# Medical aspects of fitness to drive

a guide for health practitioners

Ngā āhuatanga hauora ki te taraiwa

hei aratohu mā ngā mātanga







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#### More Information

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# **Foreword**

# Te wāhinga kōrero

NZ Transport Agency Waka Kotahi (NZTA) and those working in the health sector are aware of the impact road crashes have on the lives of everyone involved – the injured or killed, their families and caregivers, and the first responders who deal with the aftermath of a crash.

We need to be confident that all drivers on our roads are medically fit to drive. Assessing if someone is fit to drive is a big responsibility, but without it we could be putting peoples' lives at risk. Thankfully, the relationship between NZTA and health practitioners, and our commitment to road safety helps make sure our roads are safe for everyone.

Most people under 75 years of age are issued with a 10-year licence. This can be enough time for some medical conditions to develop to a point where the patient becomes medically unfit to drive. Temporary issues can also happen during this time, making a driver unfit to drive and needing medical assessment. The licensing system relies on health practitioners to assess their patient's medical fitness to drive not only at the time of licence and endorsement application and renewal, but also in between licensing applications.

The medical guidance in this document is supported by international medical standards, and the opinions of experts in health and driver licensing. This includes public consultation with the health sector in New Zealand and review of the findings made by coroners in inquests into medical-related crashes.

Finally, a thanks to the many health practitioners and organisations that contributed to this guide with their valuable expertise.

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# **Contents**

# Ngā ihirangi

Foreword Acknowledgements		3
		4
Intr	8	
1.	General matters	10
1.1	The legislation	10
1.2	Roles, responsibilities, and legal obligations	10
1.3	Licensing considerations	12
1.4	Assessing fitness to drive	14
1.5	Licence classes and endorsements	16
2.	Neurological conditions	20
2.1	Severe disabling giddiness, vertigo or Meniére's disease	23
2.2	Blackouts of unknown cause (excludes epilepsy)	23
2.3	Epilepsy	24
2.4	Myoclonus	28
2.5	Cerebrovascular disease	28
2.6	Progressive neurological disorders - including Parkinsonism, multiple sclerosis, and motor neurone disease	30
2.7	Subarachnoid haemorrhages	31
2.8	Cognitive impairments, including dementia	32
2.9	Intracranial tumours	32
2.10	Structural intracranial lesions and head injuries	34
3.	Cardiovascular conditions	41
3.1	Myocardia ischaemia	43
3.2	Severe hypertension	45
3.3	Arrhythmias and conduction abnormalities	46
3.4	Valvular heart disease	49
3.5	Cardiac failure and cardiomyopathy	50
3.6	Anticoagulation	51

# Contents (continued)

# Ngā ihirangi

3.7	Congenital heart disease	51
3.8	Aneurysm	52
3.9	Heart transplants	52
3.10	Ventricular assist devices	53
3.11	Uncomplicated ECG changes	53
4.	Diabetes mellitus	54
4.1	Hypoglycaemia and hyperglycaemia	56
4.2	Diabetes related temporary driving impairments	57
4.3	Specific considerations for types of diabetes	57
5.	Musculoskeletal conditions	61
5.1	Musculoskeletal conditions	62
5.2	Congenital conditions	64
6.	Visual standards	65
6.1	Temporary visual impairments	68
6.2	Visual fields	68
6.3	Visual acuity	68
6.4	Substandard vision (visual acuity between 6/18 and 6/60 on the worse eye)	69
6.5	Monocular vision	70
6.6	Diplopia (double vision)	70
6.7	Night blindness	70
6.8	Cataracts and aphakia	71
6.9	Glare disability	71
6.10	Colour blindness	71
7.	Hearing loss	72
8.	Mental health	74
8.1	Temporary mental health disorder or episode that may affect safe driving	75
8.2	Severe chronic mental health conditions	77

# Contents (continued)

# Ngā ihirangi

9.	Sleep conditions	79
9.1	<sup>1</sup> Excessive daytime sleepiness	79
9.2	Obstructive sleep apnoea (OSA)	80
9.3	Narcolepsy	82
10.	Increasing age	83
	Medical assessment of the older driver	85
11.	Miscellaneous conditions	87
12.	Effects of medication, drugs and abuse of substances	90
12.1	Medication	91
12.2	Alcohol and drug addiction and dependency	93
12.3	Methadone	93
13.	Driving after surgery	94
14.	Helmet exemptions and seatbelt exceptions	96
14.1	Seatbelt exceptions	96
14.2	2 Helmet exemptions	98
15.	Temporary driving impairments	99
Apı	pendices	101
App	pendix 1: your responsibilities under the legislation	101
Арр	pendix 2: relevant sections of the Land Transport (Driver Licensing) Rule 1999	101
App	pendix 3: relevant sections of the Land Transport (Road User) Rule 2004	102
App	pendix 4: licence information	103
Арр	pendix 5: example of a letter advising a patient they're unfit to drive	104
App	pendix 6: example of Notification under section 18 of the Land Transport Act 1998	105
App	pendix 7: section 19 forms	106
Appendix 8: section 19 process chart		109
App	pendix 9: roadsign test	110
Glos	ssary	

# Introduction

# Te whakatakinga

Driving a vehicle is a complex task requiring perception, judgement, the ability to respond to hazards quickly and effectively, and appropriate physical and mental capability.

New Zealand's driver licensing system aims to make sure drivers are fit and competent to drive. Patients with a medical condition that affects their ability to drive safely can be a risk to other road users as well as themselves. Medical assessments play an important part in determining if a patient is fit to drive or not. They also help NZTA decide if licence conditions are needed for road safety reasons.

### **Updates on the internet**

While the *Medical aspects of fitness to drive: a guide for health practitioners* (MAFTD) is carefully checked to make sure it's accurate when published, make sure to look on the website for any changes or updates.

Check the 'Information for health practitioners' page on our website for the most up to date information.

Information for health practitioners

# **Target audience**

This guide is intended for use by New Zealand-registered health practitioners when assessing a patient's fitness to drive or providing information to support decisions around a patient's fitness to drive.

The Land Transport (Driver Licensing) Rule 1999 defines a health practitioner as someone registered with an authority listed in section 114 of the Health Practitioners Competence Assurance Act 2003 as a practitioner in New Zealand.

#### Section 114, HPCAA 2003

Others, such as coroners, the courts, law professionals, and drivers themselves may have an interest in the content of this guide, but health practitioners are the main audience.

### **Getting the best out of this document**

You must use this guide when issuing a medical certificate or doing medical examinations. Consult the relevant sections of this guide that relate to your patient's medical condition.

Most sections start with a table of high-level summaries on fitness to drive for specific medical conditions, but you should still be familiar with the detail in the body of each section. There are also some examples included in the guide that can be used to help you when issuing written notices or letters to your patient.

If the medical condition your patient presents with isn't included in this guide, you'll need to make your own assessment based on your experience, the type of condition, the types of licences held and the type of driving they do.

The guidance provided may not be appropriate for all patients, given the range of manifestations of some medical conditions. If you find the advice in this guide isn't right for your patient in terms of assessing fitness to drive, contact us outlining your concerns and seek further advice.

medical@nzta.govt.nz

Make sure you're familiar with the General matters section of this guide. This section includes your legal obligations as a health practitioner, driver licensing considerations, the types of vehicles people can drive and the types of roles they have in the transport sector. These are important to understand when assessing a patient's fitness to drive.

### **Purpose**

MAFTD outlines medical conditions that may affect a patient's fitness to drive as well as advice on:

- » Assessing a patient's fitness to drive consistently based on current medical evidence and best practice.
- » Giving medical advice to NZTA on a patient's fitness to drive and seatbelt exceptions or helmet exemptions.
- » Understanding your professional and legal obligations and responsibilities in assessing fitness to drive and informing NZTA.

It also includes non-medical aspects to consider, such as:

- » licence class and endorsement types commercial or private
- » the amount and type of driving
- » promoting responsible behaviour to patients
- » any other driving requirements or considerations, often linked to a patient's occupation or lifestyle.

#### **Contact**

Let us know if you have any concerns or need advice on:

- » individual cases
- » medical fitness to drive general policy
- » suggestions on further revision of the advice in this guide.

You can contact the NZTA Driver Safety team by:

Email: medical@nzta.govt.nz

Post: Driver Safety team NZ Transport Agency Waka Kotahi Private bag 11777

Palmerston North 4442

Phone: 0800 790 359

# 1. General matters

# Ngā take whānui

# 1.1 The legislation

This guide is included in New Zealand's land transport legislative framework through the following main pieces of legislation:

Land Transport Act 1998 - (the Act)

Has the legal obligations of health practitioners.

Land Transport (Driver Licensing) Rule 1999 - (the Rule)

Part 7, Part 9, and Part 13 link various aspects of a patient's fitness to drive to the driver licensing system.

#### Land Transport (Road User) Rule 2004

Although not referenced in the rule, this guide should still be used when issuing a medical certificate in support of a helmet exemption issued by NZTA under clause 7.14 of that Rule, or when issuing a seatbelt exception under clause 7.11.

# 1.2 Roles, responsibilities, and legal obligations

The assessment of a patient's fitness to drive involves 3 main responsible parties:

- 1. **New Zealand registered health practitioners** qualified individuals who assess patient's fitness to drive and advise NZTA. They also give guidance to their patients around their medical situation and how it may affect their driving.
- 2. **Drivers (patients)** responsible for making sure they can drive a vehicle safely, their licence requirements, and honestly discussing their medical circumstances with a health practitioner.
- 3. **NZTA** the regulator of the land transport system and the decision maker with regards to driver licensing.

# Your legal obligations

These are your main legal obligations when assessing a patient's fitness to drive:

- » To use this guide when doing a medical examination Clause 41(4) of the Land Transport (Driver Licensing Rule) 1999
- » To give NZTA medical reports as soon as practicable of persons unfit to drive, or who should only drive subject to conditions, and are likely to continue to drive after being advised not to. Delays in sending or not giving enough information can create a road safety risk.

Section 18 of the Land Transport Act 1998

Section 18 letter template

» When issuing a medical certificate, to give NZTA written notice as soon as practicable that the applicant isn't medically fit to drive. Delays in sending or not giving enough information can create a road safety risk.
Clause 44A of the Land Transport (Driver Licensing) Rule 1999

» To do the required actions relating to patients subject to a Compulsory Inpatient Treatment Order. This is only if you're the person in charge of the hospital the patient is referred to or detained.
Section 19 of the Land Transport Act 1998

For general advice on legal and ethical issues, you should seek independent legal advice or contact your relevant professional body, as appropriate.

# Your other responsibilities

When required, you must provide a medical certificate (valid for 60 days) to a patient following an examination.

- » Always advise your patient about the impact their medical condition, disability or treatment, may have on their ability to drive. Give this advice to them in writing as well as verbally.
- » Recommend any temporary driving restrictions to the patient where appropriate. This could be not driving for a specific amount of time or not driving at night.
- » Discuss with your patients any recommendations you'll make to NZTA around their fitness to drive, including licence conditions, potential suspension, or revocation of their licence.
- » Advise patients on their responsibility to report their condition to NZTA if their long-term or permanent injury or illness may affect their ability to drive safely.
- » Include ongoing consideration of their fitness to drive while you treat, monitor, and manage the patient's medical condition.

# **Privacy and disclosure of personal information**

If there's a piece of law that says you must or may share personal information, such as section 18 of the Land Transport Act or section 44A of the Driver Licensing Rule, this overrides the general disclosure provisions of the Privacy Act 2020 and the Health Information Privacy Code 2020.

If the information you want to share isn't expressly permitted by another piece of legislation, you'll need to assess the disclosure under Rule 11 of the Health Information Privacy Code. Generally, the starting point is that you should seek the patient's consent to disclose. There are limited exceptions to this under Rule 11 – for example, disclosure could be necessary to prevent or lessen a serious threat to public health or public safety, or to prevent or lessen a serious threat to the life or health of the patient or of another person. More information about when disclosure of patient information is appropriate under the Health Information Privacy Code is available on the Office of the Privacy Commissioner website. You should always document the grounds on which the decision to disclose personal information is made.

The medical certificate for driver licence (DL9) and the eyesight certificate for driver licence (DL12) requires a licence applicant's consent to the release of any medical records relevant to their application to NZTA. If consent isn't given, the application can't be processed.

# **Responsibilities of drivers (patients)**

#### Legal responsibilities

- » Getting a medical certificate or medical examination whenever required by NZTA.
- » Disclosing medical conditions truthfully as requested on NZTA driver licensing forms and providing all required information as part of their application. It's an offence to provide false or misleading information on these forms.
- » Complying with the driving licensing requirements including any medical licence conditions.
- » Carrying a copy of a medical certificate confirming their exception from wearing a seatbelt while driving, or exemption from wearing a helmet while riding.
- » Stop driving when medically suspended or revoked, or when advised by a health practitioner that they're unfit to drive.

#### Other responsibilities

- » Shouldn't drive if they're impaired in any way.
- » Should explain to a health practitioner any concerns they have about their medical fitness to drive. Drivers have the option to surrender their driver licence to NZTA if they no longer wish to drive.
- » Compliance with any prescribed medical treatment.
- » To book appointments as soon as practicable whenever NZTA requires them to have a medical examination or sit a test.

### Responsibilities and legal powers of NZTA

NZTA can issue, renew, suspend, revoke or place conditions on a driver licence. We'll seek the input of the person's health practitioner when making a licensing decision involving medical fitness to drive.

#### **Legal powers**

We may do one or more of the following:

- » Require an applicant for a new or renewed driver licence to have a medical examination clause 40.
- » Decline an application for a driver licence or place conditions on the licence if the person doesn't have a medical examination or if there's reasonable grounds a person isn't medically fit to drive clause 42.
- » Place conditions on a driver clauses 42 and 56.
- » Require a driver to have a medical examination or test to help us determine if the person is medically fit to drive clause 77.
- » Suspend all or part of a person's driver licence until the person has a medical examination if we think they're a significant risk to public safety clause 80.
- » Require a driver to have **further examination** by an appropriate health practitioner nominated by us.
- » **Revoke** all or part of a driver's licence if a health practitioner advises us the driver is medically unfit to drive, or the driver fails to have a medical examination or test clause 82.
- » Reinstate a surrendered licence or replace a medically revoked licence clauses 85A and 86.T.

# 1.3 Licensing considerations

# Telling a patient they're unfit to drive

These are the general steps to take when telling a patient they're unfit to drive:

1. Tell the patient verbally and in writing they're unfit to drive and they should stop driving immediately.

#### OR

Tell the patient verbally and in writing they should only be allowed to drive with conditions and NZTA will be advised to put these conditions on their driver licence.

- 2. Give the patient the reasons they're unfit to drive verbally and in writing.
- 3. Tell the patient how soon they can expect to be fit to drive if applicable and if this will be subject to conditions on their licence.
- 4. Tell the patient if a medical review is needed before they can be fit to drive again.
- 5. Record the details around the decision.

If you're concerned your patient may not be competent to understand your advice, if appropriate and if privacy requirements allow, consider telling next of kin the patient is unfit to drive.

If NZTA is notified a patient is unfit to drive on mental health grounds under section 19 of the Act, the patient's licence will be automatically suspended without further consideration while they're a special patient and subject to an inpatient order.

See appendix 5 for an example letter for telling a patient they're unfit to drive, temporarily unfit to drive or fit to drive with conditions.

#### Appendix 5

See appendix 6 and 7 for example letters of advising NZTA of patients unfit to drive under sections 18 or 19 of the Act

#### Appendix 6

#### Appendix 7

#### Appealing a licensing decision

Drivers have the right to appeal a decision made by NZTA on medical grounds under section 106 of the Land Transport Act 1998.

#### Reinstatement of a revoked licence or endorsement and removal of licence conditions

Sometimes a patient's medical condition improves to the point where you consider them fit to drive. For example, an impairment is overcome by treatment, or a patient is fitted with a modified vehicle or prosthetic limb.

Their condition may also improve to the point that the conditions they have on their licence can be removed. For example, removing the requirement to wear glasses after successful eye surgery.

In these cases, the applicant must have a medical certificate stating they're medically fit to hold specified classes and endorsements. They must also meet any other relevant requirements.

Your assessment of fitness to drive when issuing the medical certificate must be made using this guide.

# You and your patient

#### Challenges of applying this guide

You may be put in a difficult situation where your patient wishes to continue driving, despite their medical situation. This may include the patient saying they could lose their livelihood or independence if they're not allowed to drive. However, you have a legal and ethical obligation to protect and promote the safety of your patient and other road users and therefore medical fitness is the only factor you can take into account.

This pressure can make assessing and reporting a patient's fitness to drive difficult for you, especially if there's a close or long-standing relationship with the patient. If you need, you can seek the opinion of another qualified health practitioner. They can help check the guidelines are being applied with the safety of the patient and other road users in mind.

Sometimes using driver assessments as a tool to determine a patient's fitness to drive may help. See Practical driving assessments for more information.

#### **Practical driving assessments**

You can also refer your patient to another health practitioner. However, the assessment to drive is best made by a patient's regular general practitioner who's aware of their medical history.

#### **Assessing non-regular patients**

Care should be taken when you're dealing with patients who don't normally come to you. If you have doubts about their reasons for seeking your medical assessment:

- 1. Ask why the patient is attending an appointment with you.
- 2. If you can, ask permission to request medical records from their regular health practitioner before the patient's appointment with you.
- 3. Consider other assessment tools that can help build the picture around fitness to drive. This could include a specialist appointment or an occupational therapist driving assessment.

You should let NZTA know if a patient isn't a regular of yours when advising of a patient's fitness to drive. There's a question to this effect on the medical certificate provided by NZTA. If you're informing NZTA that a patient is unfit to drive under section 18 of the Act, include the same. See Appendix 6 for an example letter including this detail.

#### Appendix 6

# 1.4 Assessing fitness to drive

#### **General**

Your role in assessing fitness to drive is important. Driving isn't a right – you have a legal and ethical obligation to protect and promote the safety of your patient and other road users in making any decision on fitness to drive.

Again, we're not allowed to suggest there are other concerns we can consider apparently. The guidance in this section should be considered along with the specific guidelines for individual conditions outlined in the medical sections of this guide. Use this guidance to give:

- » recommendations and advice to your patient on their fitness to drive
- » advice to NZTA around your patient's fitness to drive.

When you're assessing a patient's ability to drive safely and comply with all relevant driver licensing requirements, you must consider:

- » the patient's medical condition including the existence of multiple medical conditions (comorbidities), and their combined effects
- » the type of licence they hold <u>Licence class and endorsements</u>
- » the patient's driving requirements and mobility needs
- » the patient's functional abilities including their capacity to compensate for a lack of function or go through rehabilitation
- » the effects of treatment including any medication
- » the patient's compliance with treatment and prescribed medications
- » the patient's motor vehicle crash history, if known. Where you're aware of a medically related crash, you must tell NZTA as part of the advice given for making a licence decision.
- » any other relevant consideration

#### **Medical assessments and certificates**

A clinical assessment may be needed when a general assessment found the possibility of more significant problems.

Keep assessment records and copies of any written advice given to the patient, including any cognitive or psychiatric issues or defects of mental capacity that may affect the ability to drive safely. These records ensure your protection in medico-legal cases where specific details may be required.

#### **Medical examination**

A general medical examination carried out by an appropriately qualified health practitioner should include:

- » Consideration of medical history, especially for the following conditions, including:
  - hearing
  - diabetes
  - cardiovascular conditions
  - mental health
  - musculoskeletal conditions
  - neurological conditions
  - visual
  - medications
  - miscellaneous conditions
  - epilepsy
  - sleep conditions
- » Medications that might affect fitness to drive as well as the patient adherence to taking the medication as prescribed.
- » Consideration of driving history, including any previous determinations of being unfit to drive and for what reason.

#### Medical certificates

The medical certificate (DL9) you issue verifies a medical or clinical examination of a patient and communicates fitness to drive details to NZTA. The DL9 is included as part of the licence application to NZTA.

Make sure you complete **all** fields relevant to the patient's assessment on the DL9 medical certificate. This includes ticking all relevant boxes and providing all the required details on the form and your patient's signature.

If you don't complete the form properly, your patient may be turned away at the licensing agent and they'll need to come back to you. This can create additional unwanted stress, and time and cost impacts for your patient.

The DL9 certificates are available on the automated ordering system or by calling the NZTA contact centre.

#### Bluestar NZTA publications portal

Contact centre: 0800 822 422

If a patient requires a medical certificate for a seatbelt exception, you must make sure you include an expiry date relevant to the patient's condition.

Seatbelt exceptions

# 1.5 Licence classes and endorsements

The guide sets out medical standards for the two broad groups of driver licensing:

Private licence classes and endorsement types include:		
Licence classes	1 – car	
	6 - motorcycle	
Licence	Dangerous goods endorsement (D)	
endorsements	Forklift endorsement (F)	
	Roller endorsement (R)	
	Tracks endorsement (T)	
	Wheels endorsement (W)	
Commercial licence classes and endorsement types include:		
Licence classes	2 - medium rigid vehicle	
	3 - medium combination vehicle	
	4 - heavy rigid vehicle	
	5 - heavy combination vehicle	
Licence	Passenger endorsement (P)	
endorsements	Vehicle recovery endorsement (V)	
	Driving instructor endorsement (I)	
	Testing officer endorsement (O)	

#### Appendix 4

Factsheet 11 has more information on licence classes and endorsements.

Factsheet 11: Driver licence classes [PDF, 94 KB]

# Things to consider

The vehicle driver guidelines specified in each medical condition chapter of this guide consider the risk of patients on a private or commercial licence. You also need to consider a patient's specific licence type and endorsements, along with their general driving circumstances when assessing their fitness to drive.

#### Private licence classes 1 and 6

- » Private licence holders aren't subject to worktime requirements like commercial drivers. They may drive for several hours at a time without a break. Fatigue, reaction times, and concentration levels may be negatively affected as a result.
- » Private licence holders often have passengers such as friends, family and colleagues in the vehicle with them. The safety of any passengers should also be considered.
- » The patient's driving habits, such as where, why, how far and at what time of the day. Some patients may not need to travel often or very far. Others might need to drive long distances regularly or in the early hours or late at night. These habits may affect the safety risks associated with their condition.
- » Motorcyclists class 6 licence holders are some of the most vulnerable road users. Good handling skills, judgement, awareness, and vision are important to being a safe rider. Any condition that affects one or more of these could put the motorcyclist and any passenger they may be carrying more at risk of death or serious injury.

#### Private licence endorsements F, R, T, W and D

F, R, T, and W endorsements allow for the operation of specialist vehicles such as forklifts and civil construction machinery. These endorsements are generally associated with private licences and have similar considerations around a patient's fitness to drive.

The D endorsement allows the licence holder to carry hazardous material in their vehicle, such as poisons, fuel sources, explosives, and ammunition. D endorsements can be associated with both private and commercial licence holders.

#### Commercial licence classes 2 to 5

- » The demands of commercial operations means that commercial drivers can spend more than 70 hours a week in their vehicle. However, commercial drivers do have logbook and worktime requirements.
- » The vehicles they drive can weigh more than 25,000kg or carry passengers. This presents additional road safety risks, as these vehicles require greater skill to handle, can reduce or restrict visibility and need increased braking times and distances to stop.
- » Commercial goods drivers may have other physically demanding duties requiring a reasonable level of fitness, such as the loading and unloading of their vehicles.

NZTA has an expectation that professional commercial drivers will be able to always demonstrate and maintain a high driving standard. Depending on the nature of the medical condition a commercial driver has, the impacts presented by the condition need to be carefully considered.

See appendix 4 for more information on vehicle size classes

#### Commercial licence endorsements P, V, I, O

These endorsements allow the holder to operate commercial services like taxi and rideshare, breakdown and towing services, and driving instruction and testing. It's important to consider if a patient's medical condition may affect their ability to do the tasks permitted by the endorsement. Conditions that affect hearing or speech may affect their ability to communicate effectively, creating a safety risk if they can't understand or be understood.

If you advise NZTA that someone is unfit to drive, NZTA will consider the nature of the driving task as well as the medical condition when deciding. This may be that the patient is deemed unfit to drive on part or all their licences, or granting a licence with conditions that minimise the risk by stating that the patient is fit to drive only if they comply with the conditions.

# **Practical driving assessments**

There are 2 types of driving assessments available to help you with assessing a patient's fitness to drive:

- Occupational therapist driving assessment (OTDA)
- On-road safety test (ORST) this driving assessment only applies to private classes 1 and 6.

You should be aware of the differences and benefits of both driving assessments to make an informed decision on the most suitable for your patient. Some tests might not be available or readily accessible in some parts of New Zealand.

