

## **7.0 THE ROLE OF THE NERVOUS SYSTEM IN DRIVING**

Every motor vehicle driver must be able to carry out a continuing series of complex muscular movements without hesitation and with great precision in order to operate a motor vehicle safely in present day traffic and under all extremes of weather and road conditions. This requires a good level of intelligence, complete control over all muscle movements and freedom from the distracting influence of severe pain. A safe driver must, in addition, always be alert, fully conscious and speedily capable of appreciating and responding to changing traffic patterns and road conditions.

The more common neurologic conditions that can adversely affect driving ability are discussed in the sections that follow.

### **7.1 FEBRILE OR TOXIC CONVULSIONS**

A history of febrile convulsions in early childhood or of convulsions that can be directly related to a toxic illness either in childhood or adult life from which there has been a complete recovery, need be of no concern when evaluating a person for a driver's licence.

### **7.2 SYNCOPÉ**

A history of syncope must always be treated seriously since a person who loses consciousness while driving can scarcely avoid a crash. A single occurrence which can be fully explained and which is not likely to recur, may call for no more than careful observation for a few months, but persons who have a history of having a number of fainting spells should not drive until the cause has been determined and successful corrective measures taken.

## 7.3 SEIZURES

**7.3.1** A person who has a spontaneous epileptiform seizure should not drive again after the event until a complete neurologic examination has been carried out to attempt to determine the cause. If the patient is diagnosed as having epilepsy and placed on antiepileptic medication, the physician should withhold a recommendation to licence until:

**7.3.1.1** The person has been seizure free on medication for not less than 6 months, in order to make certain that a drug level has been achieved which will prevent further seizures and which can be maintained without side effects that could affect the patient's ability to drive safely;

**7.3.1.2** The attending physician feels quite confident that the person is a conscientious and reliable patient who will continue to take the prescribed antiseizure medication as directed, who will carefully follow the physician's instructions and who will promptly report any further seizures.

Patients who meet the above criteria can resume driving a private motor vehicle (class 5 and 6) without undue risk provided the antiepileptic medication has no effect on their alertness and muscular co-ordination. They should however, in the interest of safety, be advised not to drive for long hours without rest, not to drive when fatigued and to avoid the excessive use of alcohol.

**7.3.2** Patients who have had surgical treatment to prevent epileptic seizures should have been free of seizures for 12 months after the surgery before being recommended for licensing.

**7.3.3** It is unsafe for a person who must take antiepileptic medication to prevent seizures to operate passenger carrying or commercial transport vehicle (classes 1,2,3 or 4) because of the greater degree of certainty required that they will not have a seizure while driving. Professional drivers are often unable to avoid driving for long periods of time under extremely adverse conditions or avoid highly stressful or fatiguing situations that could act to precipitate another seizure. Unfortunately, seizures do sometimes recur, even after many years of successful treatment, however, individuals may drive any class of vehicle if they have been seizure free for ***5 continuous years on medication or five continuous years off medication.***

- 7.3.4** Since a single, unprovoked seizure is not necessarily diagnostic of epilepsy, decisions regarding possible licence suspension must be individualized to the particulars of each case. The opinion of a neurologist should be obtained and individuals holding a class 5 and 6 licence may require suspension of driving privileges for up to 6 months.
- 7.3.5** A professional driver who has had a single spontaneous epileptiform seizure should be told to stop driving passenger carrying or commercial vehicles (classes 1,2,3, and 4) at once because of the greater degree of certainty required that another seizure will not occur while s/he is driving. If a complete examination by a neurologist does not suggest a diagnosis of epilepsy or some other condition that precludes driving, the risk of further seizures is then usually low enough that it is safe to recommend a return to professional driving when the patient has been seizure free without medication for 12 months.
- 7.3.6** Persons with epilepsy whose seizures have only occurred while they were asleep, or immediately after awakening for at least five years, can be recommended for a private licence (class 5 and 6). Provided they have the approval of a Neurologist and remain under close observation, this restriction of five years may be reduced on the recommendation of the Neurologist. They should not, however, drive commercial trucks or passenger carrying vehicles because some patients with nocturnal epilepsy do, with the passage of time, begin to have daytime seizures.
- 7.3.7** Since some patients with fully controlled seizures whose antiepileptic medication is being withdrawn by their physician, do have a recurrence of their seizures, a person whose medication is being discontinued, should always be cautioned that s/he could have further seizures. Private drivers must not drive for a period of three months from the time that their medication has been discontinued. If the seizures recur after discontinuing their antiepileptic medication on their physician's instructions, they can again drive safely when they have resumed the medication, provided they had previously been seizure-free for six months and their physician is satisfied that the medication is adequate.

***Professional drivers whose medication is being discontinued by their doctor must be seizure free for five years before resuming professional driving. If the seizures recur, they must be seizure free and back on medication for a period of six months before resuming professional driving.***

***Patients with epilepsy whose antiseizure medication has been discontinued and wish to obtain a professional licence can do so once seizure free and off medication for five years.***

- 7.3.8** A patient who has stopped taking antiseizure medication against their physician's advice should never be recommended for relicensing until the physician feels quite confident that antiepileptic medication is again being taken as prescribed and that the patient will conscientiously follow medical advice in the future.
- 7.3.9** Patients who must take antiepileptic medication to prevent seizures and who are known to drink to the point of being impaired, should never be recommended for any class of licence, since they often fail to take their medication at the required intervals while they are intoxicated. In addition, alcohol appears to precipitate seizures in some patients with epilepsy. Where a licence has been denied because of a drinking problem any application to re-issue a licence should be accompanied by evidence of satisfactory attendance at an Alcohol Treatment Centre.
- 7.3.10** Alcohol withdrawal, after a bout of heavy drinking, can cause seizures in both normal people and in patients with epilepsy. Antiepileptic medication is not indicated for normal individuals following a withdrawal seizure. Neither of these groups should, however, be recommended for relicensing until the physician feels quite certain that they will abstain permanently from all further drinking. As a very minimum, a patient who has had an alcohol withdrawal seizure should not drive again for at least six months and should have attended an alcohol treatment program. A statement indicating successful attendance in the program should be received from the Director of the Alcohol and Drug Centre involved.
- 7.3.11** Patients with auras (simple partial seizures) with somatosensory or special sensory symptoms or those patients with non disabling focal motor seizures in a single limb, provided that there is no impairment in their level of consciousness and provided that these seizures are unchanged for greater than one year may be eligible for a class 5 or 6 licence dependent upon the opinion of a neurologist.