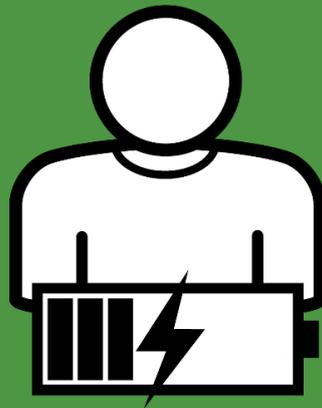


Fatigue Reduction:

How to reduce your fatigue

A guide for all Network Rail staff and contractors.



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Note: *This guide complements the Network Rail Fatigue Management Standard (NR/L2/OHS/003). Reading this is not a substitute for reading the Standard.*

1. What is fatigue?

Fatigue is a word that we use to describe feeling tired and worn out. There are several different definitions of fatigue, but it's generally thought of as:

“a state of weariness resulting from physical or mental exhaustion that can result from prolonged working, heavy workload, insufficient rest or inadequate sleep.”

Feeling tired can be fixed with a good night's sleep, but fatigue takes longer to resolve. The cure is normally a mix of health, sleep, work and lifestyle changes. Fatigue is not an illness but can be a symptom of some health conditions.

Fatigue is usually caused by several issues that interlink.

Common causes of fatigue:

- Medical conditions
- Stress or workload
- Shift patterns
- Home life issues (caring responsibilities, hectic lifestyle, etc)
- Not enough exercise
- Poor diet
- Long commute time
- Poor sleep habits

There are many symptoms of fatigue.

Physical

- Yawning
- Frequent blinking
- Rubbing eyes
- Head nodding
- Eyes closing
- Microsleeps (sleep episodes that can last as little as a few seconds)

Emotional

- Quiet
- Withdrawn
- Lacking in energy
- Irritable or grumpy

Mental

- Loss of concentration
- Lapse in attention
- Difficulty communicating
- Confusion

2. Why do I need to manage my fatigue? What problems can it cause?

To do your job safely and efficiently (regardless of your role, location and/or the type of work you do), you need to be awake and alert. Long-term exposure to fatigue is bad for our physical and mental health. Your fatigue can impact you, your livelihood, your family, colleagues and others.

Fatigue affects your ability to:

- Concentrate
- Make decisions
- Maintain vigilance
- Control emotion
- Recognise risks
- Coordinate hand-eye movements
- Communicate effectively

Fatigue can also:

- Increase error rates
- Slow reaction times
- Increase the likelihood of accidents and injuries
- Cause microsleeps

Looking at these lists, it's easy to see how fatigue causes accidents. Being awake for around 17 hours has been found to weaken performance in a range of tasks in a similar way to being over the drink driving limit.

Driving is a prime example of a task impaired by fatigue; according to the Department of Transport's THINK! campaign, nearly a fifth of accidents on major roads are sleep-related. Fatigue makes it difficult to focus and slows reaction times.

3. How is the fatigue standard changing? How does this affect me?

Fatigue is an issue that has challenged the rail industry for many years and has been considered as a possible cause or contributory factor in at least 74 railway accident and incident investigations between 2001 and 2009¹. Fatigued employees struggle to see risky situations and may take risks they would usually find unacceptable. A large US study found that staff regularly working 12 hours or more per day had a 37% higher injury rate than other staff.²

As a business, we need to manage fatigue to reduce accidents and incidents. Reduced fatigue can also improve staff health, morale and performance.

The old standard used limits to manage fatigue. The new standard (V6) replaces these limits with fatigue triggers. When these triggers are exceeded (or when it looks like they might be exceeded in future), fatigue needs to be actively managed. The new standard applies to **all Network Rail staff and suppliers**.

The business recognises that longer working hours may be necessary in exceptional or emergency circumstances. The standard allows a responsible person (nominated by your Functional Head) to authorise exceedance in these situations.

¹ Rail Accident Investigation Branch (RAIB), East Somerset Junction report 2009

² Dembe et al 2005

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The standard highlights when fatigue should be managed, but there may be other situations where you or your manager feel a fatigue assessment is necessary. If you feel fatigued, or think you are at risk of fatigue, let your manager know.

