Administrative Appeals Tribunal of Australia

Landers and ⇦ Civil Aviation Safety ⇨ Authority [2013] AATA 465 (5 July 2013)

Last Updated: 8 July 2013

[2013] AATA 465

Division	**GENERAL ADMINISTRATIVE DIVISION**
File Number(s)	**2012/4695**
Re	**Peter Landers**
	APPLICANT
And	⇦ **Civil Aviation Safety** ⇨ **Authority**
	RESPONDENT

DECISION

Tribunal	**Deputy President J W Constance** **Dr Kerry Breen, Member**
Date	**5 July 2013**
Place	**Melbourne**

The reviewable decision, being the decision of the ⇦ **Civil Aviation Safety** ⇨ Authority made 21 September 2012 and which refused the application of Mr Landers for a class 2 medical certificate, is affirmed.

.....[sgd].....
Deputy President J W Constance

CATCHWORDS

CIVIL AVIATION – medical standard for the issue of class 2 medical certificate – safety-relevant condition - sequela of a surgical operation - subdural haematoma – seizures - safety of air navigation - decision under review affirmed

LEGISLATION

Civil Aviation Act 1988 (Cth) *ss 3(1)*, *9A*, *20AB(1)*

Civil Aviation Regulations 1988 (Cth) *r 5.04*

Civil Aviation Safety Regulations 1998 (Cth) *rr 11.056, 67.015, 67.155, 67.180*

REASONS FOR DECISION

Deputy President J W Constance
Dr Kerry Breen, Member

A. INTRODUCTION

1. Mr Landers is seeking a review of the decision of the **Civil Aviation Safety** Authority to refuse to issue him a class 2 medical certificate. As the holder of a pilot's licence, Mr Landers requires a medical certificate (with or without conditions) issued by the Authority to enable him to operate an aircraft.
2. For the reasons which follow, the decision under review will be affirmed.

B. BACKGROUND

3. Unless stated otherwise the following findings of fact are based on the evidence of Mr Landers.
4. Mr Landers is 62 years old. He holds a Private Pilot (Aeroplane) Licence. He has accrued 106.9 hours of flying experience.
5. In May 2011 Mr Landers underwent a craniotomy, a surgical procedure to clip an aneurysm on a cerebral artery. He made a good recovery.
6. In late June 2011 Mr Landers fell and struck his head. On 25 June 2011 he underwent a second craniotomy to drain a haematoma which resulted from the fall. Again he made a rapid recovery.
7. On 14 July 2011 he felt unwell and experienced headache and numbness in the fingers of his left hand for about two hours. He was admitted to hospital overnight.
8. On 21 March 2012 Mr Landers applied for the renewal of his class 2 medical certificate.
9. Mr Landers says that since July 2011 he has not had any recurrence of similar medical issues. He has not suffered from headaches.
10. It is Mr Landers' intention to use the privileges of his licence for recreational purposes only. In the past he has flown approximately 50 hours per year.

C. ACT AND REGULATIONS

Civil Aviation Act 1988 (Cth)

11. Subsection 20AB(1) of the *Civil Aviation Act 1988* (Cth) provides that a person must not perform any duty that is essential to the operation of an Australian aircraft during flight times if the person does not hold a current civil aviation authorisation that authorises the performance of that duty. *Civil aviation authorisation* is defined to include a certificate issued under the *Civil Aviation Regulations 1988*.[1]
12. By section 9A of the Act the Authority, and therefore this Tribunal, is required to regard the safety of air navigation as the most important consideration in the exercise of its powers under the Act.