Occupational therapy driving assessment (OTDA)	On-road safety test (ORST)
For patients where medical fitness is uncertain.	For patients who are assessed as medically fit to drive
Purpose is to conduct a comprehensive assessment to assess driving competency in a range of situations. Provides feedback to patients.	Purpose is to determine if the patient meets the minimum safe driving standard. Either pass or fail.
Aim of the assessment is to get a medical certificate.	Aim of the test is to get a licence.
Off-road screening (1-2 hrs) and on-road assessment (45-60 mins), and a debriefing.	30 minutes including greeting and vehicle check, 20 mins on-road test, and debrief of score and performance.
Report with recommendations will be sent to the health practitioner to assist in completing the DL9 medical certificate.	If a pass, the patient's licence renewal will be processed by a licensing agent (AA or VTNZ).

Make sure your patient is aware that these tests need additional time and money to complete, and that there may be a waitlist to see some assessors. Some tests might not be available or readily accessible in some parts of New Zealand.

#### Use of driving instructors in practical assessments of driving

In some circumstances, suggesting lessons with a driving instructor might be appropriate– for example to assist with evaluating a patient with cerebral palsy for an occupational therapist driving assessment. In this circumstance it would be wise for an assessment to be made if up to 10 lessons have been given without improvement in driving skill.

For most assessment purposes an ORST or an OTDA is the appropriate test, and normally only for patients aged 74 or older<sup>1</sup> who're renewing their licence, rather than assessment by a driving instructor.

#### Occupational therapist driving assessment

Occupational therapists offer a thorough, independent, and objective assessment of someone's medical fitness to drive.

If you referred the patient and they're assessed as fit to drive, you can use the assessment report to complete your fitness to drive medical assessment.

Details of OTDA services can be found at:

#### **Enable New Zealand**

Phone: 0800 362 253 Email: <a href="mailto:enable.co.nz">enable.@enable.co.nz</a>

Or

**Occupational Therapy New Zealand** 

Phone: 04 473 6510

Email: office@otnzwna.co.nz

#### The on-road safety test

The ORST only applies to private class 1 and 6 licences. It's not a medical assessment and shouldn't be used over the occupational therapist driving assessment if you've concerns around the patient's physical and cognitive ability to drive a vehicle safely. This assessment should only be used alongside other medical assessments and the information you have on the patient's condition.

While the ORST can occasionally also be used for persons of any age, this can only be done when the Director requires them to do so under clause 77(1)(c) of the Rule.

It may also be useful when you believe the patient to be medically fit to drive, but the patient has their own doubts.

The ORST, done by a licensed driver tester, checks the patient is practicing safe driving skills. The testing officer will give instructions on when to turn, stop and carry out other driving manoeuvres. If the patient fails the test, they won't be able to get the class 1 or 6 licence they applied for.

To book an ORST, you'll first need to contact the NZTA Driver Safety team at medical@nzta.govt.nz and request for the patient to sit the ORST. Once the Driver Safety team have added the ORST test requirement to the patient's licence record, the patient can then visit a driver licensing agent to make the ORST booking or book over the phone. Driver licensing agents are participating offices of AA and VTNZ.

<u>Driver licensing agents</u> <u>medical@nzta.govt.nz</u>

# 2. Neurological conditions

# Ngā mate ioio

Including traumatic brain injuries

# Summary

This table is a summary of the information outlined in this section. Make sure you're familiar with all relevant guidance in this section.

Neurological condition	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Severe disabling giddiness, vertigo, or Meniére's disease	Generally unfit to drive until treated.	Generally unfit to drive until treated.
Blackouts of unknown cause	For a single event, may be fit to drive after 6 months.	For a single event, may be fit to drive after 5 years.
	For 2 or more events separated by 24 hours, may be fit to drive after 12 months.	For 2 or more events separated by 24 hours, may be fit to drive after 10 years without further incidents.
Epilepsy - tonic clonic	Shouldn't drive for 12 months.	Generally unfit to drive.
	Fit to drive after 6 months, with a supporting neurologist opinion.	Fitness to drive may be reconsidered if the patient is seizure-free for a minimum of 5 years without medication, and a neurologist opinion supports the application. Consideration may also be given to patients who're stable for 10 years on medication.
Solitary seizure - where epilepsy hasn't been established	Shouldn't drive for 12 months.  Fit to drive after 6 months subject to certain criteria.	Generally unfit to drive.  Fitness to drive may be reconsidered if the patient is seizure-free for a minimum of 5 years with or without medication.
Minor epilepsy and aura	Shouldn't drive for 12 months.	Generally unfit to drive.
	Fit to drive after 6 months, with a supporting neurologist opinion.	Fitness to drive may be reconsidered if the patient is seizure-free for a minimum of 5 years without medication, and a neurologist supports the application. Consideration may also be given to patients who're stable for 10 years on medication.

Neurological condition	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Sleep epilepsy	Generally unfit to drive.	Generally unfit to drive.
	May be fit to drive after 12 months if the patient only has seizures during sleep or on waking for 2 years and no other seizures have happened while awake.	Fitness to drive may be reconsidered if the patient only has seizures during sleep or on waking for 5 years and no other seizures have happened while awake.
eizures in a patient under	May be fit to drive after 4 weeks,	Generally unfit to drive.
treatment whose epilepsy was previously well controlled	subject to information provided by the treating doctor.	Fitness to drive may be reconsidered if the patient is seizure-free for a minimum of 5 years, and a neurologist opinion supports the application. Consideration may also be given to patients who're stable for 10 years on medication.
Planned withdrawal of antiseizure medication in a person who was medically fit to drive	Shouldn't drive while the medication dose is being tapered, and then for a further 3 months after the last dose.	If anti-seizure medication is withdrawn, the patient is unfit to drive.
		Reconsideration of fitness to drive can happen for exceptional cases.
Non-epileptic seizures	Generally unfit to drive.	Generally unfit to drive.
	May be fit to drive if there are no non-epileptic seizures for a minimum period of 3 months, and with supporting information from the treating practitioner.	May be fit to drive if there are no further non-epileptic seizures for a minimum period of 3 months, and with supporting information from the treating practitioner.
Myoclonus	Generally fit to drive if there are no other features suggestive of epilepsy, and any jerking movements aren't likely to make driving unsafe.	Generally fit to drive if there are no other features suggestive of epilepsy, and any jerking movements aren't likely to make driving unsafe.
<u>Strokes</u>	Generally unfit to drive.	Generally unfit to drive.
	May be fit to drive after 4 weeks, and only once clinical recovery is completed and no significant residual disability present.	May be fit to drive after 3 months following an Ischaemic stroke, subject to certain criteria
		May be fit to drive after 12 months following a haemorrhagic stroke, subject to certain criteria
Transient ischaemic attacks (TIAs)	For a single event, generally fit to drive after 2 weeks.	For a single event, generally fit to drive after 4 weeks.
Progressive neurological disorders, including Parkinsonism, multiple sclerosis and motor neurone disease	Generally unfit to drive if there's any doubt around the patient's ability to control a vehicle safely and the need for rapid responses.	Generally unfit to drive, but consideration may be given subject to a specialist recommendation.

Neurological condition	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Cognitive impairments, including dementia	Generally unfit to drive, unless health practitioner is satisfied there's no significant loss of insight or judgement, or signs of disorientation or confusion.	Generally unfit to drive, but consideration may be given subject to a specialist recommendation.
Subarachnoid haemorrhages	May be fit to drive after 3 months.	May be fit to drive after 6 months.
Cognitive impairments, including dementia	Generally unfit to drive, unless health practitioner is satisfied there's no significant loss of insight or judgement, or signs of disorientation or confusion.	Generally unfit to drive, but consideration may be given subject to a specialist recommendation.
Non-cerebral tumours	May be fit to drive 6 months after a craniotomy.	May be fit to drive 12 months after a craniotomy.
Cerebral tumours	May be fit to drive after a minimum of 12 months following diagnosis, provided there's no evidence of epileptiform seizures or other problems likely to affect the ability to drive safely.	Generally unfit to drive.
Minor head injuries	Generally fit to drive. A brief stand-down period of 3 hours if no loss of consciousness was involved, or 24 hours may be needed if loss of consciousness was experienced.	Generally fit to drive. A brief stand-down period of 3 hours if no loss of consciousness was involved, or 24 hours may be needed if loss of consciousness was experienced.
Serious or significant head injuries	May be fit to drive after 6 months. Return to driving may be subject to further neurological or occupational therapy assessments.	Generally unfit to drive.  May be considered fit to drive after 12 months, subject to specialist neurological assessment. Return to driving may be subject to other requirements.
Cranioplasty following TBI	May be fit to drive after 6 months, subject to a satisfactory neurological assessment.	May be fit to drive after 12 months, subject to a satisfactory neurological assessment.
Subdural haematoma - acute and chronic	For acute, may be fit to drive after 3 months, subject to a satisfactory neurological assessment.	For acute, may be fit to drive after 6 months, subject to a satisfactory neurological assessment.
	For chronic, may resume driving once fully recovered.	For chronic, may be fit to drive after 6 months, subject to specific requirements.
Structural intracranial lesions – cerebral abscess, arteriovenous malformations and intracranial aneurysms	May be fit to drive after a minimum of 6 months following craniotomy.	Generally unfit to drive.

# 2.1 Severe disabling giddiness, vertigo or Meniére's disease

# Things to consider

Menière's disease, labyrinthine disorders, and brain stem conditions may cause major distracting giddiness. Where attacks of giddiness may affect a patient's ability to drive safely, advise them verbally and in writing not to drive until their condition is satisfactorily treated.

Discuss the potential seriousness of their attacks on their ability to drive with them. For example, advise patients whose attacks have some warning signs to pull over to the side of the road if it's safe to do so, rather than try to continue driving during the attack.

In the case of vertigo, some patients may feel so disabled by their vertigo, they shouldn't drive. Others may be able to pull over to the side of the road. Generally, there are no bans on driving with vertigo except where the attacks are sudden, unpredictable, and disabling enough it may affect their ability to drive safely.

# **Specific considerations for vertigo**

#### All private and commercial classes and endorsements

Where the attacks of giddiness or vertigo are disabling enough it may affect a patient's ability to drive safely, advise them not to drive until it's satisfactorily treated.

# 2.2 Blackouts of unknown cause (excludes epilepsy)

# Things to consider

Due to the road safety risk, patients who suffer a blackout of unknown cause are treated the same as a patient with epilepsy. Unless there's evidence the risk of future blackouts is low, like from a suitable observation period or thorough specialist investigation, the patient should be treated as if they have tonic clonic epilepsy.

Tonic clonic epilepsy

# Specific considerations for blackouts of unknown cause

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient shouldn't drive for 6 months after a single blackout of unknown cause.

Patients shouldn't drive for 12 months after 2 or more blackouts of unknown cause separated by 24 hours.

**Note:** a patient is unfit to drive if they've experienced blackouts that can't be diagnosed as syncope, seizure or another condition.

In assessing fitness to drive after the appropriate stand-down time, make sure:

- » there's been no more blackouts for 6 months after a single blackout event
- » there's been no more blackouts for 12 months after 2 or more blackouts separated by 24 hours.

A patient shouldn't drive for 5 years after a single blackout of unknown cause.

Patients shouldn't drive for 10 years after 2 or more blackouts of unknown cause separated by 24 hours.

**Note:** a patient is unfit to drive if they've experienced blackouts that can't be diagnosed as syncope, seizure or another condition.

When assessing fitness to drive after the appropriate stand-down period, make sure:

- » there's been no more blackouts for 5 years after a single blackout event.
- » there's been no more blackouts for 10 years after 2 or more blackouts separated by 24 hours.

# 2.3 Epilepsy

# Things to consider

Having an epileptic seizure while driving puts the driver and other road users at risk and you should notify NZTA of any patient who continues to drive while still having seizures.

Epilepsy doesn't necessarily stop a patient from holding a private class of driver licence, nor does a period of uncontrolled epilepsy automatically mean a permanent ban from driving. However, the diagnosis of epilepsy in commercial drivers generally means they're considered permanently unfit to drive.

If required, NZTA may place licence conditions for ongoing monitoring, such as requirements for a follow-up medical certificate no more than 12 months apart, or another form of periodic review.

# **Specific considerations for types of epilepsy**

### 2.3.1 Tonic clonic epilepsy

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

For patients with tonic clonic epilepsy, 12 months free from seizures is normally required before they can be reassessed for fitness to drive.

You can approve a return to driving after 6 months without referral to NZTA, if:

- » a favourable specialist opinion shows the likelihood of further seizures is small
- » there are favourable modifiers, such as seizures having occurred during medically directed medication changes, seizures secondary to acute metabolic or toxic states not likely to repeat, or seizures associated with reversible acute illness.

The presence of unfavourable modifiers will, in most cases, rule out any reduction in the standard 12-month seizure-free period. Unfavourable modifiers include:

- » not taking medication, missing appointments
- » alcohol and drug abuse within the previous 12 months
- » poor driving records or seizure-related crashes in the past 5 years
- » the presence of a structural brain lesion or non-correctable brain or metabolic condition.

Patients who've had more than one seizure-related crash should be considered using the tonic clonic epilepsy guidance for commercial classes and endorsements, except they can take medication to control seizures during the 5-year period they're seizure-free.

Patients with tonic clonic epilepsy are generally unfit to drive on a commercial licence or endorsement but NZTA may still consider granting a licence.

When assessing fitness to drive and supplying a medical certificate, make sure the patient:

- » is seizure-free for at least 5 years without taking any form of anti-seizure medication
- » has a report from a neurologist supporting their application for a commercial licence.

A patient may also apply to NZTA for a licence to drive commercial classes and endorsements after a 10-year stand-down period from driving, but only if they're taking anti-seizure medication to treat their epilepsy.

#### 2.3.2 A solitary seizure (where epilepsy hasn't been established)

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient shouldn't drive for 12 months after experiencing a solitary seizure where epilepsy hasn't been established.

You can approve a return to driving after 6 months if there are no more seizures, with or without medication, over this timeframe.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients with this condition are generally unfit to drive.

However, fitness to drive can be reconsidered if there are no seizures for at least 5 years, with or without medication, and a specialist assessment supports the application.

#### 2.3.3 Minor epilepsy and aura

#### All private and commercial classes and endorsements

Epilepsy includes minor seizures such as absence of attacks, myoclonic seizures, and simple and complex partial seizures. These forms of epilepsy are just as likely to cause potentially dangerous situations as tonic clonic epilepsy. Patients suffering absence attacks (blank spells) may be unaware they're happening, which may make any history from a patient unreliable. These conditions should be treated the same way as tonic clonic epilepsy for fitness to drive.

#### Tonic clonic epilepsy

'Safe seizures', including prolonged aura, are defined as seizures that don't affect driving ability. Isolated, infrequent myoclonic jerks (without impaired awareness) may be considered safe in the context that the pattern has been established for 2 years with no seizures of any other type having occurred.

#### 2.3.4 Sleep epilepsy

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Seizures occurring during sleep should be treated in the same way as tonic clonic epilepsy for fitness to drive, except where a patient has an established pattern of seizures happening only during sleep, or on waking, and who's completely free from seizures when awake.

A patient with sleep epilepsy who has seizures while awake (not including seizures on waking) should be treated the same as for tonic clonic epilepsy.

#### Tonic clonic epilepsy

NZTA may consider fitness to drive if the patient hasn't had any seizures while awake for at least 12 months, and they have an established pattern of seizures of at least 2 years that occur only during sleep or on waking.

Any patients suffering from sleep epilepsy are normally permanently unfit to hold a commercial licence.

However, NZTA may consider fitness to drive where:

- » a patient has only had seizures during sleep or on waking for 5 years and no other seizures have happened
- » a neurologist's opinion supports the application for a driver licence.

# 2.3.5 Seizures in a patient under treatment whose epilepsy was previously well controlled

Where a single seizure happens after a long time – at least 12 months – the risk of more seizures is low enough that driving can be resumed much sooner than when the epilepsy hasn't been well controlled. The length of the non-driving seizure-free period depends on whether a provoking factor was identified and can be reliably avoided. This only applies to private vehicle drivers who're already under treatment.

In patients with epilepsy, their seizures are often triggered by factors such as missed doses of antiseizure medication, over-the-counter medications, alcohol, or acute illnesses. If the triggering factor is avoided, the risk of more seizures may be low enough to allow private driving to resume after a shorter seizure-free timeframe than after an unprovoked seizure. However, this only applies if the epilepsy has been well controlled until the seizure. Some triggering factors, such as sleep deprivation, can't be reliably avoided.

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Can generally be fit to drive if:

- » The seizure was caused by an identified triggering factor.
- » The triggering factor can be reliably avoided.
- » The triggering factor hasn't caused previous seizures.
- » There's been no seizures for at least 4 weeks.
- » The patient follows medical advice for example, sticks to medication (periodic serum drug-level measurements may be required) and avoids triggering factors.

#### OR

- » No cause for the seizure was identified.
- » There's been no seizures for at least 3 months.
- » The patient follows medical advice, including sticking to medication.

If the patient has experienced one or more seizures during the 12 months leading up to the last seizure, there's no reduction and should be treated the same as for tonic clonic epilepsy.

Tonic clonic epilepsy

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Same requirements as for tonic clonic epilepsy.

Tonic clonic epilepsy

# 2.3.6 Planned withdrawal of antiseizure medication in a patient who was medically fit to drive

In patients who've had no seizures while taking antiseizure medication over a suitable period, the specialist may attempt a withdrawal of all antiseizure medication, a reduction in the number of medications, or a reduction in dose.

The medication may also be changed because of side effects or potential side effects such as teratogenicity. The patient shouldn't drive for the full period of withdrawal or dose change and for 3 months after. However, if the dose is being reduced only because of current dose-related side effects, and is unlikely to result in a seizure, driving may continue.

For commercial vehicle drivers, if antiseizure medication is withdrawn, the patient is no longer fit to drive. This also applies to a reduction in dose of antiseizure medication except if the dose reduction is due only to the presence of dose-related side effects.

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient shouldn't drive while the dose is phased out, and not for another 3 months after the last dose.

**Note:** if a drug is being withdrawn as part of switching from one drug to another, for example, to reduce teratogenic risk, the 3-month non-driving period still applies.

If seizures come back, NZTA may consider fitness to resume driving with license conditions for ongoing annual monitoring, and considering information you provide confirming:

- » the previously effective medication regimen is resumed.
- » no seizures have happened for 4 weeks after resuming the medication regime.
- » the patient follows medical advice, including sticking to medication.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Same requirements as for tonic clonic epilepsy.

Tonic clonic epilepsy

#### 2.3.7 Non-epileptic seizures

Some transient episodes of impaired consciousness, awareness, or motor control resemble epileptic seizures or syncope, but have a psychological cause. These episodes are usually termed psychogenic non-epileptic seizures (PNES), although they're sometimes known as dissociative, functional or pseudo-seizures.

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient isn't fit to drive if they've experienced a psychogenic seizure. You may consider a patient fit to drive if:

- » The seizures are identified as psychogenic only, with no epileptic seizures.
- » There's been no more psychogenic seizures for at least 3 months.

#### OR

- » The situational context or the semiology has been stable for at least 12 months and the psychogenic seizures:
  - haven't caused a loss of awareness or responsiveness
  - haven't resulted in injury
  - won't affect driving.

#### OR

- won't happen while a patient is driving
- only happen in response to triggers that won't be experienced while driving.

A patient isn't fit to drive if they've experienced a psychogenic seizure.

You may consider a patient fit to drive if information you provide confirms:

- » the seizures are identified as psychogenic only, with no epileptic seizures
- » there's been no more psychogenic seizures for at least 3 months

# 2.4 Myoclonus

# Things to consider

Myoclonus associated with degenerative brain disease, post-anoxic or metabolic encephalopathies, sleep myoclonus and spinal myoclonus aren't considered epilepsy, and therefore not treated the same way.

# **Specific considerations for myoclonus**

#### All private and commercial classes and endorsements

Fitness to drive may be considered if there are no other features suggestive of epilepsy, and the jerky movements aren't likely to make driving unsafe. Some patients may require an occupational therapist's driving assessment.

Patients with myoclonus with features suggestive of epilepsy, or where the myoclonus jerks may affect the ability to drive safely, should be treated the same as for tonic clonic epilepsy.

Tonic clonic epilepsy

# 2.5 Cerebrovascular disease

# Things to consider

This group of conditions includes strokes arising from occlusive vascular disease (cerebral thrombosis), spontaneous intracerebral haemorrhage, and transient ischaemic attacks. Patients who suffered strokes or TIAs are at increased risk of a second attack that may make them unable to control a vehicle.

The residual effects of stroke in terms of hemiplegia or other neurological sequelae such as perceptual and visual problems, as well as effects on cognition, are often enough to make a patient unfit to drive.

When residual disability causes doubt around fitness to drive, a driving assessment by a trained occupational therapist should be done. In many cases, it may be possible to allow a return to driving after appropriate vehicle modifications have been made.

For patients with cerebrovascular disease, NZTA may place licence conditions for ongoing monitoring, such as requirements for a follow-up medical certificate no more than 12 months apart, or another form of periodic review.

# Specific considerations for types of cerebrovascular disease

Patients with the presence of homonymous hemianopia are generally considered permanently unfit to drive. Other disorders such as ataxia, vertigo and diplopia will also generally make patients permanently unfit to drive unless there's a full functional recovery.

The presence of epilepsy-associated significant cardiovascular disorders and recurrent transient ischaemic attacks after a stroke will also generally result in patients being considered unfit to drive. In exceptional circumstances, NZTA may consider fitness to drive 12 months after the stroke and a supporting specialist physician or neurologist's opinion is provided with the application.

#### 2.5.1 Strokes

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient shouldn't drive until clinical recovery is complete, with no major residual disability likely to compromise safety. This shouldn't be less than 4 weeks after a stroke.

Driving can resume after secondary prevention treatment is in place and a minimum of 4 weeks has passed. Any residual limb disability must be aided by vehicle modifications. There must be no evidence of cerebral damage resulting in significant cognitive defects, reduced reaction times, perceptual difficulties, and visual problems such as homonymous field defects and hemispatial neglect.

Research shows that there is a risk of post traumatic epilepsy for those patients that have experienced a stroke that is haemorrhagic in origin as opposed to ischaemic. Accordingly the standdown period from commercial driving is longer for those diagnosed as having experienced a haemorrhagic stroke.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

A patient shouldn't drive for at least 3 months an ischaemic stroke and 12 months after a haemorrhagic stroke.

You can consider fitness to drive if:

- » there's an absence of impairment in the following:
  - Visuospatial perception.
  - Insight.
  - Judgement.
  - Attention.
  - Comprehension.
  - Reaction time.
  - Memory.
  - Sensation.
  - Muscle power.
  - Coordination.
  - Vision (including visual fields) and the likely impact on driving ability.
- » they pass a practical driving assessment, if required.

#### 2.5.2 Transient ischaemic attacks (TIAs)

Transient ischaemic attacks may induce unconsciousness, confusion, sudden vertigo and interference with limb function. This causes difficulty in controlling a vehicle and makes driving unsafe. Always consider the possibility of these attacks being due to cardiac dysrhythmias.

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient shouldn't drive for a minimum of 2 weeks after a TIA.

Driving can resume once secondary prevention treatment is in place and a minimum of 2 weeks has passed. Patients with repeated or frequent attacks shouldn't drive until the condition is satisfactorily controlled, with no more attacks for at least 3 months.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

A patient shouldn't drive for at least 4 weeks after a single TIA. The cause must also be identified and satisfactorily treated, and a specialist medical assessment done.

Licences will not be issued to patients with a history of multiple TIAs.

However, NZTA may consider fitness to drive for patients who've had multiple TIAs. It must be 12 months after the last attack and an appropriate specialist opinion supports their application.

#### 2.5.3 Amaurosis fugax

#### All private and commercial classes and endorsements

The conditions applying to TIAs apply to this condition.

#### **TIAs**

It may be possible for NZTA to consider fitness to drive after a single episode, if no cardiac, vascular, or haematological disease is present.

# 2.6 Progressive neurological disorders – including Parkinsonism, multiple sclerosis, and motor neurone disease

# Things to consider

All forms of severe neuromuscular disease will affect a patient's ability to drive safely because of weakness, stiffness, slowed responses and incoordination. Multiple sclerosis may also cause visual problems, vertigo, and sensory loss. You should check for limb strength, accuracy of rapid foot movements and joint proprioception. You should also be alert to cognitive impairments that may coexist with conditions such as Parkinson's disease.

In the early stages of these conditions, it's often possible to drive safely, but there'll be a time when driving is no longer safe and a decision will need to be made, perhaps aided by a relevant specialist. Assessments from occupational therapists, as well as practical driving tests, will often be required before making a final decision on fitness to drive.

