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## THE PHYSICAL CONDITION OF THE DRIVER

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# Driver fatigue

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**Fatigue at the wheel, implicated in one in three motorway accidents, should be taken very seriously indeed.**

According to international statistics, between 20 and 30% of work-related road accidents are connected with somnolence issues. Lack of sleep, a disturbed circadian rhythm because of working shifts, and daytime somnolence in relation to the sleep apnoea syndrome are the main causes of drowsiness at the wheel.

Fatigue-related accidents happen more often on long journeys on monotonous roads, when conditions don't force the driver to be attentive all the time.

## People at risk from the sleep apnoea syndrome

- People who are obese (with a Body Mass Index >30) [BMI = weight in kilos / (height in metres)<sup>2</sup>]
- People who snore (loud, regular snoring)
- People who occasionally stop breathing when they are asleep
- People with a short, broad neck
- People with high blood pressure
- People with a measurement on the Epworth Sleepiness Scale of  $\geq 15$  (use the questionnaire available in the tool box)
- People who wake up feeling tired

## The factors that promote or accentuate fatigue

A better knowledge of these factors will help you prevent an accumulation of risks.

- **Lack of sleep:** One driver in two sleeps less just before leaving on holiday. This lack of rest diminishes concentration while driving and accelerates the appearance of fatigue signs. A good night's

sleep before a long journey is an absolute must.

- **Rich food:** A meal that is too heavy and/or accompanied by a little wine is followed by a period of digestion that is likely to make you fall asleep. This means that early afternoon constitutes a risk period. Eat lightly when you are travelling.
- **Ventilation/heating/air conditioning:** Poor ventilation inside the vehicle can make your fatigue worse. The same is true of overheating or excessive air conditioning. Always make sure you are neither too hot nor too cold.
- **Medicines:** Certain medicines are not recommended, or are even incompatible with driving. Pictograms (readily visible on the packaging) quickly show you if this is the case. In all cases, read the accompanying leaflet or, if in doubt, ask your doctor or pharmacist.

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### **Pauses are an integral part of long journeys**

It is important to stop every two hours, or more frequently if necessary, as soon as the first signs of fatigue appear. Unlike hunger and thirst, sleep cannot be suppressed. If you try to fight it, it will get the better of you sooner or later.

- **Everybody out!** Get out of your vehicle at a rest area or in another calm, safe place. Leave the doors open, to air the inside of the vehicle. If you are thirsty, drink ... water, of course. If you are hungry, eat something light and balanced.
- **Relax!** You've been sitting down for hours, concentrating on the road. There's nothing like a few movements to relax stiff muscles. Walking is a good start (at least twice round your vehicle, or a 5 minute stroll around the rest area). Breathe deeply several times, breathing in through your nose and out through your mouth.
- **What to do if that doesn't work.** A relaxation break may not be enough. It's no secret - to set off again feeling fresh and lively, sleep is sometimes the only answer. 10 minutes are enough to set you up again. Put the back of the seat down, close your eyes, and relax as much as possible. Don't actually try to fall asleep - resting is the main thing. And don't sleep more than 15 minutes. You'll find it hard to wake up after a longer siesta. If necessary, consider setting an alarm to wake you up.

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### Did you know?

- **Fresh air** only has a temporary effect. By winding down your window, you concentrate on the road again for a moment, but the signs of fatigue will reappear very quickly
- **Drinking coffee** to wake you up is a very widely held belief. However, the body takes a certain amount of time to absorb caffeine, so the effect is not immediate. More importantly, the effect doesn't last long
- **Listening to music**, singing or turning up the volume on the car radio may take your concentration away from your driving
- **Smoking** while driving may hamper your movements at the wheel, but above all the smoke reduces the quantity of oxygen inside the vehicle, and the lack of air brings on fatigue even more quickly

### Some advice

- Make sure you sleep 8 hours every night, in good conditions (without noise or light, in a well-ventilated bedroom)
- Eat lightly and drink enough water before setting out
- Take regular active breaks (walk about a bit) every two hours as a minimum
- If you feel sleepy, stop and sleep for a while (about half an hour)

- Check whether you are a carrier of the sleep apnoea syndrome. If you are at risk, follow the necessary treatment, as this makes it possible to reduce the risk of an accident due to daytime drowsiness the sleep apnoea syndrome can cause

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# The effects of stress on driving

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## What is stress?

Stress is defined as emotional pressure (the word is related to “distress”); it corresponds to a general syndrome of adaptation, and refers to all the responses of an organism subject to pressures or constraints exerted on it by its environment.

The notion of stress was first put forward by the endocrinologist Hans Selye, in a 1956 publication entitled “The Stress of Life”, in which he described the mechanism of the adaptation syndrome, i.e. all the changes that take place within the body to enable it to cope with the consequences of a natural or surgical trauma.