Civil Aviation Regulations 1988

13. Regulation 5.04(1) of the *Civil Aviation Regulations 1988* provides:

> *(1) Without the permission of CASA, the holder of a flight crew licence must not perform a duty authorised by the licence if the person does not hold a current medical certificate that is appropriate to the licence.*

14. Regulation 5.04(3) relevantly provides:

> *(3) For the purposes of this regulation, a medical certificate is appropriate to a flight crew licence if:*
> ...
> *(b) in the case of ... a private pilot licence ... the medical certificate is a class 1 or class 2 medical certificate.*

Civil Aviation Safety Regulations 1998

15. The medical standards which must be met to obtain each class of medical certificate are set out in Part 67 of the Regulations.
16. Subject to qualifications which are not relevant to this application, regulation 67.180 provides that the Authority must issue a medical certificate to an applicant if the applicant meets the requirements of sub-regulation 2. For the purposes of this application the relevant requirements are:

> *(2)(e) either:*

(i) the applicant meets the relevant medical standard; or

(ii) if the applicant does not meet that medical standard — the extent to which he or she does not meet the standard is not likely to endanger the safety of air navigation;

17. Regulation 11.056 permits the issue of a medical certificate to a person subject to any condition that is necessary in the interests of the safety of air navigation.
18. Regulation 67.155 sets out the criteria required to meet medical standard 2. The relevant criteria are:

> *Abnormalities, disability and functional capacity*
> *2.1 Has no safety-relevant condition of any of the following kinds that produces any degree of functional incapacity or a risk of incapacitation:*
> *(a) an abnormality;*
> *(b) a disability or disease (active or latent);*
> *(c) an injury;*
> *(d) a sequela of an accident or a surgical operation*
>
> *Nervous system*
> *2.8 Is not suffering from safety-relevant effects of a head injury or neurosurgical procedure*

19. Regulation 67.015 provides the meaning of *safety-relevant*:

> *For the purposes of this Part, a medically significant condition is **safety-relevant** if it reduces, or is likely to reduce, the ability of someone who has it to exercise a privilege conferred or to be conferred, or perform a duty imposed or to be imposed, by a licence that he or she holds or has applied for.*

D. ISSUES FOR DETERMINATION

20. The following issues arise for determination.

(1) Does Mr Landers meet the relevant medical standard for the issue of a class 2 medical certificate?
(2) If not, is the extent to which he does not meet the standard likely to endanger the safety of air navigation?

E. CONSIDERATION OF THE ISSUES

Issue 1: Does Mr Landers meet the relevant medical standard for the issue of a class 2 medical certificate?

21. It is not in dispute that in the period May-July 2011 Mr Landers:
    - underwent a craniotomy and clipping of an aneurysm on a cerebral artery;
    - suffered a head injury and subsequent development of a large haematoma;
    - underwent a craniotomy to evacuate the haematoma;
    - suffered an episode of transient weakness requiring a short period of hospitalisation.
22. We are satisfied that the conditions referred to above are medically significant and "safety-relevant" as they are likely to reduce the ability of Mr Landers to exercise the privileges, and to perform the duties imposed on him by the licence he holds. We have reached this conclusion on the basis of the evidence of Dr King, Dr Navathe and Professor Bittar referred to below. On the basis of their evidence we are satisfied that there is a significant risk that Mr Landers will suffer a seizure or seizures consequent upon the injury and surgical procedures he suffered in 2011.

Report by Mr King, Neurosurgeon

23. On 31 May 2012 Mr King reported, in part:

> *Peter is a 62 year old man who underwent elective clipping of a right middle cerebral artery aneurysm on 6th May 2011. The aneurysm was diagnosed on routine screening following an acoustic neuroma resection. He recovered well from surgery and his post operative CT looked satisfactory.*
> *In June of 2011, he had an episode where he fell and struck his head, and developed a large right sided subacute subdural haematoma. At that point, I ceased his aspirin and performed a mini craniotomy for drainage of the subdural on 25th June 2011.*
> *Peter remained well since that time. He did have one re-admission to hospital in July of 2011, when he developed some headache. A CT at that time showed a small amount of residual blood.*
> *He has never had a documented seizure, however he had an episode of transient weakness, which may have been related to the subdural, or may have been a seizure, and on that basis, I placed him on Keppra, an anticonvulsant 500 mg twice a day for approximately three months. He has now been off that medication for nearly 12 months, and has had no further events and no seizures.*[2]