Another issue is, in conditions such as multiple sclerosis, there's a variable and intermittent progression with times of significant remission. You may need to limit patients from driving at times and allow them to only drive during times of remission. If required, NZTA may place licence conditions for ongoing monitoring, such as requirements for a follow-up medical certificate no more than 12 months apart, or another form of periodic review.

# Specific considerations for progressive neurological disorders

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient shouldn't drive in all cases where there's any doubt about their ability to drive safely and where rapid responses may be needed. If a patient has difficulty walking, they may also be unfit to drive.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients with these conditions are generally unfit to drive. Those with very minor muscular weakness may drive if they have a full assessment, including assessments from occupational therapists or on-road safety tests, showing they can drive safely.

A further exception may be made in cases of drug-induced Parkinsonism. If the patient is likely to make a full recovery after treatment and if the reason for the therapy isn't a cause of exclusion.

# 2.7 Subarachnoid haemorrhages

### Things to consider

Subarachnoid haemorrhages can lead to permanent brain damage if not treated properly. Fatigue is a common symptom after, and some may also experience difficulties with short term memory and concentration.

If required, NZTA may place licence conditions for ongoing monitoring, such as requirements for a follow-up medical certificate no more than 12 months apart, or another form of periodic review.

# Specific considerations for subarachnoid haemorrhages

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient shouldn't drive for a minimum of 3 months after a subarachnoid haemorrhage. You can consider fitness to drive after 3 months, if:

- » There's an absence of impairment in the following:
  - Visuospatial perception.
  - Insight.
  - Judgement.
  - Attention.
  - Comprehension.
  - Reaction time.
  - Memory.
  - Sensation.
  - Muscle power.
  - Coordination or vision (including visual fields) and the likely impact on driving ability.
- » They pass a practical driving assessment, if required.

A patient shouldn't drive for at least 6 months after a subarachnoid haemorrhage. You can consider fitness to drive after 6 months, if:

- » There's an absence of impairment in the following:
  - Visuospatial perception.
  - Insight.
  - Judgement.
  - Attention.
  - Comprehension.
  - Reaction time.
  - Memory.
  - Sensation.
  - Muscle power.
  - Coordination or vision (including visual fields) and the likely impact on driving ability.
- » They pass a practical driving assessment, if required.

# 2.8 Cognitive impairments, including dementia

### Things to consider

Dementia (mate wareware) is the broad term used to describe the range of organic brain disorders that result in varying degrees of memory loss, impaired cognition, disturbances of mood and behaviour, and periods of confusion. The most common forms are likely to be those associated with increasing age, such as the results of multiple brain infarcts and Alzheimer's disease. However, dementia can affect anyone, and these conditions may also happen to relatively young people.

Cognitive impairment associated with alcohol abuse or chronic solvent exposure (from abuse or occupational exposure) are possibilities to consider but there are many causes of cognitive impairment, so assessment of suspected impairment is important.

It's difficult to assess these cases as there's no single marker that decides fitness to drive. It may often be very difficult to assess fitness to drive in the early stages of these conditions where there's little more than mild memory impairment. A full assessment of driving skills with an occupational therapist will often be a good way of determining whether a patient may continue to drive.

Cognitive problems can often represent a difficult situation for you, especially with patient compliance issues stemming from comprehension and memory issues. Raise the issue of driving early, when a patient has enough cognitive and reasoning ability to make decisions about their driving future, such as selling their vehicle. You'll often need to enlist the early help of family to make sure the patient doesn't drive.

# Specific considerations for dementia and other cognitive impairments

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Driving may be permitted in cases of early dementia, if you're satisfied there's no significant loss of insight or judgement, and the patient doesn't show signs of significant disorientation or confusion. Standard tests of cognitive function should be used in assessment.

Where special diagnostic or management advice is required to reach a clinical determination, patients should be referred to a geriatrician, psychogeriatrician, or other suitable specialist for more assessment.

An occupational therapist driving assessment is recommended in all cases where there's some doubt about driving ability, especially if family members have concerns.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients with confirmed dementia or cognitive impairment from any cause are unfit to drive.

# 2.9 Intracranial tumours

### **Specific considerations for types of intracranial tumours**

#### 2.9.1 Non-cerebral tumours

This group of tumours includes conditions such as acoustic neuroma, meningiomas of the posterior fossa and pituitary tumours. Treatment of these conditions isn't usually associated with problems likely to affect the ability to drive safely – other than visual field defects associated with pituitary tumours. In these circumstances, the guidelines in section 6 Visual standards should be considered.

If required, NZTA may place licence conditions for ongoing monitoring, such as requirements for a follow-up medical certificate no more than 12 months apart, or another form of periodic review.

#### Visual standards

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Problems may occur with patients who've had pituitary tumours removed through a craniotomy. Patients shouldn't drive for a minimum of 6 months after the craniotomy.

In other non-cerebral tumour situations, including transsphenoidal pituitary surgery, driving may resume as soon as there's satisfactory recovery and no residual disabling symptoms. Regular medical follow-up is advisable.

For more guidance on some specific types of non-cerebral tumours:

#### Table 1

Whether a patient has recovered enough to be considered for fitness to drive is to be determined by a clinical review either post-event or post-procedure.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients who've had pituitary tumours removed through a craniotomy shouldn't drive for a minimum period of 12 months.

In other situations, including transsphenoidal pituitary surgery, driving may resume as soon as there's satisfactory recovery and no residual disabling symptoms. Regular medical follow-up is advisable.

For more guidance on some specific types of non-cerebral tumours:

#### Table 1

#### 2.9.2 Cerebral tumours

Cerebral tumours, whether benign or malignant, carry a significant risk of associated epilepsy, both before and after surgery, so restrictions will generally be applied. Associated motor or sensory dysfunction and visual defects may also coexist, which could affect the ability to drive safely.

#### Private class 1 or class 6 licence and/or a D, F, R, T or W endorsement

Once the condition has been diagnosed, the patient is unfit to drive for a minimum of 12 months.

In advanced malignant tumours (such as grade 3 or 4 gliomas) or in cases of cerebral secondary tumours (for example, from lung cancer), a patient shouldn't drive for a minimum of 2 years after treatment, depending on circumstances.

You may consider fitness to drive 12 months after surgery or other forms of treatment if there's no evidence of epileptiform seizures or other problems likely to affect a patient's ability to drive safely.

For more guidance on some specific types of cerebral tumours:

Table 1

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients with these conditions are generally considered unfit to drive.

Patients who had a tumour diagnosed in childhood and survived to adulthood without recurrence and no significant functional deficits may be able to drive. In these cases NZTA may consider fitness to drive based on a satisfactory medical assessment, usually including an appropriate specialist report.

For more guidance on some specific types of cerebral tumours:

Table 1

# 2.10 Structural intracranial lesions and head injuries

### Things to consider

The nature, severity, and extent of a head injury will dictate if, and when, a patient can return to driving.

Some head injuries may be classified as traumatic brain injuries (TBI). TBI may cause a variety of immediate or delayed symptoms, such as disorientation, confusion, difficulty concentrating, blurred vision, and other cognitive impairments.

The severity of a TBI shouldn't be based solely on a scan of the brain but also on the period of post-traumatic amnesia (PTA). The severity of TBIs can be broadly classified as mild, moderate, or severe.

For moderate to severe TBIs, drivers will generally be unfit to drive immediately and require neurological assessment to confirm fitness to drive.

# Specific considerations for types of structural intracranial lesions and head injuries

#### 2.10.1 Minor head injuries

#### All private and commercial classes and endorsements

Any patient who has a minor head injury without loss of consciousness or any other complication shouldn't drive for 3 hours. A patient who has a minor head injury and loses consciousness shouldn't drive for 24 hours. They should have a medical assessment before returning to driving.

You may need to extend the recommended period of no driving if the patient exhibits uncontrolled vertigo, loss of good judgement, decreased intellectual capacity, post-traumatic seizures, visual impairment, or loss of motor skills. They shouldn't be allowed to drive until you've cleared them as fit to drive using the relevant section of this guide.

#### 2.10.2 Serious or significant head injuries (including TBI)

Serious head injuries, such as acute intracerebral haematoma requiring surgery, or compound depressed fracture, or dural tear, with more than 24 hours of post-traumatic amnesia, will affect the ability to drive safely.

Serious head injuries have a risk of post-traumatic epilepsy, which is much more common after penetrating (open) head injuries, particularly with dural penetration, injuries complicated by intradural (not subdural) haemorrhage and depressed fractures of the cranial vault. Associated post-injury cognitive and behavioural problems may also make it unsafe to drive. Post-traumatic physical disabilities may make driving difficult or require vehicle modifications.

It's important all cases are fully and properly assessed before there's any suggestion of returning to driving. Most patients with severe head injuries, including those with post-concussion syndrome, shouldn't drive within 6 months of the event, and fitness to return to driving should be dependent on your assessment.

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient shouldn't drive for a minimum of 6 months following severe head injuries, depending on the circumstances and the range of post-traumatic problems.

The existence of post-traumatic epilepsy means you'll need to apply the same rules as for tonic clonic epilepsy. The only exception is the event of immediate seizures (normally in the first 24 hours after injury) that are considered part of the acute process.

#### Tonic clonic epilepsy

A full neurological assessment and a trained occupational therapist's driving assessment may be needed before considering if a patient is fit to drive. An OTDA will often be needed if there are post-traumatic or post-surgical functional deficits. Visual assessment will also be needed to make sure there are no significant visual field defects. Frontal lobe injuries may present difficulties in assessment, and a neuropsychological assessment should be considered.

Occupational therapist's assessments may also be needed for vehicle modifications and other driving aids.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Most severe head injuries will result in a patient being considered unfit to drive.

Patients with severe head injuries may drive after a minimum period of 12 months if there's satisfactory evidence of a recovery allowing for safe driving relative to their occupation. A specialist neurological assessment is required in these situations, and a trained occupational therapist's driving assessment is recommended.

#### 2.10.3 Cranioplasty following TBI

Although there are various reasons for a neurosurgeon to do a cranioplasty operation, generally, a patient who has a cranioplasty procedure has had a significant head injury. Usually, a patient who's had a cranioplasty is likely to have also experienced some form of acute subdural bleeding and will need prolonged inpatient rehabilitation.

A combination of looking at the patient's brain scan and a neurocognitive impairment assessment should be used to determine the severity of the injury and if the patient has recovered enough to be considered for fitness to drive.

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient shouldn't drive for a minimum of 6 months following a cranioplasty.

You may consider fitness to drive after 6 months and a satisfactory neurological assessment, which may include an occupational therapist driving assessment, and considers:

- » the underlying pathology that led to the cranioplasty treatment
- » any ongoing PTA and whether this may affect their ability to drive.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

A patient shouldn't drive for a minimum period of 12 months following a cranioplasty.

You may consider fitness to drive after 12 months and a satisfactory neurological assessment provided by a neurologist that considers:

- » the underlying pathology that led to the cranioplasty treatment
- » any ongoing PTA and whether this may affect their ability to drive.

#### 2.10.4 Subdural haematoma (acute and chronic)

Subdural haematomas are a serious condition that are usually caused by trauma to the head. Acute subdural haematoma is the most serious type, as it's usually a sign of significant damage to the brain. A patient who's suffered an acute subdural haematoma may take a long time to recover and could be left with physical and cognitive disabilities that may affect their ability to drive safely.

Chronic subdural haematomas are more common in older patients although it may rarely present in younger patients. It can develop over time because of previous minor trauma. Surgery, for example a burr hole, is commonly the treatment of choice and generally results in the patient recovering very well.

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient shouldn't drive for 3 months after an acute subdural haematoma. Chronic subdural haematoma patients, whether they've been treated with or without surgery, must not drive until fully recovered.

In the case of acute subdural haematoma, you may consider fitness to drive after 3 months and a satisfactory assessment from an appropriate specialist.

Patients with a chronic subdural haematoma may resume driving once recovered. It may be worth referring a patient to do an occupational therapist driving assessment to help determine their ability to drive.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

For both acute and chronic subdural haematomas, a patient shouldn't drive for a minimum of 6 months.

In the case of acute subdural haematoma, fitness to drive may be considered after 6 months and a satisfactory assessment from an appropriate specialist.

Patients with a chronic subdural haematoma may resume driving after 6 months, if:

- » The condition is uncomplicated.
- » There's only one drainage procedure.
- » There's been no recurrence.
- » There are no multiple membranes seen in the haematoma.

In all other cases a patient may only return to driving after a minimum of 12 months.

# 2.10.5 Structural intracranial lesions - cerebral abscess, arteriovenous malformations, and intracranial aneurysms

The major risks on driving relate to epilepsy, particularly with cerebral abscess, and spontaneous bleeding in the case of untreated arteriovenous malformations and aneurysms. Damage to the brain from intracranial bleeding or compression, as well as from surgical treatment is also a possibility. Functional deficits may then require assessment.

### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient shouldn't drive for a minimum of 6 months after a craniotomy for intracerebral lesions, depending on the circumstances and the range of post-traumatic problems. All patients with these conditions should stop driving until you permit a return to driving.

A full neurological assessment and an occupational therapist's driving assessment may be needed before considering if a patient is fit to drive. An OTDA will often be needed if there are post-traumatic or post-surgical functional deficits. Visual assessment will also be needed to make sure there's no significant visual field defects. Frontal lobe injuries may present difficulties in assessment.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients with intracranial lesions such as aneurysms, arteriovenous malformations, and cerebral abscess are normally considered permanently unfit to drive because of the risks of epilepsy and further bleeds.

# **Specific guidance**

# Table 1 - guidance for specific types of cerebral and non-cerebral tumours

Whether a patient has recovered enough to be considered for fitness to drive is determined by a clinical review either post-event or post-procedure. If necessary, an OTDA may also assist with reaching a determination.

Neurological condition	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Acoustic neuroma/Schwannoma (radiosurgery)	Fit to drive on recovery unless there's sudden and disabling giddiness.	Fit to drive on recovery, unless there's sudden and disabling giddiness, or the condition is bilateral.
Acoustic neuroma/Schwannoma (surgery)	Fit to drive on recovery unless there's sudden and disabling giddiness.	Fit to drive on recovery, unless there's sudden and disabling giddiness, or the condition is bilateral.
Incidental meningiomas	Fit to drive.	May be fit to drive after completing 2 scans performed 12 months apart showing no tumour growth.
Infratentorial – extrinsic (meningiomas)	Fit to drive on recovery.	Fit to drive on recovery.
Infratentorial - intrinsic (grade 1 glioma)	Fit to drive on recovery.	Fit to drive on recovery.
Infratentorial - intrinsic (grade 2 glioma)	May be fit to drive after 6 months.	May be fit to drive after 2 years, subject to specialist review.
Infratentorial – intrinsic (grade 3 to 4 glioma)	May be fit to drive after 2 years, following completion of primary treatment.	Unfit to drive.
Infratentorial – intrinsic (medulloblastoma/low grade ependymoma)	May be fit to drive after 1 year, following completion of primary treatment, if there's no recurrence.	May be fit to drive after 5 years, following completion of primary treatment, if this period is clinically disease-free and the tumour was completely infratentorial.
Infratentorial – intrinsic (high grade ependymoma/lymphoma)	May be fit to drive after 2 years, following completion of primary treatment.	Unfit to drive.
Primary cerebral lymphoma	May be fit to drive after 2 years, following completion of primary treatment.	Unfit to drive.
Solitary metastasis (post- treatment: surgery or radiosurgery)	May be fit to drive after 1 year, following completion of primary treatment, if there's clinical and imaging evidence of disease stability or improvement.	May be fit to drive after 2 years, subject to specialist review.
Multiple metastases	May be fit to drive after 2 years, subject to specialist review.	Unfit to drive.

Neurological condition	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Supratentorial – extrinsic (radiosurgery)	May be fit to drive after 1 year.	May be fit to drive after 2 years if there's no evidence of epileptiform seizures or other problems likely to affect the patient's ability to drive safely.
Supratentorial – extrinsic (surgery)	May be fit to drive after 6 months if there's no residual impairment that may affect safe driving and no history of seizures.	May be fit to drive after 2 years if there's no evidence of epileptiform seizures or other problems likely to affect the patient's ability to drive safely.
Supratentorial – intrinsic (grade 1 to 2)	May be fit to drive after 6 months if there's no evidence of epileptiform seizures or other problems likely to affect the patient's ability to drive safely.	May be fit to drive after 1 year, subject to specialist review.
Supratentorial - intrinsic (grade 3 to 4)	May be fit to drive after 2 years, following completion of primary treatment.	Unfit to drive.
Suspected low grade intrinsic	May be fit to drive subject to specialist assessment.	May be fit to drive subject to specialist assessment.

# Table 2 - guidance for other specific neurological conditions

Whether a patient has recovered enough to be considered for fitness to drive is determined by a clinical review either post-event or post-procedure. If necessary, an OTDA may also assist with reaching a determination.

Neurological condition	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Abscess	May be fit to drive after 6 months.	May be fit to drive after 1 year.
Arachnoid cysts (treatment not required)	Fit to drive if not associated with epilepsy.	Fit to drive if not associated with epilepsy.
Arachnoid cysts (treated)	May be fit to drive after 6 months.	May be fit to drive after 1 year if there's no residual impairment that could affect safe driving.
Arteriovenous malformation - supratent (treatment not required)	Fit to drive.	Generally unfit to drive.  May be reconsidered for fitness to drive, subject to specialist review and dependent on size and location of malformation.
Arteriovenous malformation - supratent (intracerebral haemorrhage untreated)	May be fit to drive after 3 months if there's no residual impairment that could affect safe driving.	Generally unfit to drive.  May be reconsidered, subject to specialist review and dependent on size and location of malformation.

Neurological condition	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Arteriovenous malformation - supratent (surgery)	May be considered fit to drive after 6 months if there's no residual impairment that could	May be considered fit to drive after 2 years, subject to the checklist for neurological disorders.
	affect safe driving.	General checklist
Arteriovenous malformation - supratent (radiosurgery)	May be fit to drive after 1 month if there's no residual impairment that could affect safe driving.	May be considered fit to drive after 2 years, subject to the checklist for neurological disorders.
		General checklist
Arteriovenous malformation - infratent (treatment not required)	Fit to drive if there's no likelihood of seizures.	Generally unfit to drive.
minatent (treatment not required)	of seizures.	May be reconsidered, subject to specialist review and dependent on size and location of malformation.
Arteriovenous malformation	May be fit to drive after 1 month if	Generally unfit to drive.
- infratent (intracerebral haemorrhage untreated)	asymptomatic.	May be reconsidered, subject to specialist review and dependent on size and location of malformation.
Arteriovenous malformation - infratent (surgery)	Fit to drive on recovery.	May be fit to drive 12 months after surgery.
Arteriovenous malformation - infratent (radiosurgery)	Fit to drive on recovery.	May be fit to drive 12 months after obliteration of lesion.
Brain biopsy	May be fit to drive after 6 months, dependent on the underlying pathology. If a tumour is diagnosed on biopsy, see the relevant tumour guidance.	May be fit to drive after 6 months, dependent on the underlying pathology. If a tumour is diagnosed on biopsy, see the relevant tumour guidance.
Colloid cysts (treatment not required)	Fit to drive, however, NZTA must be notified if cyst diameter is more than 10-12mm.	Fit to drive, however, NZTA must be notified if cyst diameter is more than 10-12mm.
Colloid cysts (treated)	May be fit to drive after 6 months.	May be fit to drive after 2 years if there's no residual impairment that could affect safe driving.
Chiari	Fit to drive if isolated.	Fit to drive if isolated.
Chiari with a syrinx	Fit to drive if asymptomatic.	Fit to drive if asymptomatic.
	If sensory symptoms are present, neurological assessment required.	If sensory symptoms are present, neurological assessment required.
Chiari (posterior fossa decompression)	Fit to drive on recovery.	Fit to drive on recovery.
Hydrocephalus	Fit to drive if asymptomatic.	Fit to drive if asymptomatic.
Shunt	Fit to drive on recovery.	May be fit to drive after 3 to 6 months, dependent on seizure risk.
ICP monitor	Fit to drive on recovery.	Fit to drive on recovery.

Neurological condition	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Implanted electrodes (deep brain stimulation)	May be fit to drive, subject to neurologist review, if there are no complications from surgery, no seizures, and no other impairment that could affect safe driving.	May be fit to drive, subject to neurologist review, if there are no complications from surgery, no seizures, and no other impairment that could affect safe driving.
Implanted electrodes (cortical motor stimulation)	May be fit to drive after 6 to 12 months, depending on whether the aetiology is non-cerebral or cerebral, and otherwise is asymptomatic.	Unfit to drive.
Intracranial aneurysm (incidental)	Fit to drive.	Unfit to drive.
Intracranial aneurysm (incidental) - treated by craniotomy/coiling	May be fit to drive after 3 to 6 months.	May be fit to drive after 1 year.
Intracranial aneurysm (subarachnoid haemorrhage) - coiled	May be fit to drive after 3 to 6 months.	May be fit to drive after 2 years.
Intracranial aneurysm (subarachnoid haemorrhage) - clipped	May be fit to drive after 6 months.	May be fit to drive after 2 years.
Neuro-endoscopy	May be fit to drive after 3 months.	May be fit to drive after 6 months.

# General checklist for neurological disorders

If the answer is yes to any of the following, the patient's fitness to drive should be questioned and further assessment done.

- 1. Are there any significant impairments of any of the following?
  - Visuospatial perception.
  - Insight.
  - Judgement.
  - Attention and concentration.
  - Comprehension.
  - Reaction time.
  - Memory.
  - Sensation.
  - Muscle power.
  - Coordination.
- 2. Are the visual fields abnormal?
- 3. Have there been one or more seizures?

# 3. Cardiovascular conditions

# Ngā mate ia-manawa

# Summary

This table is a summary of the information outlined in this section. Make sure you're familiar with all relevant guidance in this section.

Cardiovascular condition	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Angina pectoris - proven or suspected	Generally unfit to drive if there are symptons on mild exertion.	Generally unfit to drive if there are symptons on mild exertion.
Acute uncomplicated myocardial infarction	May be fit to drive after 2 weeks.	May be fit to drive after 4 weeks and a specialist assessment.
Coronary artery bypass surgery	May be fit to drive after 4 weeks.	May be fit to drive after 3 months and a specialist assessment.
Coronary angioplasty	May fit to drive after 2 days.	May be fit to drive after 4 weeks.
Severe hypertension	May be fit to drive once condition is stabilised.	Generally unfit to drive if certain symptoms are present.
<u>Cardiac arrest</u>	May be fit to drive after 6 months	May be fit to drive after being at least 6 months symptom free.
Syncope or presyncope	Generally unfit to drive unless adequately treated. May be fit to drive after being at least 4 weeks symptom free.	Generally unfit to drive unless adequately treated. May be fit to drive after being at least 3 months symptom free.
Cardiac arrhythmias	Generally fit to drive once condition is stabilised. Certain forms of cardiac arrhythmia make a patient unfit to drive.	Generally fit to drive once condition is stabilised. Certain forms of cardiac arrhythmia make a patient unfit to drive.
<u>Pacemakers</u>	May be fit to drive 2 weeks after the pacemaker is fitted.	May be fit to drive 4 weeks after the pacemaker is fitted.
Automatic implantable cardioverter defibrillator	May be fit to drive 6 months after the implantation and a specialist assessment.	May be fit to drive 6 months after the implantation and a specialist assessment.
	May be fit to drive after 2 weeks and a specialist assessment if the implantation is for prophylactic reasons.	

Cardiovascular condition	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Valvular heart disease	May be fit to drive 4 weeks after successful surgery.	Generally unfit to drive.  May be fit to drive 4 weeks after successful surgery if criteria are met.
Cardiac failure and cardiomyopathy	Generally unfit to drive.  May be fit to drive with supporting specialist report.	Generally unfit to drive.  May be fit to drive if the criteria are met.
Anticoagulation	Generally fit to drive if certain criteria are met.	Generally fit to drive if certain criteria are met.
Congenital heart disease	May be fit to drive 4 weeks after successful surgery.	May be fit to drive 3 months after successful surgery
Aneurysm	May be fit to drive 4 weeks after successful surgery.	May be fit to drive 3 months after surgery.  Certain forms of aneurysm may make a patient unfit to drive.
Heart transplants	May be fit to drive 6 weeks after successful surgery.	Generally unfit to drive.  May be fit to drive after 3 months if the criteria are met.
Ventricular assist devices	May be fit to drive after 3 months if certain criteria are met.	Generally unfit to drive.

