

Getting around & Driving with a Brain Tumour

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Getting On With Life

When there is a daily-life disability after treatment for a brain tumour..

- Stroke-like picture: weak arm and/or leg, speech problems, can't do personal daily activities, difficult to get on with life; or
- Less obvious problems e.g. with thinking, logic and reasoning, memory or mood problems; but
- As things settle, getting around becomes very important

Getting On With Life

Problems should be **assessed** by Rehabilitation Medicine Physician & full rehabilitation therapy team:

Rehabilitation Medicine Physician does a life & medical history + examination. Aim: to understand problem context;

Physiotherapist: muscle & mobility control; coordination and/or strength problems will often need ongoing work;

Occupational therapist: start with daily life basics, move to complex outside tasks like shopping, transport, driving;

Speech therapist: communication/speech problems;

Social worker: family/care network issues, work & finance matters.

Setting Practical Goals to Get On With Life

Discuss individual goals with each person & how they want a therapy program to improve their daily lives;

Provide therapy: at best time & in right place during recovery – whether in hospital, or in community after discharge;

Review the effects of all the rehab therapies provided, on a regular basis, with rehab team members & person / family together

Getting Around in Community

Everyone wants to get out & about, as soon as acute medical care is completed – but to do this, you should be able to:

- Move safely between home and vehicle (are there steps, uneven outside surfaces or pathways, lawns, tree roots?);
- Transfer into vehicle (SUV often easier than a normal car);
- Sit in seat, correctly belted-in (watch for motion sickness)

Getting Around in Community

If travel-sickness with movement is an issue:

- Is it related to upright posture +/- fall in blood pressure (BP)?
Review medications & fluid intake / output balance;
Trial of tilt-table re-training of BP reflexes
- Is it related to 3D head movement in space?
Check ENT basics: hard wax, or blocked middle ears;
Check for nystagmus – if head movements make nausea worse, consider trial of Cyclizine (Marezine™);
Sit as front seat passenger, fix vision on horizon.

So Now you Want to Drive Again

Driving is a very complex task – remember?

1. Learning to control the car with hands & feet, **without** looking down;
2. Keeping your place on-road: speed, position;
3. Awareness of other users – keep safe distances, avoid physical contact between vehicles!

Needs eyes, ears, cognition & muscular control;
Plus needs good thinking and judgment.

Driving a car

Social issues:

- Quite important for social mobility
- Strong part of personal identity, especially for men
- Public transport often quite inadequate, or even absent

Legal issues: driving is a privilege, regulated by law, it is not a universal human right!

- **Triangle** of responsibility: the person driving; the health care workers (HCWs); driver licensing authority (DLA).

The Individual Driver

(Ask: “Do I need to drive?”)

- The primarily responsible person – with a car crash, problems involve us directly! So, for every driver, we must:
 - Acknowledge if we have a medical problem;
 - Have insight to realise issues that could arise;
 - Report chronic medical problems to our doctor +/- driver licensing authorities (RMS, police etc).

The Health Care Worker (HCW) (mostly doctors +/- therapy staff)

(Ask: "Is this driver safe?")

- HCW is the secondarily responsible person to:
 - Consider daily life effects of illnesses: ethical questions;
 - Assess effects of disease on function;
 - Advise impartially, if safe (or not) to drive;
 - Report to Driver Licensing Authority (DLA) if a person is unsafe, or ignores advice not to drive.

Diver Licensing Authority (DLA)

(Ask – “Is it legal for X to drive?”)

- The decision-makers (RMS in NSW):
 - Obtain information from patients, HCWs;
 - Apply the standards & issue the licence;
 - Tell a person if: safe to drive; or drive with conditions, or not to drive (licence is then cancelled);
 - Legal sanctions if person non-compliant with decision.

Thinking about Assessment

- Three major concerns now (mostly not the same as first time getting our licence):
 - Physical/psychological ability to control the vehicle;
 - Functioning status of the driver in the vehicle – any need for modifications to the car?
 - Ability to understand and apply current road law, especially if new cognitive changes are present.

Practical steps – Is Driving Possible?

1. Do full medical/driving history: previously fit/unfit to drive; crashes; insight present?
2. Examination & produce clear documentation of the person's main conditions & co-morbidities
3. Make a decision about likely ability to drive and record if:
 - a. fit to drive without any conditions imposed;
 - b. fit to drive with conditions / car modifications; or
 - c. not fit to drive at all

Practical steps – Make It Official

4. Inform of results of the decision-making process, and advise the person, together with their family/carers
5. Report recommendations to the Driver Licensing Authority:
 - if conditions should apply (endorse the licence);
 - if further/periodic review is needed;
 - if unsafe to drive at all (cancel licence)
6. Continuing follow-up: a brain tumour is often dynamic setting, where things may change

Specific Problems 1 (NSW)

(exact time limits may vary slightly)

Blackouts: no driving for 6 months, if no cause is found.

Epilepsy: not to drive for 6 months if fitting is successfully treated, where a primary cause is found; not to drive for 12 months, if no primary cause is found.

Neuro deficits: not to drive for 6 months after surgery, radiotherapy or after onset of neuro changes; **never to drive** if hemianopia or visual neglect are present.

Specific Problems 2 (NSW)

Visual Acuity (VA) / Field problems:

VA 6/12 or better; not $> 20^\circ$ central loss; Visual fields must be $> 110^\circ$ in horizontal azimuth

Brain Tumour itself

Care if there is neuropsychological impairment

If there are any worries, get a rehabilitation opinion

Commercial driver's licence is not appropriate after treatment for a malignant brain tumour

Getting back to Driving

Full assessment steps if the decision is in doubt:

- Physical examination
- Visual fields/perception
- Cognition/judgment
- Off-road test: road rules, car placement
- On-road testing: Instructor plus OT

Last two are not covered by Medicare: ~\$1000 cost

Can I travel longer distances?

By surface public transport (bus or train) – a few hours

- Can you get through check-in & boarding station?
- Can you get in/out of the vehicle and a seat?

Train preferable if available for journey > a couple of hours, easier to access than steps up into a long-distance bus

Disabled accessible toilets are usually present on trains, but not on buses. Is there a helper available?

Can I travel longer distances?

Air travel is more complex (like a train with wings); long walk to check-in & boarding gates; need for X-ray scanning; 'First-on, last-off' rule if any physical disability; Disabled people need companions on flights;

Economy seats are cramped (consider Economy-plus seats);
Some A330/A350/A380s have double-width toilets;
Cabin pressure set in most aircraft at ~2500 m.

B787, A350 set at ~1700 m.

Summary: Brain tumours, driving & travelling

Thoroughly & impartially assess safety for all living activities
Know legal responsibilities in regard to social mobility & driving

Possible outcomes:

- Not fit to drive
- Drive +/- limitations (distance, daylight..)

Long distance travel may be possible, with an assistant

Ongoing follow-up as brain tumour is a chronic disease