Evidence of Associate Professor Navathe, Principal Medical Officer

24. Professor Navathe is the Principal Medical Officer with the Authority. He has specialised in Aerospace Medicine for the past 22 years. He provided a statement dated 21 January 2013[3] and gave evidence.
25. In the opinion of Professor Navathe, the following aspects of Mr Landers' medical history are significant in relation to the question of his certification under the Act:
    - a head injury;
    - subdural haematoma;
    - episode of transient weakness;
    - treatment for an unruptured aneurysm of the middle cerebral artery for which he had a craniotomy and clipping.[4]
26. We accept the evidence of Professor Navathe that in the general population the risk of a seizure occurring is 0.05%. We accept also his evidence that each of the two conditions for which Mr Landers required intracranial surgery carries increased risks of epilepsy.
27. In regard to the surgical clipping of the middle cerebral artery Professor Navathe gave evidence

that:

> *Published studies indicate that the cumulative probability of a person suffering a seizure following clipping of the middle cerebral artery is 10.5% after 1 year and 3.5% after 2 years.*[5]

28. In regard to the operation for the subdural haematoma, Professor Navathe said that:

> *Published studies indicate that the cumulative probability of a person suffering from a seizure in a case of an SDH* [subdural haematoma] *that is not evacuated is 15.3% and if the SDH is evacuated it is 27.8% over two years.*[6]

He referred to a paper by Englander and colleagues entitled *"Analysing risk factors for late posttraumatic seizures: a prospective multicenter investigation"*.[7]

Report of Professor Bittar, Consultant Neurosurgeon[8]

29. Professor Bittar provided a report dated 8 May 2013. Dr Bittar did not interview or examine Mr Landers and his opinion was based on the various medical reports made available to him and on his understanding of the published literature.
30. Dr Bittar reported that the risk of seizure after surgical clipping of an unruptured cerebral aneurysm has been reported with a degree of variability, ranging from relatively low (0.1% to 4.4%) to considerably higher (9% to 16%). In his opinion the risk of Mr Landers suffering seizures following this procedure is between 1% and 5%.
31. In the opinion of Professor Bittar, Mr Landers' "total annual risk at this point in time would be approximately 6% ..."[9]
32. In relation to the risk of epilepsy after a subdural haematoma, Professor Bittar was of the opinion that Mr Landers had suffered a subacute and not an acute subdural haematoma and that in this instance the risk of epilepsy would be more aligned with that reported after surgical treatment of a chronic subdural haematoma. He said that, in five published studies such a risk was reported to range from 1% to over 20%.
33. Referring to the study by Englander and colleagues quoted by Professor Navathe, Professor Bittar was of the view that that study was of patients with moderate to severe head injury and that as, in his opinion, Mr Landers' type of head injury was much less severe, his risk of epilepsy is much lower. Professor Bittar expressed the opinion that the risk of Mr Landers suffering a seizure as a result of the surgically treated subdural haematoma is in excess of 1% and most likely less than 5%.
34. Professor Bittar concluded that Mr Landers "has a small but significant chance of having seizures and I most certainly would not say that his seizure risk is negligible. His total annual risk at this point in time would be approximately 6%, diminishing progressively over the next 10 years."[10]

Mr Landers' argument

35. Mr Landers argues that whilst he has had a medical history of head injury and subdural haematoma, he is not now suffering from any safety-relevant effects of such an injury. He says that there is always a risk associated with a person flying an aircraft, irrespective of the person's standard of health.
36. Although there is no evidence that Mr Landers has suffered a seizure or seizures since July 2011, it does not follow that there is no risk that such an event or events may occur. The medical evidence to which we have referred establishes otherwise.
37. In a letter dated 15 August 2012[11] Mr Landers was advised on behalf of Mr King as follows:

> *Mr King wrote to Dr A Hegde of CASA on 31 May 2012, a copy of his letter is enclosed. He advises his opinion has not changed, and he cannot recommend you be considered for a private pilot licence.*

There is no evidence to suggest that Mr King has changed this view. We take into account also that Mr King plans to review Mr Landers in August 2015.[12]

Determination of the Issue

38. We are satisfied that Mr Landers has safety-relevant conditions of the kinds referred to in regulation 67.155, namely an injury and a sequela of a surgical operation, which produce an increased risk of incapacitation as a result of a seizure. For this reason Mr Landers does not meet the medical standard for the issue of a class 2 medical certificate.