# Introduction

This section has guidelines to assess the fitness to drive of patients with cardiovascular conditions. Please note that these guidelines aren't a comprehensive coverage of all cardiovascular conditions that may affect fitness to drive. Cardiovascular conditions, such as a heart attack or arrhythmia causing sudden incapacity, may affect a patient's ability to drive safely. The onset of chest pain, palpitations, or breathlessness may also affect concentration and the ability to drive safely.

For drivers of any type of vehicle, consider the effects of driving long distances or under significant stress if they have cardiovascular conditions. It may also be worth considering if any tasks associated with their work could impact their cardiovascular condition when driving, such as the effects of potentially strenuous physical tasks like loading and unloading their vehicle or changing a tyre.

All patients with cardiovascular disease who hold a commercial licence or endorsement generally need to be assessed by a specialist. Patients assessed by a cardiologist as having a high risk of sudden cardiovascular collapse shouldn't drive.

You should advise patients with cardiovascular conditions or who've experienced a medical event associated with cardiovascular conditions about the potential impacts these could have on their ability to drive safely. Any advice you give to the patient should be in writing as well as verbally. If you advise a patient not to drive because of their condition but you think they'll continue to drive anyway, you must notify NZTA in line with your obligations under section 18 of the Act.

#### Temporary driving impairments

Unless specified, after cardiac surgery patients may be assessed for cardiovascular fitness to drive only if there's no musculoskeletal pain or other morbidity that could affect the ability to drive safely.

43

# 3.1 Myocardia ischaemia

In patients with ischaemic heart disease, the severity should be the primary consideration in assessing fitness to drive. You should consider any symptoms of sufficient severity to be a risk while driving. Cardiac history is also an important consideration. An electrocardiogram (ECG) should be performed if clinically indicated.

# 3.1.1 Angina pectoris - proven or suspected

The type and frequency of angina episodes is important in considering if a patient should drive or not. When angina pectoris is suspected, the same considerations as for proven angina pectoris apply until a diagnosis of angina pectoris is excluded.

### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Patients with angina pectoris at rest or on minimal exertion even with medical therapy are generally unfit to drive.

You may consider fitness to drive if:

- » angina pectoris is usually absent on mild exertion
- » there are no electrocardiographic changes, symptoms, arrhythmias, poorly controlled anticoagulant therapy, severe hypertension or other conditions that would make the patient unfit to drive.

#### - section 3.6

### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients with angina pectoris at rest or on minimal exertion even with medical therapy are generally unfit to drive.

A patient with angina pectoris happening only on strenuous exertion, or who's previously experienced angina pectoris, may be considered fit to drive if there's no evidence of myocardial ischaemia on acceptable stress.

This is measured by exercise for more than 9 minutes on the Bruce protocol or equivalent exercise protocol, or by pharmacological testing with either echocardiographic or scintigraphic assessment combined with ECG assessment

You may consider fitness to drive for patients with evidence of minimal myocardial ischaemia if there's a supporting specialist opinion.

# 3.1.2 Acute uncomplicated myocardial infarction

# Private class 1 or class 6 licence and D, F, R, T or W endorsements

Patients shouldn't drive for a minimum of 2 weeks after an acute uncomplicated myocardial infarction.

You can consider fitness to drive after 2 weeks if:

- » the left ventricular ejection fraction is more than 40 percent otherwise one month if less than or equal to 40 percent
- » angina pectoris is usually absent on mild exertion
- » there are no electrocardiographic changes, symptoms, arrhythmias, poorly controlled anticoagulant therapy, severe hypotension or other conditions that make the patient unfit to drive.

#### - section 3.6

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients shouldn't drive for a minimum of 4 weeks after an acute uncomplicated myocardial infarction.

You can consider fitness to drive after 4 weeks if:

- » the left ventricular ejection fraction is greater than 40%
- » there's no evidence on acceptable stress (exercise or pharmacological) testing (electrocardiographic, echocardiographic or scintigraphic) of myocardial ischaemia.

NZTA may also consider fitness to drive for patients with evidence of minimal myocardial ischaemia with a supporting specialist opinion. Angiography may be needed to confirm a commercial driver's low-risk status.

NZTA may request a further medical assessment, for example, a one-off report 12 months later.

# 3.1.3 Coronary artery bypass surgery

Fitness to drive after coronary artery bypass surgery is influenced by completeness of revascularisation, functional capacity, evidence of reversible myocardial ischaemia and the absence of musculoskeletal or other pain.

If required, NZTA may place licence conditions for ongoing monitoring, such as requirements for a follow up medical certificate no more than 12 months apart, or another form of periodic review.

# Private class 1 or class 6 licence and D, F, R, T or W endorsements

Patients shouldn't drive for a minimum period of 4 weeks after coronary artery bypass surgery.

You can consider fitness to drive after 4 weeks if:

- » there's satisfactory response to treatment
- » there's no concern of cognitive or neurological impairment
- » angina pectoris and dyspnoea are usually absent on mild exertion
- » there's no musculoskeletal or other pain that would interfere with driving `
- » there are no electrocardiographic changes, symptoms, arrhythmias, poorly controlled anticoagulant therapy, severe hypertension or other conditions that would make the patient unfit to drive.

### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients shouldn't drive for a minimum of 3 months after coronary artery bypass surgery.

NZTA may consider fitness to drive after 3 months, with a supporting specialist assessment and provided:

- » there's satisfactory response to treatment
- » there's no concern of cognitive or neurological impairment
- » there's no evidence of myocardial ischaemia on adequate stress (exercise or pharmacological) testing (electrocardiographic, echocardiographic or scintigraphic)
- » there's evidence of minimal myocardial ischaemia at a moderate or high level of stress, but at angiography there's complete revascularisation.

NZTA may consider fitness to drive for patients with evidence of minimal myocardial ischaemia and/or incomplete revascularisation at angiography if there's a supporting specialist opinion.

# 3.1.4 Coronary angioplasty

How long it takes to recover after coronary angioplasty will vary according to the:

- » symptoms
- » extent of disease before angioplasty
- » effectiveness and complications of angioplasty
- » functional capacity
- » evidence of reversible myocardial ischaemia after angioplasty.

The timing of fitness to drive after coronary angioplasty should be assessed in the context of recovery.

# Private class 1 or class 6 licence and D, F, R, T or W endorsements

Patients shouldn't drive for at least 2 days after coronary angioplasty. If angina or equivalent symptoms return, they shouldn't drive until this has been assessed to exclude a cardiac cause such as stent restenosis.

Patients with complications from coronary angioplasty, which may affect their ability to drive safely, shouldn't drive until given medical clearance.

Patients may be considered to drive after 2 days if the angioplasty wasn't associated with acute myocardial infarction (immediately before, during or after angioplasty) or other significant complications.

### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients shouldn't drive for at least 4 weeks after coronary angioplasty. Patients with complications from coronary angioplasty, which may affect their ability to drive safely, shouldn't drive.

You may consider fitness to drive after 4 weeks, if:

- » the left ventricular ejection fraction is greater than 40%
- » angioplasty was not associated with acute myocardial infarction (immediately before, during or after angioplasty) and there's no evidence of myocardial ischaemia on acceptable stress (exercise or pharmacological) testing (electrocardiographic, echocardiographic or scintigraphic)

#### OR

» there's evidence of minimal myocardial ischaemia at a moderate or high level of stress, but at angiography there's complete revascularisation.

# 3.2 Severe hypertension

### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient with blood pressure consistently equal to or more than 200mm Hg systolic, or equal to or more than 110mm Hg diastolic is unfit to drive.

Patients whose treatment causes symptomatic postural hypotension or impaired alertness shouldn't drive until these effects have been satisfactorily treated.

You may consider fitness to drive if:

- » the blood pressure is well controlled
- » there're no side effects from medication that would affect safe driving
- » there's no end-organ damage cardiac, cerebral, retinal or renal.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

A patient is generally unfit to drive if:

- » the sitting blood pressure is consistently equal to or more than 170mm Hg systolic, or equal to or more than 100mm Hg diastolic, or
- » treatment causes symptomatic postural hypotension or impaired alertness
- » there's end-organ damage cardiac, cerebral, retinal or renal that makes the individual unfit to drive.

You may consider fitness to drive if:

- » the patient is treated with antihypertensive therapy and effective control of hypertension is achieved over a 4-week follow-up period
- » there are no side effects from medication that would affect safe driving
- » there's no damage to end-organs.

Ongoing fitness to drive may be assessed by the treating health practitioner.

# 3.3 Arrhythmias and conduction abnormalities

Patients with regular or persistent arrhythmias causing presyncope or syncope are normally unfit to drive. Fitness to drive may be assessed after effective treatment and being symptom-free for an appropriate time.

# 3.3.1 Cardiac arrest

Cardiac arrest may occur secondary to bradycardia or asystole, ventricular tachycardia or fibrillation, or if cardiac output is reduced in association with other arrhythmias.

Patients should only drive after the minimum stand-down period if the causes of cardiac arrest have been effectively treated and the patient has remained asymptomatic for an adequate time.

If required, NZTA may place licence conditions for ongoing monitoring, such as requirements for a follow up medical certificate no more than 12 months apart, or another form of periodic review.

#### All private and commercial classes and endorsements

Patients shouldn't drive for at least 6 months after a cardiac arrest.

Fitness to drive may be considered after 6 months, with regular review, after taking into account the type of driving the patient will be doing and information provided by you that confirms the following criteria are met:

- » It's at least 6 months after the cardiac arrest.
- » The cause of the cardiac arrest and response to treatment has been considered.
- » There are minimal symptoms relevant to driving chest pain, palpitations, breathlessness.

# 3.3.2 Syncope and presyncope

Presyncope and syncope may happen secondary to arrhythmias, medications, and other factors. Driving should stop until the causes of presyncope and syncope have been identified and effectively treated. The patient must also be asymptomatic for an adequate time. If the cause of presyncope or syncope isn't identified, patients shouldn't drive for the times outlined.

If required, NZTA may place licence conditions for ongoing monitoring, such as requirements for a follow up medical certificate no more than 12 months apart, or another form of periodic review.

47

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient is generally unfit to drive, unless:

- » all the factors leading to presyncope or syncope have been identified and treated effectively
- » there's no other condition making the patient unfit to drive.

You may consider fitness to drive after being symptom-free for at least 4 weeks after a presyncope or syncope.

### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

A patient is generally unfit to drive, unless:

- » all the factors leading to presyncope or syncope have been identified and treated effectively
- » there's no other condition making the patient unfit to drive.

You may consider fitness to drive after being symptom-free for at least 3 months after a presyncope or syncope.

# 3.3.3 Cardiac arrhythmias

See section 3.3.4 for patients with a pacemaker implanted.

If required, NZTA may place licence conditions for ongoing monitoring, such as requirements for a follow up medical certificate no more than 12 months apart, or another form of periodic review.

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Atrial fibrillation doesn't normally need driving restrictions unless complicated by episodes of syncope or dizziness. In these cases, patients shouldn't drive until the condition has stabilised from satisfactory treatment.

For other forms of arrhythmia, such as supraventricular tachycardias, Wolff-Parkinson-White syndrome, and other conduction disorders, any history of collapse, dizziness, or syncope should be included in the assessment. Normally, a symptom-free period of at least 3 months on treatment or after corrective surgery is needed before patients with these conditions are fit to drive again.

Patients who have undergone radiofrequency ablation may be considered fit to drive after 6 weeks, if:

- » assessed by a specialist
- » there's an absence of symptoms
- » an ECG is normal, where relevant
- » there's no other condition making the patient unfit to drive.

Patients with untreated ventricular tachycardia shouldn't drive. Patients with ventricular tachycardia or any arrhythmia likely to cause syncope or predisposed to sudden death are generally considered unfit to drive.

### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients with a history of regular or persistent arrhythmia are unfit to drive.

Patients with ventricular tachycardia or any arrhythmia likely to cause syncope or predisposed to sudden death are unfit to drive.

Patients with uncomplicated atrial fibrillation don't normally need any driving restrictions or stand-down periods unless their condition is complicated by episodes of syncope or dizziness or other symptoms. In these cases a minimum of 6 months free of symptoms is needed before a patient can be considered fit to drive.

NZTA may consider applications for a licence or endorsement based on a supporting specialist report where sound reasons exist.

#### 3.3.4 Pacemaker

# Private class 1 or class 6 licence and D, F, R, T or W endorsements

Patients shouldn't drive for at least 2 weeks after successful implantation of a pacemaker.

Fitness to drive may be considered after the 2-week stand-down with a specialist assessment and if there's no other condition making the patient unfit to drive.

### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients shouldn't drive for at least one month after successful implantation of a pacemaker.

Fitness to drive may be considered after one month if:

- » there are normal haemodynamic responses at a moderate level of exercise
- » there's no other condition making the patient unfit to drive.

A specialist assessment should be done before driving starts again.

# 3.3.5 Automatic implantable cardioverter defibrillator (ICD)

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Patients with an ICD shouldn't drive for at least 6 months after it's fitted.

Fitness to drive may be considered after 6 months if there's no other condition making the patient unfit to drive. A specialist assessment should be done before driving starts again.

A patient who has an ICD for prophylactic reasons shouldn't drive for at least 2 weeks after fitting. A specialist assessment is needed before driving can start again. If the device discharges, then a patient should not drive for 6 months unless sound reasons exist for an earlier return to driving. A patient shouldn't drive for one month anytime the batteries are changed.

### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients with an ICD shouldn't drive for 6 months after it's fitted.

Fitness to drive may be considered after 6 months, with a specialist assessment, if:

- » the ICD was implanted for primary prevention
- » there are no episodes of atrial fibrillation
- » there are no discharges from the defibrillator
- » interrogation of the ICD shows no evidence of anti-tachycardic pacing
- » there's an ejection fraction equal to or more than 40%
- » there's an exercise tolerance of more than 90% of the age and sex predicted exercise capacity according to the Bruce protocol or equivalent functional test protocol
- » there's no evidence of severe ischaemia less than 2mm ST segment depression on an exercise test or reversible regional wall abnormality on an exercise stress echocardiogram, or absence of a large defect on a stress perfusion scan
- » there are minimal symptoms relevant to driving chest pain, palpitations, breathlessness.

A patient is unfit to drive if the ICD was implanted to manage ventricular arrhythmias as secondary prevention.

# 3.3.6 Other arrhythmias and electrocardiographic abnormalities

Atrial fibrillation may be secondary to other arrhythmias, myocardial ischaemia, valvular or other heart disease, and thyrotoxicosis. Assessment of fitness to drive should consider factors that may cause atrial fibrillation, and if treatment is likely to stop atrial fibrillation.

Supraventricular and ventricular tachycardia may be caused by re-entry using electrical pathways that may be modified medically or cured by catheter ablation or surgery.

Assessment of fitness to drive should consider potentially curative therapy. Conduction abnormalities may happen in isolation or be associated with other heart disease or drug therapy.

#### All private and commercial classes and endorsements

Patients shouldn't drive if they have arrhythmias or other electrocardiographic abnormalities that could cause presyncope or other symptoms that might affect their ability to drive safely.

Fitness to drive may be considered for patients with arrhythmias or other electrocardiographic abnormalities that don't cause presyncope or any other symptoms that might affect driving. There must also be no other conditions making them unfit to drive.

# 3.4 Valvular heart disease

If required, NZTA may place licence conditions for ongoing monitoring, such as requirements for a follow up medical certificate no more than 12 months apart, or another form of periodic review.

### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient shouldn't drive for 4 weeks after successful valve surgery. Patients with dyspnoea on mild exertion shouldn't drive.

Fitness to drive may be considered after 4 weeks, subject to specialist assessment, if:

» there're no electrocardiographic changes, symptoms, arrhythmias, cardiac failure, poorly controlled anticoagulant therapy, severe hypertension, or other conditions making the patient unfit to drive

#### AND

» there's no sternotomy or other pain that would affect the ability to drive safely.

### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

A patient is unfit to drive if there's:

» any clinical evidence of valvular disease, with or without surgical repair or replacement, associated with dyspnoea, chest pain, symptomatic arrhythmia, dizziness, or a history of embolism

### OR

» electrocardiographic changes, symptoms, arrhythmias, cardiac failure, poorly controlled anticoagulant therapy, severe hypertension, or other conditions making the patient unfit to drive

#### OR

» echocardiographic evidence of severe mitral stenosis or severe aortic stenosis.

A patient may be fit to drive if there's only mild valvular disease of no haemodynamic significance, and no other conditions making the patient unfit to drive.

Patients may be considered fit to drive 4 weeks after successful valve surgery if there's no evidence of valvular dysfunction and there are no electrocardiographic changes, symptoms, arrhythmias, cardiac failure, poorly controlled anticoagulant therapy, severe hypertension, or other conditions making the patient unfit to drive. A specialist assessment should be done before driving can start again.

# 3.5 Cardiac failure and cardiomyopathy

Cardiac failure is a predictor of risk of sudden death. Patients with uncontrolled or recent (within the last 2 weeks) uncontrolled heart failure shouldn't drive.

If required, NZTA may place licence conditions for ongoing monitoring, such as requirements for a follow up medical certificate no more than 12 months apart, or another form of periodic review.

# 3.5.1 Dilated cardiomyopathy

### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Patients with dilated cardiomyopathy shouldn't drive.

You may consider fitness to drive if:

- » There are minimal symptoms relevant to driving chest pain, palpitations, breathlessness.
- » The patient is not subject to arrhythmias.

Cardiologist assessment is recommended for complex presentations.

### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Generally, patients are unfit to drive. However, NZTA may consider applications for a licence or endorsement with a supporting specialist report if:

- » there's a left ventricular ejection fraction more than or equal to 40%
- » there's an exercise tolerance more than or equal to 90% of the age/sex predicted exercise capacity according to the Bruce protocol or equivalent functional test protocol
- » there's no history of syncope, severe left ventricular hypertrophy, family history of sudden death, or ventricular arrhythmia on Holter testing
- » there are minimal symptoms relevant to driving chest pain, palpitations, breathlessness.

# 3.5.2 Hypertrophic cardiomyopathy

### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Patients with hypertrophic cardiomyopathy and syncope are unfit to drive.

You may consider fitness to drive if:

- » dyspnoea is usually absent on mild exertion
- » there are minimal symptoms relevant to driving chest pain, palpitations, breathlessness
- » the patient doesn't have arrhythmias or syncope

NZTA may consider applications for a licence or endorsement with a supporting specialist report.

### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Generally, patients are unfit to drive. However, NZTA may consider applications for a licence or endorsement with a supporting specialist report if:

- » there's a left ventricular ejection fraction more than or equal to 40%
- » there's an exercise tolerance more than or equal to 90% of the age/sex predicted exercise capacity according to the Bruce protocol or equivalent functional test protocol
- » there's no history of syncope, severe left ventricular hypertrophy, family history of sudden death, or ventricular arrhythmia on Holter testing
- » there are minimal symptoms relevant to driving chest pain, palpitations, breathlessness.

# 3.6 Anticoagulation

### All private and commercial classes and endorsements

Fitness to drive may be considered if:

- » anticoagulation is maintained at the appropriate degree for the underlying condition, and
- » there are no electrocardiographic changes, symptoms, arrhythmias, cardiac failure, severe hypertension or other conditions that would make the patient unfit to drive.

# 3.7 Congenital heart disease

### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Patients shouldn't drive for at least 4 weeks after successful surgery for congenital heart disease. Specialist assessment should be done before driving can start again.

You may consider fitness to drive after 4 weeks if there's no:

- » electrocardiographic changes
- » symptoms
- » arrhythmias
- » cardiac failure
- » severe hypotension
- » poorly controlled anticoagulant therapy
  - section 3.6
- » other conditions making the patient unfit to drive.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients with asymptomatic minor congenital heart disorders may be fit to drive. These include:

- » mild pulmonary stenosis
- » a small atrial or ventricular septal defect
- » a bicuspid aortic valve without stenosis
- » mild coarctation of the aorta without aortic aneurysm.

A patient may be fit to drive 3 months after successful surgery for congenital heart disease if there's no:

- » electrocardiographic changes
- » symptoms
- » arrhythmias
- » poorly controlled anticoagulant therapy
  - section 3.6
- » severe hypotension
- » other conditions making the patient unfit to drive
- » evidence of myocardial ischaemia on adequate stress (exercise or pharmacological) testing (electrocardiographic, echocardiographic or scintigraphic).

Specialist assessment should be done before driving can start again.

# 3.8 Aneurysm

### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Patients are generally unfit to drive if they have a thoracic aneurysm of more than 6.5 cm in diameter, or an abdominal aortic aneurysm of more than 5.5 cm, or another vascular abnormality at risk of dissection or rupture. All other aneurysms must have a diameter of less than 5cm.

Patients with Marfans Syndrome shouldn't drive if they have an aneurysm of more than 4.5 cm.

In exceptional circumstances, NZTA may grant a licence with a favourable specialist report.

In all other circumstances, fitness to drive may be considered 4 weeks after successful surgery.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients are generally unfit to drive if they have a thoracic aneurysm of more than 6.5 cm in diameter, or an abdominal aortic aneurysm of more than 5.5 cm, or another vascular abnormality at risk of dissection or rupture. All other aneurysms must have a diameter of less than 5cm.

Patients with Marfans Syndrome shouldn't drive if they have an aneurysm of more than 4.5 cm.

You may consider fitness to drive 3 months after successful surgery if there's no significant complications. Specialist assessment should be done before driving can start again.

# 3.9 Heart transplants

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Successful transplants aren't a barrier to driving unless there are ongoing symptoms. Patients may be considered fit to drive 6 weeks after a successful heart or heart-lung transplant if there are no:

- » electrocardiographic changes
- » symptoms
- » arrhythmias
- » cardiac failure
- » poorly controlled anticoagulant therapy
  - section 3.6
- » severe hypertension
- » other conditions making the patient unfit to drive.

A specialist assessment should be done before driving can start again.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients who've had heart or heart-lung transplants are normally considered unfit to drive unless the following criteria are met.

They shouldn't drive for 3 months after discharge from hospital and there's:

- » no symptoms referable to the cardiovascular system.
- » normal responses to the end of Stage III of the Bruce protocol or its equivalent.
- » no heart failure and satisfactory ventricular function (ejection fraction more than 40 percent) on the basis of echocardiograms or other appropriate investigations.
- » satisfactory compliance with any ongoing treatment and assessment by an appropriate specialist.
- » no medication side effects that could affect the ability to drive safely.

A specialist assessment should be done before driving can start again.

# 3.10 Ventricular assist devices

### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Patients shouldn't drive for at least 3 months after insertion of a ventricular assist device.

Fitness to drive may be considered after 3 months, if:

- » the device has been in place for a least 3 months and there've been no equipment problems experienced in the previous 2 weeks
- » anticoagulation is stable
- » the medical condition is stable and satisfactorily controlled, with minimal symptoms relevant to driving chest pain, palpitations, breathlessness
- » the patient is confident with all device equipment.

If there's concern of cognitive or neurological impairment, a practical driver assessment should be done.

### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

A patient who has a ventricular assist device fitted or any type of artificial heart is unfit to drive.

# 3.11 Uncomplicated ECG changes

Conditions such as bundle branch blocks and strain changes, if not associated with symptoms and within normal exercise tolerance, and after specialist assessment, won't normally stop a patient from holding a licence to drive any vehicle.

# 4. Diabetes mellitus

# Te mate huka

# Summary

This table is a summary of the information outlined in this section. Make sure you're familiar with all relevant guidance in this section, including issues around hypoglycaemia and temporary driving impairments.

Diabetes type and treatment type	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Severe hypoglycaemia unawareness - a temporary driving impairment	Severe hypoglycaemia unawareness may make a patient on any licence class or endorsement type unfit to drive for a time. See time recommendations in this chapter.	Severe hypoglycaemia unawareness may make a patient on any licence class or endorsement type unfit to drive for a time. See time recommendations in this chapter.
Type 1 diabetes - insulin required	Generally fit to drive with satisfactory glucose control.  NZTA may apply licence conditions such as ongoing monitoring.	May be fit to drive with satisfactory glucose control.  NZTA may apply licence conditions such as ongoing monitoring.
Type 2 diabetes with dietary control only	Generally fit to drive.	Generally fit to drive.
Type 2 diabetes controlled with non-insulin glucose lowering treatment (oral agents)	Generally fit to drive.	May be fit to drive with satisfactory glucose control.
Type 2 diabetes partly or solely controlled by insulin	Generally fit to drive with satisfactory glucose control.	May be fit to drive with satisfactory glucose control.  NZTA may apply licence conditions such as ongoing monitoring.

# Introduction

Diabetes mellitus (diabetes) is a common condition in New Zealand. The number of people with both type 1 and 2 of diabetes is rising.

