



Sport During the Ramadan Fasting Period: Health Benefits and Risks and Recommendations for Practicing

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Abstract

Context: The subject of "Sport During Ramadan" focuses on the impact of fasting during the holy month of Ramadan on athletic performance and physical activity. Muslims around the world fast from sunrise to sunset during this month, abstaining from food, drink, and other physical needs. Our hypothesis suggests that during Ramadan, the fasting period can cause particular problems for athletes and people involved in sports and physical activities that require a lot of stamina and energy.

Evidence Acquisition: A systematic review of the literature was conducted using the search equation "sport during Ramadan" in the PsycInfo, PubMed and ScienceDirect databases, in order to identify the 40 targeted articles on the subject up to the year 2022.

Results: Taking into account the similarities of the contents of the 40 targeted articles, 24 articles were selected. During the fasting period of the month of Ramadan, engaging in sports and exercise during Ramadan can have numerous benefits for physical and mental health. However, physical activities that require a lot of endurance and energy can pose physical health risks, including dehydration, hypoglycemia, muscle cramps, fatigue and delayed recovery.

Conclusions: Participating in sports and exercise during Ramadan can have many benefits for physical and mental health, as well as spiritual awareness and community engagement. During this time, uncontrolled physical exertion can have detrimental effects on health. Proper hydration combined with a rich and balanced diet during the non-fasting period and quality sleep can help overcome the risks associated with exercising during Ramadan. It is important that Muslims prioritize their health and well-being during this time and consult a physician if necessary before engaging in physical activity.

Keywords: Sport, Physical Activity, Fasting, Ramadan, Health

1. Context

The theme "Sport during Ramadan" explores the impact of fasting during the sacred month of Ramadan on athletic performance and physical activity. Muslims around the world fast from sunrise to sunset during this month, abstaining from food, drinking, and other physical needs. Ramadan is the ninth month of the Islamic calendar, observed by Muslims as a month of fasting, prayer, and reflection. The origin of Ramadan can be traced back to the revelation of the Quran to the Prophet Muhammad, which began during the month of Ramadan in the year 610 CE (1). Fasting means that Muslims are required to fast during Ramadan from dawn to sunset. The fast is broken at sunset with a meal called Iftar (2). The significance of the subject "Sport and Ramadan" is underlined by the importance of physical activity in promoting health and well-being among people of all

ages. It is also important to understand how to balance religious and cultural practices with maintaining physical fitness and athletic performance. By examining the challenges and opportunities presented by Ramadan, athletes and trainers can devise strategies to maintain their fitness and performance levels while respecting their religious and cultural obligations

Our hypothesis suggests that during Ramadan, the fasting period can cause particular problems for athletes and people involved in sports activities that require a lot of stamina and energy. We designate as sport activity any form of physical exercise or organized physical movement carried out with the purpose of improving physical fitness, developing skills, and participating in competitions. It encompasses a wide range of physical activities and games that require physical exertion, skill, and coordination. Some examples of sport activities

include running, swimming, soccer, basketball, tennis, weightlifting, cycling, dancing, martial arts, and team sports.

2. Evidence Acquisition and Results

A systematic literature review was carried out using the search equation "sport during Ramadan" in the PubMed and Science Direct databases, to identify the 40 articles on the subject up to the year 2022. Due to similarities in the content obtained, only 20 articles were retained. The objective of this subject is to explore the different effects that fasting during Ramadan can have on athletic performance and how athletes can adapt their training and dietary regimes to maintain their fitness levels during this period. The subject covers various aspects of sport during Ramadan, including the physiological effects of fasting on the body, the impact of dehydration on athletic performance, and the benefits and risks of maintaining physical activity during Ramadan. Overall, this subject sheds light on an important and relevant issue facing athletes who observe Ramadan and provides insight into the ways that they can adapt their training and nutrition to maintain their performance and well-being during this holy month. Before addressing all these points, it is worth highlighting the health advantages and disadvantages of fasting. In recent years, numerous scientific studies have explored the effects of fasting on various aspects of human health.

Physiologically and psychologically, fasting can have various effects on the body, depending on the duration and type of fasting. We mention some of the most common effects. In relation to weight loss, fasting can lead to weight loss due to a reduction in calorie intake. This can also lead to a reduction in body fat and improved body composition (3). Improved insulin sensitivity has been associated with fasting, which may lead to better blood glucose control and a lower risk of type 2 diabetes (4). Fasting significantly reduces inflammation, which is associated with various chronic diseases, in the body (5). During Ramadan other physiological processes are significantly improved. One example is an increase in autophagy, which is a mechanism by which the body clean damaged cells and generates new ones (6). The mental benefits of fasting include stress reduction and mood improvement in some people (7). Exercise has been shown to reduce symptoms of depression and anxiety and improve overall mood (8). This can be particularly important during the emotional and spiritual challenges of Ramadan. However, it is important to consider the possible health disadvantages associated with fasting. Nutrient deficiencies, metabolic disturbances, and psychological implications are among

the possible adverse effects of fasting (9-11). Individuals considering fasting as a dietary practice should consult with healthcare professionals to ensure proper nutritional intake and to monitor their overall health status

Engaging in sports during Ramadan can improve physical fitness and stamina, leading to better overall health. Studies have shown that regular physical activity can improve cardiovascular health, reduce the risk of chronic diseases, and promote longevity (12, 13). On the social front, participating in sports activities during Ramadan can provide opportunities for community engagement and social interaction, which can be important for emotional well-being. Studies have shown that social support and connectedness are important predictors of mental health and well-being (14). In addition, engaging in physical activity during Ramadan can also help to increase spiritual awareness and mindfulness. Many Muslims find that exercise can be a form of worship, helping them to connect with their bodies and their faith (15).

