

## Flying high

Yousouf Peerbaye, MD; Sunil Sookram, MD

A good residency program goes beyond assessing “weak and dizzy” patients. In fact, it goes beyond learning strategies to reduce the long waits our patients face. Once in a while unique opportunities arise, and we are exposed to new experiences that enrich our future practice.

Residents from the University of Alberta and University of Toronto RCPSC emergency medicine programs had the opportunity to participate in such an experience by enrolling in the Canadian Forces Flight Surgeon course. This 7-week program, taught at the Defence and Civil Institute of Environmental Medicine (DCIEM) in Toronto, is an annual course run for military and selected civilian physicians, to acquaint them with aviation medicine.

During the course, participants learned about the unique stressors aviators endure while operating a variety of airplanes and helicopters. Basic scientists and DCIEM engineers described their research into spatial disorientation, airsickness, hypother-

mia and other problems that influence aircrew health. Experts on decompression and high altitude sickness shared their expertise, and medical experts described the effect of high G-forces on human organ systems. (G-forces are the extreme acceleration forces experienced by occupants of

atives discussed emergency care on commercial airliners. Aeromedical transport and SAR (search and rescue) experts shared military and civilian experiences. Canadian Forces personnel who responded to the Swiss Air disaster near Peggy’s Cove, NS, discussed the practical considerations

involved in planning the response to a major air disaster. The importance of human factors and how they influence flight accidents was covered.

Course participants experienced simulated high altitude by decompressing to 43,000 feet in a hypobaric chamber, all the while breathing positive pressure oxygen. Then we attempted simple psychomotor skills — without oxygen — at “25,000 feet,” but two minutes of this rarefied air left all of us pre-syncope.

Next, it was off to the pool to learn survival skills, because aircraft periodically “ditch” in the water. Extricating oneself from under a parachute in the water was challenging (especially for the non-swimmer in the group), and the difficulty of climbing into a life raft while weighed down by wet clothing quickly became apparent.

Finally, we went out into the field to spend a week with an operational squadron, witnessing, first-hand, the



Dr. Sookram, being “dragged into” the Canadian Forces Search and Rescue helicopter, “The Labrador”

high performance aircraft such as fighter jets and acrobatic planes.) Throughout the training, our instructors emphasized how the extreme environment of flight influences normal physiology. The course participants were also introduced to the principles of space medicine and the challenges that will face occupants of the future International Space Station and manned missions to Mars.

Civilian airline medical representa-

\*Division of Emergency Medicine, University of Alberta, Edmonton, Alta.

physiological stresses aircrew encounter while performing their jobs. One author joined a CF-18 Hornet



**Drs. Andrea Kerr and Michelle Lambeth, standing with Drs. Lou Fraser and Aaron Khan**

squadron, and in this high performance jet environment, during air combat manoeuvres, gained a true appreciation of airsickness and G-intolerance. The other author, to his chagrin, had a tamer experience, flying with the Metro Toronto Air Ambulance Program.

The training program accomplished several objectives. It acquainted participants with aviation medicine. It gave us a better understanding of the medical care needs of aviators, who are likely to see and treat in our EDs, and who are responsible for the lives of many people in our increasingly mobile society. Finally, it provided a

better understanding of aeromedical transport and disaster response — highly relevant and exciting areas for future emergency physicians.

For information regarding the Aerospace Medicine and Aeromedical Transport fellowships, please contact Dr. Chris Mazza at [cmazza@basehospital.on.ca](mailto:cmazza@basehospital.on.ca), 416 480-5559.

**Acknowledgments:** The authors are grateful to DCIEM for their cooperation and to Dr. Andrea Kerr for assistance with the photographs.

**Correspondence to:** Dr. Sunil Sookram, WMC 1G1.50, University of Alberta Hospital, 8440 112 St., Edmonton AB T6G 2B7; [ssookram@ualberta.ca](mailto:ssookram@ualberta.ca)

## Services

### Abonnement et ventes

Le *JCMU* est offert à titre gracieux aux membres de l'ACMU dont la cotisation est à jour; les autres peuvent s'abonner annuellement. Voici les tarifs pour l'an 2000 : Canada 50 \$, États-Unis et ailleurs 50 \$ US. Communiquez avec le bureau de l'ACMU au 800 463-1158. Exemplaire unique d'un numéro de l'année en cours 15 \$; anciens numéros 15 \$ (sujet à disponibilité). Les commandes au Canada sont assujetties à la TPS de 7 % / TVH de 15 % (N.-É., N.-B., T.-N.) là où elle s'applique. On doit faire le paiement à l'ordre de l'Association canadienne des médecins d'urgence (ACMU) en argent canadien ou américain selon le cas. Les cartes VISA et MasterCard sont également acceptées.

### Changement d'adresse

Nous demandons un avis de 6 à 8 semaines afin d'assurer un service ininterrompu. Veuillez faire parvenir votre adresse postale actuelle, votre nouvelle adresse et la date à laquelle elle doit entrer en vigueur à : [CJEM@caep.ca](mailto:CJEM@caep.ca) ou faites parvenir un fax au 613 523-0190.

### Tirés à part

Des tirés à part d'articles du *JCMU* sont disponibles en quantités minimales de 50. Pour des renseignements sur les commandes, veuillez communiquer avec la coordonnatrice des tirés à part, Janis Murrey, tél. 800 663-7336 ou 613 731-8610 x2110; fax 613 565-2382; [murrej@cma.ca](mailto:murrej@cma.ca)

### Disponibilité électronique

Le *JCMU* est disponible en ligne sur Internet ([www.caep.ca](http://www.caep.ca)).

### Permissions

Les droits d'auteur pour tous les articles sont détenus par le *JCMU* ou par ses concessionnaires. À moins d'indication contraire, vous pouvez, sans permission, pour un usage non commercial, reproduire jusqu'à 10 copies de tout item spécifique ou de toute partie d'un article publié dans le *JCMU*, en autant que la source originale soit mentionnée. Vous devez obtenir une permission écrite pour toute reproduction, insertion dans un système d'extraction de données ou diffusion, par toute forme ou moyen que ce soit. Dans le cas des photocopies ou d'autres méthodes de reprographie, veuillez communiquer avec le bureau de rédaction du *JCMU* (a/s Dr Grant Innes, Département de médecine d'urgence, St. Paul's Hospital, 1081, rue Burrard, Vancouver BC V6Z 1Y6; tél. 604 806-9050; fax 604 806-9057; [ginnes@interchange.ubc.ca](mailto:ginnes@interchange.ubc.ca)).

### Annonces classées

Communiquez avec Beverley Kirkpatrick, Gestionnaire, annonces publicitaires, *JCMU*, 1867, prom. Alta Vista, Ottawa ON K1G 3Y6 (envois par messenger : 150, rue Isabella, Ste. 500, Ottawa ON K1S 1V7); tél. 800 663-7336 ou 613 731-8610 x2127; fax 613 565-7488; [advertising@cma.ca](mailto:advertising@cma.ca). Veuillez consulter la section des Annonces classées du Journal pour tout renseignement sur les tarifs.