The main risk of diabetes is metabolic disturbances associated with regulation of blood glucose, causing hypoglycaemia (low blood sugar) and the possible progression to end-organ complications.

Any associated complications should be assessed separately using the relevant sections of this guide.

# Things to consider

Consider the following when assessing a patient's fitness to drive:

**Hypoglycaemia** – including the patient's attitude to their treatment, monitoring and awareness of the condition.

### **Hypoglycaemia**

**Medication** – including the effects of the medication on the patient and their compliance with taking it. If the patient is on several different types of medication, be aware of the effect on driving if they mix the medications or combine them with other substances such as alcohol.

**Associated complications** – including the presence of multiple conditions. Common complications associated with diabetes include:

- » visual acuity problems from cataract formation and/or diabetic retinopathy and its treatment. Those who've had extensive laser photocoagulation of the retinae often have very poor vision at night, and may also have a limited visual field
- » ischaemic heart disease and cerebrovascular disease
- » locomotor conditions, particularly of the lower limbs, arising from peripheral neuropathy and peripheral vascular disease
- » obstructive sleep apnoea in obese patients with type 2 diabetes
- » higher instance of cognitive decline.

**Known motor vehicle crash history** – if a patient has a history of crashes that may be associated with their condition, you may need to recommend not driving for a while. See temporary driving impairments for more on temporary driving restrictions and time periods. If you think a patient is medically unfit to drive but they're driving anyway, then you must notify NZTA under section 18 of the Land Transport Act 1998.

# Temporary driving impairments

**Alcohol use** – this may increase the likelihood of hypoglycaemic episodes as well as affect their ability to drive safely. If food intake is poor, alcohol is more likely to cause hypoglycaemia and unawareness of the condition.

**The type of licence held** – professional drivers can spend up to 70 hours a week in their vehicle. These vehicles can weigh more than 25,000kg or carry many passengers. A crash could put many people at risk. See general matters section 1.3 General matters for more on licence types and endorsements.

#### Licence classes and endorsements

**Shifts, total driving hours and timing** – hypoglycaemia associated with taking insulin and some other oral agents can happen more often before meals and overnight, especially when there's a delay in eating. This means shift work is more of a risk than regular hours, and the patient's total driving hours should be reasonable.

56

# 4.1 Hypoglycaemia and hyperglycaemia

Hypoglycaemia comes on quickly making it important when assessing a patient's fitness to drive.

Hypoglycaemia may affect the ability to drive safely because of:

- » poor motor coordination
- » impaired judgement and reaction times
- » inappropriate and aggressive behaviour
- » loss of consciousness.

Different treatments mean the risk of hypoglycaemia is not the same in all patients with diabetes. The risk of drug-related hypoglycaemia is biggest in older drivers and in patients with weight loss and poor renal function. It's most likely to happen with long-acting agents, such as glibenclamide.

# Hypoglycaemia unawareness

The biggest danger for drivers with diabetes is not realising they're developing hypoglycaemia and responding to it in time. This means they may not know how much their driving is affected – like someone driving under the influence of alcohol.

The major risk factors for hypoglycaemia unawareness are:

- » a history of severe hypoglycaemia that needs the help of someone else to manage it
- » intensive hypoglycaemic therapy
- » long term type 1 diabetes.

Important things to ask a patient when determining hypoglycaemia unawareness are:

- » recent severe hypoglycaemia episodes how many in the last 12 months, and if they happen during the day, night or when waking up.
- » is the patient monitoring their blood glucose levels daily using blood monitoring or other methods of continuous glucose monitoring?
- » other ways the patient recognises their blood glucose is getting low. Patients who report sweating, shaking, tremor and palpitations as their early warning symptoms are likely to have enough awareness. Those who report confusion, slurred speech, unsteadiness, difficulty concentrating, and sleepiness are likely to be less aware.
- » if the patient is usually able to detect hypoglycaemia before people close to them do. Where possible, confirm how the patient usually realises it this may strengthen your conclusions.

Patients with hypoglycaemia unawareness often have levels of 3mmol/l or less without symptoms. Those with more than 5 to 10 percent of readings below 4mmol/l are also likely to be at risk. HbA1c measurements are often close to, or in, the normal range in these patients.

Hypoglycaemia unawareness can be difficult to manage successfully and may need specialist referral. Management involves some relaxation of glycaemic targets, thorough self-blood glucose monitoring to detect times of unrecognised hypoglycaemia (particularly at night) and changing meal and insulin regimens.

# Managing hypoglycaemia

Make sure patients taking insulin or oral agents to control blood glucose know the safety measures to avoid hypoglycaemia while driving, and in general. Education from an experienced diabetes clinical nurse specialist is a good idea for these patients.

Refer to Health Pathways for possible utilisation of Continuous Glucose Monitoring systems where possible.

Factsheet 16: Diabetes and driving [PDF, 52 KB]

# Managing hyperglycaemia

While acute hyperglycaemia may affect some aspects of brain function, there's not enough evidence to determine the regular effects on driving performance and related crash risk. Each person with diabetes should be counselled about managing their diabetes during days when they're unwell and should be advised not to drive if they are acutely unwell with metabolically unstable diabetes.

# 4.2 Diabetes related temporary driving impairments

Patients with diabetes may become temporarily unfit to drive, most likely due to hypoglycaemia episodes or complications with end-organ functions.

See the Temporary driving impairments section for more guidance on managing a patient's temporary unfitness to drive, including your legal obligations.

Temporary driving impairments

### Mild hypoglycaemia

No driving for at least an hour after mild hypoglycaemia.

**Severe hypoglycaemia** (An event requiring assistance of another person to actively administer carbohydrates, glucagon, or take other corrective actions.)

No driving for 24 hours if severe hypoglycaemia has occurred outside of driving.

No driving for a minimum of 4 weeks if severe hypoglycaemia has occurred while driving, whether they crash or not. The patient will need a specialist review.

# Hypoglycaemia with sulphonylurea drug users

No driving for at least 48 hours.

### Introduction of insulin or major revisions to therapy

Patients having major changes in therapy, particularly starting insulin treatment, can be temporarily unfit to drive and may need to stop driving for a few days until hypoglycaemia is under control.

### Dilation of pupils for retinal examination.

No driving for at least 2 hours.

# 4.3 Specific considerations for types of diabetes

# 4.3.1 Type 1 diabetes - insulin always required

Patients in this group are most likely to experience hypoglycaemia as they're fully dependant on insulin to regulate their blood glucose levels. Patients with type 1 diabetes should be reviewed thoroughly and regularly with particular attention to any diabetic complications that may affect fitness to drive. You should also be aware of the risk of hypoglycaemia in the period after starting insulin therapy or following major treatment re-adjustments. NZTA may apply licence conditions such as:

- » a follow up assessment and medical certificate no more than 12 months apart
- » at your discretion, and where specific concerns or issues are identified, a review with a diabetes specialist with the appropriate frequency should be arranged. The specialist may be a health practitioner other than an endocrinologist or consultant physician specialising in diabetes. For example, a nurse practitioner or clinical nurse specialist working within a diabetes specialist service.

#### All private and commercial classes and endorsements

Patients with type 1 diabetes are generally fit to drive.

When supplying a medical certificate or assessing ongoing fitness to drive, make sure the patient:

- » is regularly self-testing blood glucose with satisfactory blood glucose levels
- » is adhering to treatment
- » isn't experiencing hypoglycaemic episodes or unawareness
- » is regularly eating in a way that reduces the risk of hypoglycaemia
- » has no significant complications of diabetes
- » has no other comorbidities or concerns
- » is provided information on their condition and driving, including:
  - temporary unfitness to drive after hypoglycaemia episodes
  - the danger of drinking alcohol
  - the need for regular check-ups.

# 4.3.2 Type 2 diabetes controlled by diet alone

#### All private and commercial classes and endorsements

Patients with type 2 diabetes controlled by diet and exercise alone are generally fit to drive.

When supplying a medical certificate or assessing ongoing fitness to drive, make sure the patient is regularly monitored for progression of the condition and any significant diabetic complications.

Make sure the patient is made aware they need regular check-ups to monitor the progression of their diabetes.

# 4.3.3 Type 2 diabetes controlled with non-insulin glucose lowering treatment (oral agents)

This includes metformin, sulfonylureas, DPP IV inhibitors, SGLT-2 inhibitors, and GLP1 RAs. Patients with diabetes prescribed these medications have a relatively low risk of hypoglycaemia. However, hypoglycaemia can occur with sulfonylurea drugs. If insulin is also required for better glycaemic control, go to section 4.3.4.

It's important these patients are regularly monitored for any diabetic complications that may affect fitness to drive.

### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Patients with type 2 diabetes controlled with non-insulin glucose lowering treatment are generally fit to drive.

When supplying this medical certificate or assessing ongoing fitness to drive, make sure the patient:

- » is adhering to treatment
- » isn't experiencing hypoglycaemic episodes or unawareness
- » is regularly eating in a way that reduces the risk of hypoglycaemia
- » has no significant complications of diabetes
- » doesn't have other comorbidities or concerns
- » is provided information on their condition and driving, including:
  - temporary unfitness to drive after hypoglycaemia episodes
  - the danger of drinking alcohol
  - the need for regular check-ups.

### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients with type 2 diabetes controlled with non-insulin glucose lowering treatment may be considered fit to drive.

When supplying a medical certificate or assessing ongoing fitness to drive, make sure the patient:

- » is adhering to treatment
- » isn't experiencing hypoglycaemic episodes or unawareness
- » has a regular pattern of work shifts with good meal breaks
- » has no significant complications of diabetes
- » doesn't have other comorbidities or concerns
- » is provided information on their condition and driving, including:
  - temporary unfitness to drive after hypoglycaemia episodes
  - the danger of drinking alcohol
  - the need for regular check-ups.

**Note:** it's important you see these patients regularly to check for the emergence of diabetic complications that may affect fitness to drive.

# 4.3.4 Type 2 diabetes partly or solely controlled by insulin

Patients in this group may experience hypoglycaemia. Nocturnal insulin has a lower risk of daytime hypoglycaemia than other more complex insulin regimes, especially those with short acting components.

It's important to see these patients regularly to make sure the treatment regime is right, adequate glycaemic control is being achieved, and there are no emerging complications that may affect driving ability. A diabetes specialist review isn't needed unless specific issues are identified and correction of the issue falls outside the capability of the primary care clinician.

NZTA may apply licence conditions such as:

- » a follow up assessment and medical certificate no more than 12 months apart
- » at your discretion, and where specific concerns or issues are identified, a review with a diabetes specialist with the appropriate frequency should be arranged. The specialist may be a health practitioner other than an endocrinologist or consultant physician specialising in diabetes. For example, a nurse practitioner or clinical nurse specialist working within a diabetes specialist service.

### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Patients with type 2 diabetes controlled with insulin are generally fit to drive.

When supplying a medical certificate or assessing ongoing fitness to drive, make sure the patient:

- » is regularly self-testing blood glucose with satisfactory blood glucose levels
- » is complying with treatment
- » isn't experiencing hypoglycaemic episodes or unawareness
- » is regularly eating in a way that reduces the risk of hypoglycaemia
- » has no significant complications of diabetes
- » doesn't have other comorbidities or concerns
- » is provided information on their condition and driving, including:
  - temporary unfitness to drive after hypoglycaemia episodes
  - the danger of drinking alcohol
  - the need for regular check-ups.

## Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients with type 2 diabetes controlled with insulin may be considered fit to drive.

When supplying a medical certificate or assessing ongoing fitness to drive, make sure the patient:

- » is regularly self-testing blood glucose with satisfactory blood glucose levels
- » is complying with treatment
- » isn't experiencing hypoglycaemic episodes or unawareness
- » has a regular pattern of work shifts with good meal breaks
- » has no significant complications of diabetes
- » doesn't have other comorbidities or concerns
- » is provided information on their condition and driving, including:
  - temporary unfitness to drive after hypoglycaemia episodes
  - the danger of drinking alcohol
  - the need for regular check-ups.

# 5. Musculoskeletal conditions

# Ngā mate kōiwi-uaua

Including congenital neurological conditions

# **Summary**

This table is a summary of the information outlined in this section. Make sure you're familiar with all relevant guidance in this section.

Medical condition	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Musculoskeletal conditions	Generally fit to drive. Driving restrictions may be necessary if the person's ability to drive safely is affected. An occupational therapy driving assessment may be necessary for some people.	Generally fit to drive. Driving restrictions may be necessary if the person's ability to drive safely is affected. An occupational therapy driving assessment may be necessary for some people.
Congenital neurological conditions, such as cerebral palsy, spina bifida	Generally fit to drive, usually without driving restrictions. An occupational therapy driving assessment may be necessary for some people.	Generally fit to drive, usually without driving restrictions. An occupational therapy driving assessment may be necessary for some people.

# Introduction

A variety of musculoskeletal conditions may affect a patient's ability to drive safely – pain, muscle weakness, joint stiffness or arthrodesis, amputations and similar impairments arising from disease or trauma. Examples of these are:

- » rheumatoid arthritis
- » osteoarthritis and other degenerative joint disorders
- » ankylosing spondylitis
- » Paget's disease
- » paraplegia and tetraplegia.

Some of these conditions are common and rarely keep people from being able to drive safely. Musculoskeletal conditions fall into three main groups:

- » Conditions affecting the limbs.
- » Disabilities of the spine.
- » General or specific loss of driving ability arising from weakness and impaired mobility.

# 5.1 Musculoskeletal conditions

# Things to consider

The following should be considered when assessing if a patient is fit to drive:

- » the strength of muscles to safely carry out driving functions,
- » the level of flexibility of individual joints or limbs to allow enough mobility for safe driving,
- » the presence of pain that may restrict movement and the ability to drive safely.

How a condition affects driving ability will differ between patients and their situation. For example, vehicles with manual transmission need four fully functioning limbs, while an automatic transmission needs only three.

Permanent joint stiffness from any cause isn't likely to keep someone from driving safely. In some cases, vehicle modifications, such as automatic transmission, spinner knobs and hand controls, may be needed.

When a locomotive condition is present, a patient's ability to drive is often a joint discussion with you. An occupational therapist is usually used to assess driving skills and suggest any modification requirements to allow driving. If there's any doubt about the ability of a patient to drive a standard vehicle, refer them to an occupational therapist.

Where a medical certificate of fitness to drive is required, it should state that a modified vehicle is required, with details around how it's modified.

For details of occupational therapists' driving assessment services call:

#### **Enable New Zealand**

0800 362 253

enable@enable.co.nz

# Occupational Therapy New Zealand

04 473 6510

office@otnzwna.co.nz

The following may require a separate assessment when associated with musculoskeletal conditions:

- » Pain or severe discomfort this may be severe enough to be distracting and pose a danger on the road. Examples include acute neck pain, severe back pain, and knee or elbow problems, especially when associated with locking.
- » The potential impairment from prescription medications balanced against improvement in function and health more generally.
- » The possibility of the condition or disability getting worse.
- » Associated cerebral deficits when locomotor disabilities are the result of strokes, brain tumours, severe head trauma or similar conditions. Complete an assessment of the individual's intellectual capacity, any other associated impairments, such as sensory problems, together with an assessment of the risk of epilepsy. This assessment should follow the advice set out in Neurology and TBI section 2.

#### Neurology and TBI

- » Artificial limbs there's usually no difficulty in adapting a vehicle to requirements, but special conditions may apply for those driving larger vehicles
- » Casts and splints a plaster cast or splints may result in driving problems, although these are generally temporary.

# Temporary driving impairments

» The presence of multiple medical conditions.

# **5.1.1** Specific advice for private and commercial classes

### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Patients with the conditions bellow are fit to drive if they can operate a vehicle safely.

A medical certificate is required if a musculoskeletal disability has affected their ability to drive in the last 5 years and they're applying for or renewing a private licence class or endorsement.

You'll need to supply a medical certificate or assess ongoing fitness to drive for patients with musculoskeletal conditions, including:

- » joint or muscle problems affecting one upper limb mainly applies to unilateral weakness, amputations, and flail limb
- » below knee amputations of one or both legs who have full strength and movement in their backs, hips, and knee joints, and are wearing properly fitted prostheses
- » above knee amputations or conditions resulting in lower limb paralysis
- » all cases of clinically significant locomotor problems
- » spinal conditions that severely limit movement inside and outside mirrors or other aids will be needed as modifications
- » absence of one or both thumbs
- » a reduction in rotation of the cervical spine to less than 45 degrees either to the right or left. Other musculoskeletal conditions, such as a below-knee prosthesis or a forefoot amputation
- » inflammation and pain in any joint, spine or muscle group that interferes with concentration or affects the range of motion.

An assessment by an occupational therapist is often needed to work out how the condition affects the patient's ability to drive safely. In most cases a vehicle may be fitted with appropriate modifications to overcome the disability and achieve fit to drive. Any modifications should be stated clearly on the medical certificate. NZTA may make use of a prosthetic limb or modified vehicle when driving a licence condition.

If the patient is taking medication for the condition, assessment for potential impairment when driving needs to be considered.

### **Effect of medications**

Patients with the following musculoskeletal conditions should be considered unfit to drive if the condition cannot be effectively managed by medication:

- » severe pain interferes with movement of the spine, shoulder, and pelvic girdles.
- » severe neck pain, severe back pain, knee or elbow problems, especially when associated with locking.
- » inflammation and pain in any joint, the spine or muscle group that interferes with concentration or affects the range of motion needed to drive.

# Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

A medical certificate is required when applying for or renewing a commercial licence class or endorsement.

When supplying this medical certificate or assessing ongoing fitness to drive, use the guidelines for private class licence and endorsements above.

A higher level of functional performance is needed to cope with the demands of commercial driving so, if there's any difficulty at all with driving, make sure the patient can cope with the demands. An assessment by an occupational therapist should be done.

NZTA may make use of a prosthetic limb or modified vehicle when driving a licence condition.

64

# 5.2 Congenital conditions

If patients with congenital conditions such as, but not limited to, spina bifida or cerebral palsy, or acquired and/ or degenerative conditions can show they can drive safely, they can be considered fit to drive.

Some patients with these conditions may have difficulties with driving because the level of flexibility of their joints or limbs doesn't allow enough mobility for safe driving. An assessment by an occupational therapist may help work out if any vehicle modifications are needed.

A medical certificate is required when applying for or renewing a commercial licence class or endorsement.

# 6. Visual standards

# Ngā paerewa kite

# Summary

This table is a summary of the information outlined in this section. Make sure you're familiar with all relevant guidance in this section.

Visual condition	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Visual field	A visual field of 140 degrees is required. There should be no scotoma within 20 degrees of fixation.	A visual field of 140 degrees is required. There should be no scotoma within 20 degrees of fixation.
Visual acuity	Minimum combined visual acuity of 6/12, corrected or uncorrected.	Minimum combined visual acuity of 6/9 and at least 6/18 using each eye separately.
Substandard vision (visual acuity between 6/18 and 6/60 in the worse eye)	Generally fit to drive if meets the combined visual acuity and field standards. Minimum combined visual acuity 6/12 corrected or uncorrected and a visual field of 140 degrees with no scotoma within 20 degrees of fixation. A thorough eye examination of the better eye for pathology should be done.	Legislation states the patient is unfit to drive. However, NZTA may consider an exemption on a caseby-case basis.
Monocular vision (visual acuity in the worse eye of less than 6/60)	Generally fit to drive once a successful adaptation has been achieved. A thorough eye examination of the better eye for pathology should be done.	While generally considered unfit to drive, NZTA may grant licences to licence holders if there are sound reasons to do so.
<u>Diplopia</u>	Should not drive until the condition has been assessed and satisfactorily treated.	Generally unfit to drive. In exceptional circumstances, NZTA may consider an exemption if the patient's application is supported by an optometrist or ophthalmologist report.

<b>Visual c</b> ondition	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Night blindness - retina pigmentosa	A licence may be issued subject to only driving within daylight hours.	Generally unfit to drive. In exceptional circumstances, NZTA may consider an exemption if the patient's application is supported by an optometrist or ophthalmologist report.
Cataracts and aphakia	Driving restrictions may be necessary if the patient has difficulties with glare intolerance or vision. Such restrictions as deemed necessary should be noted and recommended as a licence condition in the optometrist or opthalmologist report. NZTA should be consulted regarding a review of restrictions should the condition be changed or resolved (eg following cataract surgery).	Driving restrictions may be necessary if the patient has difficulties with glare intolerance or vision. Such restrictions as deemed necessary should be noted and recommended as a licence condition in the optometrist or opthalmologist report. NZTA should be consulted regarding a review of restrictions should the condition be changed or resolved (eg following cataract surgery).
Glare disability	Refer to section 6.9.	Refer to section 6.9.
Colour blindness	Generally fit to drive. However, patients with colour vision problems should be advised, verbally and in writing, of the potential hazards.	Generally fit to drive. However, patients with colour vision problems should be advised, verbally and in writing, of the potential hazards.

# Legal obligations of health practitioners relevant to this section

The law requires:

- » health practitioners to advise NZTA of any patient who is diagnosed as medically unfit, and is likely to drive section 18 of the Land Transport Act 1998
- » health practitioners to consider *Medical aspects of fitness to drive* when determining if a patient is fit to drive.

Section 18 of the Land Transport Act 1998 also provides that a health practitioner or registered optometrist who gives notice in good faith under this section, wont be subject to civil or professional liability because of any disclosure of personal medical information in that notice.

The requirements for visual standards, in terms of visual acuity and visual field, are outlined in clause 38 of the Land Transport (Driver Licensing) Rule 1999. The Rule includes two categories of eyesight:

#### » Drivers who have vision in both eyes

Class 1 or class 6, or a D, F, R, T or W endorsement: have a visual acuity of at least 6/12 using both eyes (or using one eye if they have monocular vision) and a visual field of at least 140 degrees.

Classes 2-5, or a P, V, I or O endorsement: have a visual acuity of at least 6/9 using both eyes and at least 6/18 using each eye separately, and a visual field of at least 140 degrees.

#### » Drivers who have vision in only one eye

Class 1 or class 6, or a D, F, R, T or W endorsement must have a minimum visual acuity of at least 6/12 in one eye.

Classes 2-5, or a P, V, I or O endorsement must have vision in both eyes as no provision is made in the Rule for monocular vision..

Any exemptions from the standards for visual acuity and visual field listed above can only be granted by NZTA when the patient is making an application for a driver licence. However, outside of a licence application process NZTA may still consider individual circumstances if there are sound reasons to do so.

### Dealing with patients who are unfit to drive

You can usually successfully negotiate for patients not to drive in the short-term, such as while waiting for eye surgery. However, if longer times are needed, you should advise your patients both verbally and in writing. They should also be told how soon they might expect to have this situation reviewed. If you think a patient will continue to drive against medical advice, you're legally obliged to inform NZTA under section 18 of the Land Transport Act 1998.

Your legal obligations

# Introduction

The eyesight standards are the only medical-related standards in this guide that are outlined specifically in the Land Transport (Driver Licensing) Rule 1999. The standards relating to visual acuity and visual field in this section must be met, unless NZTA grants an exemption from the standards outlined in the Rule.

#### Term of licence

The maximum term a licence may be issued for is 10 years. In the interest of road safety, it's a good idea to recommend review at shorter intervals for progressive conditions. You may want to consult with us when recommending shorter-term reviews.

Other issues, such as diminished cognitive ability and restricted movement, when associated with reduced vision, may increase the level of risk in driving. Examples of progressive conditions include:

- » age-related macular degeneration
- » glaucoma
- » diabetic retinopathy
- » high myopia
- » keratoconus

#### **Licence conditions**

You can recommend to NZTA that an individual have a condition placed on their licence, such as

- » must wear prescribed lenses
- » occlusion to be worn in cases of diplopia
- » daytime driving only
- » requirement for regular medical assessment, for example, a yearly check by an optometrist or ophthalmologist for individuals with deteriorating eyesight.

# 6.1 Temporary visual impairments

A patient shouldn't drive unless they meet the visual acuity and visual field requirements outlined in this section.

Those who suffer sudden deterioration of vision in one eye, or in both, shouldn't drive until the condition has recovered or they get an optometric or medical review of their fitness to drive.

Where mydriatics have been used to dilate the pupils, advise your patient verbally and in writing this may impair acuity and cause glare disability. Let them know recovery is generally within 2 hours.

# 6.2 Visual fields

For safe driving, a good visual field is essential to allow a driver to detect other vehicles and pedestrians to the side of the line of vision. The required horizontal field should be tested using either of the following:

» a visual screening instrument of a design approved by NZTA

#### OR

» confrontation, manual perimetry or a suitable programme on an automated perimeter. For confrontation, using a wand with an LED or a small white target at the tip – such as Bjerrum Screen targets – is recommended.