While sports and exercise can have numerous benefits for physical and mental health, there are also risks associated with engaging in these activities during the month of Ramadan. We will provide in this part a synthesis of the risks related to the practice of sport during Ramadan. Fasting during Ramadan can lead to dehydration, which can be exacerbated by strenuous exercise. Muslims who engage in sports during this time should be careful to hydrate properly before and after exercise, and to avoid overexertion during fasting hours (16). Fasting can also lead to low blood sugar levels, which can cause weakness, dizziness, and other health issues. Muslims who practice sports during Ramadan should take care to monitor their blood sugar levels and avoid strenuous exercise, as well as listening to their bodies to avoid overexertion during fasting hours (17), it should also be noted that the Engaging in strenuous exercise without proper hydration and nutrition can lead to muscle cramps, fatigue, and other physical health issues.

Fasting can have an impact on athletic performance, as athletes may suffer from dehydration, fatigue and hunger. However, many athletes choose to train and compete during Ramadan, adapting their program to accommodate fasting. Here are some examples of sports and how they can be adapted during Ramadan. Football (Soccer): Football is a popular sport in many Muslim countries, and many professional football players choose to continue playing during Ramadan. However, they may adjust their training and playing schedules to avoid dehydration and fatigue. Some players choose to train and play at night after breaking their fast, while others may reduce their training intensity and focus on maintaining

their fitness levels. Similarly, many athletes continue to run and participate in marathons during Ramadan. However, they may adjust their training schedule to avoid running during the hottest parts of the day, and they may focus on hydration and nutrition during the hours when they are allowed to eat and drink.

Studies have shown that fasting during Ramadan can have both positive and negative effects on athletic performance. For example, a study by Abaidia et al. found that Ramadan fasting had no significant effect on the physical performance of young Muslim football players (18). However, a study by Chaouachi et al. found that intermittent fasting during Ramadan had a negative impact on aerobic and anaerobic performance in male elite judo athletes (19). To mitigate the negative effects of fasting on athletic performance, athletes must make adjustments to their training and nutrition regimes during Ramadan. Hydration and nutrition are critical factors for maintaining physical performance during this period. Research has shown that adequate hydration and nutrient intake can help athletes maintain their fitness levels and avoid fatigue during Ramadan (20).

Ramadan is a month of fasting and spiritual reflection for Muslims around the world. During this time, it is important to maintain physical health and well-being, which includes staying active and engaging in sports. Moderate physical activity is one of the religious recommendations for sports during Ramadan. Muslims are encouraged to engage in moderate exercise during Ramadan, such as walking, swimming, or cycling. It is important to avoid strenuous exercise during fasting hours, especially in hot weather, to prevent dehydration and other health issues. Muslims are also advised to break their fast with a light meal before engaging in exercise, and to drink plenty of water to stay hydrated. This helps to maintain energy levels and prevent muscle cramps. It is important to schedule sports and exercise activities outside of fasting hours to avoid overexertion and dehydration. Muslims should also be mindful of the time when breaking their fast to allow for adequate digestion before engaging in physical activity. Overall, Muslims should strive to maintain a balance between physical activity and spiritual practice during Ramadan, and to prioritize their health and well-being above all else.

Several researches that have been conducted about the effects of Ramadan on the body have suggested recommendations for athletes. In one such study, the authors recommend that athletes consume a balanced diet with sufficient carbohydrates and fluids during non-fasting hours to ensure adequate energy for their sporting activities (21). In another study investigates the effects of Ramadan fasting on recreational runners and

their perceptions of fatigue, mood, and exertion during exercise, the authors suggest that athletes should reduce the intensity and duration of exercise during Ramadan and plan their meals and hydration carefully to avoid dehydration and fatigue (19). Focusing on the effects of Ramadan fasting on physical performance and eating habits in athletes, other researchers recommend adapting training schedules to avoid the hottest periods of the day, and consuming a balanced diet containing sufficient protein and fluids during non-fasting hours to maintain muscle mass, keep energy levels up and avoid dehydration (22, 23). Other dietary and hydration advice to optimize sports performance during Ramadan are to be taken into consideration. The American Council on Exercise recommends drinking at least 17 - 20 ounces of water 2 - 3 hours before exercise and 7 - 10 ounces of water every 10-20 minutes during exercise (24). Athletes should also plan their meals around their exercise schedule to ensure adequate energy and hydration. It is thus recommended to consuming a pre-exercise meal 2 - 3 hours before exercise and a post-exercise meal within 30 minutes after exercise (22). Foods rich in electrolytes such as sodium, potassium and magnesium, to maintain water balance during exercise, should not be neglected during Ramadan (25). Thus, previous studies suggest consuming foods such as bananas, dates, and yogurt during non-fasting hours to maintain electrolyte balance (25).

3. Conclusions

In conclusion, engaging in sports and exercise during Ramadan can have numerous benefits for physical and mental health, as well as for spiritual awareness and community engagement. However, the practice of physical activity during the fasting period can pose risks to physical health, particularly related to dehydration, low blood sugar, muscle cramps, fatigue, and delayed recovery. Proper hydration combined with a rich and balanced diet during the non-fasting period and quality sleep can help overcome the risks associated with sports during Ramadan. It is important for Muslims to prioritize their health and well-being during this time, and to seek medical advice if needed before engaging in physical activity.

Footnotes

Authors' Contribution: I. S.: All the stages of writing the manuscript.

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