Stress is felt when there is a perceived imbalance between what is required of the person and the resources at his/her disposal for meeting those demands.

Although stress is perceived psychologically, it can also affect physical health.

The most frequent factors that generate stress include the following:

- Pressure of time
- Obligation of performance
- Lack of autonomy
- Conflict with hierarchical superiors, subordinates or colleagues

- Problems with clients
- Working hours (shift work, overtime) that don't allow physiological recovery
- Lack of recognition
- Incertitude over professional future
- Organisational or technological changes
- Underwork, overwork, responsibility connected with task performance
- Working conditions (noise, heat, lack of space, working in front of a screen etc.)
- Information flood
- Constant disturbances, phone ringing constantly

## Stress-generating factors specific to driving a vehicle

These factors involve the following aspects:

- Traffic conditions (heavy traffic, rush-hour traffic, congestion, roadworks, incomprehensible traffic directions, etc.)
- Environmental conditions (aquaplaning, black ice, poor lighting and visibility, extreme temperatures, wind and draughts, poor air quality inside the vehicle)
- State and condition of the vehicle (seat adjustments, ergonomic layout of pedals and instruments, inside and outside lighting, air-conditioning)
- Acoustic disturbance (engine, road surface, tyres, etc.)
- Distractions (music and conversation while driving,

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- phoning while driving, using a GPS system)
  - Driving manoeuvres (overtaking, cornering at speed, etc.)
  - Less requirements from the driver (monotony and boredom)
  - Complexity of the road and urban environment
  - Predisposition – when we take stress into the car with us (biological stress factors, chrono-biological rhythm, state of health and existence of physical pain, the state of the driver's private life, work-related stress risks, etc.)

How the driver experiences these stress risks depends not only on the individual but also on the following variables:

- Type, intensity, number and duration of the stress risks
- Assessment of the situation
- The ability the person thinks he/she has for coping with the situation

### **Can stress at work have a negative effect on driving?**

While it is difficult to establish a specific link of cause and effect between generators of stress and a road accident, there can be no doubt that excessive stress at the wheel increases the risk of an incident or road accident occurring because it has a direct influence on the driver's behaviour and on his/her ability to process information.

### **Some advice**

Whenever possible, preventive measures should be applied in order to reduce exposure to risks.

By **reorganising work**, the following actions make it possible to reduce the risk associated with stress while driving:

- Avoid work-related distractions while driving (phoning while driving, discussing complex or stressful topics, etc.)
- Make sure that the employee has an appropriate vehicle (and that it is in good condition) for work-related travel
- Reduce the number of journeys as much as possible (use the new communications technologies, group appointments or meetings that take place off company premises to keep the number down, etc)

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- Reduce exposure to road risks during travel (use public transport, which also gives you time to prepare for your meeting during the journey, restrict the use of two-wheeled vehicles to very specific requirements, etc.)
  - These very specific efforts should form part of an overall process of risk management within the company. The causes of stress at the wheel are not limited to the actual driving - they also depend on factors connected with the driver's work and private life

#### **What the company can do to help**

- Manage working relations (by setting up the principles of respect and behaviour among employees, training management and staff in conflict management, accompanying and supporting employees suffering from stress, etc.)
- Reorganise work-related constraints (by adapting the organisation of working hours, analysing experiments to identify and capitalise on good practices in reducing the workload, etc.)
- Manage human resources to promote quality of life at work (by issuing a clear message on expectations, aims and objectives in relation to employees, increasing staff awareness of the psycho-social risks involved and proposing ways of reducing the risks, etc.)
- Deal with change management sensitively (by setting up an in-house communication process with employee participation; for any major planned changes, set up a training schedule to accompany the change in the organisation, etc.)

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### **Example: The specific stress risks connected with work in the transport sector**

Attention should also be paid to the specific risks not due to the actual driving that are found in certain sectors, particularly transport (taxi drivers, bus drivers, railway staff, airline staff), where the risk of violence or aggression are very real.

According to an article by the International Labour Organisation (ILO), workers in the transport sector have to face at least two important demands in connection with their work:

- frustration on the part of the public in the event of delays
- the attitude they should adopt to deal with specific groups of people whose behaviour is sometimes fickle and unpredictable

#### **Tool box**

- Fatigue: assess your level of fatigue by using the [questionnaire](#) produced by the multi-sector health service (STM). If you are at risk, discuss it with your family doctor or with your occupational health doctor.

Sources: [Multi-sector health service](#) (Service de Santé au Travail Multisectoriel - STM, Luxembourg), [association for the prevention of road accidents](#) (La Prévention Routière, France) (Association for the prevention of road accidents), [representative body for salaried staff in the private sector](#) (Chambre des Salariés - Luxembourg)