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## **Guidance: Managing Fatigue for Road Marking Operations**



# Guidance on Managing Fatigue for Road Marking Operations

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## A. Scope.

This guidance provides information on how all duty holders can work together to manage fatigue within the Road Marking Operations industry.

## B. Purpose.

This guidance has been produced to help improve the management of fatigue within Road Marking Operations. The Guidance can be used by all the CDM duty holders from Client to Worker. This document represents best practice from the Road Safety Markings Association and should be used in conjunction with the Working Time Directive.

## C. Definitions.

**Fatigue:** “a result of prolonged mental or physical exertion”. Fatigue can affect people’s performance and impair their mental alertness, which leads to dangerous errors’. Recognising that fatigue is not simply “tiredness” and that it has a direct effect on attentiveness and alertness at work.

**RMO:** Road Marking Operations.

**Extension of Working Hours Personal Risk Assessment:** A risk assessment undertaken when the standard rostered working hours are exceeded due to an unplanned or unforeseen event occurring.

**Extended Working Hours:** Any working hours in excess of planned rostered hours, this includes overtime.

**Night Worker:** A person who regularly works for at least 3 hours during the Night Time. Workers may also be night workers if there is a collective agreement that states what counts as night work; and it is likely that they’ll work a proportion of their annual working time during the night.

**Mobile Worker:** A person who has no regular fixed place of work and who spends time travelling to multiple sites or jobs during their typical working period.

**Fixed Worker:** A person who is based at the same location of a regular basis.

**Night Time:** In relation to a worker, means a period in which the duration of work is not less than 7 hours, that includes the period between midnight and 5 a.m.

**Lifestyle:** Habits, attitudes, tastes, moral standards, economic level, etc. that together constitute the mode of living of an individual or group.

**Special Hazards:** A hazard that is outside of their normal work activity. A hazard which is unknown or by which those who are presented by it are not trained in the controls required to mitigate the risk of the hazard. No special hazards have been identified in RMO.

**Door to Door Time:** Is that period of time identified as the combined total of commuting time, travel time and working time.

**Commuting Time:** The time spent travelling from a place of rest to the place of work, likewise from the place of work to a place of rest. This includes passengers and the use of public transport.

**Travel Time:** A period of time during which an employee travels whilst at the disposal of the employer, including carrying out activities or duties on behalf of the employer. This type of travel does not include commuting time.

**Suitable accommodation:** Is a place that provides a comfortable bed where an individual can have a minimum of 8 hours of uninterrupted sleep and a place to eat a meal.



**Shift Work:** The hours worked between the start and finish of a shift, excluding any overtime or shift change-over period worked.

**Work Cycles or Rosters:** The regular work and rest period scheduled.

**Young Worker:** A young worker is someone under 18 but over school leaving age. Under 18's are not able to work nights.

**Line Manager:** This is the person who puts the Operative to work.

## D. Guidance

### 1) Planning the work

All levels of the highways industry will need to plan their work to manage fatigue risk by following good practice. They will need to identify their key hazards, the work demands, work environment, on call arrangements, what special hazards need to be considered and how these factors might contribute to and be impacted by fatigue risk. They will need to consider what mitigation measures are feasible and can be implemented and ensure that actual hours are recorded and managed.

Four of the main duty holders within CDM, who are Client, Principal Contractor, Contractor and Worker have responsibilities for the management and successful implementation of Health and Safety on a project, including fatigue. The application of these in connection with Fatigue management is expressed within the matrix shown in Part D-Section 7 of this document.

**Client.** Has overall responsibility for the successful management of the project and is supported by the Principal Designer and Principal Contractor in different phases of the project. The Client ensures that the construction project is set up so that it is carried out from start to finish in a way that adequately controls the risks to the health and safety of those who may be affected, and this includes fatigue. The best way to control the health and safety risks arising from fatigue is to eliminate the factors causing fatigue at the source.

The planning starts with the client and can include:

- Work load planning to ensure an even spread rather than peaks or troughs;
- Allocating spend to enable sufficient resource planning by other duty holders;
- Initial design to be adequately resourced. For example, there have been issues on Site Management Plans due to assumptions being made;
- Consideration of more works being carried out during the day;
- Facilitating innovation and challenging standards;
- Eliminating fatigue risk at source by ensuring there is sufficient time allowed for completion of works, including the impact of site induction timings;
- To comply with health and safety legislation:
  - It shall be the duty of every employer to conduct his undertaking in such a way as to ensure, so far as is reasonably practicable, that persons not in his employment who may be affected are not thereby exposed to risks to their health or safety.
  - Every employer shall ensure that his employees are provided with such health surveillance as is appropriate having regard to the risks to their health and safety which are identified by the assessment.

**Principal Contractor.** Manages the construction phase of a project. Planning is an essential part of managing a construction site and should start as early as possible to identify health and safety risks, control measures and resources needed to reduce or eliminate them.

The Principal contractor's role in this includes but is not limited to:



- Planning of the contract including RMO resources;
- Giving contractors sufficient notice;
- Induction for those carrying out night shift to be held at night rather than during the day;
- Giving more consideration to carrying out works during the day.

**Contractor.** The main duty of a Contractor is to plan and manage construction work under their control so that it is carried out in a way that controls risks to health and safety.

The Contractor's role includes but is not limited to:

- Consult with workers regarding welfare and fatigue;
- Coordinating their activities with others involved in the project team;
- Complying with directions given to them by the Principal Designer or Principal Contractor;
- Where Contractors are involved in design work, including for Road Marking Operations, they will carry out duties as Designers.

#### **Workers must:**

- Be consulted about matters which affect their health, safety and welfare;
- Take care of their own health and safety and others who may be affected by their actions, including their own fatigue and that of other colleagues;
- Report anything they see which is likely to endanger either their own or others' health and safety, including instances of fatigue;
- Cooperate with their employer, fellow workers, contractors and other duty holders;
- Ensure they are fit for work and monitor their fatigue and performance during the shift.

## **2) Evaluate the risk**

Evaluate the risk against the identified good practice for site specific work. This should include establishing if there are special hazards to be managed and how can work be organised to minimise fatigue risk.

## **3) Control and Mitigation**

The best way to control the health and safety risks arising from fatigue is to eliminate the factors causing fatigue at the source.

If elimination is not reasonably practicable, the risks must be minimised.

Reasonably practicable relating to managing the risk of fatigue will vary depending on the structure of an organisation, including the persons carrying out the work.

Factors contributing to the risk of fatigue are often inter-related. Incorporating a combination of control measures into general workplace systems, as well as control measures specific to the work, can help to minimise more than one contributor to fatigue.

Control measures for fatigue risks which can be built into a work schedule may include:

- Ensuring all workers have undertaken a safety critical medical;
- Ensuring all workers and supervisory staff have received effective training relating to recognising and monitoring fatigue in colleagues during the shift;



- Designing working hours to allow for good sleep opportunity and enough recovery time between work days or shifts for travelling, eating, washing and sleeping;
- Developing a working-hours policy on daily work hours, maximum average weekly hours, and total hours over a three-month period and work-related travel;
- Develop effective methods for recording true working times rather than shift allocated times;
- Developing procedures to manage and limit excessive working hours;
- Encouraging workers to take adequate and regular breaks to rest, eat and rehydrate;
- Identifying sites where it may be safe and practicable for workers to take a short nap during the shift. For example, power napping in the vehicle cab;
- Where practicable and site dynamics allow, avoiding work arrangements which provide incentives to work excessive hours;
- Implementing processes to manage accrued leave balances and requests for leave. For example, setting maximum limits of leave accrual to encourage workers to use it;
- Considering future schedules when approving request for leave or shift swaps, and ensuring leave is reflected in rosters;
- Having access to on-call or agency workers for unplanned leave, emergencies or where workload increases;
- Developing plans to deal with workload changes due to absenteeism;
- Considering the fatigue of workers when they return from a period of leave or absence;
- Companies should have a process in place to manage and monitor the secondary employment of their workers;
- Giving consideration, where practicable, to increasing the amount of time between shifts and adjusting shift starting times which may improve the opportunity for sleep.

