

RAMADAN AND FOOTBALL

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Ramadan is a holy month for Muslims during which they observe intermittent fasting for approximately 30 days. The practice of Ramadan fasting is obligatory for all healthy, adult Muslims and requires each to abstain from food and fluid from sunrise to sunset. According to Muslims, Ramadan fasting is regarded with high importance as it is considered a spiritual act that increases God-consciousness and brings about personal improvement through self-restraint. During Ramadan, Muslims believe they are spiritually more enlightened and rise up towards nobler acts that bring one closer to God. While the choice to fast is that of every individual, for football players and other athletes, the effects of Ramadan fasting on sports performance needs to be considered.

Ramadan is dictated by the Islamic calendar, which follows a lunar cycle and is shorter than the Gregorian calendar by 10 to 11 days. As a result, the month of Ramadan shifts forward each year, through the seasons, and completes a cycle every 33

years. Over the next few years, Ramadan will be observed in July and August (2013) and will progress to June by 2016. This period presents an additional challenge for football players and all Muslim athletes living in the northern hemisphere, as longer summer days mean a longer fasting period.

It is not uncommon for major sports competitions to be held during Ramadan. Last year, the London 2012 Summer Olympic Games was held during the month of Ramadan. Over the next few years, major international competitions will also overlap with Ramadan (Figure 1). The FIFA World Cup 2014 in Brazil will be held from 12 June to 13 July and will coincide with the month of Ramadan, which will start 28 June 2014. In 2016, the UEFA European Football Championship, also known as the 'Euro cup' in France, will coincide with 3 weeks of Ramadan.

Importantly, it is estimated that 29% of the world's population are Muslim. According to a FIFA report, Muslim football fans are estimated to number

270 million, representing 208 different countries. Although distributed widely, the concentration of Muslims is high in countries where football is a popular sport, such as in the Middle East and Africa. Given the popularity of football among Muslims across the globe, Ramadan and football are closely linked. The present article is intended



The 2014 FIFA World Cup in Brazil and 2016 UEFA European Football Championship will coincide with Ramadan



| SPORT | 2013 | | | | | | | | | | | | 2014 | | | | | | | | | | | | 2015 | | | | | | | | | | | | 2016 | | | | | | | | | | | |
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| Football | ● | ● | | | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| Cycling Tours | ● | | | ● | ● | ● | ● | | | | | | | | ● | ● | ● | ● | | | | | | | | | | ● | ● | ● | | | | | | | | | | ● | ● | ● | | | | | | |
| Handball | ○ | ○ | ○ | ○ | ○ | ○ | | | | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | | | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | | | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | | | | | |
| Multi-sports | | | | | | | ● | ● | ● | ● | | ● | ● | | | | | ● | ● | | | | | ● | ● | | | | | | ● | ● | | | | ● | ● | | | | | | ● | ● | | | | |

Figure 1: Sports events that will coincide with Ramadan in the next 4 years.

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| KEY | ○ Local Competitions |
| | ● International Competitions |
| | ● Local and International Competitions |
| | ■ Ramadan Month |

to provide a summary of the effects of the Ramadan fast on sports performance, and will highlight key strategies to inform football players, coaches, and organisers on the best practice to cope with the lifestyle changes that occur during Ramadan.

DIET

Athletes are required to maintain a healthy diet in order to optimise performance. Although it is strongly recommended that athletes consume three large meals per day, this is often not the case during Ramadan given the shorter time available to eat. Most Muslims automatically change their meal frequency to two meals: one before sunrise (Suhoor) and the other just after sunset (Iftar). Thus, the major change in lifestyle during Ramadan begins with the shift of food (and fluid) intake from daylight to night hours. As this pattern continues throughout the next 30 days, there is an increased risk of nutritional and energy deficiency in active athletes.

During Ramadan the challenge for Muslim athletes to eat healthy meals becomes more difficult as each day is celebrated with a large feast at sunset (Iftar). In modern Muslim culture, Iftar comprises of foods high in fat, sugar and salt, which are not necessarily healthy for 'normal' individuals, much less for athletes. Studies analysing the nutritional content of Iftar have discovered that the calorific value is nearly equivalent to two meals. Thus, the

total daily caloric intake during Ramadan can be maintained, however nutritional deficiencies have been documented, given that food choices are not varied.

To encourage healthy eating among athletes during Ramadan, coaches and sports organisers should advocate for athletes to consume varied foods rich in macronutrient profile (e.g. carbohydrate, protein and fat) and high in nutrients which are essential for optimal performance and recovery. As much as possible, meals should be moderate in size and spaced out at regular intervals to maximise absorption of nutrients. A smaller pre- and post-training meal can also help to increase caloric intake, maintain performance and aid in recovery. Finally, should the opportunity be presented, moving the training camp away from home where a strict diet plan can be offered may improve dietary intake.

