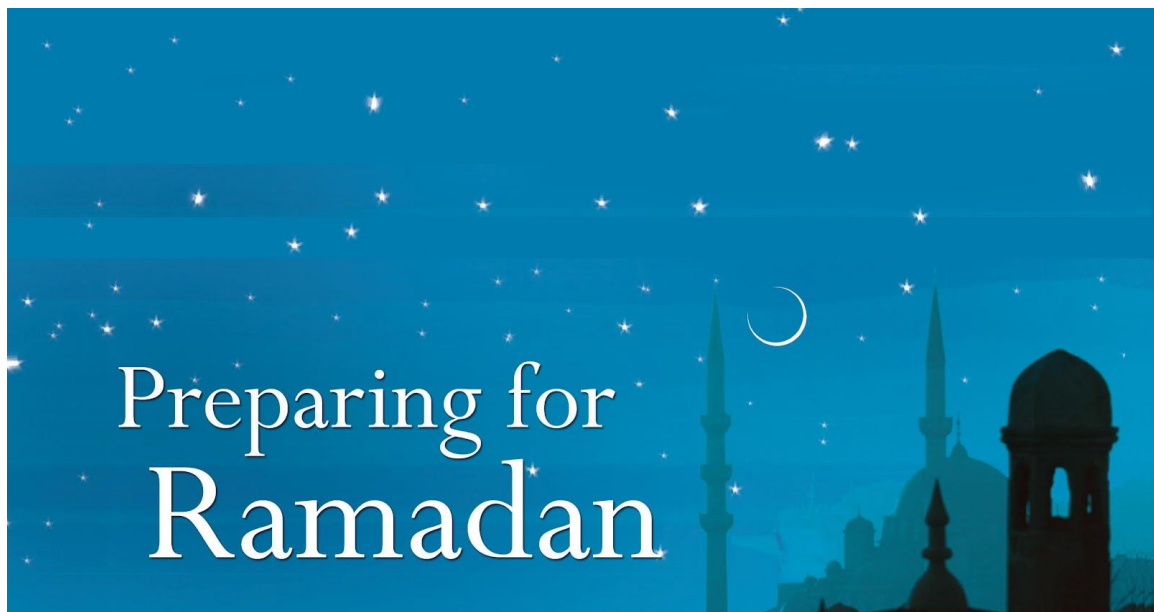




Knowledge and Technology Transfer Services



Effects of Fasting on Fitness to Drive (S220)

**Knowledge search report prepared for:
South West Trains**

Effects of Fasting on Fitness to Drive (S220)

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Executive Summary

Recommendations given to train drivers to help them ensure optimal fitness for duty in all conditions, usually fail to consider that there may be circumstances or times in the year where these recommendations may be difficult or even impossible to universally implement, be it related to maintaining healthy sleep patterns or sufficient hydration levels in hot weather. The constraints imposed by the observance of fasting certainly constitute such special circumstances.

Although the fasting practice does exist among the followers of other religions, the period of fasting in Islam, the month of Ramadan, is significantly longer, and Muslims are entirely prohibited from eating or drinking during the day. They are de facto likely to adopt different sleeping patterns than during ordinary times.

Fasting can have a range of effects on individuals, including fatigue (tiredness), dizziness, dehydration and headache, sleepiness, and reduction in concentration which can result in safety concerns, especially when conducting safety critical jobs.

There exist some specialised advice for both employees and employers, provided by different organisations or forums, in order to assist with managing the fasting practice during working shifts.

For employees, some of the most significant recommendations include: communicating with managers and colleagues to reduce demanding tasks during the fasting period, using available flexibility arrangements to reduce working hours and the number of working days during the month of Ramadan, considering flexibility at work regulations to formalise their flexibility arrangements during the month of Ramadan, and accessing health advice available on relevant sources such as the NHS Direct website.