# **Advice for practitioners**

Make sure each quadrant is tested. Where abnormality in the visual field is shown in the initial screening or clinical examination, refer the patient to a registered optometrist or ophthalmologist for further examination. The Titmus screener doesn't test fields above or below the horizontal and 45 degrees either side of fixation. It's very important that any scotoma be assessed.

There should be no significant pathological field defect in the binocular field that encroaches within 20 degrees of fixation either above or below the horizontal meridian. This includes homonymous hemianopic, homonymous quadrantanopic and bitemporal hemianopic defects within 20 degrees of fixation. You're advised that the following conditions may cause significant field defects:

- » cerebral lesions
- » glaucoma
- » panretinal photocoagulation
- » retinitis pigmentosa.

#### All private and commercial classes and endorsements

For all licence classes and endorsements, the minimum standard is a binocular horizontal field of 140 degrees. There should be no significant pathological field defect encroaching within 20 degrees of the point of fixation.

# 6.3 Visual acuity

Marked loss of visual acuity is likely to reduce the ability to drive safely. The complexity of visual tasks required for driving suggests that visual defects may have more impact in conditions of reduced lighting and at night.

# **Testing visual acuity**

Each eye is to be tested separately and then together. The smallest line read with no more than one error represents the visual acuity. Visual acuity should be tested using either of the following:

- » the standard Snellen wall chart, or projector and screen the chart should be well illuminated (a minimum of 500 lux at the surface) and at eye height from the floor. The chart should be viewed from 6 metres.
- » f this distance isn't available directly, a reversed chart may be viewed indirectly through a mirror, so that the total distance from subject to mirror to chart is 6 metres in an equivalent test, such as a screening instrument of a design approved by NZTA.

### **Advice for practitioners**

Testing distances less than 6 metres advantages under-corrected myopes and disadvantages hyperopes. The effect of testing at 4 metres is to enable the under-corrected myope to read one extra Snellen line.

To maintain the integrity of the minimum standards for visual acuity, compensatory lenses (available from some optical suppliers) should be used at testing distances other than 6 metres. Alternatively, you should use a reversed chart viewed indirectly through a mirror so that the total distance from subject to mirror to chart is 6 metres.

An examination by an optometrist is recommended when in doubt, for example, if there's noticeable narrowing of the lids to improve vision.

If an applicant doesn't meet the visual acuity standards, then they may be able to apply to NZTA for an exemption from the standards, but a supporting medical or optometric assessment will be needed. For commercial classes, or those with serious visual conditions, such as progressive conditions or conditions that involve pathology in the eye, consideration would require a supportive assessment from a registered optometrist or ophthalmologist.

# Private class 1 or class 6 licence and D, F, R, T or W endorsements

Minimum combined visual acuity of 6/12, whether corrected or uncorrected. When a patient's vision requires correcting by wearing lenses to meet the combined visual acuity standard this must be noted and recommended as a licence condition.

### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Minimum combined visual acuity of 6/9 and at least 6/18 using each eye separately. When a patient's vision requires correction by wearing lenses to meet the combined visual acuity standard, this must be noted and recommended as a licence condition.

# 6.4 Substandard vision (visual acuity between 6/18 and 6/60 on the worse eye)

## Private class 1 or class 6 licence and D, F, R, T or W endorsements

Generally fit to drive if meets the combined visual acuity and field standards. Minimum combined visual acuity 6/12 corrected or uncorrected and a visual field of 140 degrees with no scotoma within 20 degrees of fixation. A thorough eye examination of the better eye for pathology should be done.

### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Legislation states a patient is unfit to drive.

NZTA may consider an exemption for licence applicants on a case-by-case basis in exceptional circumstances. A thorough examination is required, and, where appropriate, patients should be referred to an optometrist or ophthalmologist for proper examination of the eyes for pathology.

# 6.5 Monocular vision

### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Generally fit to drive once a successful adaptation has been achieved. A thorough eye examination of the better eye for pathology should be done.

### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

While generally considered unfit to drive, NZTA may grant licences to existing licence holders if there're sound reasons to do so.

# 6.6 Diplopia (double vision)

Diplopia in the primary position is a hazard to safe driving. Any patient who experiences the sudden onset of diplopia that is more than transient shouldn't drive until the condition has been assessed and treated.

All patients with diplopia should have a vision assessment done by an optometrist or ophthalmologist.

### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient who experiences diplopia (double vision) may drive if:

- the diplopia can be remedied using prism or occlusion and the patient can meet the visual acuity (section
   6.3) and visual field (section
   6.2) standards
- » they've adapted to the condition.

Patients with diplopia that only happens in a very limited direction of gaze may be fit to drive.

### Advice for practitioners

Some forms of diplopia are consistent with safe driving, for example, where compensated by head posture.

## Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients shouldn't drive with diplopia. NZTA may consider issuing a licence subject to a favourable assessment by an optometrist or ophthalmologist. If diplopia is resolved, NZTA may issue a licence.

# 6.7 Night blindness

Patients who may have reduced vision in dim light, for example, use of miotics, those with cataracts, retinitis pigmentosa and other inherited retinal disorders, and those with diabetic retinopathy treated with panretinal photocoagulation, should be referred to their optometrist or ophthalmologist for assessment of fitness to drive.

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Patients may be fit to drive with the condition that driving is restricted to daylight hours only.

### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients are generally unfit to drive. NZTA may consider issuing a licence subject to a favourable assessment by an optometrist or ophthalmologist. NZTA would likely impose a licence condition to restrict driving to daytime hours only.

# 6.8 Cataracts and aphakia

Driving restrictions may be necessary if a patient has difficulties with glare intolerance or vision. Such restrictions as deemed necessary should be noted and recommended as a licence condition in the optometrist or ophthalmologist report. NZTA should be consulted regarding a review of restrictions should the condition be changed or resolved (for example, after cataract surgery).

# 6.9 Glare disability

Glare may be disabling in some instances, for example, where a cataract is present, after some refractive surgical procedures and for some contact lens wearers. In these cases, you should take appropriate action, which may include recommending the condition of daytime driving only.

# 6.10 Colour blindness

There's no colour vision requirement in determining fitness to drive.

# **Advice to practitioners**

Defective colour vision is mainly inherited and occurs in 8% of men and 0.2% of women. Of men, 6% have a green perception difficulty (duetan defect) and 2% have a red perception difficulty (protan defect). Less than half of 1% have a severe red perception difficulty (protanopia).

Some studies indicate that patients with a protan defect have a reduced visual distance for detecting vehicle taillights and red traffic signal lights, and may have an increased nose-to-tail collision rate.

Another hazard to consider for patients with colour blindness conditions is that certain coloured vehicles and objects may become 'camouflaged' or difficult to distinguish against a similarly coloured background such as a green car blending in with trees or a hill.

If you assess that a patient's colour vision may impact their driving, you should advise them verbally and in writing of the hazards or issues that may be made worse by their condition.

# 7. Hearing loss Te rongo

## Summary

The table below summarises the information outlined in this section. However, make sure you're familiar with all relevant guidance outlined in this section.

Medical condition	Private class 1 or class 6 licences and D, F, R, T or W endorsements	Commercial classes 2, 3, 4 or 5 licences and P, V, I or O endorsements
Hearing loss or impairment	Generally fit to drive.	Generally fit to drive when holding a licence class 2, 3, 4 or 5.
		A hearing assessment should be done for holders of licence P, V, I or O endorsements.

## Introduction

Profound hearing loss is generally not associated with an increased risk of road crashes. This is because drivers rely more on visual information for making judgements needed for safe driving. However, hearing loss can be an issue for some drivers as they're more likely to be distracted when they need to turn their head towards a passenger to have a conversation. This becomes more significant for commercial endorsement types because of the need for the driver to communicate with passengers while driving.

## **Assessment of hearing loss for private and commercial licence holders**

You can assess a patient's hearing and then advise them on ways to make sure the associated risk is as minimal as possible.

### Testing for 40dBHL hearing

This involves assessing that the person can hear each word spoken in a normal conversational voice from 3 metres away. If they fail this screening test, formal audiometric hearing tests must be done with pure tone air conduction audiometry. This assessment should follow the procedures set out by the Australian National Acoustic Laboratory, where the standard is an average hearing threshold of no less than 40dBHL in the better ear, measured across the lower frequencies of 500, 1000, 2000 and 3000 Hz.

Use the hearing measurement assessment method below to check if hearing loss is below 40dBHL. Hearing below 40dBHL may be an issue for some drivers, including those who frequently carry passengers and wish to communicate with them while driving.

### Assessment of hearing loss for P, V, I and O endorsements holders

Patients who hold **P, V, I or O** endorsement types on their licence are more often required to communicate with passengers in the vehicle and need to be able to do this without turning their head away from the road. To be considered fit to drive, these patients should use an alternative solution when driving.

#### Alternative solutions (aids) to compensate for hearing loss while driving

Solutions to ensure hearing loss that don't compromise the ability to drive safely include:

#### » Use of hearing aids

Hearing aids can restore a patient's hearing to an optimal level while driving. New users of hearing aids should discuss with a Member of the New Zealand Audiological Society (MNZAS) audiologist, MNZAS audiometrist, an audiologist or hearing therapist the possibility of hearing weaknesses while driving.

#### » Two-way communication while driving

A rear-view mirror placed on the dashboard in an upside down and inward facing position can allow a patient to keep their eyes on the road and communicate with a passenger at the same time. The mirror should be placed in a position where it doesn't cause the driver sun strike.

# 8. Mental health

# Hauora hinengaro

## **Summary**

The table below summarises the information outlined in this section. However, make sure you're familiar with all relevant guidance outlined in this section.

Medical condition	Private class 1 or class 6 licences and D, F, R, T or W endorsements	Commercial classes 2, 3, 4 or 5 licences and P, V, I or O endorsements
Temporary mental health disorder or episode	A patient is unfit to drive while experiencing a temporary mental health condition or episode that prevents them from driving safely. In some cases, a patient with a temporary mental health condition may still be able to drive safely, but you may need to recommend restrictions.	A patient is unfit to drive while experiencing a temporary mental health condition or episode that prevents them from driving safely.  In some cases, a patient with a temporary mental health condition may still be able to drive safely, but you may need to recommend restrictions.
Severe chronic mental health conditions	Generally unfit to drive.  Fitness to drive may be considered with regular review and information provided by the treating health practitioner or psychiatrist.	Generally unfit to drive.  Fitness to drive may be considered with regular review and information provided by the treating health practitioner or psychiatrist.

## Introduction

Assessing fitness to drive in patients experiencing mental health or psychiatric conditions is difficult. The effect of mental health on the ability to drive safely hasn't been determined with any certainty, and fluctuations that may happen during the illness make setting rigid rules inappropriate.

### Things to consider

Patients living with mental health conditions shouldn't automatically be considered unfit to drive. You should assess each patient and the impacts of their condition or treatment plan, along with the guidance in this section, to work out if they're fit to drive or not. You may need to refer the patient to a specialist or a mental health service provider.

If clear information on the potential road safety risks isn't available, you should take a commonsense approach. For example, a patient experiencing an acute psychotic episode and delusions which are impacting on decision making may not be able to drive safely. Consideration should also be given to other mental health conditions where reaction times, concentration or decision making are impacted.

#### **Legal obligations**

For patients committed to mental health facilities, you're required to comply, where appropriate, with the requirements and responsibilities of section 19 of the Land Transport Act 1998. This relates to driver licensing matters for patients subject to a Compulsory Inpatient Treatment Order, or special patients.

#### Severe chronic mental health conditions

If you think a patient may continue to drive despite being advised not to, section 18 of the Act still applies.

# 8.1 Temporary mental health disorder or episode that may affect safe driving

Those who are assessed as unfit to drive using this assessment criteria should be advised not to drive until:

» They have been satisfactorily treated

OR

» The things that made them unfit to drive are no longer there or no longer at a level that would affect their ability to drive safely.

Does the patient have:

- » no major symptoms known to impair driving, including conditions other than their mental health.
- » no enduring, residual impairment to driving.
- » no suicidal behaviour or intent.
- » self-awareness of the impact of their condition.
- » willingness and ability to seek and act on advice about their fitness to drive.
- » compliance with previous recommendations to temporarily stop driving when medically unfit to drive.
- » any other mental health condition that could impact their ability to drive safely.

If you think the patient may keep driving despite being advised not to, you must notify NZTA under section 18 of the Act. When you advise a patient not to drive, you should advise them in writing as well as verbally.

### 8.1.1 Psychomotor and cognitive functioning

Consider the following factors, if appropriate:

- » Level of arousal both over and under arousal can affect the ability to drive safely. For example, potential psychomotor retardation of depression.
- » A patient's perceptions perceptual disorders can affect the ability to reliably see, hear or understand the driving environment. For example, a patient experiencing hallucinations may also experience significant distraction, depending on the form and type of the hallucination, which may impact on driving safety.
- » Information processing any problems with information processing, such as cognitive impairment, excessive preoccupation, poor concentration, or the thought disorder of active psychosis, may affect the ability to drive safely.
- » Memory problems may affect driving ability if more than trivial.
- » Impaired reaction may affect driving ability.
- » Anxiety or panic attacks don't prevent driving, but you should advise the patient not to drive if their symptoms are acute.
- » Any other mental health condition that could affect their ability to drive safely.

#### 8.1.2 Behaviour

The ability to drive safely may be affected by:

- » excessively aggressive or irritable behaviour
- » misperceptions about the behaviour or intent of other road users, for example, some patients experiencing paranoia
- » erratic or irresponsible behaviour
- » poor judgement, recklessness, and a sense of invulnerability which may be seen in manic mood states.

#### 8.1.3 Mood, including suicidal ideation

You should carefully assess patients who are prone to elevated or depressed moods, and the behavioural manifestations of these. Particularly consider if:

- » the manifestation of the mood will affect the patient's concentration when driving.
- » the effect of the mood could alter their ability to drive safely, for example, they consider themselves invincible and drive aggressively because of this.
- » they have sudden changes of mood that could make their driving behaviour unsafe for a time, or they attempt to use a vehicle to harm or kill themselves or other road users.

Advise patients not to drive during times of active suicidal behaviour or intent. The presence of suicidal ideation should be carefully assessed – the intensity of suicidal ideas, impulsiveness, likelihood of attempt, and imminence. Suicidal thinking may be an acute phase that subsides quickly, or may be ongoing.

#### 8.1.4 Medication

Assess the effects of medication carefully, including for compliance and its impairment effects on their ability to drive safely. Assess each patient individually, look at the known profile of effects of the drug, the dose, and how much of the illness is controlled. Consider:

- » Does the medication control any parts of a patient's condition that may affect their ability to drive safely?
- » The side effects of sedation, such as the risk of somnolence, impaired reactions and information processing.
- » Side effects on motor skills, such as impaired coordination.
- » Other side effects, such as blurred vision, hypotension, or dizziness.
- » Any other factor that could impact their ability to drive safely, such as lifestyle.

You should also consider the potential impacts on driving ability if the patient mixes medications or combines with alcohol.

#### Effects of medication, drugs and abuse of substances

Psychotropic medication can temporarily affect a patient's ability to drive safely. When starting or increasing most psychotropic medication, a patient shouldn't drive until the side effects are unlikely to affect their ability to drive safely.

#### 8.1.5 Insight and judgement

This is important in conditions that fluctuate or are episodic. Is the patient able to judge when it's safe or not safe to drive? Consider their condition history, such as the sudden onset of symptoms affecting their ability to drive safely.

## 8.2 Severe chronic mental health conditions

Assess patients with severe chronic mental health conditions affecting their ability to drive safely using the diagnostic criteria in section 8.1. There are a range of mental health conditions which may impact the ability to drive safely, determined by their symptom presentation. This could include severe anxiety or depression, psychosis, and bipolar disorder.

Advise patients with severe chronic mental health conditions the appropriate amount of time they shouldn't drive, and advise them in writing. In line with your obligations under section 18 of the Act, notify NZTA if you think the patient is likely to drive despite your advice.

Not all patients with anxiety or depression, psychosis or bipolar disease should stop driving, and every patient should be assessed on the impacts of their disorder.

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Patients with any severe and chronic mental health condition that affects their ability to drive safely for an extended period are unfit to drive.

Fitness to drive may be considered with regular review and the information provided by the treating health practitioner that confirms that:

- » the condition is well controlled, and the patient complies with treatment for a long time
- » the patient is aware of the potential effects their condition can have on safe driving
- » there are no medication side effects that may affect their ability to drive safely
- » the impact of any comorbidities have been considered, and there are no other concerns.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients with any severe and chronic mental health condition that affects their ability to drive safely for an extended period are unfit to drive.

Fitness to drive may be considered with regular review and the information provided by a psychiatrist that confirms that:

- » the condition is well controlled, and the patient complies with treatment for a long time
- » the patient is aware of the potential effects their condition can have on safe driving
- » there are no medication side effects that may affect their ability to drive safely
- » the impact of any comorbidities have been considered, and there are no other concerns.

#### **Section 19 of the Land Transport Act 1998**

Very few patients who experience mental disorder or suicidal ideation are subject to the Mental Health (Compulsory Assessment and Treatment) Act 1992. The spirit of the Act is to facilitate treatment in the community wherever possible, so patients can participate in their normal day to day activities. A patient can still drive under this Act, unless:

» You assess them as unfit to drive, and recommend they don't drive for a specific amount of time.

#### OR

» the patient is detained in hospital or is a special patient.

Section 19 of the Land Transport Act 1998 (appendix 2) applies to patients subject to a Compulsory Inpatient Treatment Order or special patients, as defined in the Mental Health (Compulsory Assessment and Treatment) Act 1992.

Section 19 places legal responsibilities on 'persons in charge of a hospital' and 'Directors of Area Mental Health Services' as follows:

#### Persons in charge of a hospital

Where a patient who holds a driver licence is subject to section 19 of the Land Transport Act 1998, that licence is deemed suspended during the term of the order issued under section 19. In addition, the person in charge of a hospital is required to advise the Director of Land Transport. An example notification letter is outlined in appendix 6.

#### **Directors of Area Mental Health Services (DAMHS)**

DAMHS have a range of actions they must take, depending on the patient's circumstances and the type of licence the patient holds. Flowcharts A and B in appendix 7 outline the processes for section 19 of the Land Transport Act 1998 for the two categories of licence classes and endorsement types.

If you have any concerns the patient may continue to drive, section 18 obligations still apply.

# 9. Sleep conditions

# Ngā mate moe

## **Summary**

The table below summarises the information outlined in this section. However, make sure you're familiar with all relevant guidance outlined in this section.

Medical condition	Private class 1 or class 6 licences and D, F, R, T or W endorsements	Commercial classes 2, 3, 4 or 5 licences and P, V, I or O endorsements
Obstructive sleep apnoea	Patients who meet the risk profile shouldn't drive until condition has been treated. Annual medical review may be a licence condition.	Patients who meet the risk profile shouldn't drive until condition has been treated. Annual medical review may be a licence condition.
<u>Narcolepsy</u>	Patients who meet the risk profile shouldn't drive until the condition has been treated.	Patients with narcolepsy or cataplexy that affects their ability to drive safely are unfit to drive.

## 9.1 Excessive daytime sleepiness

Excessive daytime sleepiness, which generally presents as a tendency to doze at inappropriate times when intending to stay awake, can stem from many causes and is associated with an increased risk of vehicle crashes. It's important to distinguish sleepiness (the tendency to fall asleep) from fatigue or tiredness that's not associated with a tendency to fall asleep. For example, many chronic illnesses cause fatigue without increased sleepiness.

Increased sleepiness during the daytime in otherwise normal people may be due to prior sleep deprivation, poor sleep hygiene habits, irregular sleep-wake schedules, sleep disordered breathing, shift work or the influence of sedative medications, including alcohol. Insufficient sleep (classified as less than five hours) prior to driving is strongly related to crash risk. Excessive daytime sleepiness may also result from a range of medical sleep conditions including the sleep apnoea syndromes (OSA, central sleep apnoea and nocturnal hypoventilation), periodic limb movement disorder, circadian rhythm disturbances (such as advanced or delayed sleep phase syndrome), some forms of insomnia and narcolepsy. All factors should be considered in an assessment.

Until the condition is investigated, treated effectively and licence status determined, patients should be advised to avoid or limit driving if they're sleepy and to not drive if they are at high risk, particularly in the case of commercial vehicle drivers. High-risk patients include:

- » those who experience moderate to severe excessive daytime sleepiness
- » those with a history of frequent self-reported sleepiness while driving
- » those who've had a crash caused by inattention or sleepiness.

Patients with high-risk features have a significantly increased risk of sleepiness-related crashes. These patients, especially commercial drivers, should be referred to a sleep condition specialist.

## 9.2 Obstructive sleep apnoea (OSA)

Obstructive sleep apnoea (OSA) syndrome is defined by repeated apnoea, habitual snoring and daytime sleepiness. OSA is often connected with obesity, a thick neck, and a reddened and oedematous oropharynx.

Evaluating sleep apnoea includes a clinical assessment of the likelihood of sleep apnoea followed by overnight monitoring (sleep study) to identify sleep apnoea and its severity, as well as assessing sleepiness based on subjective and sometimes objective tools.

Clinical features can have a high predictive value for a subsequent diagnosis of OSA via a sleep study. Criteria of significant concern include:

- » BMI  $\geq$  40 kg/m2
- » BMI  $\geq$  35 kg/m2 and either
  - hypertension requiring  $\geq 2$  medications for control, or
  - type 2 diabetes
- » sleepiness-related crash or accident, off-road deviation, or rear-ending another vehicle by report or observation
- » excessive sleepiness during the major wake period.

Other clinical features include:

- » habitual snoring during sleep
- » witnessed apnoeic events (often in bed by a spouse/partner) or falling asleep inappropriately (particularly during non-stimulating activities such as watching television, sitting reading, travelling in a car, when talking with someone).
- » feeling tired despite adequate time in bed.

Poor memory and concentration, morning headaches and insomnia may also be presenting features.

Things to consider in assessing fitness to drive are:

- » the severity of the OSA (severe OSA is defined as an oxygen desaturation index or apnoea hypopnea index of >/= 30 )
- » the degree of nocturnal desaturation
- » the scale of daytime sleepiness
- » history of sleepiness and fatigue incidents or near misses during routine daily driving
- » compliance with any treatment
- » any other relevant factor.

Patients suspected of having sleep apnoea or other sleep conditions should be made aware of the potential effect on road safety. General advice may include:

- » minimising unnecessary driving
- » minimising driving at times when they would normally be asleep
- » allowing adequate time for sleep and avoiding driving after having missed a large portion of their normal sleep
- » avoiding alcohol and sedative medications
- » avoiding using over the counter or other non-prescribed substances for maintaining wakefulness
- » ensuring prescribed treatments are taken as required
- » resting and limiting driving if they're sleepy
- » heeding the advice of a passenger that the driver is dozing off.

Commercial drivers diagnosed with sleep apnoea requiring treatment, must have an annual review by a sleep specialist to make sure adequate treatment is maintained. For drivers treated with CPAP, it's recommended they use CPAP machines with a usage meter to allow objective assessment and recording of treatment compliance.

Minimally acceptable adherence with treatment is defined as 4 hours or more per day of use on 70% or more of days. An assessment of sleepiness should be made, and an objective measurement of sleepiness should be considered, especially if there's concern about persisting sleepiness or treatment compliance.

It's the responsibility of the driver to avoid driving if they're sleepy, comply with treatment, maintain their treatment device, attend review appointments and honestly report their condition to their treating health practitioner.

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient with suspected or confirmed OSA and a high risk of excessive sleepiness while driving is not fit to drive.

A patient with severe daytime sleepiness and a history of sleep-related motor vehicle crashes or equivalent level of concern is not fit to drive.

Patients may resume driving once their treatment is effective, which is indicated by good adherence to the treatment and resolution of their sleepiness. If the patient is treated with CPAP therapy, the minimum average use is >/=4 hours for >70% of nights, however, it's strongly recommended to use CPAP every night before driving tasks.

A patient with severe OSA and unwilling to accept treatment is not fit to drive. For patients with OSA that can't tolerate the usual prescribed treatment methods, you may be able to consider fitness to drive if there's an absence of excessive daytime sleepiness.

NZTA may apply licence conditions such as regular medical assessment – the medical follow-up may be given to the health practitioner.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

A patient with suspected or confirmed OSA and a high risk of excessive sleepiness while driving is not fit to drive.

Patients with severe OSA should have an annual review of CPAP therapy by an appropriate health practitioner.

The minimum average use is >/=4 hours for >70% of nights, however, it's strongly recommended to use CPAP every night before driving tasks.

