Should people with epilepsy be able to drive?

Every driver has a risk of an accident. 15% of drivers per year make insurance claims for motor vehicle accidents. Crashes bad enough to be reported to the police occur in 1% of drivers per year. Some drivers have a higher relative risk.

Table 1. Causes leading to traffic deaths in the USA 1995-1997

	Number	Percentage
Seizures	86	0.2%
Diabetes	144	0.3%
Cardiac and hypertensive disorders	1800	4.1%
Young drivers (<25 years old)	10,579	24%
Total deaths	43,884	100%

Sheth SG, Krauss G, Krumholz A, Li G. Mortality in epilepsy: driving fatalities vs. other causes of death in patients with epilepsy *Neurology* 2004;63:1002-1007

Table 2. Variability of common and unavoidable factors in the population

	Accident rate ratios
Maximum rate of accidents because of epilepsy	1.8
Sleep deprivation of 17-19 hours	2.0
Driving within the legal alcohol limit (0.05%)	2.0
Age>75	3.1
Age>70	2.0
Female<25	3.2
Male<25	7.0

Data from the website of the Belgian Traffic Bureau (BIVV) and the "IMMORTAL" project, a study funded by the EU 2004. In, Epilepsy and Driving in Europe - A report of the Second European Working Group on Epilepsy and Driving.

The number of fatal accidents related to young drivers is 120 times higher than that of epilepsy-related accidents. The highest accident rate ratio (relative risk) for a driver with epilepsy is lower than that for young drivers, older drivers and driving while deprived of sleep or having drunk alcohol within the legal limit. The relative risk for drivers with epilepsy is only 1.84 for all accidents and 1.4 for serious accidents compared to the general population.

It seems only fair to accept an increased accident rate ratio for people with epilepsy that is comparable to that accepted by the community for young people, elderly people and those driving within the legal alcohol limit.

What is an acceptable risk for epilepsy?

This depends on a number of factors, including:

1. Driving time. For private license, with about 1 hour/day driving (4% lifetime driving), there is only a 1 in 24 chance that seizures will occur while driving, if seizures occur at anytime. For a commercial driver license, there may be ≥8 hours per working day of driving (≥20% lifetime driving) and thus a greater chance of a seizure occurring while driving.

2. The percentage of seizures that leads to an accident if consciousness is impaired. For private licence, an accident rate of about 50% per seizure might be assumed. For commercial drivers, assume 80%, given the greater risk of controlling heavy vehicles

3. The likely outcome of an accident. For private licence, assume 21% chance of a serious accident (3% chance of fatality). For commercial drivers, it would be greater given heavy-goods vehicles, more people at risk per crash etc.

4. The chance of a seizure with impaired consciousness when awake
The Austroads guidelines use duration seizure-free reflecting the chance of a seizure occurring in the next year. For a private license, it varies from 6 months to 2 years seizure free. For commercial drivers, ≥ 5 years seizure free is used (equivalent to a 2% seizure risk in the next year).

Who should notify the Driving License Authority (DLA) if someone has a medical condition that affects driving ability?

The driver? YES
Such legislation now exists in all Australian states and territories.

The treating doctor? NO
Mandatory reporting does not work. It does not decrease the number of people with epilepsy that drive, it increases the non-reporting of seizures to the treating doctor and therefore interferes with treatment (not serving public or patient safety), and doctors don't comply (e.g. South Australian experience). A 2003 American Association of Neurology survey revealed that in California, a state with mandatory reporting, 9% of patients with seizures said they had concealed relevant information from their physicians. 50% of those who had experienced a previous license suspension admitted to hiding relevant information from their doctors. A 1992 survey revealed comparable concerns. Under mandatory reporting, patients were six times more likely to compromise their medical care in order to continue driving (49% vs 8%).

The doctor should advise their patient of the driving risks associated with their condition, advise them of their responsibility to report their medical condition to the DLA, and provide medical information to the DLA for their assessment of the patient's fitness to drive. If a patient refuses to accept medical advice, then in exceptional circumstances and in the public interest, the doctor my need to breach patient confidentiality and disclose to the patient's driving to the DLA.

Who should certify fitness to drive?

The DLA? YES, as it has the legal responsibility.

The treating doctor? NO, as the doctor's role is to provide relevant medical information to the authority with the legal responsibility.

If the treating doctor is expected to certify fitness to drive, this creates a conflict of interest for the treating doctor. The doctor's first priority is to the patient. Decisions regarding driving will influence, and will be influenced by, the doctor-patient relationship. There is pressure to make unsafe decisions and give patients the benefit of the doubt. Some patients develop the perception that the treating doctor has deprived them of their livelihood or imposed hardship. They can react by blaming the doctor, not following the doctor's advice, or even by making threats.

As stated above, doctors should give patients advice which may include telling them that they should not be driving and that they should report their medical condition to the DLA.

Do you understand the form you're filling in and signing?

Are you familiar with the Austroads national guidelines for people with epilepsy [PDF 84 KB]?

Have you completed the examination in accordance with national medical standards?

Are you providing relevant medical information, certifying fitness to drive, or both? The ANZAN advised that unless there was a very clear case in which the patient was eligible or not to drive, that neurologists should not certify FTD but simply provide medical information to help the DLA determine FTD.

Is an expert medical advisory panel available in your state?