#### **4) Review**

Once control measures are implemented, they should be monitored and reviewed to ensure they continue to effectively manage fatigue. Consider implementing trial periods for any new work schedules and encouraging workers to provide effective feedback on these measures.

To determine the frequency of monitoring and review consider the level of risk; i.e. high-risk hazards need more frequent assessments.

Control measures should also be reviewed when:

- There is any indication that risks are not being controlled;
- New tasks, equipment, procedures, rosters or schedules are introduced;
- Changes are proposed to the work environment, working hours, schedules and rosters;
- Changes in personnel;
- Changes in legislation;
- There is an incident due to fatigue at the workplace;
- Changes in working time legislation require the need to review your effective methods for recording true working times rather than shift allocated times;
- Where health surveillance highlights a problem requiring a systems or personnel review;
- Where a risk assessment declaration highlights a fatigue risk issue;
- New information regarding fatigue becomes available, and;
- Results of consultation, including a request from a health and safety representative, indicate that a review is necessary.

#### **5) Monitor during the shift**

Peer monitoring should be used continuously to reduce the risk of fatigue impacting an individual.



Where fatigue has been identified, suitable arrangements are to be made for the activity to be finished safely. The cause of the fatigue should also be investigated and actions to be taken before they recommence work. Arrangements should be in place for any worker to report that they are unfit for work due to fatigue.

#### 6) CDM Duty holders fatigue risk matrix

| Duty Holder          | Plan | Evaluate | Control and Mitigation | Review | Risk Assessment Start of Shift | Monitor During Shift |
|----------------------|------|----------|------------------------|--------|--------------------------------|----------------------|
| Client               | Yes  | Yes      | Yes                    | Yes    | No                             | No                   |
| Principal Contractor | Yes  | Yes      | Yes                    | Yes    | No                             | Yes                  |
| Contractor           | Yes  | Yes      | Yes                    | Yes    | Yes                            | Yes                  |
| Worker               | No   | No       | No                     | No     | Yes                            | Yes                  |

#### 7) Roles and Responsibilities

**Senior Manager.** Has overall responsibility for the implementation and review of this plan, ensuring that their direct reports comply with this plan through the provision of suitable controls, training and preventative measures to eliminate, minimise or mitigate the risk to health and safety of individuals caused through fatigue.

**Managers.** Where reasonably practicable, shall ensure, that all work schedules, rosters and working time recording systems meet the requirements of the Fatigue Management Plan. Where extended working hours are required for operational reasons the manager should:

- Ensure all workers have received a safety critical medical;
- Control extended hours and shift swapping by monitoring and recording hours worked and rest periods;
- Monitor the arrangements for managing fatigue to assess how effectively the risks are being controlled;
- Implement mitigation measures identified to ensure fatigue is managed effectively;
- Produce, review and implement risk assessments, safe systems of work;
- Keep records of documents as required;
- Encourage Employees not to exceed their assigned working hours.

**Supervisor / Charge-hand.** Shall ensure that staff and operatives under their supervision or control do not carry out work in circumstances where they are likely to be excessively fatigued. The following tasks should be undertaken by them:

- Ensure that all working hours are accurately recorded;
- Implement risk assessments, safe systems of work;
- Keep records of documents as required;
- Review the arrangements of managing the risks identified with fatigue, when there is reason to doubt the effectiveness of the arrangements;
- Liaise with management when there is reason to doubt the effectiveness of existing arrangements;
- Ensure all workers are supplied with clear and relevant information on the risks associated with fatigue and how they will be controlled;



- So far as reasonably practicable, ensure that any worker who reports for duty where clearly unfit owing to fatigue or who through the course of their shift become unfit owing to fatigue, do not continue to work;
- Encourage all employees to take regular breaks appropriately.

**All Personnel.** Are empowered to identify individuals who they feel are unfit for work due to whatever circumstances. Each individual at work must:

- Ensure that they are fit for work;
- Ensure the information they provide in regards to commute time and travel time is accurate;
- Monitor their colleagues' fatigue levels throughout the shift;
- Inform their managers, supervisors or charge-hands if they are concerned about a colleagues' level of fatigue or they themselves are affected;
- So as far as is reasonably practicable, ensure that any worker who reports for duty where they are clearly unfit owing to fatigue or, who through the course of their work shift, become unfit owing to fatigue, do not continue to carry out work.

## 8) Instruction, training and guidance

Contractors responsibility to ensure operatives and personnel are trained and aware of fatigue.

Recommended training should include toolbox talks.

Guidance to manage fatigue utilising the following topics can be found in Annex B:

