr. Nolly Octavianes Habel Rantung, Sp.JP, FIHA. as a speaker, with material covering an introduction to risk factors for heart disease, the impact of fasting on the cardiovascular system, and tips for maintaining stable heart conditions during Ramadan. The material was delivered using an interactive lecture method accompanied by a question-and-answer session. Before and after the counseling, participants were given a simple pre-test and post-test to assess the increase in knowledge.

Documentation of extension activities as shown in Figure 1 below:



**Figure 1. Photo Documentation of the Implementation of Extension Activities**

From the evaluation results, it was found that most participants experienced an increase in understanding about the importance of maintaining a balanced diet, stress management, compliance with taking medication, and maintaining light physical activity during fasting. This counseling also emphasized the importance of regular consultation with a doctor for heart patients before deciding to fast. Overall, this activity succeeded in achieving its objectives and is expected to provide a long-term impact in improving the quality of life of patients with cardiovascular disease during the holy month of Ramadan. This activity is also a form of real contribution from doctors in carrying out community service through educational activities. Health workers and religious leaders can work together to convey health messages in a spiritual context. For example, Friday sermons or tarawih lectures can be important moments to

educate the public about the importance of maintaining the heart. Health centers and clinics can also open healthy Ramadan posts that provide light consultations and distribute educational brochures.

Data on increased participant knowledge about the importance of maintaining heart health is presented in table 1 below:

**Table 1. Data on Increased Participant Knowledge About the Importance of Maintaining Heart Health**

Category of Participants' Knowledge about the Importance of Maintaining Heart Health in the Month of Ramadan	Frequency	Percentage (%)
Increase	34	68
No Change	13	26
Decrease	3	6
<b>Total</b>	<b>50</b>	<b>100</b>

From the data above, it can be indicated that the counseling activities gave good results, which can be seen from the majority of participants who attended the counseling experienced an increase in knowledge, namely 34 out of 50 participants (68 %). while 3 person who based on the post-test results experienced a decrease in score, through interviews obtained information due to lack of time in filling out the post-test, where at the time of the post-test filling out, the participant had to go home early for more important matters.

Programs in the Middle East and South Asia have shown that effective education during Ramadan can reduce the number of cardiovascular complications. For example, a program in Egypt involving doctors and religious teachers increased patient adherence to heart medication by 78% during Ramadan. Healthy Lifestyle Recommendations during Ramadan: Sahur with a menu containing high protein and complex carbohydrates. Break the fast gradually, starting with water and fruit., Light exercise after tarawih prayers., Get enough sleep, at least 6-7 hours per day. Blood pressure and cholesterol checks before and after Ramadan.

## CONCLUSIONS AND RECOMMENDATIONS

Health education activities with the theme "Maintaining Heart Health in the Month of Ramadan" held in the lobby of UKI general hospital on Monday, March 10, 2025, went well and smoothly. Based on direct observation and the results of the pre-test and post-test that were distributed to participants, data was obtained that there was an increase in knowledge about how to maintain heart health during fasting. This education has a positive impact in the form of increasing public awareness of the importance of maintaining a diet, taking medication regularly, and maintaining a healthy lifestyle during the month of Ramadan, especially for people with heart disease. This activity is expected to be a real contribution in improving the quality of life of the community and become a provision of information for participants in carrying out fasting safely and healthily.

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