Triggers for a fatigue assessment to be completed are:

- Your working day is more than 12 hours long
- Your rest period is less than 12 hours
- You've worked more than 13 consecutive turns of duty in 14 rolling days
- Your door to door day length (which includes your commute) is 14 hours or more
- Returning to work after long term sickness or absence (including parental leave)
- You have a fatigue condition identified in an occupational health referral
- You (or you and a group of colleagues) request a fatigue assessment or a fatigue management plan
- Your working hours are being amended in relation to reasonable adjustments

If you work on a roster or on call, you'll also need a fatigue assessment if an FRI calculation shows:

- You have a Fatigue Index score that's 35 or more for a daytime shift or 45 or more for a night-time shift.
- Your Risk Index score is 1.6 or more

Triggers for a fatigue management plan to be put in place for you are:

- You've worked **60 hours or more in 1 week**. In this situation, the following controls are also necessary:
 - Your safety critical duties must be minimised, or additional supervision provided
 - You should not be nominated for driving, lookout or IWA duties
 - You should be relieved from duty at the earliest opportunity and have a minimum of 12 hours rest before your next period of duty
- You've worked **72 hours or more in 1 week**. In this situation, these controls are also necessary:
 - You should not be rostered for any further shifts until you've had a rest period of at least 24 hours.
 - You will be excluded from the following tasks until you've had a minimum of 24 hours rest
 - Any safety critical tasks
 - Activities requiring the management of train, OTP or OTM movements
 - All train exposure
 - Driving duties
 - Plant operation
- You've asked for one
- Your fatigue assessment shows you to be at medium risk of fatigue and you or your manager think you need a fatigue management plan
- Your fatigue assessment shows you to be at high risk of fatigue

4. How can I help prevent fatigue?

Healthy diet, hydration, sleep and rest are key to managing your fatigue levels. There are simple things we can all do every day to manage our own fatigue risk.

Prioritise sleep

Sleep has an image problem. We associate it with laziness, but your brain is highly active during sleep, performing tasks that keep you alert and high performing the following day. According to the NHS, most adults need between 6 and 9 hours sleep every night.

One thing to be aware of is while a small amount of caffeine can boost your energy, it also makes it harder to get to sleep. The NHS recommend you avoid it within 4 hours of bedtime.

Napping, while helpful for keeping fatigue at bay, can lead to reduced mental and physical performance for a short period after waking; this is called sleep inertia, and can be dangerous. Sleep inertia is more likely to occur if you nap for more than 30 minutes. Napping near bedtime should also be avoided, as it'll make it difficult to get to sleep when you need to.

Look after your body

Stay hydrated:

- It's important to catch dehydration early, but the signs aren't always obvious. Some surprising signs and symptoms of dehydration are reduced vigilance, increased tension or anxiety, headaches and fatigue
- It is recommended that women get about 2.7 litres of water a day and men get about 3.7 litres a day. Those totals include water gained from foods and beverages like soups, tea, milk and fruit juice.

Eat a healthy diet:

- Eat a balanced and varied diet that includes at least 5 portions of a variety of fruit and vegetables every day.
The NHS have lots of useful advice about healthy eating on their [website](#).

Exercise regularly:

- The NHS recommend 19 - 64 year olds do at least 150 minutes of moderate intensity activity or 75 minutes of vigorous intensity activity a week

For more information on healthy living please see our Safety Moment slides on the [Fatigue Reduction site](#), or visit the [Health and Wellbeing hub](#).

Take control

By educating yourself on fatigue (we have lots of information on [Fatigue Reduction](#)) you will be empowering yourself to:

- Recognise your fatigue symptoms early
- Identify the sources of your fatigue (caring responsibilities, stress, commute etc)

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- Discuss your fatigue situation (with colleagues, friends, family)
- Take action to overcome your sources of fatigue (exercise, diet, sleep hygiene etc)
- Monitor your sleep patterns (keep a sleep diary)

You could even form a local fatigue support group where you share personal experiences and information on fatigue.

5. What should I do if I already feel, or am at risk of becoming, fatigued?

The first thing you need to do is talk to your manager. Being open and honest with them will help them to support you in managing your fatigue effectively.

If they feel it's needed, or if you ask them to, they'll work with you to complete a fatigue assessment. If you work on a roster or on call, your roster clerk, section admin or planner may also run an FRI (Fatigue Risk Index) calculation. The Fatigue Assessment and FRI score will help you both decide whether a fatigue management plan is needed. These tools will also be used if you hit or exceed one of the triggers listed in section 5.