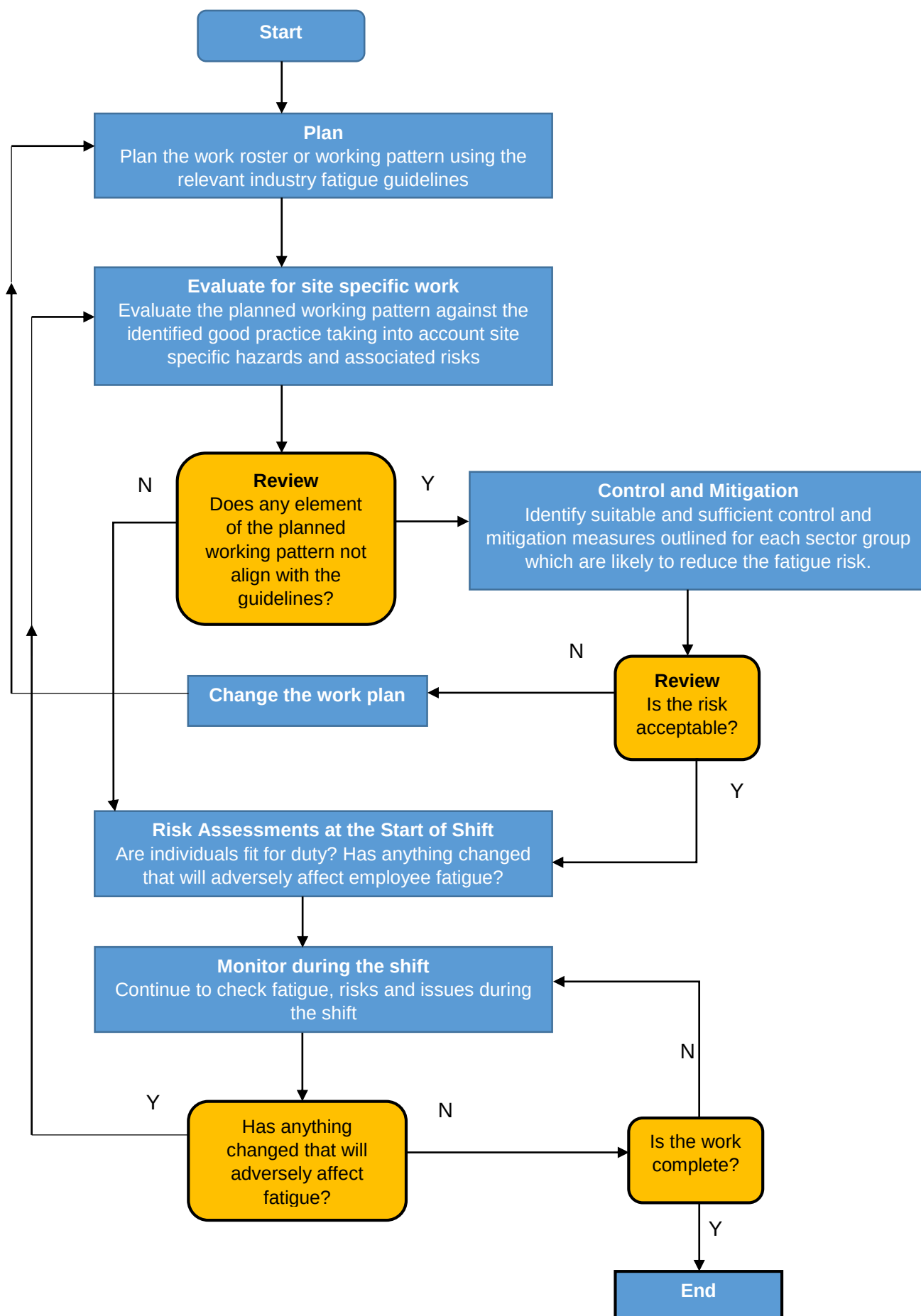
- Sleep
- Nutrition
- Hydration

## 9) Fatigue management plan sections

Using the guidance of this document the suggested sections of any fatigue management plan may include the following headings:

- Commitment to systematically manage fatigue;
- Define scope of the fatigue management plan;
- Roles & responsibilities of those who manage fatigue;
- Working hours and overtime limits;
- Protocols to exceed working time limits;
- Training, awareness and communication of Fatigue management;
- Fatigue management process;
- Protocols for employees self-reporting fatigue;
- Investigating incidents and near misses involving fatigue;
- Management of health issues;
- Audit and continuous improvement of the Fatigue Management Plan.

## 10) Fatigue process map





## E. Resources

Further information to assist in developing your fatigue management policy and related training can be found in this section.

### 11) Working Hours' Time Limits

The legislation states that you cannot work for more than 48 hours per week, which is normally measured over a 17 week 'reference period'. However, this '17 week reference period' can be amended where: there is a valid collective or workforce agreement in place the reference period can be extended up to a maximum of 52 weeks.

Workers can have a 26 week reference period if they live far from their workplace (e.g. offshore workers); if they work in security or surveillance that requires a permanent presence; or they perform a duty that involves the need for continuity of service or production e.g. Press/Film/TV, hospital and care workers, farm workers, utility workers, dock and airport workers.

#### Opt Outs:

In many industries, such as construction, Workers can be asked by their Employers to voluntarily sign an Opt-Out of this 48 hour limit (which is legally valid) – i.e. you agree that you can work for more than 48 hours per week. The Opt-Out is not a condition of your employment and it must remain optional and voluntary. Therefore, even if you have signed your contract with an Opt Out in place, you have the legal right to opt back in to the 48 hour limit at a later date. You have to give your employer a minimum of seven days written notice by law to do this (check your contract in case it requires a longer time scale to Opt back in, as this is allowed).

Young workers cannot Opt Out.

Workers should not be subjected to any detriment by refusing or proposing to refuse to sign an Opt-Out agreement. Employees who are dismissed because they refuse to sign an Opt-Out clause could be seen as unfairly dismissed and they could potentially make a claim to an Employment Tribunal.

In April 2009 the UK won its right to retain the Opt Out – the European Parliament had proposed to remove the Opt Out provision within three years – for now, the Opt Out remains legal and valid.

The number of hours worked per week can be averaged by an employer over the applicable 17/26 reference work period (or contract length), rather than in one week, and the first 20 days holiday they are legally entitled to cannot be used to reduce their average number of hours worked. However, with the Daily and Weekly Rest breaks and the Opt Out above included, the maximum in any week they should work is 78 hours. Breaches of the 48 hour limit are dealt with by the Health and Safety Executive (i.e. a prosecution and/or a fine for Employers, but not compensation for the worker).

More information is available from [ACAS](#) or [Gov.uk](#).

### 12) RSMA Fatigue Policy Example

The degree to which fatigue impacts on safety and health depends, to a large extent, on the structure and duration of the shift, the shift roster, the nature of the work, 'team make-up', commuting time and method, sleeping arrangements in the home or at site accommodation and the lifestyle of the individual.

When developing a fatigue policy, consider the following:

- Methods of travel to and from work available to employees and the risk of commuting accidents, e.g. impact of public transport or car sharing



- Driving at work, workloads and type of work undertaken, including: Environmental factors (e.g. Heat, humidity, noise levels, and vibration) and ability to access a balanced diet and frequency of breaks.

Continuous monitoring of the progress of works against the planned shift pattern leading to the authorisation of additional hours is only permitted if there are exceptional circumstances which are likely to:

- Increase the risks to health and safety of colleagues or the public;
- Cause significant disruption or delay to the network.

### 13) Considerations when developing a Fatigue Policy

Highways England Standard Rules.

| Standard Rules                                                                                                                                                                                              | Examples of Control Measures<br>(not an exhaustive list)          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| <p>The working time for a 'fixed' worker should not exceed 12 hours in any 24 hour period.</p> <p>With the exception of 'mobile' &amp; 'night workers' whereby working time should not exceed 13 hours.</p> | Change shift start / finish times                                 |
| <p>Minimum 12 hours rest period between shifts, this includes any commuting time for a 'fixed' worker.</p> <p>Minimum of 11 hours uninterrupted rest for 'mobile' workers</p>                               | Reduction in shift lengths                                        |
| <p>The door to door time should not be planned to exceed a maximum of 14 hours per shift, this includes commuting time for 'fixed' workers.</p> <p>This is 13 hours for 'mobile' workers.</p>               | Lodging in overnight accommodation or reduce commuter time        |
| <p>The weekly working time should not be planned to exceed a maximum of 60 hours in any 7 day period, unless permitted by the risk assessment and outputs from use of the HSE fatigue tool (1)</p>          | Increase frequency / length of breaks                             |
| <p>The weekly working time in any 14 day period should not exceed an average of 72 hours for each 7 days.</p>                                                                                               | Rotation of alternative staff                                     |
| <p>No more than 12 shifts to be worked in any 14 day period.</p>                                                                                                                                            | <p>Rotation of alternative staff</p> <p>Review shift patterns</p> |



#### **14) Night Works.**

The rules about how long workers can work at night are based on an average working time, normally calculated over a 17-week period. If the workers and the employer both agree as part of a collective or workforce agreement, the working hours can be averaged over a longer period, e.g. up to 52 weeks.

Night workers should not work more than an average of 8 hours in 24-hour period. This average is usually calculated over a 17 week reference period, but it can be over a longer period if the workers and employer agree. Regular overtime is included in the average and workers can't opt out of this limit.

Night worker health assessments can be offered as part of an Occupational Health Surveillance Assessment Procedure. The Company must keep the records for at least 2 years.

Employers should provide similar facilities and opportunities for night workers as those available for day time workers.

Those undertaking special hazards during a night shift **MUST** adhere to an 8 hour shift only (the average rule does not apply when undertaking special hazards)

#### **15) Young Workers**

Workers under 18 years of age must not exceed more than eight hours a day or 40 hours a week.

There is no opt-out agreement for young workers.

Young workers are entitled to two days off each week and are entitled to a 30 minute rest break for every 4.5 hours worked.

#### **16) Risk Assessments**

Fatigue Risk Assessments will identify the shift patterns required to manage fatigue for planned works and should record this information in a shift roster. Risk assessments for work activities and projects should, where appropriate, identify fatigue as a hazard and the controls to be implemented. Where required, a specific risk assessment will be needed for "Excessive" commute times.