Issue 2: Is the extent to which Mr Landers does not meet the medical standard for the issue of a class 2 medical certificate likely to endanger the safety of air navigation?

39. On the basis of the evidence of Professor Navathe[13] we are satisfied of the following:
    - *a seizure during any stage of flight risks major interference with the safe control of the aircraft due to the interference with consciousness associated with any seizure event;*
    - *a seizure may occur with very little warning, thus preventing the safe handover of control to another pilot;*
    - *a seizure may cause the pilot to block the primary flight controls (yoke and rudder pedals) and interfere with secondary controls, such as the throttles, flaps or undercarriage;*
    - *the confined space typical of most cockpits would limit the opportunity to minimise self-harm* [physical injury or respiratory obstruction] *due to the fit;*
    - *these characteristics of seizure activity, and their potential risks in the confines of an aircraft cockpit mean that, even if Mr Landers were flying with a qualified co-pilot, the timing, nature and severity of any seizure activity may be such as to prevent the co-pilot safely assuming control of the aircraft in order to avert an accident in the event of Mr Landers suffering from a seizure;*
    - *a seizure in a solo- piloted aircraft would result in complete loss of control;*
    - *the post-ictal phase would limit the restoration of normal cognitive function for an extended period of time.*
40. Taking into account the effect that a seizure would have on the ability of Mr Landers to operate an aircraft, we are satisfied that the risk that he will suffer a seizure or seizures, is likely to endanger the safety of air navigation.
41. We have given consideration to whether a condition or conditions could be imposed in accordance with regulation 11.056 which would reduce the likelihood of endangering the safety of air navigation to an acceptable level. Taking into account the evidence of Professor Navathe as to the risks involved if a pilot suffers a seizure while in control of an aircraft, we are not satisfied that the imposition of a condition or conditions would reduce the likelihood to such a level that it would be acceptable. Mr Landers did not contend that the issue of a certificate subject to conditions was appropriate.

CONCLUSION

42. The reviewable decision, being the decision of the **Civil Aviation Safety** Authority made 21 September 2012 and which refused the application of Mr Landers for a class 2 medical certificate, will be affirmed.

I certify that the preceding 42
(forty-two) paragraphs are a true
copy of the reasons for the decision

herein of Deputy President J W Constance and Dr Kerry Breen, Member.

.....[sgd].....

Dated 5 July 2013

Dates of hearing	**25 May 2013**
Counsel for the Applicant	**Mr J Ribbands**
Advocate for the Respondent	**Ms C Swain, CASA Legal Services Group**

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[1] *Civil Aviation Act 1988* (Cth) s 3(1).

[2] *Exhibit A8.*

[3] *Exhibit R4.*

[4] *Exhibit R4 para.73.*

[5] *Professor Navathe referred to a paper by Hart and colleagues entitled "Epilepsy after subarachnoid hemorrhage: the frequency of seizures after clip occlusion or coil embolization of a ruptured cerebral aneurysm: results from the International Subarachnoid Aneurysm Trial" published in J Neurosurg 2011 Dec;115(6):1159-68.*

[6] *Exhibit R4 para.74.*

[7] *Published in Arch Phys Med Rehabil. 2003, Mar:84(3):365-74.*

[8] *Exhibit R2.*

[9] *Exhibit R2 p.3.*

[10] *Exhibit R2 p.3.*

[11] *Exhibit R3.*

[12] *Exhibit R1 p.46.*

[13] *Exhibit R4 pp.21-22.*
