



Duncan Abbott explains how to apply ergonomic principles to company cars and vans

The driver's seat

IN ITS safe driving guidance *Driving at Work* (www.hse.gov.uk/pubns/indg382.pdf), the HSE asks employers to take ergonomics into account when providing employees with vehicles. But it doesn't say much about what exactly this involves.

If you are responsible for the health and safety of drivers and/or preventing musculoskeletal disorders, your starting point (as in so many other areas) should be a risk assessment for all drivers — and not just those who have suffered an injury, though such cases take priority.

In your assessments, you should take into account the duration of driving per day or per week, how often the driver takes breaks, and whether they have been given advice on posture, or on the safe use of laptops and other devices in vehicles.

Allow for all drivers' movements that have an effect on their posture; for example

reaching for the controls or the pedals, as well as clearance for their legs and feet, their view of the external environment, the availability of mirrors, and the position of controls and displays, including satnav systems (which can obscure the view if not correctly sited).

When considering the postures adopted by drivers bear in mind the differing needs of van and lorry drivers, who prefer a bolt upright posture, and car drivers who usually prefer a reclined driving position.

Mobile office

Health and safety managers should try to introduce ergonomic priorities into the choice of company vehicles, whether it's delivery vans or the approved lists for company car models. A checklist is provided in on page 35.

More and more workers are now using their vehicles as mobile workplaces — using laptops, making telephone calls,

writing up notes — all of which can have associated health risks. Laptop users often constrain themselves up against the steering wheel or twist to use the machine on the passenger seat. Where an assessment flags up this sort of ergonomic risk, the controls are as simple as either shifting to the passenger seat to work, stopping off at a service station for computer work, or using a voice recorder to take notes and waiting to write them up at the office.

If they are routinely carrying anything heavy or cumbersome, the driver should be assessed loading and unloading the vehicle. Drivers must be trained to manage the risk of musculoskeletal disorders. This training should cover how to adjust the seat, adopting the best driving posture for their size and shape, the risks associated with working from the car, the benefits of taking regular breaks, and stretching exercises.

Remedial work

Beyond the general precautionary assessments to prevent workers suffering musculoskeletal problems associated with driving, you may face cases where workers develop conditions that make driving uncomfortable or difficult.

The following three short examples will illustrate ways to accommodate workers with back and knee pain and workers whose employment is reliant on their ability to travel extensively during their working day.

1. The rep who changed patches

Damien is a sales representative who changed his working area from the Home Counties to Central London. He makes the journey from his home office in Heathrow to Central London four times a week on average.

After a couple of months of having to change gear constantly, his left leg and lower back became very painful, whereas before he had experienced only mild discomfort.

An ergonomic assessment of the car, led to the seating being adjusted to better support Damien's back and lower limbs. But despite this, there was no option but to change the car for one with automatic transmission to avoid the lower limb pain.

Damien was also advised to handle smaller quantities of promotional material

and wherever possible to have the company send material to the client, to reduce the amount of material he carries from the car to the client.

2. The product installer who swapped vehicles

Clifford's employer wanted to change his company vehicle from an estate car to a small van, but on driving the vehicle he experienced severe knee pain and lower and upper back pain. His posture in the car was reclined, but moving to the van he found he had to adopt a bolt upright seating position.

Clifford spent half his time driving and the other half at clients' premises installing equipment under counters and work surfaces, which involved a lot of time on his knees.

Measurements of the cabin were compared with the estate vehicle, and it became clear that the bulkhead in the van prevented Clifford from achieving a comfortable posture for either the knees or the lower back. It was suggested to the employer that the bulkhead be set back to allow Clifford enough space for his knees and to slightly recline the seat.

Clifford's schedule of appointments didn't allow him adequate time to get to clients and that appointments were made without considering the distance between them. Clifford's work schedule was

reworked with his supervisor to make it more manageable. These changes allowed Clifford to move safely from the estate to the van.