The risk assessment should firstly consider who might be at risk. While all workers are potentially at risk from shift work, consideration should be given to those groups who are more vulnerable. These include demographics of the workforce, new and expectant mothers, pre-existing health conditions and Workers taking medication.

In addition to the above the following points should also be considered when developing the risk assessment: the control of working hours, the physical and mental demands of the task being undertaken, the time of day or night the work will take place, monitoring the door to door time of the workforce, impact on the road user.

In terms of assessing the risk, hazard factors to be considered should include the following:

- The structure of the work schedules and rosters;
- Irregular work schedules;
- Potential for call-out of shift-work employees for incident response which may result in sleep deprivation, disruption of sleeping patterns and an increase in fatigue;
- Shift length in relation to the physical and mental demands of the work and commuting arrangements;
- Use of plant and equipment under time pressures;
- Proximity of residence or accommodation to worksite.

The following wording should be included on all risk assessments, point of work assessments, start of shift briefings or whichever method is used to brief operatives at the start of a shift: *"By signing the above*



*document I agree that I am fit to work on this site and that if at any stage I feel the effects of fatigue I shall make my foreman, supervisor or line manager aware immediately."*

## ANNEX A – Policy Guidance

### Introduction.

The Health and Safety Laboratory recently produced a report on Fatigue Risk Management for the Highways Industry with specific focus on four elements of Highway Construction. The key findings suggest that future policy and advice by Employers needs to focus on managing awareness and perceptions within the workforce.

The following information from <http://www.hse.gov.uk/humanfactors/topics/fatigue.htm> describes why the management of fatigue is important within the work place.

More than 3.5 million people are employed as shift workers in the UK. They work in a wide variety of industries including the emergency services, healthcare, the utilities, construction, transport, manufacturing (including oil, gas & chemical industries), entertainment and retail. Poorly designed shift-working arrangements and long working hours that do not balance the demands of work with time for rest and recovery can result in fatigue, accidents, injuries and ill health.

Fatigue refers to the issues that arise from excessive working time or poorly designed shift patterns. It is generally considered to be a decline in mental and/or physical performance that results from prolonged exertion, sleep loss and/or disruption of the internal clock. It is also related to workload, in that workers are more easily fatigued if their work is machine-paced, complex or monotonous.

Fatigue results in slower reactions, reduced ability to process information, memory lapses, absent-mindedness, decreased awareness, lack of attention, underestimation of risk, reduced coordination etc. Fatigue can lead to errors and accidents, ill-health and injury, and reduced productivity. It is often a root cause of major accidents e.g. Herald of Free Enterprise, Chernobyl, Texas City, Clapham Junction, Challenger and Exxon Valdez.

Fatigue has also been implicated in 20% of accidents on major roads and is said to cost the UK £115 - £240 million per year in terms of work accidents alone.

The Working Time Regulations 1998 specify minimum legal requirements on the organisation of working time. Along with Management of Health and Safety at Work Regulations 1999, Employers are required to make an assessment of risks to Employees from work activities and take reasonably practicable measures to manage working time fatigue.



## **Fatigue Risk Mitigation Policy Guidance.**

Policy and mitigation measures require a holistic approach to ensure awareness and perceptions are managed correctly from front line operatives through to client.

Any policy needs to include:

- Best practice, including specification of maximum hours from Working Time Regulations.
- Effective methods for monitoring hours.
- Assessment of risks that lead to fatigue relating to hazards associated with Road Marking activities.
- Recognition of mitigation reasons and methods.
- Fit for shift assessment methods.
- Awareness training methods used to dispel myths and manage perceptions.

When devising policy, a key question should be “Do you feel in control of Working Hours?”

Other key policy decisions could focus on how we educate the client on our working time arrangements prior to any contract formalisation. One suggestion from the RSMA Fatigue Working Group representatives is to insist that any site induction is performed en-masse at Employer depots rather than in small groups on-site.

A common theme from discussions in the group and the report is that Lining activities often occur near the end of a project, yet many clients insist on operatives being on-site hours earlier to attend inductions, often resulting in operatives waiting an unnecessary length of time.

On dissecting the report, the RSMA Fatigue Management Working Group came to the conclusion that to begin mitigating variations in working time, Employers need to recognise that they are often not in control of when the customer wants us to work. Once this is recognised and Employee perceptions properly managed then stress levels relating to working hours may be reduced.

## **Fatigue Risk Management: A Guide to Best Practice.**

For any Fatigue Risk Management Policy to be effective, as an industry we need to consider many factors.

A recognition that we are often not in control of working hours due to weather and vagaries of client requirements.

Where possible define regular start and finish times and shift patterns. This will help with managing Operative and Client expectations, reducing confusion and stress.

Double shifting is illegal. However, we know it can happen in rare and exceptional circumstance but the policy must be clear in how an employer would mitigate excessive work hours and ensure adequate rest periods.

Consideration given to the policy monitoring working hours within the supply chain. When using sub-contractors it is necessary to ensure they have not worked excessive hours and will not be a danger on site.

Policy and training needs to recognise the working time averaging period. Consider having a written group opt-out policy extending the average period to help mitigate long hours during summer months.

Perception of breaks during the shift: Common on night shifts is the perception that operatives do not stop for an official break due to the nature of the work demands. Any training needs to highlight that during a shift there are many opportunities for short ad-hoc breaks with a cumulative total exceeding the legal minimum. Management needs to ensure that this is not seen as skiving, rather effective time management.

Acceptance of napping, and associated benefits: There is a growing body of evidence that short power naps are beneficial especially during long night shifts. The industry needs to recognise this practice and that it will



often occur “naturally” during the shift due to the ebb and flow of work demands. Acceptance of this practice needs to be formally recognised and associated training should include methods of effective power napping.

Training to manage expectations and perceptions: For example; Short notice is not given by managers but is a consequence of short notice from client. Operative often are not aware of this and it may cause unnecessary friction between operatives and management.

Pay structure for both salaried supervision staff and bonus driven operatives will effect fatigue levels. A common theme seen across the industry is bonus driven structures causing operatives to work as much as possible to maximise pay opportunities. At the other end of the scale are fluctuations in working time caused by Job-and-Knock. Whilst all pay structures are valid and are often in place to suit individual business needs, it must be recognised that they will be a contributing factor to fatigue in the work place.

Make operatives aware that time exposed to actual danger can be a small percentage of working time. A large proportion of shift time is loading in depot, driving to and from site and prep-time at site.

Avoidance of changes in shift patterns. All night or day. If shift change is necessary, carefully consideration needs to be given to change over methods. This includes given thought to the dangers of cumulative fatigue caused by constant shift rotation.

Policy needs to recognise that often, managers and supervisors, do not have monitored hours and can be subject to unnecessary stress and fatigue. Perhaps consideration needs to be given to company policies banning the use of all electronic communication devices when driving, unless a passenger can relay messages. This would serve to provide respite from one work place stressor. However, we appreciate that this type of policy is only a useful measure if effectively enforced.

Recognise and educate that industry is often reactive with little or no opportunity for long term planning often unfeasible. Where project phase plans are used, expected working hours need to consider commuting time as well as travel to and from depot. Where operatives are stopping out, consider the location of accommodation in relation to the work site.

In conclusion, any effective policy and procedure needs to consider fostering improvements in the relationships with clients so they better understand the working nature of our industry. A fatigue management policy should be a proportional approach relevant to the needs of our industry and seek to avoid poor practice in dealing with the causes of excessive fatigue in the work place.



## ANNEX B

This Annex includes further information on guidance on sleep, nutrition and hydration.

# Facts About Sleep



## 1 Sleep need varies

Different people need different amounts of sleep. Eight and a quarter hours is the average for adults. Some people can cope very well with much less and some need much more every night.