Patients may resume driving once their treatment is effective, which is indicated by good adherence to the treatment and resolution of their sleepiness. Consider the type and hours of driving the patient does. If there's any risk of daytime sleepiness, you should recommend restricting working hours or shiftwork – both verbally and in writing.

However, any patient with severe OSA that's untreatable or they're unwilling or unable to accept the usual prescribed treatment methods is not fit to drive. If alternative therapy for severe OSA is used, effectiveness of the alternative treatment needs to be determined by the prescribing health practitioner before fitness to drive can be considered.

NZTA may apply licence conditions such as regular medical assessment – the medical follow-up may be given to the health practitioner.

## 9.3 Narcolepsy

This condition is often associated with cataplexy. Transient diplopia, automatic behaviour and memory lapses have also been reported in some cases. The condition is usually lifelong and will require continuing medication. Not all individuals with narcolepsy suffer the full range of symptoms and not all suffer from unpredictable episodes of cataplexy. Make sure you consider the circumstances of each patient separately.

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

A patient shouldn't drive if you suspect they have narcolepsy likely to affect their ability to drive safely and you're waiting for the diagnosis of narcolepsy to be confirmed.

Driving should stop on diagnosis until:

- » There's a good response to treatment, and clearance by a specialist, or
- » It's found the patient doesn't suffer from the full range of symptoms, in particular unpredictable episodes of cataplexy, and is unlikely to be a road safety risk.
- » NZTA may apply licence conditions such as regular medical assessment.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients with severe narcolepsy or narcolepsy with excessive sleepiness or cataplexy are unfit to drive.

# 10. Increasing age Whakapikinga taipakeke

## **Summary**

The table below summarises the information outlined in this section. However, make sure you're familiar with all relevant guidance outlined in this section.

Medical condition	Private class 1 or class 6 licences and D, F, R, T or W endorsements	Commercial classes 2, 3, 4 or 5 licences and P, V, I or O endorsements
Age-related issues	Fit to drive if the condition doesn't prevent the patient from driving safely.  NZTA may place licence conditions as part of being considered fit to drive.	Fit to drive if the condition doesn't prevent the patient from driving safely.  NZTA may place licence conditions as part of being considered fit to drive.

## Introduction

Age itself isn't a barrier to holding a driver licence, and many people of advanced years continue to drive safely. Although age isn't a measure of a patient's physical well-being, the natural ageing process comes with an increased risk of medical conditions that can affect the ability to drive safely, such as stroke, heart disease and dementia.

Other common links include early onset fatigue, slowed responses, visual problems, impaired cognitive function, and impaired mobility. Medications taken for various medical conditions may also affect driving ability. The combination of these means regular assessment of their medical fitness to drive is needed. This is usually done by the patient's health practitioner.

When assessing fitness to drive, consider whether the patient is medically fit to hold all or only some of the classes and endorsements on their licence or whether they are medically fit only if certain conditions are imposed, such as no driving at night. If NZTA decides to revoke all or part of the licence or to impose conditions, the patient has the right to appeal those decisions.

## Things to consider

Unlike many medical conditions, there's no one test to give a complete answer and a combination of age-related conditions can complicate an assessment. Various tests, or help from specialists such as geriatricians, may be helpful in providing evidence towards the patient's overall fitness to drive. Ultimately, you have discretion to use the test or tests that you think are fit for purpose and most appropriate to apply to determine fitness to drive, given a patient's specific condition.

Consider the following along with the guidance outlined in this section:

- » The presence of multiple medical conditions and any possible combined effects on their ability to drive safely.
- » The patient's awareness of any age-related condition they may have.
- » The effects of medications, and the patient's likely compliance with medications, on their ability to drive safely.
- » The risks associated with mixing medications.
- » The risks associated with consuming alcohol or using illicit drugs.
- » The patient's motor vehicle crash history (if known) before the assessment, with a focus on more recent crashes. You may need to recommend a longer time of no driving. If they have a history or pattern of crashes that may be associated with their condition, a pause of driving should be considered until a full assessment has been done, which may include an occupational therapy driving assessment.
- » Under section 18 of the Act, you must tell NZTA as soon as practicable if the patient is likely to continue to drive after medical advice not to.

Where you consider that a patient is currently medically fit to drive but may need to stop driving soon, if appropriate the following is recommended:

- » Give the patient a summary of what you have discussed in writing.
- » Give the patient plenty of time to prepare for the change and think about other transport to maintain their independence and lifestyle.
- » Consider involving supportive family members and other support networks of the patient. Where memory loss or confusion is involved, the support of those close to the patient will be important.

When there's evidence of a deterioration of skills or cognitive ability, you may want to advise patients in writing that they should consider:

- » reducing the amount of driving they do
- » avoiding peak traffic times
- » avoiding busy roads
- » avoiding driving at night.

If the patient is compliant and self-limiting their driving, there's no need to notify NZTA. However, if you think the patient is likely to drive because they've indicated or implied they'll continue to drive, and you think their mental or physical condition could be a risk to public safety, you should use the section 18 template to advise us as soon as practicable. Any advice to stop driving should also be provided in writing to the patient.

#### Section 18 template

#### **Dementia**

### **Occupational therapy driving assessment**

If there are medical factors affecting an older patient's ability to drive safely, it may be appropriate for them to have an occupational therapy driving assessment. These specialists are available in most centres and offer a thorough, independent, objective assessment of driving ability that's valuable in determining fitness to drive.

Occupational therapists help patients with medical conditions to be independent in driving – where technical and financial resources allow.

85

Occupational therapists' driving assessments cover a range of skills needed for safe driving, including:

- » biomechanical problems these are evaluated, and recommendations are made for suitable vehicles and appropriate vehicle modifications, with consideration given to lifestyle and mobility devices such as wheelchairs
- » cognitive skills, including concentration, decision making, eye-hand coordination and impulsiveness to make sure they can cope with the demands of driving and traffic situations.

If you're referring a patient to an occupational therapist, specify what needs assessing based on the patient's medical situation or your concerns, for example, the affected parts of the body and what this could mean for a specific driving task.

Occupational therapy driving assessment

## **On-road safety test (ORST)**

Under clause 44B of the Rule, if you have significant doubts about their ability to drive safely, you may request drivers 75 or above to do an ORST as part of their required medical certificate when applying for, or renewing, their licence or endorsement. Section 1 General matters has more information on ORSTs.

**Practical driving assessments** 

## Medical assessment of the older driver

Age-related physical and mental changes are different for everyone. A patient may have several minor conditions or impairments that on their own may not affect driving, but when combined present risks to safe driving.

The aim should be to enable older people to drive – but only for as long as it's safe to do so. When assessing fitness to drive, focus on the potential risks to them and other road users and if they're medically fit to hold all or some of the classes and endorsements on their licence, or if they're medically fit only if certain conditions are placed on their licence.

Any recommendation you make to a patient to reduce their driving or stop driving entirely should be made in writing as well as verbally. If you believe that a patient may continue to drive despite your advice not to, you must inform us in line with your obligations under section 18 of the Land Transport Act 1998.

#### **Guidance for all licence classes and endorsements**

A medical certificate is required for a patient 75 years or older, when applying for or renewing any class of licence or type of endorsement.

When supplying a medical certificate or assessing ongoing fitness to drive, you should consider the following:

- 1. Medical history
  - Any previous or existing medical problems, with particular attention to episodes of dizziness, vertigo, angina, visual disturbances, sleep apnoea, transient ischaemic attacks and similar episodes.
  - Any recent motor vehicle crashes or near misses.
  - Current medications.
- 2. Hearing
  - Any hearing problems.
  - Use of hearing aids, if applicable.
- 3. Diabetes
  - Type of diabetes.
  - Any medications or treatments to manage diabetes.

#### 4. Cardiovascular system

- Presence of poorly controlled hypertension.
- Presence of arrhythmias.
- Evidence of significant ischaemic heart disease.

#### 5. Mental function

- Orientation in time and space, recent memory, coordination, congruity of behaviour and responses, inattention, confusion, ability to communicate.
- See section 2.8 for more information

#### 6. Musculoskeletal system

- General mobility and strength, especially in relation to arthritis and other degenerative conditions.

#### 7. Neurological function

- Parkinsonism.
- Strokes and post-stroke effects.
- Transient ischaemic attacks.

#### 8. Vision

- Any visual problems such as cataracts, glaucoma.
- General visual acuity and visual fields should meet the required standards.
- See section 6 for details of testing

#### 9. Medications

- Effects of medications, drugs and abuse of substances.

Also consider the presence of other conditions, such as malignant disease or significant respiratory problems.

# 11. Miscellaneous conditions

# Ngā momo mate kē

# Summary

This table is a summary of the information outlined in this section. Make sure you're familiar with all relevant guidance in this section.

Medical condition	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Respiratory conditions	Generally fit to drive if the medication, pain or any other complication of the condition doesn't keep the patient from driving safely.	Generally fit to drive if the medication, pain or any other complication of the condition doesn't keep the patient from driving safely.
	If the patient needs continuous oxygen therapy, they're unfit to drive.	If the patient needs continuous oxygen therapy, they're unfit to drive.
	Patients with respiratory conditions should be advised verbally and in writing about the possibility of severe respiratory failure attacks and they'll need to stop driving for a time if they happen.	Patients with respiratory conditions should be advised verbally and in writing about the possibility of severe respiratory failure attacks and they'll need to stop driving for a time if they happen.
Renal conditions	Generally fit to drive.	Generally fit to drive.
	Patients with end-stage renal failure may become unfit to drive.	Patients with end-stage renal failure may become unfit to drive.
Cancer	Generally fit to drive if the medication, pain or any other associations with the condition doesn't keep the patient from driving safely.	Generally fit to drive if the medication, pain or any other associations with the condition doesn't keep the patient from driving safely.
HIV and AIDS	Generally fit to drive if the medication or any other association with the condition doesn't keep the patient from driving safely.	Generally fit to drive if the medication or any other association with the condition doesn't keep the patient from driving safely.
Intellectual disability	Generally fit to drive if the patient can drive safely.	Generally fit to drive if the patient can drive safely.

## Introduction

Many medical conditions may affect a patient's ability to drive safely. This section includes some miscellaneous medical conditions that aren't covered in other sections as well as general guidance that can be applied to other miscellaneous conditions.

### Things to consider

Consider the following when assessing a patient's fitness to drive:

- » Medication, including compliance with taking it and the effects
- » Associated complications and comorbidities
- » The type of licence held, and type and amount of driving done. Professional drivers spend up to 70 hours a week in their vehicle, and that vehicle can weigh greater than 25,000kg or carry passengers. A crash involving these vehicles could put many people at risk. For more guidance on licence types, endorsements and road safety see:

#### Licence classes and endorsements

» Their known motor vehicle crash history. You may need to recommend a patient stops driving for a time if they have a history of crashes that may be associated with their condition. Any recommendation not to drive should be given in writing, as well as verbally. For more information see:

#### Temporary driving impairments

There'll be other things to consider relating to a patient's medical condition. Some of these include:

#### **Respiratory conditions**

Severe respiratory conditions or severe respiratory failure can affect the ability to drive safely. In most cases, by the time this stage is reached, it'll be clear that a patient is unfit to drive. However, in conditions such as asthma or chronic obstructive pulmonary disease, particularly when associated with significant emphysema, loss of consciousness is a possibility. Make sure your patient knows this and advise them not to drive during severe attacks or exacerbations. Do this both verbally and in writing.

Patients on continuous oxygen therapy are generally unfit to drive.

#### **Renal conditions**

Renal disorders don't generally make a patient unfit to drive unless there's end-stage renal failure or other complications.

#### Cancer

Cancer may affect the ability to drive safely due to general weakness and other related medical problems. There's a danger of epilepsy associated with primary and secondary cerebral tumours. The effects of cancer and treatment on general sites in the body will be largely covered by the general provisions of the previous sections. The main concern will always be the presence or likelihood of primary or secondary tumours in the brain.

#### **HIV and AIDS**

The presence of antibodies to the human immunodeficiency virus (HIV) doesn't mean the patient is unfit to drive. However, early manifestation of the complications of HIV/AIDS may often show impaired cognitive processes together with isolated neurological defects. Complications can include dementia.

There are generally no driving restrictions for patients with complications of HIV/AIDS. However, driving restrictions may be needed if a patient develops a complication that may affect their ability to drive safely. NZTA may apply a licence condition for regular medical assessment.

#### Intellectual disabilities

Patients who have an intellectual disability are generally fit to drive if they can meet driver licensing requirements, such as passing theory and practical driving tests. However, ongoing reviews may be needed if changes in the patient's medical status affects their ability to drive safely. If you have any doubt, a psychological assessment, or an assessment of ability to deal with emergency situations may be needed. An on-road safety test may also be helpful in assessing driving ability.

#### **Temporary driving impairments**

Patients with various medical conditions could become temporarily unfit to drive. This could be due to the medical condition, complications or medication. You can find more guidance on managing a patient's temporary unfitness to drive, including your legal obligations, in the Temporary driving impairments section. Make sure your patients are aware of any possible temporary impairments related to their medical condition and if they'll need to temporarily stop driving.

Temporary driving impairments

## **Assessing fitness to drive**

Patients with miscellaneous medical conditions are likely to need ongoing medical care and reassessment of their driving fitness. This is especially important where the condition is progressive, as the patient may become unfit to drive over time.

#### Private class 1 or class 6 licence and D, F, R, T or W endorsements

Patients with miscellaneous conditions are generally fit to drive if they can drive safely.

A medical certificate is required if a medical condition has affected their ability to drive in the last 5 years and they're applying for or renewing a private licence class or endorsement.

If you need to supply a medical certificate, or assess ongoing fitness to drive, make sure:

- » the patient is taking medication as prescribed, and it isn't affecting their ability to drive safely Effects of medication
- » the patient knows the risk their condition could have on their ability to drive safely, including being temporarily unfit to drive
- » the details of the medical condition are considered as part of the assessment.

#### Commercial classes 2, 3, 4 or 5 licence and P, V, I or O endorsements

Patients with miscellaneous conditions are generally fit to drive if they can drive safely.

A medical certificate is required if a medical condition has affected their ability to drive in the last 5 years and they're applying for or renewing a private licence class or endorsement.

If you need to supply a medical certificate, or assess ongoing fitness to drive, make sure:

- » the patient is fit to drive in line with the same guidelines for private licence and endorsement types
- » the condition is unlikely to worsen to a point where the patient is unable to drive safely.

# 12. Effects of medication, drugs and abuse of substances

Ngā pānga a te rongoā, te tarukino me te tūkino o ngā mea

# Summary

This table is a summary of the information outlined in this section. Make sure you're familiar with all relevant guidance in this section.

Medical condition	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Alcoholism and/or drug addiction	Patients with symptoms or effects of alcohol and drug dependency or abuse that may impair their ability to drive safely shouldn't drive until effective treatment is in place.	Patients with symptoms or effects of alcohol and drug dependency or abuse that may impair their ability to drive safely shouldn't drive until effective treatment is in place.
Patients on oral methadone treatment programme	A patient on an oral methadone treatment programme may continue to drive if they're stable on the programme and their methadone treatment is unlikely to affect their ability to drive safely.	A patient on an oral methadone treatment programme may continue to drive if they're stable on the programme and their methadone treatment is unlikely to affect their ability to drive safely.

**Important:** section 12.1 contains a list of general medications and drugs that may affect driving. However, you should always consult the manufacturer's recommendation when prescribing medications and advise patients where medications may affect their ability to drive safely.

### Introduction

New Zealand has strict legislation about drinking alcohol and driving. In 2023, law changes were made around driving while impaired by prescription medications and illegal drugs to recognise the affect these products and substances have on road safety.

Drink driving is one of the most serious problems on our roads – it's a leading contributor to crashes involving death and serious injury. This is because once alcohol is absorbed into the bloodstream, it enters the vital organs, including the brain. This results in slowed reactions along with dulled judgement and vision, and can increase the risk of driver fatigue. There are a range of short- and long-term impacts of drink driving, including:

- » death and injury
- » emotional harm
- » long-term financial costs
- » legal charges manslaughter, drink driving and other offences

- » penalties including imprisonment, loss of licence, disqualification and fines
- » loss of insurance cover.

You should discuss these with patients who have an alcohol problem and are seeking treatment.

For patients seeking treatment for drug problems, whether high-risk class A drugs like heroin or moderate risk class C drugs like cannabis, you should discuss with them the possible effects of the drugs on their driving, including:

- » sedation effects risk of somnolence (sleepiness), impaired reactions or information processing
- » euphoria effects feeling wired and over-confident
- » motor effects impaired coordination
- » cognitive effects confusion, being unable to focus or pay attention
- » specific side effects headaches, blurred vision, hypotension or dizziness
- » exacerbation of other medical-related risks for example some antidepressants and antipsychotics reduce the epileptic threshold and may trigger epileptic attacks in some people.

Many medications may interact with each other to worsen the effects on the ability to drive safely. The combination of alcohol with many medications may affect driving ability to the point that a crash is a likely result. The use of illicit drugs is also likely to be a safety hazard, based on the known physiological effects.

New Zealand has a network of Alcohol and Drug Assessment Centres you can refer your patients to whenever alcohol or drug dependency is in question. You'll find a list of these centres on our website.

Ministry of Health approved assessment centres

#### Things to consider

Consider the following when assessing a patient for fitness to drive:

- » Their ability to drive safely, for example some patients may not respond well to medications, and may not be able to drive safely, even if most patients taking that form of medication can.
- » The impact of changing prescriptions or levels of a medication on their ability to drive safely.
- » The cumulative effects of medications on their ability to drive safely.
- » Type of licence held and type of driving done commercial drivers spend up to 70 hours a week in their vehicle, and their vehicles can weigh more than 25,000kg or carry many passengers. A crash involving these vehicles could put many people at risk.
- » The presence of multiple medical conditions if a patient has multiple medical conditions, consider any possible combined effects on their ability to drive safely.
- » Other factors that may increase risks, for example, a known history of illicit drug use and medications.
- » The possibility of the patient mixing medications or combining medication with other substances such as alcohol, and the impact this may have on their ability to drive safely.

Each patient should be assessed, considering the known profile of the effects of the drug, the dose, the degree to which the illness is controlled, and the presence of other medical problems that may affect their ability to drive safely.

## 12.1 Medication

When prescribing medications, check the British National Formulary (BNF) and the New Ethicals Catalogue to see if any of them may affect the ability to drive safely. You should also check the list of the 25 specific drugs covered by the law change in 2023. These can affect driving and can result in penalties if taken above the legal limit.

Schedule 5 Blood concentration levels for offences related to drug driving

Section 64 of the Land Transport Act 1998 provides a defence for drivers with a current and valid prescription and who are following the manufacturer's directions for the drug, or are administered a drug by a health practitioner and are following their directions. However, this doesn't waive all liability.

Make sure you talk with your patient about the drug you're prescribing or administering if it may affect their ability to drive safely. Give this advice in writing as well, along with clear written instruction on the correct dose and use of any medication or drug you prescribe.

The following is a list of the more common medications, drugs and substances of abuse that may affect driving ability. Some of these, such as antihistamines and anti-motion sickness preparations, may be obtained without prescription.

#### Sedatives, hypnotics or anti-anxiety agents

- » Barbiturates
- » Benzodiazepines

#### **Analgesics**

- » Codeine
- » Narcotic drugs
- » Propoxyphene

#### **Anti-allergy agents**

» Antihistamines

#### **Antipsychotic and antidepressant agents**

- » Tricyclic and similar antidepressants
- » Haloperidol
- » Phenothiazines

#### **Anti-motion sickness agents**

- » Antihistamines and related compounds
- » Hyoscine and related compounds

#### Some antihypertensive agents

#### Skeletal muscle relaxants

» Dantrolene

#### **Ophthalmic agents (topical preparations)**

» Most agents used for treating glaucoma

#### Drugs and chemicals of abuse, including

- » Alcohol
- » Amphetamines (chronic use)
- » Cocaine
- » Cannabis
- » Heroin, morphine and methadone
- » LSD and other hallucinogenic agents

#### Some antimalarial medication

Medical aspects of fitness to drive: a guide for health practitioners

If patients are being prescribed several different medications, keep in mind the potential impacts of mixing substances and make sure the patient is aware of how this may affect their ability to drive safely. Even if taken hours apart from each other, mixing different substances can cause them to interact negatively – by masking the effect of other drugs, making the effects worse, or causing a reaction the patient may not expect. Mixing medication with or without illegal drugs or alcohol is far more likely to affect the ability to drive safely.

# 12.2 Alcohol and drug addiction and dependency

Chronic heavy alcohol use carries a real risk of neurocognitive deficits that can affect a patient's ability to drive safely. These deficits include:

- » short-term memory and learning difficulties
- » impaired perceptual motor skills
- » impaired decision making, judgement, visual scanning and hazard monitoring, focus and attention, and impulsiveness control.

Long-term heavy alcohol use is also associated with various end-organ pathologies that may affect driving ability, such as Wernicke-Korsakoff syndrome. Those with an alcohol dependency may experience withdrawal symptoms, and this carries some risk of generalised seizure, confusion, and hallucinations.

Drug addiction and dependency can present the risk of brain injury through hypoxic overdose, trauma or chronic illness, while end-organ and cardiovascular damage may be associated with forms of illicit substance use. Withdrawal symptoms can have the same seizure risk as alcohol withdrawal.

#### All private and commercial classes and endorsements

Patients with symptoms or effects of alcohol and/or drug dependency or abuse that may impair their ability to drive safely should be advised not to drive until effective treatment is in place. For example, where the patient's dependency affects their motor skills, perceptions, cognitive abilities or other areas needed for safe driving.

Check if your patient has another medical condition, such as epilepsy, that can be exacerbated by the effects of alcohol and/or drugs. This may further impact their ability to drive safely and whether they're fit to drive or not

## 12.3 Methadone

#### All private and commercial classes and endorsements

A patient on an oral methadone treatment programme may continue to drive if they're stable on the programme and their methadone treatment is unlikely to affect their ability to drive safely.

Make sure you know the effects of oral methadone and a combination of any illegal drugs or prescribed medications on driving, and advise patients they shouldn't drive when taking oral methadone in combination with other substances.

94

# 13. Driving after surgery

# Te tairawa i muri i te hāpara

## Summary

This table is a summary of the information outlined in this section. Make sure you're familiar with all relevant guidance in this section.

Medical condition	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Local anaesthetic	Generally fit to drive when the effects of surgery aren't affecting the patient's ability to drive safely.	Generally fit to drive when the effects of surgery aren't affecting the patient's ability to drive safely.
General anaesthetic	Generally fit to drive when at least 12 hours have passed after the surgery, and the effects of surgery aren't affecting the patient's ability to drive safely.	Generally fit to drive when at least 12 hours have passed after the surgery, and the effects of surgery aren't affecting the patient's ability to drive safely.

#### Introduction

Advances in medical science and anaesthetics have made it possible for day surgery procedures and quick release from hospital after surgery. This raises some issues with a patient's ability to drive safely soon after surgery, such as:

- » effects of anaesthetics and medication such as poor concentration, excessive sleepiness, visual disturbances, and slower reaction times
- » limited mobility
- » pain
- » the risk of complications.

### Things to consider

Consider the following when assessing if a patient is fit to drive after surgery:

- » If the surgery has a specific impact on a patient's ability to drive safely, such as turning the head or moving limbs.
- » Some people may not respond well to anaesthetic and may take longer to recover.
- » The effects of pain medications and anaesthetic, including any cumulative effects.
- » The type of licence held, and the type and amount of driving done. Commercial drivers should only drive when they're certain they no longer feel affected by the surgery. This is particularly important if they're doing long shifts, driving larger vehicles, or carrying multiple passengers.
- » The presence of multiple medical conditions and any possible combined effects.

## Surgery with local or regional anaesthetic

A patient should only drive when they're no longer feeling the effects of the anaesthetic and they're able to drive safely. Depending on the surgery type, advise the patient they may want to consider not bringing a vehicle due to the possible effects of the anaesthetic.

## Surgery with general anaesthetic

A patient should only drive when they're no longer feeling the effects of the anaesthetic and at least 12 hours have passed after the surgery. If day surgery is planned, advise the patient not to bring their vehicle because they'll be unable to drive home. This advice should be given in writing wherever possible.

You might need to recommend the patient doesn't drive for a while, or that they drive with limitations, after surgery. Things to consider include the:

- » type of surgery including the invasiveness and the expected recovery time
- » location of the surgery on the body, such as on limbs used for driving
- » patient's general condition which may affect how quickly they may recover
- » pain medication prescribed following surgery and the likely effects on driving ability.