Understanding your personal situation, is key to your manager making a fatigue management plan that's suited to your needs.

6. How do I record fatigue related sickness?

To help Network Rail manage fatigue on an ongoing basis, we need a clear picture of current levels of fatigue. One area where we can get this is by monitoring fatigue related absences.

If you're off sick with a fatigue related absence (e.g. stress), you can log this on Oracle.

First you need to select a Sickness Category. By putting a % sign in the search field, then clicking go, you will be able to choose what category your fatigue falls under.

Search and Select: Sickness Category

Search

To find your item, select a filter item in the pulldown list and enter a value in the text field, then select the "Go" button.

Search By

Results

	Quick Select	Sickness Category	Description
<input type="radio"/>		Disability related absence	As defined by the Equality Act
<input type="radio"/>		Non Work Related	Non Work Related
<input type="radio"/>		Part Work Related	Part Work Related
<input type="radio"/>		Work Related	Work Related

Then under Sickness Medical Reason, you can search for Fatigue.

Search and Select: Sickness Medical Reason Cancel Select

Search

To find your item, select a filter item in the pulldown list and enter a value in the text field, then select the "Go" button.

Search By Sickness Medical Reason ▼ fatigue Go

Results

	Quick Select	Sickness Medical Reason	Description
<input type="radio"/>		Fatigue	16 - SYMPTOMS AND ILL DEFINED CONDITIONS

7. I don't feel my fatigue is being managed adequately. What should I do?

If you've spoken to your line manager, but don't feel your concerns are being taken seriously, get in touch with your local HR representative for further informal advice.

If you ever feel your fatigue, or that of a colleague is putting their, or anyone's safety at risk, you should follow the Worksafe Procedure, details of which can be found on My Connect. If it's a less immediate safety concern, you can raise a Close Call by calling 01908 723500, or via the Close Call app on a Network Rail mobile.

8. Caring for others – we're all responsible

Fatigue can creep up on people. As a friend and colleague, you are well placed to look out for potential symptoms in others.

Things to think about are:

- Are you aware that they have some issue in their private life that could be affecting their ability to rest and sleep?
- Are you aware that they are on medication, either temporarily or permanently?
- Do you know that they regularly achieve less than 6 hours sleep?
- Has their performance and or quality of work dropped?
- Do they have slower reaction times, make more errors, have decreased cognitive ability?
- Do they have a second job that is restricting their ability to gain rest and sleep?

If the answer is yes to any of these questions, you should ask your colleague how they're feeling and whether they think they could benefit from a chat with their manager about their fatigue. Point them in the direction of this document and the resources available on the [Fatigue Reduction site](#)

Again, if you ever feel your fatigue, or that of a colleague is putting anyone's safety at risk, you should follow the Worksafe Procedure, details of which can be found on My Connect. If it's a less

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immediate safety concern, you can raise a Close Call by calling 01908 723500, or via the Close Call app on a Network Rail mobile.

9. Useful links

- Fatigue Reduction site
<https://networkrail.sharepoint.com/sites/FatigueReduction/>
- Health and Wellbeinghub
<https://safety.networkrail.co.uk/healthandwellbeing/>
- RSSB Fatigue and Alertness
<https://www.rssb.co.uk/en/Insights-and-News/Industry-Topics/Fatigue--Alertness>
- ORR fatigue guidance
<https://orr.gov.uk/rail/publications/guidance/health-and-safety/working-patterns-fatigue>
- HSE – Human Factors: Fatigue
<http://www.hse.gov.uk/humanfactors/topics/fatigue.htm>
- RMT – Briefing on fatigue in the transport industry
<https://www.rmt.org.uk/about/health-and-safety/health-and-safety-resources-for-reps/briefing-on-fatigue-in-the-transport-industry/>
- HSE fatigue risk index calculator (FRI)
<http://www.hse.gov.uk/research/rrhtm/rr446.htm>
- Fatigue alertness game
<http://healthysleep.med.harvard.edu/need-sleep/whats-in-it-for-you/how-awake-are-you>
- NHS guidance on sleep
<https://www.nhs.uk/live-well/sleep-and-tiredness/how-to-get-to-sleep/>
- The Sleep council
<https://sleepcouncil.org.uk/>
- NHS Eat Well
<https://www.nhs.uk/live-well/eat-well/>

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