## 2 Sleep is an active state

We used to think that everything shuts down when we sleep. But over the last 60 years scientists have discovered that our brains are very active while we sleep. In fact, some parts of the brain use more oxygen and glucose while asleep than when awake.

## 3 Deep sleep happens first

The first three hours of sleep have the deepest stages of sleep (Slow Wave Sleep). Later on in the night we have more of the sleep stage with vivid dreams (Rapid Eye Movement Sleep, REM sleep).

## 4 Sleep changes in cycles

Sleep changes across the night in cycles of about 90 minutes. There is REM (dreaming) sleep in every cycle, even if only for a short time. We also have very brief arousals many times across the night. We are not aware of most of these arousals and we forget most dreams.

## 5 A body clock affects our tiredness

The timing of our need for sleep is based on two things. The first is how long we have been awake. The second is our body clock. If we stay awake all night we will feel more tired at 4am than at 10am. Scientists call the time between 3am and 5am the 'dead zone'. It's when our body clock makes us 'dead' tired.

## 6 Falling asleep can be hard

You cannot make yourself fall asleep – just like you can't digest your food faster. Sleep onset is not something we can control. We can only create the right conditions for sleep – both in our minds and in our environment.

## 7 Lack of sleep can bring you down

Some people cope with a lack of sleep much better than others. But everyone who is very sleepy loses concentration easily and experiences mood changes. The usual mood changes are feeling more depressed and irritable.

## 8 Genetics and sleep

We now believe that many aspects of sleep are genetically controlled. Recent breakthroughs may have identified the gene that makes some people cope more easily with a lack of sleep.

## 9 Why do we sleep?

Scientists don't yet understand exactly why we need sleep so badly. They believe it restores us physically and helps us organise things in our brain. We do know, however, that we can't live well without it.

This information is produced by:

### **Sleep Health Foundation**

ABN 91 138 737 854

[www.sleephealthfoundation.org.au](http://www.sleephealthfoundation.org.au)

A national organisation devoted to education, advocacy and supporting research into sleep and its disorders

### **Sleep Disorders Australia**

ABN 98 075 427 459

[www.sleepoz.org.au](http://www.sleepoz.org.au)

A voluntary group offering assistance and support to people and their families living with sleep disorders

### **Australasian Sleep Association**

ABN 32 172 170 561

[www.sleep.org.au](http://www.sleep.org.au)

The peak national association of clinicians and scientists devoted to investigation of sleep and its disorders

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# Common Myths About Sleep



## 1 Myth: The brain shuts down and is inactive during sleep

In fact, the brain is very busy during sleep. Among other things, it sorts and processes information on what was going on that day. Then it cements these into your long term memory. This is a vital for learning and memory.

## 2 Myth: You can train yourself to get by with less sleep

How much sleep is needed each night varies between people. The average adult needs about 8 hours a night. Some need less, others more. Most of us know from our own experience how much we need to feel good the next day. Getting less than this builds a sleep debt. Sooner or later this will have to be paid back. You might not notice missing an hour or so every now and then, but it is not good to make a habit of it. If you do, you won't be able to think or react to things as quickly as before. Even if you don't feel sleepy, your brain won't be working as well as it could.

## 3 Myth: Sleeping in on the weekend prevents the effects of sleep loss during the next week

Sleeping in will work when you haven't been sleeping enough and you need to pay back a sleep debt. But you can't bank sleep in advance. If you are behind on sleep, it will affect how well your mind works. Things won't get better until you catch up on the sleep that you missed. Regular sleep habits help build a good, strong sleep-wake pattern and keep you at the top of your game.

## 4 Myth: Daytime sleepiness will always get better if you spend more time in bed

Good sleep needs the right length, timing and quality. There are a number of sleep problems that can worsen the quality of your sleep and cause sleepiness during the day. This can be the case even if you don't notice any problems at night.

Obstructive sleep apnoea is a common example of this. It is not normal to sleep for a long time at night and still feel tired during the day. If you do, a doctor needs to look into why this is happening.

## 5 Myth: Daytime naps don't help and they waste time

Adults usually don't need daytime naps if they have slept well for long enough at night. But they are useful if there has been sleep loss at night. If you do need a nap, it is best not to have one later than mid afternoon. This is so you can still get a good night's sleep. Also, naps that last more than 15 to 20 minutes can make you feel groggy for a while after you wake up. This is known as "sleep inertia". Napping is normal in young children.

## 6 Myth: The brain adjusts quickly to changes in your sleep schedule

We all have an internal body clock. This clock is set by when we get (and don't get) sunlight. This means we are at our most alert during the day. The time when we are the most tired is between midnight and dawn. Sometimes we need to change the times when we go to bed and get up. This could be because of shift work or changing time zones (jet lag). Some people cope better with this than others. But we all take time to adjust to these changes. Until we adjust, our sleep quality suffers and we don't function as well during the day.

## 7 Myth: We need less sleep when we are older

How much sleep children needs gets less and less as they grow up. But once they are young adults, their sleep needs

stop changing. The amount of sleep they need will stay the same for the rest of their life. As we age through adult life, sleep can get less efficient. This could be from body aches and pains, among other things. Because of this, we might have to spend a bit more time in bed. But apart from this, sleep needs are stable throughout adult life.

## 8 Myth: If children don't get enough sleep, this will always lead to them feeling too sleepy during the day

If a child doesn't get enough sleep, this can cause many other problems apart from just sleepiness. It might be that they can't concentrate well but don't feel tired. In some cases they behave badly, are moody and get into trouble at school.

## 9 Myth: Regular snoring is normal

Snoring from time to time is a common problem. Loud snoring on most nights is not normal and should be checked out. It often means something is getting in the way of breathing during sleep, both in children and in adults. This is known as obstructive sleep apnoea.

## 10 Myth: If you find it hard to fall asleep or stay asleep, the usual cause is stress

Stress can certainly make it harder to sleep. But many other causes exist. These include a variety of sleep, medical and psychological issues. Often the issue is poor sleep habits. If so, these can and should be dealt with.

This information is produced by:

**Sleep Health Foundation**  
ABN 91 138 737 854  
[www.sleephealthfoundation.org.au](http://www.sleephealthfoundation.org.au)

A national organisation devoted to education, advocacy and supporting research into sleep and its disorders

**Sleep Disorders Australia**  
ABN 98 075 427 459  
[www.sleepoz.org.au](http://www.sleepoz.org.au)

A voluntary group offering assistance and support to people and their families living with sleep disorders

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# The energy 'diet'

**The best way to eat to keep up your energy levels is to follow a healthy, balanced diet.**

The [Eatwell Guide](#) shows the different types of food and drink we should consume – and in what proportions – to have a healthy, balanced diet.

The main recommendations are to:

- eat at least 5 portions of a variety of fruit and vegetables every day
- base meals on potatoes, bread, rice, pasta or other starchy carbohydrates – choose wholegrain versions where possible
- have some dairy, or dairy alternatives such as soya drinks – choose lower-fat and lower-sugar options
- eat some beans, pulses, fish, eggs, meat and other protein – including 2 portions of fish every week, 1 of which should be oily
- choose unsaturated oils and spreads, and eat them in small amounts
- drink 6 to 8 glasses of fluid a day

Find out more about [eating a healthy, balanced diet](#).

## Eat at regular intervals

If you eat at regular times, you may find it easier to sustain your energy levels.

Try to eat 3 meals a day. Have a healthy snack, such as fruit or low-fat yoghurt, between meals if necessary.

## Don't skip breakfast

A healthy, balanced breakfast will help keep you going until lunchtime. Despite this, up to a third of us regularly skip breakfast according to the British Dietetic Association (BDA).

