



Driving and Pain

Guidance for Faculty of Pain Medicine Members

Introduction

Road traffic accidents remain a significant public health problem in the UK. In 2016 there were over 180,000 casualties resulting from driving accidents in Britain.¹ Despite a steady decline in deaths on UK roads (from a peak in 1966), around 1800 people a year still die in road accidents. This figure has remained largely unchanged since 2010. The top two contributing factors that led to crashes that resulted in a death were 'loss of control' and 'failing to look properly'.² There is also a strong link between fatal crashes and night time driving, with such crashes much more likely to occur between the hours of 11pm and 6am.

Indeed, fatigue and tiredness may be a contributory factor in as many as 20% of all road accidents.³

Driving remains a complex dynamic task and chronic pain may affect a number of factors that influence driver performance. Pain conditions themselves may effect ability to drive, as may medications and co-morbid conditions. Driving safely depend on three integrated processes: perception, decision and reaction, and as such relies on eyes, brain and musculoskeletal systems working together.

This guidance summarises current understanding of the way in which Chronic pain may affect driving, the effects of current legislation on pain doctors and patients, and how to advise patients on this topic.

The effect of pain on driving

Pain itself has the potential to affect driving performance through adverse effects on physical function and cognition. For example, musculoskeletal conditions can cause difficulty with the physical act of driving e.g. people with low back pain may experience difficulties using foot pedals.⁴ Tests of 'on road' driving performance show that patients with chronic non-malignant pain perform poorly compared to matched healthy controls.⁵ When surveyed, 70% of chronic pain patients indicated that pain limited their driving in some way, with 41% experiencing either quite a bit of difficulty or a great deal of difficulty driving.⁶ The self reported prevalence of difficulty performing basic safety manoeuvres such as checking for traffic by looking over the shoulder was 57%.

A number of common co-morbid conditions may also adversely effect driving ability in pain patients:

Depression	Fatigue
Anxiety	Sleep apnoea or sleep apnoea syndrome
Impaired concentration	Excessive sleepiness
Suicidal thoughts	

There is some evidence that patients whose pain is adequately controlled perform better in tests of driving ability compared to untreated pain patients, although the potential side effects of treatments such as pain medication need to be accounted for when a patient is considering their overall fitness to drive.

Pain medications and driving

Many drugs prescribed to help manage chronic pain may interfere with the visual, cognitive or motor abilities needed to drive safely.

Tricyclic antidepressants

These medications can produce visual disturbance and sedation and are associated with an increased risk of crashing of between 41% and 230%.⁷ The degree of driving impairment shows a dose dependent association, however even relatively low doses of TCA (such as those commonly used for the management of neuropathic pain) are associated with impaired driving ability.

Other antidepressants

Data for SSRI and SNRI and related antidepressants is conflicting. SSRI's may pose a threat to driving ability, particularly at higher doses. SNRI's such as venlafaxine and duloxetine are also associated with an increased risk of crashing, although objective tests of driving function often fail to demonstrate a deleterious effect.⁷

Antiepileptic drugs

Anticonvulsant medications such as carbamazepine and gabapentin can cause sedation, cognitive impairment and visual disturbance and are associated with a significantly increased risk of crashing.⁷ Reducing the dose of anti-epileptic medication appears to reduce the risk of an accident.

NSAIDS

Although not commonly associated with impaired cognitive or motor function, NSAID use is associated with an increased risk of crashing (58-70% higher crash risk).⁷ It is not clear if this increased risk is a result of medication side effects, or the underlying pain condition, however NSAID monographs produced by manufacturers warn of caution when driving or using heavy machinery.

Benzodiazepines

Benzodiazepines use is associated with dose dependent degrees of driving impairment and roughly doubles the risk of road traffic accident. Benzodiazepines with long half lives may be particularly implicated in causing crashes.

Opioids

Opioids are associated with a number of side effects that may impair the ability to drive including: sedation, fatigue, cognitive and visual disturbance. Elderly drivers who are not habituated to opioids show signs of

impairment even at relatively low doses of a weak opioid such as codeine.⁸ It is of no surprise that stronger opioids when given to opioid naïve drivers also show evidence of impairment in tests such as those measuring psychomotor skills, reaction times and attention.⁹ Such effects appear to demonstrate a dose response relationship with more impairment at higher plasma levels. The picture is less clear with chronic opioid use for chronic pain conditions. Some tests of driving ability in patients on stable doses of long acting opioids do not demonstrate impairment. However, experimental tests of driving ability may give a false reassurance, as case control data of patients attending ED following road traffic accidents shows a clear link between prescription opioid use and increased odds of road trauma amongst drivers.¹⁰ The implication is that some patients may be impaired even if they are not aware of being so.

