



# The Australasian College of Aerospace Medicine

Application for Fellowship

Information Sheet

## **Introduction**

Aerospace medicine - also called 'aviation medicine' - is the medical specialty concerned with the interaction between the aviation environment and human physiology. It is concerned with the physiological stresses experienced by a healthy person in flight, and the interaction between the aviation environment and underlying health problems - in passengers as well as in aircrew. It is also concerned with sustaining and enhancing the performance of those engaged in flight operations. Aerospace medicine also encompasses the health, safety, and working environments of those ground personnel engaged in support of air operations.

The aviation environment poses significant physical and physiological hazards: reduced barometric pressure, hypoxia, extremes of temperature, noise, vibration, fatigue, acceleration forces, poor ergonomics, exposure to smoke and fumes. There is also the ever-present risk of having to eject or impacting terrain.

Aerospace medicine promotes flight safety by maintaining the health and sustaining performance of those engaged in air operations, training aircrew to recognise and respond appropriately to the limitations of a sea-level-adapted body in an aviation environment, and conducting research into the health and performance impacts of exposure to the flight environment.

A specialist in aerospace medicine has the responsibility to promote the safety of flight operations through health surveillance programmes. Aerospace medicine includes primary, secondary, and tertiary prevention of harm, through regular medical surveillance of aircrew, appropriate management and aeromedical disposition of aircrew with disease, and the rehabilitation and return to flying of suitable candidates.

Returning a pilot to flying involves not only knowledge of the disease process and management, but also an understanding of the disease in the context of the stresses of flight, the risk of incapacitation, ability to function in arduous conditions - both in terms of the impact of the underlying condition on flight safety, as well as the potential impact the aviation environment may have on the disease process.

The practice of aerospace medicine is holistic, dealing with individuals in the context of occupational and operational systems where flight safety is paramount. Although the specialist in aerospace medicine may at times need to represent a pilot to an employer or regulatory authority, they must at all times act in the interests of flight safety.

Although aerospace medicine shares some commonality with primary health care, occupational medicine, and preventive health, it also relies heavily on a knowledge of non-medical disciplines such human factors, aerospace engineering, industrial hygiene, anthropometry, and ergonomics. The availability of health providers who are competent in the practice of aerospace medicine is a cornerstone of flight safety; however, the knowledge and skills required to practice aerospace medicine have developed to such a degree that a comprehensive understanding of the discipline by every medical practitioner cannot be expected. This is the basis of offering clinical training and specialist

qualifications in aerospace medicine. Aerospace medicine is not merely 'being a clinician in an aviation setting'.

The Australasian College of Aerospace Medicine was established in 2011 to meet the need to train and credential specialists in aerospace medicine in Australia and New Zealand.

The objectives of the Australasian College of Aerospace Medicine are to:

- Educate and train the next generation of specialists in aerospace medicine;
- Maintain professional standards and ethics among specialists in aerospace medicine through continuing professional development and other activities;
- Promote the study of the science and art of aerospace medicine;
- Increase the evidence and knowledge on which the practice of aerospace medicine as a recognized medical specialty is based, through research and dissemination of new knowledge and innovation within the profession and the community;
- Seek improved health and safety for all people who venture into the aerospace environment for work or for travel, by developing and advocating health and safety policy in partnership with health consumers and jurisdictions;
- Support and develop aerospace physicians as specialist clinicians, occupational health practitioners, public health practitioners, risk managers, teachers and researchers;
- Increase awareness of aerospace medicine amongst the wider medical community; and
- Work collaboratively and supportively with other bodies having similar objects within Australasia and elsewhere.

In striving for these objectives, ACAsM will undertake the following activities:

- Define the competencies of a specialist in aerospace medicine, acceptable to aerospace medicine stakeholders in Australasia;
- Recognise through Fellowship those who meet the competencies of a specialist in aerospace medicine;
- Provide mentoring for aviation medicine practitioners who aspire to a career in aerospace medicine;
- Define Continuing Professional Development requirements to maintain currency in aerospace medicine; and
- Pursue recognition of aerospace medicine as a medical specialty in Australasia.

## **Benefits and Responsibilities of Fellowship**

Individuals who have been recognised as a specialist in aerospace medicine and designated a Fellow of the Australasian College of Aerospace Medicine may use the post-nominal designation 'FACAsM'.

Fellows of the Australasian College of Aerospace Medicine are required to:

- pay the annual fees of ACAsM; and
- meet the requirements of the ACAsM continuing professional development guidelines.

Fellowship or Membership of the Australasian College of Aerospace Medicine includes membership of the Australasian Society of Aerospace Medicine or the Aviation Medicine Society of New Zealand.

In accepting Fellowship, the Fellow declares their intent to support the objectives, goals, and activities of the College, and to uphold the practice of aerospace medicine as a clinical entity.