Go for healthier options, such as:

- porridge made with lower-fat milk or water, and topped with fruit
- Low-sugar, high-fibre breakfast cereals such as bran or wheat biscuits
- boiled or poached eggs, with wholemeal toast and low-fat spread

If you can't face eating as soon as you get up, take a low-sugar snack to eat on the go, such as fruit.

Here are [5 healthy breakfasts](#).

## **Aim for at least 5 A Day**

Most people in the UK eat too much fat, sugar and salt, and not enough fruit and vegetables.

Fruit and vegetables are good sources of vitamins, minerals and fibre – essential nutrients that your body needs to work properly.

Try to incorporate at least 5 portions of a variety of fruit and veg into your daily diet. They can be fresh, frozen, canned, dried or juiced.

Read more about [how to get your 5 A Day](#).

## **Starchy carbohydrates can help sustain energy**

Starchy carbohydrates are an important part of a healthy diet. They're a good source of energy and the main source of a range of essential nutrients. Starchy carbohydrates include:

- potatoes
- bread
- cereals
- pasta
- rice

Starchy foods should make up just over a third of what you eat.

Where possible, go for wholegrain or wholemeal varieties, as these are also higher in fibre and will keep you fuller for longer.

Read more about healthy [starchy foods](#).

## **More good sources of energy**

### **Iron-rich foods**

Being low in iron can lead to iron-deficiency anaemia, which can make you feel tired and run down.

Teen girls and young women are especially at risk because they lose iron in their menstrual blood during their periods.

While red meat, green vegetables and fortified foods such as breakfast cereals are good sources of iron, the important thing is to eat a range of foods to get enough iron.

Find more advice on [good sources of iron](#).

## Healthy drinks

Make sure you stay hydrated by drinking plenty of fluids – the government recommends 6 to 8 glasses every day. This is in addition to the fluid we get from the food we eat.

Water, lower-fat milk and sugar-free drinks are healthier choices.

Watch your alcohol intake. Alcohol can not only dehydrate you but also disturb your sleep, leading to tiredness the next day.

Read more about [healthy drinks](#).

## Cut down on sugar

Adults and children in the UK eat too much sugar. While it does give you a rush of energy, this wears off quickly. It's also bad for your teeth – and can be bad for your waistline too.

There are sugars in lots of foods, including fruit and veg, but you don't need to avoid these.

However, we should cut down on foods with lots of added sugar, such as:

- sweets
- cakes
- biscuits
- sugary fizzy drinks
- chocolate
- some breakfast cereals

Find out [how to cut down on sugar in your diet](#).

## Superfoods and supplements

No single food, including those labelled "[superfoods](#)", can compensate for unhealthy eating. And there's no evidence that a single food can provide an energy boost.

Most people don't need to take vitamin supplements to improve their energy levels. They can get all the vitamins and minerals they need by eating a healthy, balanced diet.

However, there are some groups of people who are at risk of deficiency and may be advised to take a supplement.

Find out more about [vitamin and mineral supplements](#).



# THE ESSENTIAL GUIDE TO HYDRATION

## WHY WE NEED WATER

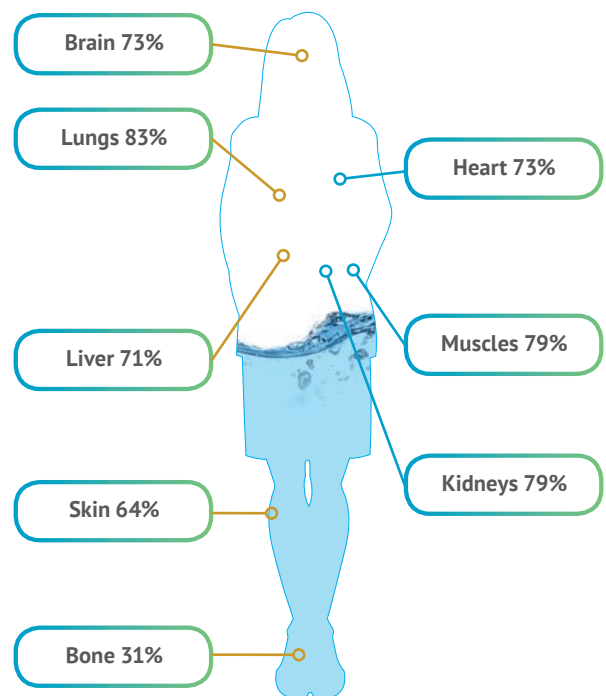
Water is essential for life. It accounts for about 60% of our body weight and performs crucial roles such as carrying nutrients and waste products between our major organs, helping to regulate body temperature, lubricating our joints and acting as a shock absorber.<sup>1</sup>

Body water is found both inside cells, and is called, intracellular water. Intracellular water contains dissolved solutes (electrolytes) which are essential to maintaining healthy body functions. Water found outside cells is called extracellular water. Blood contains extracellular water which is transported around our body. Water moves easily between cells to wherever it is needed.

The human body works to maintain optimal hydration by using hormones to control how much we urinate and giving our brains signals to tell us that we are thirsty.<sup>2</sup> As our brains are 73%<sup>3</sup> water, insufficient hydration can have an adverse effect on how our brains function.<sup>4</sup> On average, we take in and excrete around two and a half litres of water a day, although this varies from person to person.

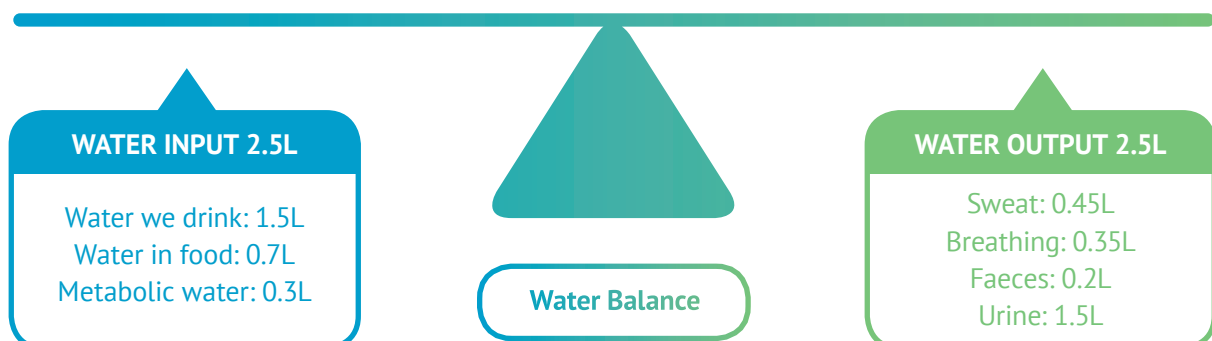
### AVERAGE WATER CONTENT IS 60% IN ADULTS

The body is comprised of between 50-75% water, depending on a person's age and gender. In adults body water = 60%.



Source: Adapted from Mitchell HH et al (1945)<sup>3</sup>

TABLE 1: THE WATER BALANCE



Source: Adapted from Jequier and Constant (2010)<sup>1</sup>

# STATES OF HYDRATION

Hydration status may fluctuate throughout the day, however, our body will regulate itself over a 24-hour period<sup>5</sup>. Optimal hydration is when our water intake matches requirements. However, when water intake is less than our bodies' requirements, we start to become 'hypo-hydrated' and this can lead to insufficient hydration, or 'dehydration'.

We are at the greatest risk of dehydration when we are too hot or too dry, have limited access to water or lose more water than usual. Warm or dry environments, such as centrally-heated homes tend to increase our need for fluid. We can lose more fluid through sweating (due to exercise or hot climates), or by suffering vomiting and diarrhoea.