3. The utilities op who got a new van

John changed his van after a fleet update. Four months later he began to suffer from back discomfort and pain. It reached a point where the choice was between John going off sick or the company reinstating the old vehicle.

An ergonomic assessment found that the lumbar support on the seat in the new van was fixed, which meant it supported the wrong part of John's back. This caused pressure points and gaps, so his back was constantly under strain.

If the seat had had greater adjustability (with a movable lumbar support), John wouldn't have suffered discomfort or pain.

In all of the above cases, the workers received advice on posture as well as clear advice and training in hazard awareness.

Anyone wishing to put together a monitoring and assessment process for drivers, to flag up existing and developing musculoskeletal problems should consider building in the following checks: pre-employment medical assessments specifically for car drivers; a reporting system for drivers to report discomfort, and regular health checks for work drivers. ☒

Cabin

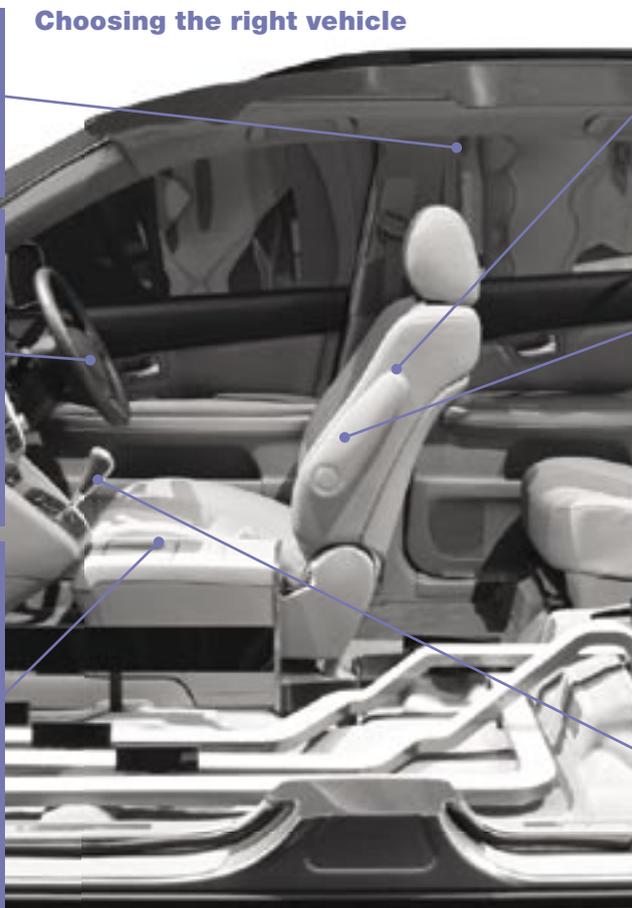
- ☒ Head and leg room should be adequate for all drivers
- ☒ Air conditioning — not always a luxury

Steering wheel

- ☒ Should be adjustable — tilt up and down, in and out
- ☒ Power steering should be standard
- ☒ The wheel should be positioned centrally; if offset it can put extra strain on the spine
- ☒ The wheel must not obstruct instrument display

Seat

- ☒ Should have separate tilt and height adjustment
- ☒ The length should not put pressure on the back of the knees
- ☒ Not wider than hips and thighs
- ☒ When seat height adjusted the driver must be able to reach the pedals without stretching as well as have good all-round vision of instruments and mirrors



Backrest

- ☒ To reach shoulder height
- ☒ Does not obstruct rear vision
- ☒ Provides shoulder support
- ☒ Supports full length of back

Lumbar support

- ☒ If lumbar support is adjustable the back will be supported
- ☒ If not adjustable the support may be in the wrong part of the back which can result in pressure points or gaps

Boot

- ☒ The boot should not be too low if heavy equipment is to be stored and retrieved (manual handling must be considered)

Pedals and gearbox

- ☒ Automatic gearbox is helpful for driving in centre of towns where there is a constant change between 1st and 2nd gears
- ☒ Pedals should be centrally positioned to avoid putting strain on the spine