

to advise a medical or surgical treatment, to check for sequelae, to require a perfect respect of the therapeutical objectives, to participate in the optimal follow-up, and finally to make the difficult but essential synthesis of a thick and complicated medical file with many investigations and a wandering diagnosis.

Learning Objectives

1. The audience will be aware of the limits of care medicine to optimize the flight safety and the health of the aircrew.
2. The audience will learn about the different modalities of interaction between the AME and the medical team of the aircrew before and after a medical condition.

Thursday, 06/05/2025

3:30 PM

Hanover C/D/E

[S-69] PANEL: AMERICAN ASSOCIATION OF AEROSPACE MEDICINE SPECIALISTS'- AEROSPACE MEDICINE BOARD REVIEW COURSE

Chair: Jeffrey Jones

Co-Chair: Thomas Jarnot

Workshop Overview: EDUCATION: *Aerospace Medicine Board Review Panel* **INTRODUCTION:** *To assist American Society of Aeromedical Specialists members prepare for periodic written examinations for those educated on the topics defined by the American College of Preventive Medicine GME requirements and wishing to become certified or re-certified under the American Board of Preventive Medicine, and to provide education on relevant topics to anyone interested in Aerospace and Preventive Medicine, the ASAMS education committee assembles topics for review by knowledgeable invited experts in the field. TOPICS and Speakers: Introduction to the Aerospace Medicine Board Exam- Jeff Jones; The Atmosphere- James Elliott; Hypoxia- Thomas Jarnot; Flight Dynamics- Dwight Holland; Q&A moderator- Jeff Jones* **APPLICATION:** *The knowledge gained in this panel can be applied by the attendee to preparation for the knowledge examination in both the preventive medicine core and the aerospace medicine specialty examination. Others considering their possible involvement in clinical Aerospace Medicine or AM applied research may find the review topics interesting and educational. Preventive Medicine Core Content Outline: 25% - I. Clinical Preventive Medicine 25% - II. Public Health/Population Health Medicine Knowledge 20% - III. Epidemiology, Biostatistics, and Informatics Knowledge 15% - IV. Environmental Medicine 15% - V. Strategic Healthcare Leadership Knowledge Aerospace Medicine Content Outline: 40% - The Flight Environment 30% - Clinical Aerospace Medicine 20% - Operational Aerospace Medicine 10% - Management and Administration* **RESOURCES:** *American Board of Preventive Medicine – American Board of Preventive Medicine – The American Board of Preventive Medicine was established to promote the health and safety of the American people through our high standards in the certification and maintenance of certification in the profession of preventive health. (theabpm.org) American College of Preventive Medicine- American College of Preventive Medicine | ACPM*

[376] THE ATMOSPHERE

James Elliott

FAA, Fort Worth, TX, United States

(Education - Tutorial / Review)

This presentation will review the composition and physical properties of the atmosphere, including the common gas laws, altitude physiology, and regulatory guidance for supplemental oxygen use.

Learning Objectives

1. Describe the relationship between the volume, the pressure, and the temperature of a gas per Boyle's and Charles' Laws.
2. Given the atmospheric pressure at a specific altitude, calculate the partial pressure of oxygen at that altitude.

3. List the cabin altitudes where supplemental oxygen is required IAW 14 CFR Part 91.211.

[377] AIRCRAFT CONTROL SURFACES, AERODYNAMICS AND CONSIDERATIONS

Dwight Holland

Human Systems Integration, Roanoke, VA, United States

(Education - Tutorial / Review)

This presentation will review the key topics on theory of flight— aerodynamics for fixed and rotary winged aircraft, and the factors affecting lift, thrust, and drag (different types). Other topics include the physics of producing lift, wing camber, and how lift and angle of attack are related, and what factors can degrade lift. Review will also be offered on how modern aircraft and helicopters are controlled with various control surfaces will be highlighted, and countering torques produced by spinning propellers or rotors, whether single engine, multiengine, or helicopter operations.

Learning Objectives

1. This presentation deals with various aspects of aircraft and helicopter control in three axes. The learner will understand basic aircraft control aspects and surfaces after attending this presentation.
2. This presentation looks at the aerodynamics and basic physics of propellers, control surfaces, and the concepts of lift and different aspects of drag. These basic aerodynamic properties will be covered at the appropriate level for the Aerospace Medicine Board exam.

[378] HYPOXIA

Thomas Jarnot

USAFSAM, Wright-Patterson AFB, OH, United States

(Education - Tutorial / Review)

This presentation will review typical categories of hypoxia, associated physiology, common examples with signs and symptoms, and operational significance/considerations for the aerospace medicine practitioner.

Learning Objectives

1. Describe four basic types of hypoxia and associated physiology.
2. Discuss common chronic hypoxia situations with corresponding signs and symptoms.
3. Review the operational significance of hypoxia in the aerospace environment.

