**The Civil Aviation Medical Association will present three medical education programs during the Aerospace Medical Association Annual Scientific Meeting in Denver, Colorado, August 29-30, 2021. The combined total medical education presentation time for the CAMA Sunday program and the CAMA Luncheon is 5.00 hours**

**CAMA Sunday Lectures – Four hours comprised of four different presentations**
August 29, 2021
8:30 am to 12:45 AM
Denver Sheraton Hotel Downtown
Room number TBD

**8:30 AM to 10:30 AM:**

**Two one-hour presentations by Cheryl L. Lowry, MD, MPH and Brian S. Pinkston, MD, MPH**

**Lecture Module Topic - Practice Gap:** Environmental physiology, prevention of disease, and medical care in extreme environments is not widely taught in traditional medical institutions. This module will introduce the prevention and treatment of illness in extreme environments.

**Dr. Brian S. Pinkston, MD, MPH - Medicine at the Extremes (One Hour)** – Introduction to human physiology in extreme environments and treatment of disease

**Objectives**
After this lecture, attendees should be able to:

1) Describe the physiological effects and illnesses associated with altitude exposure
2) Discuss the gas laws and how they affect human performance from undersea to space
3) Identify common illnesses associated with temperature extremes

**Dr. Cheryl L. Lowry, MD, MPH - Expedition Support (One Hour)** – Introduction to the medic's role in supporting an expedition to an extreme environment

**Objectives**
After this lecture, attendees should be able to:

1) Describe key components to performing a pre-participation examination
2) Evaluate personality styles and motivational psychology of typical extreme environment participants
3) Discuss the fundamental concepts in building an expedition medical kit
4) Identify common illnesses and treatments in extreme environments

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10:30 AM to 10:45 AM Break
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**10:45 AM to 12:45 PM AM**

**Two one-hour presentations by Douglas J. Ivan, MD**

**Lecture Module Topics:**

**1) Quality of Vision (QoV) and Ocular Aging Effects on Aviator Visual Performance**

A. Macular degeneration genetic testing & prevention.
B. Prescription correction for pilots with presbyopia — Frames & Lenses fit for pilots with and without gradient sun protection.
C. Cataract treatment with replacement intraocular lens options.
D. Floater prevention and treatment options.

**2) Aeromedical Aspects of Color Perception and Color Vision (CV) Testing**

A. Color vision deficiency screening using standardized tests, standardized lighting, and methodology.
B. Prescription corrected visual acuity versus uncorrected visual acuity color vision screening.
C. Use of contrast sensitivity testing in Color Contrast Test screening.
D. How good is "good enough" color vision for the 8-10% color deficient males in the population and how the FAA Operational Color Vision Test and color vision Medical Flight Test makes the choice.

**Objectives**

After this lecture, attendees should be able to:

1) Know the factors of macular degeneration and the various testing methods
2) Be aware of the various prescription correction lenses for pilots
3) Determine when cataract treatment is necessary
4) How to prevent and treat floaters
5) Know the various testing modules and methodology for color vision deficiency detection and screening techniques
6) Know when to use the FAA Operational Color Vision Test and color vision Medical Flight Test for a pilot with color vision deficiencies

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**CAMA Luncheon Keynote Medical Education Presentation**
August 30, 2021
CAMA Luncheon 12:00 Noon to 2:00 PM
**Presentation (1 Hour) 1:00 PM to 2:00 PM**
Denver Sheraton Hotel Downtown
Room number TBD

**Keynote Speaker: William (Bill) R. Ercoline, PhD**
**Topic of Presentation: Spatial Disorientation in Aviation**

**Objective**

After this lecture, attendees will be able to recognize the nature, causes, and consequences of spatial disorientation as it applies to aviation.