Fellows are encouraged to become involved in the activities of the various committees within ACAsM. Being available to undertake mentoring and supervision of aspiring aerospace medicine specialists will be an important responsibility for Fellows of the Australasian College of Aerospace Medicine. Details about how to become a Supervisor can be obtained from the ACAsM Education Committee.

Fellows are also encouraged to become involved in the activities of ASAM or AMSNZ. They are encouraged to contribute to the development of aviation health policies and provide expert input into aviation safety debates whenever possible.

There is an ongoing need for specialists in aerospace medicine to provide education and training to aircrew, their commanders or employers, the wider medical community, and the traveling public. Fellows of the Australasian College of Aerospace Medicine are encouraged to become involved in these activities.

## **Foundation Fellowship ('Grandfathering')**

With the establishment of the Australasian College of Aerospace Medicine, there is a need to recognise those aerospace medicine practitioners who already meet the training, experience, and competencies of a specialist in aerospace medicine.

The College will identify eminent specialists in aerospace medicine from Australia and New Zealand to form a Foundation Fellowship Committee. The Foundation Fellowship Committee will run during the period January to December 2012.

Individuals who wish to be recognised by the College as a specialist in aerospace medicine and receive a Fellowship must meet all of the following criteria:

- be a medical practitioner, with current unconditional registration to practice medicine in Australia or New Zealand;
- be an individual 'in good standing' with the aeromedical regulatory authorities;
- hold a postgraduate degree in aerospace medicine at the level of Diploma or Master's degree from an institution approved by the Committee;
- have at least seven years full-time relevant experience in aerospace medicine;
- be working in a position, or have previously reached a position, requiring exercise of aerospace medicine knowledge and skills at the level of a consultant or advisor;
- meet the competencies of a specialist in aerospace medicine; and
- have maintained their currency in aerospace medicine by undertaking relevant continuing professional development activities within the previous three years.

Prospective Fellows will be required to complete the attached application, which will be evaluated by the ACAsM Fellowship Committee.

In exceptional circumstances, the Fellowship Committee may consider for Fellowship those who have an extensive involvement in aerospace medicine at the level of a specialist/consultant/advisor but who do not have formal post-graduate qualification in aviation medicine. These will be considered on a case-by-case basis, provided the applicant demonstrably meets the competencies of aerospace medicine and the other criteria for Fellowship.

The successful applicant for 'grandfathering' will be a person who is considered by their peers to have reached the level of expertise appropriate to be recognised as a specialist in aerospace medicine. The Chairman of the Fellowship Committee will advise the applicant of their success, and notify them that their Fellowship will become effective once they have paid the prescribed fees, after which the new Fellow will be entitled to use the post-nominal designation 'FACAsM'.

In the case an applicant is unsuccessful, the Chairman will detail the reasons for the applicant being unsuccessful, and detail the requirements the need to be met before the application can be considered suitable for Fellowship. In the case that there is insufficient information to support a decision, the Chairman of the Committee will request additional information or documentary evidence before considering the application again.

## **Appeal**

The unsuccessful applicant may appeal the decision of the Fellowship Committee. In the first instance, the applicant should appeal the decision with the Chairman of the Fellowship Committee, providing whatever additional information they believe supports their application. If the original decision is upheld by the Chairman of the Fellowship Committee, the applicant may redress the decision directly with the ACAsM Board. The decision of the Board will be final.

## **Continuing Professional Development**

Fellows of the College are required to participate in ongoing professional development, with a particular emphasis on aerospace medicine. Fellows are expected to accrue 100 CPD points each calendar year. Details of the ACAsM CPD programme are contained in the attached template.

Fellows or Trainees who are already involved in a CPD programme of another College can submit those points to ACAsM in order to satisfy the CPD requirement; however, at least 50% of the CPD points should arise from an activity with relevance to aerospace medicine.

## **Certificate of 'good standing'.**

It is a requirement of the Australasian College of Aerospace Medicine ('the College') that its Fellows and Members be 'in good standing' with aeromedical regulatory authorities in Australasia, comprising the Civil Aviation Safety Authority (CASA) and the RAAF Institute of Aviation Medicine (AVMED) in Australia, and the Civil Aviation Authority and the Aviation Medicine Unit in New Zealand.

In order to determine that an applicant is 'in good standing', the Foundation Fellowship Committee will provide the aeromedical regulatory authorities a list of applicants names, and ask them to confirm that the applicants are not the subject of a current or unresolved investigation, have not been the subject of an investigation that returned a negative finding, and are not the subject of disciplinary action. *Details of the nature of the complaints will not be sought from the regulators.*

An applicant who is not 'in good standing' with any of the aeromedical regulatory authorities will be asked to provide additional information in support of their application for Fellowship or Membership of the College.

An applicant who does not provide consent for their name to be circulated to the four aeromedical regulatory authorities in order to determine they are 'in good standing' will not be considered further for entry to the College. However, the applicant may resubmit their application at any time without prejudice, subject to the same process.

Please provide written references from two (2) people who can provide the Fellowship Committee with information relevant to your suitability for Fellowship of the Australasian College of Aerospace Medicine. The Fellowship Committee may also contact these referees directly.