This is particularly important for patients with commercial licence classes or endorsement types as the risk of harm to others is greater. This includes commercial drivers that operate large vehicles and drive for extended periods of time. Any recommendations should be given in writing.

# 14. Helmet exemptions and seatbelt exceptions

# Ngā whakawāteatanga pōtae mārō me ngā whakawāteatanga tātua

## 14.1 Seatbelt exceptions

It's compulsory to use seatbelts and child restraints in Aotearoa New Zealand. However, the law recognises that sometimes patients can't wear a seatbelt for medical reasons, for example, children with hip spica casts often can't be in a child restraint.

If it's impracticable or undesirable for medical reasons for the patient to use a child restraint or seatbelt, you can issue a certificate for a specified time under the Land Transport (Road User) Rule 2004.

#### Clause 7.11 of the Road User Rule 2004

Convenience, or not wanting to wear a seatbelt, doesn't meet the definition of impracticable or undesirable – the reason must relate to a specific medical condition. For your patient's safety, make sure the exception only lasts as long as it needs to.

There are few medical conditions that make it impracticable or undesirable to wear a seatbelt. Exceptions should only be issued in special circumstances, as granting an exception puts the patient, and others, at considerable risk if there's a crash.

These are the most common reasons why patients ask for a seatbelt exception and how you might respond.

Medical conditions	Guidance
lleostomies and colostomies	No exception should be granted. Generally these don't interfere with the use of a correctly fitted seatbelt.
Musculoskeletal conditions and deformities	Exceptions may be necessary for passengers only, depending on the exact nature of the condition.
Obesity	No exception should be granted. Advise patients to get their seatbelt modified.
Pregnancy	No exception should be granted. Advise patient on correct fitting of seatbelt.

If it's appropriate to issue a seatbelt exception to a patient, you must make sure the exception certificate you provide them:

- » is only issued for the minimum time necessary
- » clearly specifies the issue date and the expiry date of the exception
- » confirms that using a child restraint or seatbelt is medically impracticable or undesirable for medical reasons.

We recommend you use the exception certificate template included in this section.

Because it's an offence to travel in a motor vehicle without restraints, you should also remind your patient to always carry their exception certificate with them while travelling in a vehicle so it can be shown to an enforcement officer if needed. If they don't have it with them when they're stopped, they have 7 days to produce that exception letter to Police.

#### Example exception certificate from requirement to wear seatbelt or child restraint

Date:

To whom it may concern,

#### Certificate confirming use of a seatbelt/child restraint isn't required

In line with the *Medical aspects of fitness to drive* guidelines, I have assessed the patient below, and certify that, in my opinion, it's medically impracticable or undesirable for them to be restrained by a seatbelt/child restraint¹ until the expiry date listed below.

until the expiry date listed below.
Full name:
Date of birth:
Address:
Driver licence number <sup>3</sup> :
Certificate issue date:
Certificate expiry date <sup>4</sup> :
I confirm that the expiry date listed above represents the minimum period necessary, owing to their medical condition, for this patient to not be required to use a seatbelt/child restraint¹.
Signed
Name
NZMC number:

Address and phone number (if certificate not printed on letterhead)

<sup>&</sup>lt;sup>1</sup>Delete as applicable.

<sup>&</sup>lt;sup>2</sup>Not required if the patient is unlicensed (for example, a child).

<sup>&</sup>lt;sup>3</sup>When working out an expiry date, consider the patient's specific medical condition and the likely recovery period (if any).

## 14.2 Helmet exemptions

Riders of motorcycles, mopeds and bicycles, and drivers of all-terrain vehicles, along with any passengers, must by law wear approved standard helmets for their safety.

You can't issue an exemption from wearing a helmet. Only NZTA can exempt a person from being required to wear a helmet.

## **Bicycle helmet exemptions**

We can consider an exemption from wearing a bicycle helmet based on religious belief, physical disability, or other reasonable grounds. You may be asked to provide a medical certificate or other information in support of this application.

Clause 11.8 of the Road User Rule

## Helmet exemption for motorcycles, all-terrain vehicles and mopeds

We can consider an exemption from wearing a motorcycle helmet for a medical condition. The exemption is also subject to any terms and conditions the Director of Land Transport sees fit to impose.

#### Clause 7.14 of the Road User Rule

We can only issue an exemption if there's a medical certificate supporting the application. You may be asked to provide this. Please also tell us:

- » if you think there should be any conditions attached to the exemption
- » the minimum timeframe the exemption will be needed for, as determined by the medical condition.

Motorcycle riders must carry the exemption with them when riding and they must not ride faster than 50 kph. The exemption can only be issued for a maximum of up to 2 years.

There are already some exceptions in the Rule from the requirement to wear a helmet:

- » followers of the Sikh religion¹ who ride a bicycle, motorcycle, all-terrain vehicle or moped below 50 kph
- » drivers and passengers on all-terrain vehicles, motorcycles, or mopeds travelling below 30 kph from one part of a farm to another part of the same farm or from one farm to another adjoining farm owned or occupied by the same person
- » occupants wearing a properly fastened seatbelt in an all-terrain vehicle fitted with a rollbar.

<sup>&</sup>lt;sup>1</sup>Practically, this only applies to Sikh men as the dumala (turban) they're required to wear gives some protection to the head at speeds below 50 kph.

# 15. Temporary driving impairments

# Ngā whakahauā taraiwa rangitahi

## Summary

This table is a summary of the information outlined in this section. Make sure you're familiar with all relevant guidance in this section.

Medical condition	Private class 1 or class 6 licence and D, F, R, T or W endorsements	Commercial Classes 2, 3, 4 or 5 licence and P, V, I or O endorsements
Temporary driving impairments	A patient should be considered unfit to drive while experiencing a temporary driving impairment that prevents them from operating a vehicle safely.	A patient should be considered unfit to drive while experiencing a temporary driving impairment that prevents them from operating a vehicle safely.
	In some cases, a patient with a temporary driving impairment may still be able to drive safely, but appropriate restrictions may need to be recommended by a health practitioner.	In some cases, a patient with a temporary driving impairment may still be able to drive safely, but appropriate restrictions may need to be recommended by a health practitioner.

### Introduction

A patient may need to stop driving for a short time where a temporary impairment keeps them from driving safely. This may be because of injury, a medical procedure, a complication relating to a medical condition, a treatment regime or medication.

A temporary driving impairment is one that prevents a patient from driving for hours, days, or weeks. For temporary impairments that may be longer, ongoing reassessment is recommended at regular intervals.

Temporary driving impairments may coincide with an application or renewal of a driving licence where a medical certificate may be required as part of the process. More often, the temporary impairment will occur in-between licencing events. Either way, you'll need to consider the impairment in terms of the patient's fitness to drive.

### Things to consider

In some cases, where the impairment impacts driving ability less, the patient may be able to drive safely but with restrictions that suit their driving needs and circumstances. Considerations may include only driving for short periods at a time or stopping any commercial driving activities for a time because of the demands and increased risk.

#### **Legal obligations**

If a patient with a temporary driving impairment agrees to stop driving for the recommended time, and you don't have any reason to suspect the patient won't stop driving, NZTA doesn't need to be notified under section 18 of the Act. See Section 1 General matters for more information on your legal obligations for reporting unfitness to drive.

#### Section 1 General matters

If you advise a patient to stop driving for a time, do this in writing and update clinical notes to reflect the recommendation. Make sure the patient knows the details around reassessment of the condition.

## Assessment across all licence classes and endorsement types

Short-term impairments include:

- » locomotor function a temporary injury to a limb makes driving a vehicle safely difficult
- » vision may be temporarily impaired
- » motor coordination reduced motor coordination
- » concentration temporarily unable to concentrate
- » **judgement** judgement is impaired.

# **Appendices** Ngā āpitihanga

# Appendix 1: your responsibilities under the legislation

Section 18 Health practitioners to give Director medical reports of persons unfit to drive.

legislation.govt.nz/act/public/1998/0110/latest/DLM434534.html

Section 19 Licences of certain persons subject to Mental Health (Compulsory Assessment and Treatment) Act 1992 to be suspended

legislation.govt.nz/act/public/1998/0110/latest/DLM434536.html

Clause 44A Obligations of person who issues medical certificate

legislation.govt.nz/regulation/public/1999/0100/latest/DLM281525.html

The Rule requires medical examination and medical certificates when:

- » a person declares a medical condition that's affected their driving in the last 5 years, or they're over the age of 75, at the time of applying for or renewing a licence or endorsement type
- » the person is required by NZTA to have a medical certificate for an ongoing medical condition, usually in the form of licensing conditions
- » the person is applying for, or renewing, some licence classes and endorsement types.

# Appendix 2: relevant sections of the Land Transport (Driver Licensing) Rule 1999

#### **Clause 38 Eyesight testing**

legislation.govt.nz/regulation/public/1999/0100/latest/DLM281512.html

#### Clause 39 Medical declaration

legislation.govt.nz/regulation/public/1999/0100/latest/DLM281514.html

#### **Clause 40 Special medical examination**

legislation.govt.nz/regulation/public/1999/0100/latest/DLM281515.html

#### **Clause 41 Requirements of medical examination**

legislation.govt.nz/regulation/public/1999/0100/latest/DLM281516.html

#### Clause 42 Powers of Director

legislation.govt.nz/regulation/public/1999/0100/latest/DLM281518.html

#### Clause 43 Advice of right to appeal

legislation.govt.nz/regulation/public/1999/0100/latest/DLM281519.html

#### **Clause 44 Medical certificates**

legislation.govt.nz/regulation/public/1999/0100/latest/DLM281520.html

#### Clause 44B Applicants may be referred for on-road safety test

legislation.govt.nz/regulation/public/1999/0100/latest/DLM281527.html

#### Clause 49 On-road safety test

legislation.govt.nz/regulation/public/1999/0100/latest/DLM281546.html

#### Clause 56 Conditions relating to physical disability

legislation.govt.nz/regulation/public/1999/0100/latest/DLM281563.html

#### Clause 77 Requirements for tests, medical examinations, and approved courses

legislation.govt.nz/regulation/public/1999/0100/latest/DLM281931.html

#### Clause 78 Requirement to be in notice

legislation.govt.nz/regulation/public/1999/0100/latest/DLM281941.html

# Clause 79 Obligations on person required to undertake test or medical examination, or complete approved course

legislation.govt.nz/regulation/public/1999/0100/latest/DLM281943.html

#### Clause 80 Suspending driver licence for medical reasons

legislation.govt.nz/regulation/public/1999/0100/latest/DLM281946.html

#### Clause 82 Revocation of driver licence or endorsement

legislation.govt.nz/regulation/public/1999/0100/latest/DLM281949.html

#### Clause 86 Replacement of driver licence or endorsement revoked on medical grounds

legislation.govt.nz/regulation/public/1999/0100/latest/DLM281960.html

# Appendix 3: relevant sections of the Land Transport (Road User) Rule 2004

#### Clause 7.11 Exceptions to application of requirements relating to use of child restraints and seat belts

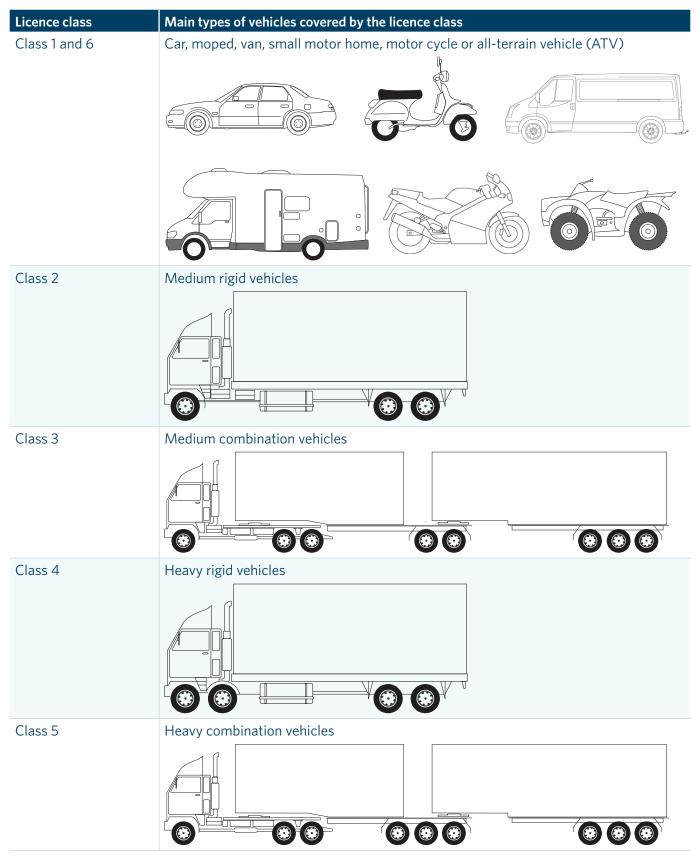
legislation.govt.nz/regulation/public/2004/0427/latest/DLM303629.html

#### **Clause 7.14 Certificate of exemption**

legislation.govt.nz/regulation/public/2004/0427/latest/DLM303632.html

# Appendix 4: licence information

Table A. Licence classes



For more information see:

Factsheet 11: Driver licence classes

# Appendix 5: example of a letter advising a patient they're unfit to drive

Patient's name Patient's address Re: Assessment of fitness to drive 1. In my professional opinion as a registered health practitioner, you, [patient's name], are medically unfit to drive the following licence classes and endorsements for [amount of time]: ☐ Class 1 and 6 ☐ Classes 2 to 5 ☐ PVIO endorsements ☐ FWRT endorsements OR 2. In my professional opinion as a registered health practitioner, you [patient's name], are medically unfit to drive the following licence classes and endorsements: ☐ Class 1 and 6 ☐ Classes 2 to 5 ☐ PVIO endorsements ☐ FWRT endorsements OR 3. In my professional opinion as a registered health practitioner, you [patient's name], are medically fit to drive the following licence classes and endorsements: ☐ Class 1 and 6 ☐ Classes 2 to 5 ☐ PVIO endorsements ☐ FWRT endorsements Only under the following driving conditions: » [add conditions, for example, daylight only, or limits to where driving can occur]

#### Please note:

- » You're entitled to seek another opinion.
- » If you're applying for or renewing a licence or endorsement, you medical certificate will say you're not fit to drive.
- » If this assessment doesn't relate to applying for or renewing a licence or endorsement, I'm obligated to tell NZTA if I suspect my recommendations aren't being complied with.

Sign and date

# Appendix 6: example of Notification under section 18 of the Land Transport Act 1998

Provide your patient a copy of this notification also.

Date

NZ Transport Agency Private Bag 11777 Palmerston North 4442

Attn. NZTA

#### Notification under section 18 of the Land Transport Act 1998

In line with my obligations under section 18 of the Land Transport Act 1998, I'm advising you of a patient I've advised not to drive, or to drive with certain conditions, whom I don't believe is following [will follow] my advice.

Given the patient's medical conditions and in the interests of public safety, the patient should [not be allowed to drive.] [should only be allowed to drive with these conditions:

» [add conditions, for example, daylight only, or limits to where driving can occur.]

Driver licence number: [if known]

Patient full name:

Patient date of birth:

Patient address:

Patient email address:

Patient is/is not a regular of mine.

The reason for my decision to notify NZTA is [include the medical condition the patient has, the potential impacts on road safety, and anything else that supports the decision to notify NZTA, for example, the patient says they'll continue driving, has been seen driving, is generally non-compliant with medical advice, or the patient isn't a regular of yours].

[I believe further assessment is necessary, and recommend that <insert specialist assessment>]

Signed

Name and address of health practitioner

Phone number

Email

# Appendix 7: section 19 forms

Download these forms from our website

Compulsory inpatient treatment order Special patient order notification	er notification
То	Date
NZ Transport Agency Waka Kotahi - Driver Safety	dd/mm/yyyy
From	
Name, Director Area Mental Health Services/Name of facility	
Patient details	
Full name	Date of birth
	dd/mm/yyyy
New Zealand driver licence number	
☐ Compulsory inpatient treatment order	Special patient order
Date of order	poolal patient oracl
dd/mm/yyyy	
Licence holder holds a class 1 and/or 6 New Zealand Driver L	icence.
Licence holder holds a class 2,3, 4 or 5 New Zealand Driver L Driving Instructor or Testing Officer Endorsement).	icence (including Passenger, Vehicle Recovery,
Licence holder cannot locate licence or refuses to provide license has retained the photo driver licence.	ence to Director of Area Mental Health Services and
Information not available.	
Released from Compulsory inpatient treatment/Special particle (Complete this section if assessed as medically unfit to drive)	atient order – unfit to drive
Date of release	
dd/mm/yyyy	
Licence holder holds a class 1 and/or 6 New Zealand Driver L	icence.
Licence holder holds a class 2,3, 4 or 5 New Zealand Driver L Driving Instructor or Testing Officer Endorsement).	icence (including Passenger, Vehicle Recovery,
Information not available.	
NZ TRANSPORT AGENCY WAKA KOTAHI	Te Kāwanatanga o Aotearoa New Zealand Government

# **Compulsory inpatient treatment order notification Special patient order notification**

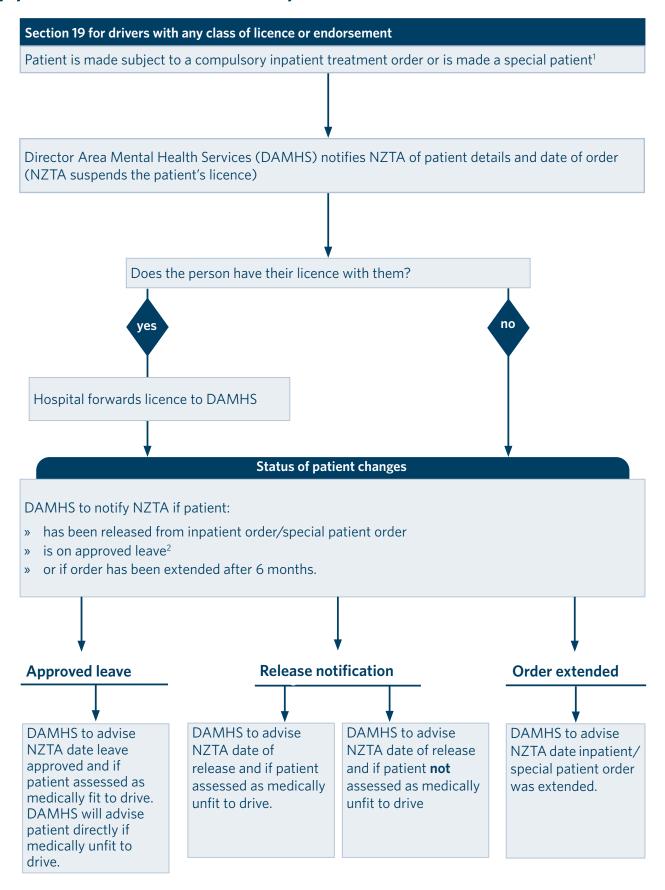
To  NZ Transport Agency Waka Kotahi - Driver Safety	Date
NZ Transport Agency Waka Kotani - Driver Salety	dd/mm/yyyy
From	
Name, Director Area Mental Health Services/Name of facility	
Patient details	
Full name	Date of birth
	dd/mm/yyyy
New Zealand driver licence number	
Compulsory inpatient treatment order	Special patient order
Date of order	
dd/mm/yyyy	
Licence holder holds a class 1 and/or 6 New Zealand Dri	iver Licence.
Licence holder holds a class 2,3, 4 or 5 New Zealand Driving Instructor or Testing Officer Endorsement).	iver Licence (including Passenger, Vehicle Recovery,
Licence holder cannot locate licence or refuses to provio has retained the photo driver licence.	de licence to Director of Area Mental Health Services and
Information not available.	
Released from Compulsory inpatient treatment/Speci (Complete this section if assessed as medically unfit to drive	
Date of release	
dd/mm/yyyy	
Licence holder holds a class 1 and/or 6 New Zealand Dri	iver Licence.
Licence holder holds a class 2,3, 4 or 5 New Zealand Dri Driving Instructor or Testing Officer Endorsement).	iver Licence (including Passenger, Vehicle Recovery,
Information not available.	
NZ TRANSPORT AGENCY	Te Kāwanatanga o Aotearoa New Zealand Government

# Compulsory inpatient treatment notification Approved leave of absence

To NZ Transport Agency Waka Kotahi - Driver Safety	Date
From	dd/mm/yyyy
From	
Name, Director Area Mental Health Services/Name of facility	
Patient details	
Full name	Date of birth
	dd/mm/yyyy
New Zealand driver licence number	
Approved leave of absence - fit to drive.	
Date of approved leave	
dd/mm/yyyy	
Licence holder holds a class 1 and/or 6 New Zealand Driver Licence (confirmation Director of Area Mental Health has returned the photo driver licence).	
Licence holder holds a class 2,3, 4 or 5 New Zealand Driver Licence (including Passenger, Vehicle Recovery, Driving Instructor or Testing Officer Endorsement).	
Information not available.	
Signature	Name
Date signed	
dd/mm/yyyy	
NZTRANSPORT	ិ Te Kāwanatanga o Aotearoa



## Appendix 8: section 19 process chart



- 1. Special Patient as defined under the Mental Health (Compulsory Assessment and Treatment) Act 1992.
- 2. Leave as outlined in section 31, 50 and 52 of the Mental Health (Compulsory Assessment and Treatment) Act 1992.

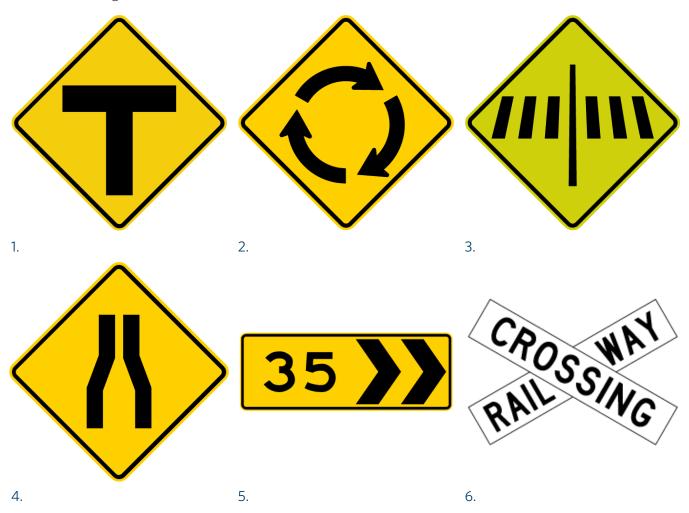
110

# Appendix 9: roadsign test

**Note:** this is an additional resource for you to use if you think it could be of use. It's not a mandatory test.

If you think a patient may be showing signs of forgetfulness or memory loss, you can give them this simple test on common traffic signs. If they have trouble with this test or take a long time to answer, they may need further assessment.

What does this sign mean? What action should the driver take?



It's important to note that performing well on this test doesn't necessarily mean a patient is fit to drive from a cognitive perspective, particularly if other aspects of their history raise concerns.

# Glossary

## Te rārangi kupu

Term	Meaning
the Act	The Land Transport Act 1998
commercial licence	A licence or endorsement(s) on a licence that permits the driver to carry goods or passengers for hire or reward such as a bus or truck driver.
the Director	The Director of Land Transport; for the purposes of this guide, the terms 'Director' and 'NZTA' can be considered as having the same meaning.
endorsement	An additional qualification that can be added to an existing driver licence that allows the holder to drive certain types of vehicles or operate in specific circumstances suchn as drive a taxi.
exception	A provision in legislation that states that the law doesn't apply to a person or group in certain circumstances.
exemption	Written permission given by NZTA not to follow a specific rule or regulation required by transport legislation. Exemptions granted by NZTA must be gazetted.
licence condition	An enforceable restriction or limitation placed on a driver licence in the interests of road safety.
private licence	A licence for driving a standard car or motorcycle licence. A courier van, ambulance and some motorhomes can be driven on this licence.
renew, renewal	The process of making an application before expiry, or no later than 5 years after expiry, of an existing driver licence so that a licence holder can continue to legally drive.
revoke	NZTA's process of officially reversing, rescinding, cancelling or otherwise taking back all or part of a driver licence.
the Rule	The Land Transport (Driver Licensing) Rule 1999.
suspend	NZTA's process of temporarily preventing all or part of a licence from being in force or effect.

## **References**

Monash University Accident Research Centre June 2022. 'Influence of chronic illness on motor vehicle crash risk'. Report Number 353. ISSN: 1835-4815

 $\underline{monash.edu/\_data/assets/pdf\_file/0008/2955617/Chronic-illness-and-MVC-risk\_Report-MUARC-report-no-353\_JUNE2022.pdf$