For employers, a number of practices which are in place in some countries or are recommended by some relevant organisations include:

- Providing relevant health and well-being guidance to employees.
- Having a Ramadan policy in order to set out the standard expected of the employees, as well as the flexibility arrangements available to the employees to assist them during the fasting periods.
- In some countries with significant proportion of Muslims, working hours are reduced during the month of Ramadan. To be fair to all employees where the majority of them are *not* fasting, those who observe Ramadan may be required to make up for the reduced hours within a year.

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1 Introduction

This knowledge search has been commissioned by South West Trains in order to find documented effects of fasting on train drivers' fitness for duty, particularly those who observe fasting in the month of Ramadan. This knowledge search has also sought to identify relevant advice for drivers as well as for their employers, to assist them in minimising the potential adverse impacts and risks during the period of fasting.

Although there are some exceptions, fasting during Ramadan is obligatory for every fit and able Muslim over the age of puberty. Fasting does exist in other religions too, however the duration of the fasting period throughout the month of Ramadan and the number of people who observe fasting in Islam makes the fasting practice more significant for the purpose of this report. Furthermore, fasting in Islam involves refraining entirely from eating and drinking, from sunrise to sunset throughout the day for a whole month, whereas in some other religions people are expected to refrain from particular types of foods and drinks¹.

As the Islamic Calendar is based on the moon, the fasting dates vary every year. This can complicate making planning arrangements for helping those employees who fast and their employers with overcoming any issues arising from fasting at work. It also means that sometimes the fasting dates are in winter, with short, cool or cold days, but sometimes they are in the summer.

Unlike their peers in the Middle East and other countries with significant Muslim population who benefit from working hours adapted for Ramadan, Muslims in the West must normally fit Ramadan around the demands of a regular working day. This can make it significantly more challenging for many employees to observe fasting at work while fulfilling their employment duties at the same time, and for some businesses, including train operators employing train drivers, can raise the risks associated with fatigue at work (see section 2.1 to 2.2) [1].

The guidelines available to rail staff, including train drivers, to deal with fatigue and dehydration (e.g. [2], [3] and [4]), cannot logically apply fully to those train drivers who observe fasting during Ramadan. This is due to the fact that those who fast are not allowed to drink water and other liquids, neither are they able to have an ordinary sleep pattern during the month of Ramadan². Nonetheless in the rail study, the relevant managers (referred to as the controllers) must be aware of the potential effects of fasting on their staff since "they must make sure that workers do not carry out safety-critical tasks if they are affected by fatigue³ (or would be affected if they carried out the task) in a way that also affects health and safety" [5]. Conducting a *risk assessment* is essential to identify the employees affected, and to put in place appropriate arrangements to manage the risks involved⁴.

The following section of this report reviews several possible effects of fasting on individuals. Subsequently a number of recommendations will be reviewed, for both employees and employers, in order to minimise the potential adverse impacts and risks of such fasting practices.

¹ The fasting days for other well-known religions can be found in reference [19] of this report

² Normally Muslims who fast should get up before dawn in order to eat food and drink water before starting their fast.

³ Fatigue is a potential effect of fasting (see section 2)

⁴ Regulation 25 of reference [5] (page 60)

2 Effects of fasting

2.1 General effects

While fasting, Muslims are prohibited from eating and drinking. The resulting deprivation from food and drinks, together with disruption to sleeping patterns, can cause a range of physical and mental effects⁵. These effects, however, significantly vary among different people due to having different levels of physical and mental capabilities, and also depend on the time of the year which fasting takes place (e.g. whether fasting in long and hot summer days, or short winter days). The following are the most significant effects which have been mentioned in some references including the NHS website (e.g. [1], [6], [7], [8]):

- dizziness or light-headedness
- headache
- tiredness and sleepiness
- heat-related issues (in hot environments) e.g. heat stress, heat rash, heat cramps, heat exhaustion, heat stroke etc. (see reference [9] for a brief description of each item)
- becoming irritable
- reduced concentration for individuals due to blood sugar levels running low
- the feeling of deprivation

As mentioned above, the occurrence and the extent of the effects can significantly vary depending on individuals, and will also depend on the duration of the fasting period, which can vary from one year to the other. Advice is available for having a healthy diet during fasting periods (e.g. on the NHS Direct website [10]) which is focused on keeping an overall healthy diet and obtaining sufficient sleep and rest, despite the day time and night time constraints.