### ***Supporting documents***

To enable the Foundation Fellowship Committee to properly assess your suitability to be recognized as a Fellow of the Australasian College of Aerospace Medicine, a copy of the following documents must accompany your application:

1. Evidence of current unconditional registration to practice medicine in Australia or New Zealand.
2. A comprehensive curriculum vitae (CV), detailing the training, qualifications, employment, and academic activities and publications relevant for recognition as a specialist in aerospace medicine.
3. A summary of continuing medical education activities during the last three (3) years, with specific emphasis on those activities relevant to aerospace medicine. Use the attached Continuing Professional Development (CPD) template for each of the last three years.
4. A letter detailing how you meet the core competencies of a specialist of aerospace medicine (listed below).
5. Two (2) written references.
6. *Payment of application fee (pay directly to College account, details below).*

### ***Fees***

Application for Fellowship	AU\$250
Convocation fee (if successful)	AU\$150
Examination fee	AU\$750
Annual Fee	AU\$350 Fellows; AU\$250 Associate Fellows

Fees can be paid directly to: Australasian College of Aerospace Medicine  
National Australia Bank  
BSB: 083121, Account Number: 1181 48633

*Make sure you include your name as the payment reference so we can track your payment.*

### ***Submit application***

*Email completed application form along with required supporting documents to:*

## **Core Competencies for Foundation Fellowship**

### **The Flight Environment**

Demonstrate practical application of knowledge of the following physical and physiological stresses of the flight environment:

- Hypobaria
- Hypoxia
- Decompression illness
- Hypo- and hyperthermia
- Long-duration acceleration
- Short-duration acceleration during ejection
- Noise
- Vibration

Demonstrate practical application of knowledge of the interactions between the stresses of flying and clinical disease and pathophysiological processes that accompany clinical and sub-clinical disease.

Demonstrate practical application of knowledge of the proper use of aircrew life-support equipment and personal protective equipment to mitigate the stresses of flying, and the possible adverse effects of using them.

Demonstrate practical application of knowledge of the limitations of the visual and vestibular systems in the aviator, especially as they relate to disorientation, visual illusions, and motion sickness.

### **Principles of Aerospace Medicine**

Demonstrate practical application of knowledge of the principles of aircrew certification, including the principle of risk assessment in the aeromedical decision-making process.

Demonstrate practical application of knowledge in assessing an individual's fitness to fly, including the role of functional cockpit checks and in-flight assessments when required.

Demonstrate practical application of knowledge of the role of the specialist of aerospace medicine, with specific emphasis of their relationship to the aviator, an employer, and the regulator.

Demonstrate practical application of knowledge of how the principles of aerospace medicine are applied not only to aviators, but also to other flight-safety critical trades in support of aviation, including air traffic control and aviation maintenance personnel.

## **Clinical Aerospace Medicine**

Demonstrate the ability to assess a patient with clinical and sub-clinical disease in order to produce a valid differential diagnosis, undertake an appropriate investigation and management plan, and formulate and implement an aeromedical management plan.

Demonstrate practical application of knowledge of the potential impact on flight safety of prescription and non-prescription medications, and the appropriate use of these agents in aviators.

Demonstrate practical application of knowledge of clinical medicine to be able to assess the presenting features, underlying pathophysiology, and management strategies that increase concern regarding the potential risk a clinical condition may pose to flight safety.

## **Assessing the Hazards of the Aviation Workplace**

Demonstrate practical understanding of the principles of physical, chemical, biological, ergonomic, and psychosocial and other hazards to health in the aviation workplace, and the illnesses they can cause.

Demonstrate practical understanding of the principles of health surveillance and health risk management in the aviation workplace.

## **Aeromedical Evacuation**

Demonstrate practical application of knowledge of how the aviation environment can influence common clinical, post-surgical, and traumatic conditions, and identify the features contributing to safe and efficient transport of patients and casualties by air.

## **Aviation Human Factors**

Demonstrate practical application of knowledge of aviation human factors, especially fatigue, information processing, perception, orientation and situation awareness, and decision-making.

Demonstrate practical application of knowledge of the interaction between aviation human factors, the stresses of flight, and the manifestation of clinical and sub-clinical diseases.

## **Scientific Method**

Demonstrate practical application of the principles of good scientific practice, including the ethical considerations of research, scientific design and methodology, appropriate use of statistics, interpretation and presentation of results, and communication of relevant findings to scientific and user communities.

Demonstrate the ability to critically appraise the scientific literature, with specific reference to the ability to determine the merits of the literature based on appropriate research design, reporting of results, and appropriate use of statistics, ensuring that the findings, conclusions, and recommendations are based on sound science.

### **Professional Qualities of a Specialist**

Demonstrate practical application of the qualities that define the good clinical practice of a Specialist as described by the Professional Qualities Curriculum of the RACP (<http://www.racp.edu.au/page/curricula/professional-qualities>).