## CONSEQUENCES OF INSUFFICIENT HYDRATION

Mild dehydration may occur when we lose about 1 per cent of our body weight due to water restriction. Some common symptoms of mild to moderate dehydration are given below<sup>6</sup>:

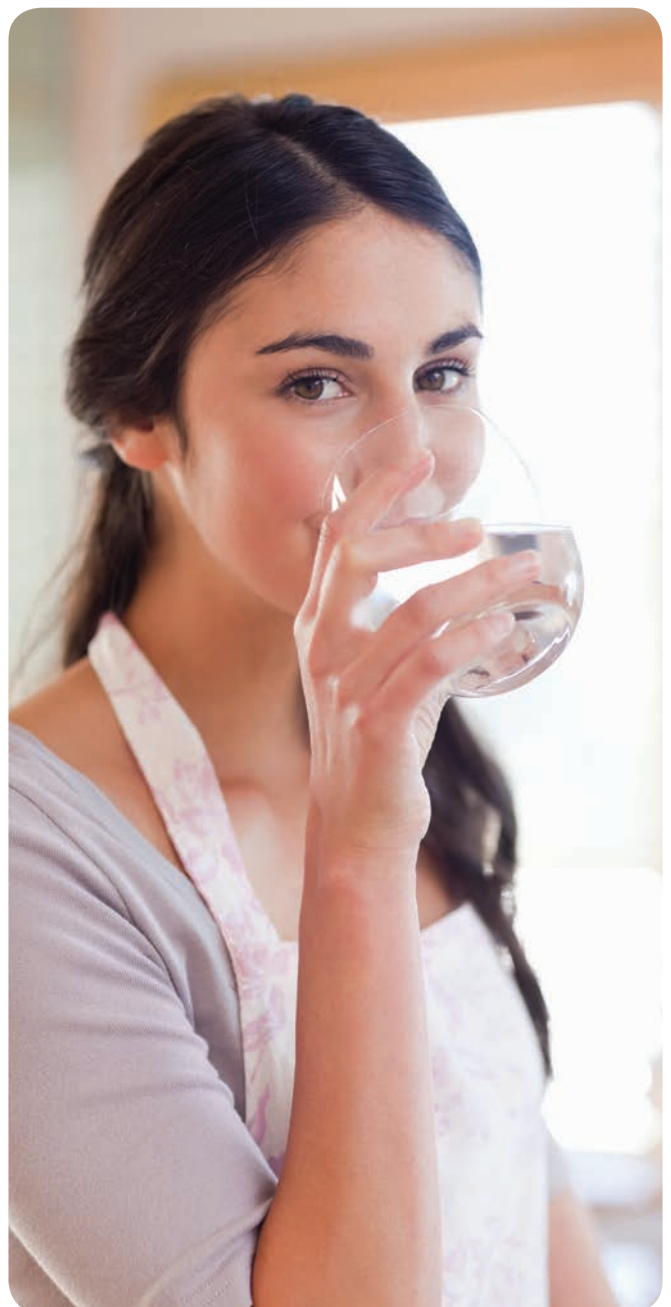
- **Constipation**
- **Dark yellow or brown urine**
- **Dry, sticky mouth**
- **Few or no tears when crying**
- **Headache**
- **Increased thirst**
- **Muscle tiredness**
- **Sleepiness or tiredness**
  - **children may be less active than usual.**

Research shows that losses of 2% or more can reduce cognitive (mental) performance.<sup>7</sup>

Inadequate water intake can also contribute to chronic kidney diseases.<sup>8</sup>

Elderly people in particular are at increased risk of dehydration, due to a number of factors. The thirst sensation lessens with age, while using multiple drugs and medicines can also affect water balance which means they might become dehydrated more easily or without realising.<sup>9</sup> It can be difficult for elderly people to physically reach or handle drinks and some actively restrict the amount they drink due to worries about not reaching the toilet on time.<sup>10</sup>

Persistent dehydration can lead to confusion and even hospitalisation unless dealt with promptly, therefore, health professionals and caregivers should encourage the elderly to drink fluid at regular intervals throughout the day.<sup>11</sup>



# THIRST AND URINE COLOUR

Thirst is one of the indicators of hydration status. The body’s fluid balance itself is regulated by thirst sensations, and fluid and salt concentrations, hormones and nerve signalling pathways all have important roles to play in this.<sup>12</sup> For these reasons healthy individuals often receive advice from health professionals to “drink to thirst”. However, it should be recognised that age and whether we are healthy can affect how much we can rely on thirst.<sup>13</sup>

Another indicator of whether we are adequately hydrated is urine colour. As a general rule of thumb, if you are healthy and well-hydrated the urine will tend to be straw-coloured, and becomes progressively darker the more dehydrated we become. Once it becomes honey-coloured this a sign that not enough water has been drunk. Urine that is dark brown in colour can indicate severe dehydration. Please note, certain medications and foods, such as beetroot, may change the colour of your urine.

Note: If urine colour remains dark after increasing water intakes, medical advice should always be sought.



## HOW MUCH WATER DO WE NEED?

Like vitamins and minerals, our fluid requirements are individual and depend on factors such as body weight and size, age and gender, levels of physical activity and the temperature of our environment. European guidelines, however, provide a useful insight into how much water our bodies need each day.

The European Food Safety Authority (EFSA) states that water contributes to the maintenance of normal physical and cognitive functions and normal thermoregulation.<sup>14</sup> Based on the EFSA’s scientific opinion on adequate water intake, women should

aim for total water intakes of 2 litres per day and men 2.5 litres per day.<sup>15</sup> The same guidelines also apply to older individuals.

Remember, these guidelines include water from beverage and food sources. Ideally 70-80% of this should come from drinks and 20-30% from foods.<sup>15</sup> Food with a high water content; such as melon, soups and stews, will make the greatest contribution to overall water intake. As hydration levels fluctuate during the day, it is advisable to sip water regularly throughout the day.

**TABLE 2**

| Gender         | Age Group     | Amount of fluid from drinks and food (litres/day) <sup>1</sup> | Amount of fluid from drinks only (litres/day) <sup>1</sup> |
|----------------|---------------|----------------------------------------------------------------|------------------------------------------------------------|
| Boys and girls | 4 to 8 years  | 1.6                                                            | 1.1 – 1.3                                                  |
| Girls          | 9 to 13 years | 1.9                                                            | 1.3 – 1.5                                                  |
| Boys           | 9 to 13 years | 2.1                                                            | 1.5 – 1.7                                                  |
| Women          | 14 years +    | 2.0                                                            | 1.4 – 1.6                                                  |
| Men            | 14 years +    | 2.5                                                            | 1.75 – 2.0                                                 |

Source: Adapted from EFSA’s recommendation for water intake<sup>14</sup>; Table 2.

Key: 1. It is estimated that 70-80% of the recommended fluid comes from drinks and 20-30% from food.  
2. Estimated amounts of fluid from beverages only.

# HYDRATION FOR ATHLETES

For people participating in high intensity exercise, it is possible to reach a state of over hydration if you consume too much fluid in a short period of time. In extreme cases this can cause a condition known as hyponatraemia, but, this is very rare.



## GLOSSARY OF MEDICAL TERMINOLOGY

**Hypo** = under

**Hyper** = over

**Hypo-hydrated** = water intake is less than body's requirements. This can lead to poor hydration or dehydration.

**Hyper-hydrated** = water intake is more than body's requirements. This is also known as over-hydration.

**Hyponatremia** = low sodium levels in the blood plasma.

**Hypernatremia** = high sodium levels in the blood plasma.

## TOP TIPS FOR HEALTHY HYDRATION

- 1 Whilst you can meet your body's water requirements from other drinks, water is one of the healthiest ways to hydrate as it has no calories or sugar.
- 2 Foods can also contribute to your daily water intake. Those with a high water content; for example melon, soups, stews, fruit and vegetables, will make the greatest contribution.
- 3 Drink at regular intervals throughout the day, in order to meet your body's water requirements.
- 4 The elderly and children are more at risk of dehydration since they are not always regulating their water intake properly.
- 5 Make sure you always have access to water, even when you are out and about.
- 6 You may need to drink more water when you exercise or spend time in hot and dry environments.