3 Advice for employees

Since different people have differing physical and mental capabilities and possibly varying medical conditions, they themselves can best identify those arrangements which can help them with managing their fasting during working hours without comprising the health and safety of themselves and other relevant individuals (the employers, the customers/clients and the business). During fasting periods, an occupational situation which is fairly easily manageable by one person may prove very difficult for another. As such, it is usually the individual who is in the best position to work out a plan, in collaboration with the employer, to assist him or her with fasting during working hours (although the employer can assist substantially, giving the employee as much flexibility as possible for this purpose; see section 4). This is also in line with the duties set on an employee by section 7 of the “Health and Safety at Work etc. Act 1974” [11] in relation to managing one’s health and safety, and others who may be affected by an employee’s acts at work.

3.1 General advice

The general advice available for employees (e.g. in references [12], [13], [1], [14]) often depends on the nature of their employment. The following are some advisory statements which are likely to be relevant to train drivers:

⁵ Fasting can have some positive effects on individuals’ health and wellbeing (e.g. reducing weight, increasing self-control) – mainly materialised in longer terms – which are not discussed in this report.

- “Establish when Ramadan is approaching and let the employer know that fasting will be observed. It is highly advisable to let colleagues and managers know that one is fasting. They will probably be wondering why one isn't eating, gets a little irritable, or isn't one's usual self. They may also be able to help by taking on some of the fasting worker's responsibilities during the fasting period (in return for helping them on other occasions).
- Ask the employer if they can reschedule very physically demanding tasks after Ramadan. If they cannot, and if the work is extremely physically demanding in very dire environments, consider the possibility of applying the *fatwa* (associated with a religious rule/instruction) about not fasting for those days when one is scheduled for such types of work, and doing replacement fasting later.
- It is best to create a dialogue with colleagues or managers about any adjustments one may need. Explain that during Ramadan, working through lunch hours, finishing earlier and coming into the office earlier may be preferable. Employers can't always accommodate flexible working requests, but these requests are more likely to be understood if one takes the time to discuss the situation.
- Ask the employer if they will allow the employee to continue working during lunch time (or take a shorter lunch break for praying) so that he/she can leave earlier. Otherwise, ask if one can use part of one's lunch break to take a short power nap.
- If possible, consider working during night and rest during the day.
- Balance the work day. Reserve the morning for intellectually demanding work or tasks that require concentration, and save the routine tasks for later in the day.
- Plan one's daily schedule to sleep well, exercise regularly and eat meals at a consistent time.
- If one feels sleepy before driving, take a nap for no more than 20 minutes. If one feels sleepy while driving, take a short break and a short nap. Be aware that one can't 'drive through tiredness'.
- Be alert when driving just before sunset which is normally the most difficult time during fasting.
- Despite not having a lunch or coffee break, one should still take a break, particularly in fresh air
- Take one of the possible measures (e.g. a short nap, short walk, or use flexible working hours to go home early) to cope with the late afternoon, which is always the hardest part of the fast.
- Eat properly during the month of Ramadan, and avoid take-ways.
- Try to be disciplined about one's eating and sleeping habits when one is not fasting.
- Hydrate well during the night and at *Suhour* (i.e. early morning food before fasting starts) and after *Iftar* (meal upon breaking one's fast) so that one does not get dehydrated on the job. Severe dehydration can lead to people passing out on the job, etc. and hurting oneself.
- If possible avoid committing oneself to evening functions or to travel away from home for business.”

To the author's knowledge, a Muslim must avoid fasting – or cease fasting should he or she have started so already – if there is reasonable suspicion that fasting can cause illness, or put other people's lives at risk. It may be worthwhile for the relevant employees to remind themselves of this explicit rule.