HYDRATION

Athletes who fast during Ramadan also cannot drink water during daylight hours. Although dehydration is not widely reported, smaller levels of hypo-hydration could be carried over to the next day and ultimately leave an athlete at risk for dehydration, which could affect performance.

During Ramadan, athletes will have limited opportunity to re-hydrate themselves, especially in the summer months when nights are shorter. In addition, social commitments are usually planned during the night when most people

focus more on eating rather than drinking fluids. A common occurrence is for athletes to drink large quantities of water which is an ineffective way to improve hydration. Consuming large volumes of water at once will induce urine loss and if done before bedtime will cause interrupted sleep.

For improved hydration during Ramadan, athletes are recommended to drink water frequently in shorter intervals rather than in one large amount. In addition, solid foods including those containing a marginal amount of salt can help to improve water retention.

TRAINING AND COMPETITION SCHEDULE

During Ramadan, training and competition schedules need to be balanced with consideration for available energy stores and the ability to re-fuel and re-hydrate. Importantly, athletes who participate in training in the morning will not be able to refuel or re-hydrate, whereas those training in the late afternoon or early evening before sunset may not be adequately fuelled or hydrated given that the daytime fast could be up to 14 hours in the summer. Thus, any training between sunrise and sunset would be ineffective and is not recommended during Ramadan.

There is no consensus on the best time to train Muslim football players who fast during Ramadan. In countries where the majority of the team are Muslims, it is usually decided to schedule training at least 3 to 4 hours after the break of fast. Training

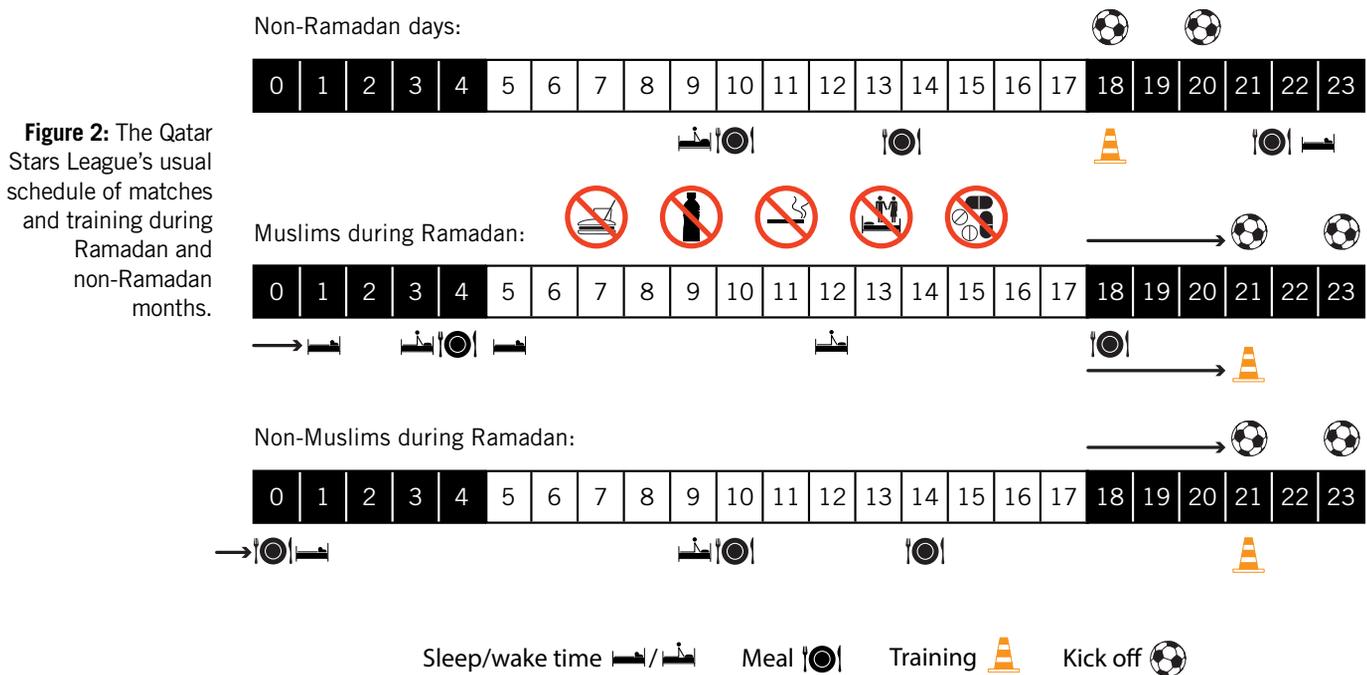


Figure 2: The Qatar Stars League's usual schedule of matches and training during Ramadan and non-Ramadan months.

at this time will avoid diet and hydration restrictions before, during and after exercise. The Qatar Stars League's usual schedule of matches and training illustrates this perspective (Figure 2). During non-Ramadan months, all training sessions take place in the evening and matches start around 6.30 pm or 8.30 pm. These timings are delayed during Ramadan and when there are two matches to be played in a day, the second match could be as late as 11.30 pm.