Natural Hydration Council

### FURTHER INFORMATION

Natural Hydration Council

[www.naturalhydrationcouncil.org.uk](http://www.naturalhydrationcouncil.org.uk)

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Other fact sheets in this series:

Hydration for Children

Hydration and Exercise

Hydration for Recreational and  
Physical Activities

Hydration and Urinary Tract Health

Hydration and Kidney Health

Hydration and Dental Health

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# HYDRATION IN THE WORKPLACE

**In the UK, average contracted hours for a full-time job are 37-hours a week and 16-hours a week for a part-time job (excluding overtime)<sup>1</sup>. Given how much time we spend at work it is important that we consider our hydration needs.**

Staying hydrated at work can be difficult for many of us; busy schedules make it easy to forget to drink as much water as we should and for some, the type of work or specialist work clothes makes it awkward to access water regularly.

Not only can staying hydrated help to improve our work productivity, helping us to perform better mentally and physically, it can also help to offset potential safety risks. For example, dehydration could lead to reduced concentration, which is a risk for anyone operating machinery, or driving a vehicle.

This fact sheet provides advice and tips about how to maintain healthy hydration habits in the workplace – no matter where we work or what job we do.

Not only can staying hydrated help to improve our work productivity, helping us to perform better mentally and physically, it can also help to offset potential safety risks.



# HYDRATION AT WORK

Certain work environments and conditions can influence water requirements. For example, air conditioning units can speed up moisture evaporation from our skin and lungs, leading to increased water losses. Also, warm work environments and strenuous jobs can drive up perspiration rates, increasing the need for water. For example, in protective clothing and very hot environments, sweat rates have been reported to reach as much as 2 litres per hour<sup>2</sup>.

Employers are required by law to ensure workers have adequate access to safe drinking water. The 1992 Workplace Health, Safety and Welfare Regulations (Regulation 22) states that employers should meet certain requirements which include:

- 1 Providing an adequate supply of clean drinking water.
- 2 Making sure that this is readily accessible at suitable places and conspicuously marked by an appropriate sign.



The regulation also specifies that a sufficient number of suitable cups or other drinking vessels should also be provided, unless the drinking water is from a jet which people can easily drink from<sup>3</sup>.

In spite of this, barriers still exist which can lead to poor hydration and they are outlined in the table below:

**Table 1: What influences hydration at work?**

| Factors influencing hydration | Examples                                                                                                              |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Access to water               | Long-distance driving, working in controlled environments e.g. building sites, hospital operating surgeries, schools. |
| Barriers to water consumption | Face masks and helmets e.g. construction and emergency service workers.                                               |
| Heavy/strenuous work          | Agriculture, armed forces, construction, landscaping.                                                                 |
| Air conditioning              | Often fitted in offices, gyms, airports, shops and hospitals. Also in cars affecting long-distance drivers.           |
| Warm environments             | Armed forces, catering staff, heated buildings, working outdoors in the summer.                                       |
| Working at altitude           | Aircrew, armed forces, construction.                                                                                  |

# HYDRATION AND WORK PERFORMANCE

Our brains are about 70% water and our bodies around 50–75% water, depending on age and gender<sup>4</sup>. It is not surprising, therefore, that being inadequately hydrated can affect how we feel and perform at work.

Research has shown that even a reduction in dehydration levels of as little as 2% of body weight can influence mood, lead to greater feelings of fatigue and reduced levels of alertness<sup>5</sup>.

A growing body of work has also found that hydration status can affect cognitive (brain) function. Severe (and sustained) dehydration can also reduce short-term memory and the ability to process and interpret visual information<sup>6</sup>.

There is some evidence that drinking water in examination settings can have cognitive benefits. When water was taken into examination settings, adult students achieved significantly better grades than those who did not drink water<sup>7</sup>. These findings suggest that water consumption may help to support cognitive performance in real-world settings e.g. out of lab environments.

## GP Survey

A survey carried out by the Natural Hydration Council of 300 UK General Practitioners found that 1 in 5 GP consultations were down to tiredness and fatigue and 1 in 10 of those were thought to be linked to dehydration<sup>8</sup>.

## HYDRATION AND MOOD

When we are lacking water, this can begin to affect our mood. One study of 25 young women (mean age 23 years) showed that dehydration (-1.36% loss of body mass) led to poor mood, reduced concentration, a tendency to find tasks harder and more frequent headaches<sup>9</sup>. In 2015 a study carried out on 120 American women (mean age 20 years) found total water intakes influenced mood throughout the day. It was concluded that this should be considered when attempting to optimise day to day mood<sup>10</sup>.

Another study carried out on 26 young men (mean age 20 years) found that mild dehydration (>1% loss in body mass) increased feelings of fatigue, tension and anxiety. Vigilance and working memory were also reduced<sup>11</sup>.

Amongst a sample of 119 cyclists dehydration was found to adversely affect mood state, which included feelings of reduced vigour and increased fatigue<sup>12</sup>.

Whilst these are small studies and not all conducted specifically in the workplace they demonstrate how poor hydration could affect our mood. In turn, this has broader implications when it comes to work productivity and enjoyment of being in the workplace.



## HOW MUCH WATER?

The European Food Safety Authority recommends a total water intake of 2.5 litres for men and 2.0 litres for women per day, via food and drink<sup>13</sup>. Ideally 70–80% of this should come from drinks and 20–30% from foods<sup>13</sup>. Whilst you can meet your body's water requirements from other drinks, water is one of the healthiest ways to hydrate as it has no calories or sugar.

Foods with a high water content; for example, melon, soups, stews, fruit and vegetables, will make the greatest contribution to your daily water intake.



## TOP TIPS TO IMPROVE HYDRATION

- 1 Start your day with a glass of water, or have a drink of water during the commute to work.
- 2 Include a bottle of water in your work bag to ensure that you have access to water throughout the day. Some people find it useful to use a big bottle as a gauge, or count up the number of small bottles they are drinking, to track how much water they are consuming throughout the day.
- 3 If dehydration could affect your safety, or that of others, then don't risk it. Consider ways to improve access to water for you and your colleagues to make sure you keep well hydrated.
- 4 Urine colour is a useful indicator to monitor hydration status. This should be pale straw colour. Dark yellow, concentrated urine or a low urine output is a sign that you need to drink more water.
- 5 If you are feeling tired, have a headache or are experiencing any other signs of dehydration, try having a glass of water, as a first step.





# CHECKLIST FOR EMPLOYERS:

## Creating a healthy hydration culture

- ✓ Do your employees have access to clean, safe drinking water?
- ✓ Do you give your employees time to drink water?
- ✓ Do you remind your employees to drink water?

### Please note

This information sheet has been based on scientific evidence available. The information contained in this fact sheet is not a substitute for medical advice or treatment, and we recommend consultation with your doctor or health care professional if you have any health concerns.

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### Other fact sheets in this series:

The Essential Guide to Hydration  
Hydration for Children  
Hydration and Exercise  
Hydration for Recreational  
and Physical Activities

Hydration and Dental Health  
Hydration and  
Urinary Tract Health  
Hydration and Kidney Health  
Hydration for Pregnancy  
and Motherhood



Natural Hydration Council

### FURTHER INFORMATION

[www.naturalhydrationcouncil.org.uk](http://www.naturalhydrationcouncil.org.uk)

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