3.2 Taking the advantage of regulations on flexibility at work

In the UK and many other European countries, employees are entitled to ask for flexible working from their employers regardless of the underlying reasons for their requests. Some employees may wish to consider this option in order to formalise the arrangements which they wish to have during the fasting period. It should be noted that in the UK and most other countries, an employer can reject the flexible working arrangements requested by an employee due to having detrimental effects on the business under question [15]. As such, informal negotiations remain the key means of reaching an agreement with one's employer to obtain flexible working arrangements. Furthermore, within many rail operating

companies, it is quite common for colleagues to swap their shifts sometimes, with their manager's knowledge and agreement, in order to help each other with managing their personal commitments and lifestyles.

4 Some guidelines, practices and policies for employers

As mentioned in section 1, the relevant employers in the rail industry have a legal duty to undertake risk assessments to manage the risk from employees' fatigue (which is a potential effect of fasting). Furthermore issues of discrimination/unfairness may rise should the employers do not put in place appropriate arrangements (some of which suggested later in this section) to assist those who fast at work.

Employers can play a major role in supporting those employees who observe fasting. This can in turn benefit their own businesses. Employers normally appreciate that Muslims observing the fast have a longer day than usual. A number of recommendations to employers have been provided by some employee unions and business associations and these are described below.



Figure 1 A taxi driver in New York city praying on a petrol station during Ramadan (source: [16])

- The recommendations of the Islamic Workplace Association⁶ are:[14]
 - Establishing when Ramadan is approaching. Communicating early and openly with employees, stakeholders and western partners on work schedule implications.
 - If possible, making allowances for Muslims to take a break at sunset to break their fast and pray.
 - If possible, arrange with the relevant staff to do night-work (after breaking their fast) and rest during the day.

⁶ <http://theislamicworkplace.com/>

- When relevant, allowing Muslim staff to work a shorter lunch break in return for an earlier finish.
- Not to ask the relevant staff to commit to evening functions or to travel away from home for business.
- Communicating with all stakeholders on opening and closing times for factories or organisations, and notifying them of key resources not available.
- Moving major activities (including training events, appraisals, etc.) to before or after Ramadan
- A news reporting and analysis website⁷ recommends providing a dedicated place to worship (prayer room) for Muslims during Ramadan: while Muslims observing Ramadan need a place to pray throughout the year, it will be even more helpful to provide such a place during fasting times, as this will reduce the physical and mental burden of finding a suitable place when the employees are already stressed due to lack of food and drink. [16]
- Providing relevant health and well-being guidance to the employees. For instance First Bus gives Muslim bus drivers in Bradford healthy eating advice to make sure they stay safe and alert while fasting for Ramadan⁸. [17]
- An international legal company (Pinsent Masons⁹) recommends to employers (those with significant proportion of employees who observe fasting during the month of Ramadan) to have in place a Ramadan policy in order to set out the standard expected of the employees, as well as the flexibility arrangements available to the employees to assist them during the fasting periods. [18]
- The Islamic Workplace portal¹⁰ [14] reports that in some countries with significant proportion of Muslims, working hours are reduced during the month of Ramadan. For example in UAE, employees are by law entitled to work two hours fewer every day). In Saudi Arabia, the working hours are 10am to 3pm (5 hours) which is 2 to 3 hours shorter than normal working hours. To be fair to all employees where the majority of them are *not* fasting, those who observe Ramadan may be required to make up for the reduced hours within a year.

⁷ <http://www.citylab.com/>

⁸ The information sheets highlight a diet that has less food than normal but is sufficiently balanced to keep people healthy and active. The diet should be simple and not differ too much from a normal everyday diet. Also staff are being encouraged to have a full and healthy breakfast, which includes plenty of liquids, before setting off to work. In the evenings and at the end of fasting periods, staff are being reminded not to indulge in too many rich and fatty dishes that could bring on stomach aches and illness.

⁹ Out-Law portal on <http://www.out-law.com/en/about-us/>

¹⁰ <http://theislamicworkplace.com/2011/08/03/work-ethics-for-muslims-fasting-during-ramadan/>

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