Importantly, Qatar is predominately a Muslim country, and therefore this schedule is designed to fit into the lifestyle of the majority who are fasting. However, for the 10 to 15% of non-Muslims who are also participating in football training and competition, their meal timings and sleep habits may be different, which could negatively influence their performance should they not cope well with such changes in training and competition schedules. Of course, in non-Muslim predominate countries the opposite may also be true. Thus, in all cases both coaches and athletes must communicate to find what is most effective for each individual, for the team and for the competitions.

SLEEP

Sleep loss is a major factor leading to daytime fatigue and poor concentration, which is believed to limit performance and recovery in athletes. New research demonstrates that Muslim football players have major disturbances to sleep during

Ramadan. In Qatar football players, there is a substantial delay in the sleep period, increased sleep fragmentation and more reports of daytime fatigue. Therefore, the impact that sleep has on both recovery and performance, especially during Ramadan when major changes in lifestyle occur, needs to be considered.

Firstly, coaches and athletes must be made aware of the importance of sleep. Further it is recommended that training and competition schedules are balanced with sleep-wake pattern. In all cases, athletes need to be encouraged to schedule their lifestyle to maintain a minimum of 7 hours sleep and ideally between 8 to 9 hours. Interventions such as sleep education, daytime naps and specialist sleep improvement may be warranted to limit fatigue and improve recovery.

PERFORMANCE AND INJURIES

During Ramadan, the crucial question to consider is whether or not training intensity can be maintained. It is well known that sufficient training intensity is needed to promote adaptation and improve athletic performance.

The available literature suggests that when provided with adequate diet, hydration and sleep, football players can maintain their performance as long as the training load is also maintained in relation to intensity and volume. Notably, one study has reported an increase in injury rates among non-Muslims (in a Muslim

country) where training and matches were held during evening and late night hours. Thus, it appears that the ability for individual athletes to cope with the changes during Ramadan is a key factor mediating performance.

The fact that all athletes respond differently to training is not new. However, during Ramadan there are additional lifestyle changes to consider. It is especially

Any training between sunrise and sunset is not recommended

important during this time that coaches routinely collect feedback from athletes on factors that may affect both their mental and physical performance. This includes diet, hydration, sleep, training load, recovery, mood and motivation. By doing so, any significant deviation from the pre-Ramadan levels should then be considered cause for appropriate intervention according to team protocols.

TO FAST OR NOT TO FAST?

The decision whether or not to fast during Ramadan is not new for professional Muslim athletes. In Qatar and many of the

Middle East and Arab countries, Ramadan fasting is practiced from the age of 10 to 12 years. Even after a few years of experience, each athlete will have developed their own set of beliefs, knowledge and perceptions about the impact that Ramadan fasting has on both mental and physical performance. While these perceptions may not be scientifically proven they are valid and should therefore be considered.

The decision on whether or not to fast may receive criticism and disapproval from family, friends and members of the community or coaches who give more weight to religion or sport. It has been reported that some professional league football players observe Ramadan fasting during training as well as during games. Others observe Ramadan fasting on training days but not on match days. In essence, the right to practice ones faith is recognised as a universal human right. However, the decision to observe the Ramadan fast among football and other athletes is not without concern for others (Figure 3). An Iranian national team player was excluded from the national team squad because he decided to break his fast. Three Muslim players from a German football club received warnings for failing to inform the coach about their decision to fast.

As previously described, in Muslim majority regions athletes will often chose to fast every day because of the social support and culture. In addition, they will receive full support and convenient training and competition plans from organisers.

Of course, some coaches, for example those living in a non-Muslim predominate country are less concerned about Ramadan, since they may have only a couple of Muslim players in the team, while others coach an entire team that practices Ramadan fasting. Therefore, any decision that goes against the team's will can increase mental pressure and decrease team morale. These examples not only highlight the various opinions among athletes and coaches, but also highlight the influence that the surrounding environment may have on whether or not an athlete decides to fast.

CONCLUSION

In conclusion, Ramadan fasting results in a shift of food and fluid intake from daylight to night time, which presents major lifestyle changes that may negatively affect sports performance if not monitored and controlled. The occurrence of Ramadan with major football competitions is increasing and becomes important to consider given that football is a sport that requires all 11 players on the field to perform at their best physical and mental effort. While the decision on whether or not to fast is that of each individual athlete, we believe that coaches and organisers can play an important role in providing accurate and updated knowledge about the impact of Ramadan fasting on health and physical performance, and ultimately have mutual agreement with athletes on the best strategy for training and competition during Ramadan.

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Figure 3: The ramifications of the decision made by players of whether to fast or not during Ramadan.