FRIDAY, JUNE 06, 2025

Friday, 06/06/2025

Hotel Lobby

7:00 AM

[S-77] WORKSHOP: TROPICAL AND SUBTROPICAL MEDICINE: OPERATION STONE MOUNTAIN

Chair: Brian Pinkston

Co-Chair: Cheryl Lowry

Workshop Overview: INTRODUCTION: *Aerospace Medicine practitioners find themselves in austere environments around the world, from providing critical care patient support to recovering aircraft or spacecraft. Atlanta is considered a subtropical climate which provides a laboratory environment for tropical as well as temperate zone medical topics. Topic: Members of the aerospace medicine community may be called upon to provide travel medicine counseling, conduct medical mission planning, or unexpectedly find themselves in a survival situation in these environments.*

The tropics and subtropics pose unique challenges to the health of travelers, adventure-seekers and operational forces. They also provide unique opportunities that assist in survival and treatment of patients. For example, people living in rural parts of the Amazonian region use over 1300 plant species in their traditional remedies. Though water may be plentiful in tropical and subtropical areas, sources can contain hazardous flora and fauna, requiring treatment to ensure potability. Plentiful foliage and moisture provide ideal conditions for vector-borne diseases and other health threats. Thick brush and flowing rivers present challenges for patient stabilization and movement. An understanding of the health threats in this environment is critical for creating appropriate austere medical kits, performing emergency patient care, and providing appropriate medical advice for people working, traveling and recreating in the tropics and subtropics. This workshop will be conducted with lectures, hands-on skill stations and activities in an outdoor environment. Application: Understanding this environment is a key tool in the kit for the medical professional providing support in austere locations. This workshop is intended to be an introductory, hands-on experience focused on medical care and safe medical operations in tropical and subtropical environments. It will cover the following: 1) Procurement and treatment of water as well as field preparation of intravenous fluids for an injured or ill patient. 2) Prevention and treatment of major tropical diseases 3) Common medicinal plants and their preparation in the tropical environment 4) Improvised medical care and improvised patient transport both on land and riverine environments 5) Field hemorrhage control and pain management 6) Medical and survival kits for the tropical environment

[420] TROPICAL AND SUBTROPICAL MEDICINE: OPERATION STONE MOUNTAIN

Brian Pinkston¹, Cheryl Lowry¹, Jim Fike², Bonnie Posselt³, Michael Jackson¹

¹Kinetic Adventure Medical Education, St. Petersburg, FL, United States;

²Fike Global Health, Alexandria, VA, United States; ³RAF Centre of Aerospace Medicine, Henlow, United Kingdom

(Education - Tutorial / Review)

INTRODUCTION: Aerospace Medicine practitioners find themselves in austere environments around the world, from providing critical care patient support to recovering aircraft or spacecraft. Atlanta is considered a subtropical climate which provides a laboratory environment

for tropical as well as temperate zone medical topics. **TOPIC:** Members of the aerospace medicine community may be called upon to provide travel medicine counseling, conduct medical mission planning, or unexpectedly find themselves in a survival situation in these environments. The tropics and subtropics pose unique challenges to the health of travelers, adventure-seekers and operational forces. They also provide unique opportunities that assist in survival and treatment of patients. For example, people living in rural parts of the Amazonian region use over 1300 plant species in their traditional remedies. Though water may be plentiful in tropical and subtropical areas, sources can contain hazardous flora and fauna, requiring treatment to ensure potability. Plentiful foliage and moisture provide ideal conditions for vector-borne diseases and other health threats. Thick brush and flowing rivers present challenges for patient stabilization and movement. An understanding of the health threats in this environment is critical for creating appropriate austere medical kits, performing emergency patient care, and providing appropriate medical advice for people working, traveling and recreating in the tropics and subtropics. This workshop will be conducted with lectures, hands-on skill stations and activities in an outdoor environment. **APPLICATION:** Understanding this environment is a key tool in the kit for the medical professional providing support in austere locations. This workshop is intended to be an introductory, hands-on experience focused on medical care and safe medical operations in tropical and subtropical environments. It will cover the following: 1) Procurement and treatment of water as well as field preparation of intravenous fluids for an injured or ill patient. 2) Prevention and treatment of major tropical diseases; 3) Common medicinal plants and their preparation in the tropical environment; 4) Improvised medical care and improvised patient transport both on land and riverine environments; 5) Field hemorrhage control and pain management; 6) Medical and survival kits for the tropical environment

Learning Objectives

1. This workshop will be conducted with demonstrations and activities in at Stone Mountain Park Georgia including a controlled water environment.
2. By the end of the session, participants will be able to name three commonly found tropical plants and their medicinal uses.
3. By the end of the session, the attendees will be able to identify and use resources for medical expedition planning in tropical and subtropical environments.