Drug driving legislation

It is illegal in England and Wales to drive whilst taking any prescription medication if it impairs driving ability. In order to try and reduce the problem of recreational drug driving, which was traditionally difficult to successfully prosecute, the government introduced a new offence of driving over a specified blood concentration of certain drugs. These drugs included recreational drugs, as well as prescription drugs that are often abused.

'Illegal' drugs – zero tolerance approach	'Medicinal' drugs – risk based approach
Benzoylcegonine	Clonazepam
Cocaine	Diazepam
Delta-9-tetrahydrocannabinol (cannabis)	Flunitrazepam
Ketamine	Lorazepam
Lysergic acid diethylamide	Methadone
Methylamphetamine	Morphine
MDMA	Oxazepam
6-monoacetylmorphine (heroin)	Temazepam

Drugs associated with illegal use have low limits (zero tolerance) set at a level where any claims of accidental exposure can be ruled out. Drugs more associated with medicinal use (such as morphine or related drugs like codeine) have higher limits based on a road safety risk approach.

Patients suspected of driving under the influence of drugs may be asked to perform a series of impairment tests at the roadside, as well as being tested using roadside drug kits or blood/urine screening at a police station.

The government do not provide any guidance on what amounts or dosage would equate to being over specified limits, as too many variable may effect blood concentration (such as rates of metabolism). As a guide however, the blood threshold set for morphine is 80 micrograms per litre and tests in cancer patients demonstrate that 209mg per day of morphine gives an average blood concentration of 66 micrograms per litre.¹¹ The drug driving limits for the medicinal drug group are therefore set at a threshold generally above the normal therapeutic range. However, under the legislation, patients are permitted to drive if they have been prescribed the drug, followed advice from a healthcare professional on how to take them, and the drug is not causing them to be unfit to drive. This applies even if they are above the specified blood threshold for that drug. Patients may wish to carry with them documentary evidence that they are taking prescription drugs in line with medical advice, in the event they are stopped by the police and tested by the roadside.

DVLA Guidance

The DVLA produce comprehensive guidance for medical professionals on assessing fitness to drive that is continually reviewed and updated when indicated.¹² It is beyond the scope of this article to recreate this guidance, although some key principles are considered:

Doctors and healthcare professionals should advise patients on the impact of their medical condition on their fitness to drive and they should also advise patients of their legal requirement to notify the DVLA of any relevant medical condition that may be diagnosed.

A comprehensive list of medical conditions is included in the DVLA guidance, and whilst many of these may have been diagnosed by other healthcare professionals prior to the patient being seen by a pain doctor, some potentially reportable conditions such as 'excessive sleepiness' may present for the first time in a pain clinic. Some patients either cannot or will not notify the DVLA themselves and if this is the case, their healthcare professional should notify the DVLA. The GMC offer specific guidance on how and when this should be done in their guidance on confidentiality.¹³ Doctors are thought to be under reporting fitness to drive problems, and it is likely that future regulations will seek to address this. As part of their ongoing care, the pain doctor should be mindful of the effects of treatments and changes in the patient's condition that may effect their driving ability.

General Guidance for Pain Doctors

Pain doctors should be aware of the circumstances that can lead to impairment of driving:

- Physical restrictions that prevent safe performance of driving manoeuvres
- The effects of pain on sleep, mood and concentration
- The effects of medication
- Doctors should inform their patients that most pain medication may impair driving, and that patients should not drive if this is the case. Patients are most at risk of impairment:
 - When commencing a new pain medicine
 - When increasing or reducing the dose
 - When another drug is added that may affect driving ability
 - When medication is taken in conjunction with alcohol
- Patients should be warned that even if they do not feel impaired, they are more likely to suffer a road traffic accident if they are taking medication such as strong opioids.
- Patients should be advised to be especially careful driving when they are more at risk of an accident, such as driving in adverse conditions or driving at night. Pain doctors are duty bound to inform a patient that they are not fit to drive if they are clearly incapable.
- Pain doctors should advise that it is the patient's duty to determine if they are fit to drive or not, however patients should be warned it is against the law for them to drive if they have been advised not to by a

medical professional.

- There may be circumstances when a pain doctor must breach confidentiality and inform the DVLA that their patient is not fit to drive.
- Doctors should document clearly any advice given to patients and use suitable patient information leaflets

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