



Federal Aviation
Administration

The Civil Aerospace Medical Institute

An International
Resource



Welcome to The FAA Civil Aerospace Medical Institute...

CAMI is the medical certification, research, education, and occupational health wing of the FAA's Office of Aerospace Medicine. The goal of our activities is to enhance aviation safety.

After America's first successful flight in 1903, the first aviation fatality could not be far off. Amazingly, five years would pass before the first fatal accident. But since then, safety has been an important concern. In 1926, the Civil Aeronautics Act marshaled the talents of the medical profession to certify that all aviators are physically fit to fly.

Thus, our principal concern at CAMI is the human element in flight—pilots, flight attendants, passengers, air traffic controllers—and the entire human support system that embraces civil aviation. We study the factors that influence human performance in the aerospace environment, find ways to understand them, and communicate that understanding to the aviation community.

The Institute's people—researchers, physicians and other medical specialists, engineers, educators, pilots, technicians, and communicators—all merged as a team in 1961 at our centralized Oklahoma City facility. Since then, the CAMI team's synergistic products serve people everywhere as they safely and routinely achieve one of the oldest of human dreams: *Flight!*

Aerospace Medical Certification

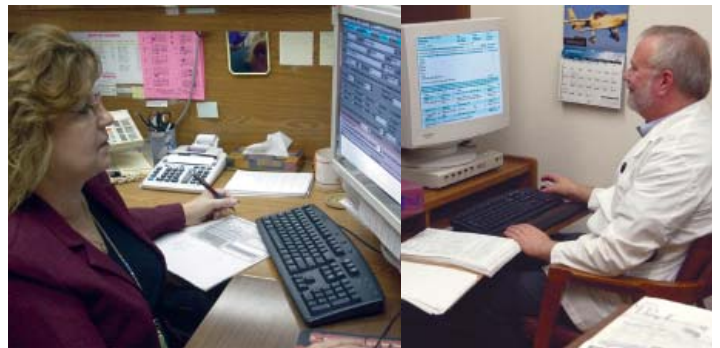


Since 1926, the Federal Aviation Administration has developed and utilized health standards for airmen to assure the safety of all who fly. By federal law, all aviators must be medically certified. About a half-million airman medical certificates are issued each year on the basis of physical examinations, all of which require prompt review by the Aerospace Medical Certification Division's staff.

To manage this massive data influx, a new Internet-based system was developed. Called the Document, Imaging, and Workflow System, it now receives about 1,800 examinations each day via the Internet. This extraordinary computer system makes it possible for reviewers to resolve medical cases on standard office computer stations. Before the new system was implemented, examinations submitted for review were mailed in, copied, then distributed, reviewed, resolved, and, finally, stored on shelves—a colossal storage and retrieval problem.

Today, medical records are stored in digital form, allowing faster retrieval, review, and more accurate certification decisions to be made.

The Civil Aerospace Medical Institute has more than a dozen complex labs and large-scale, computerized health system and performance databases. Our most important resource is our staff. These professionals are dedicated to their work at the Institute—serving an aviation community and public that rely upon safe, dependable air transportation.



Medical examinations from aviation medical examiners are transmitted via the Internet and reviewed by an Aerospace Medical Certification Division legal examiner or physician.

Bottom line: Greatly enhanced service to the aviation community.

Aerospace Medical Education

The FAA is required by the U.S. Congress to promote the safe and efficient use of America's airspace. One way the Civil Aerospace Medical Institute promotes aviation safety is through aerospace medical education programs that:

- Train and evaluate the performance of Aviation Medical Examiners, a specialized group of 3,700 physicians located in the U.S. and in about 100 countries around the world, appointed by the FAA to perform the required airman medical examinations.



An aviation medical examiner and staff member view self-directed refresher training program in their office.

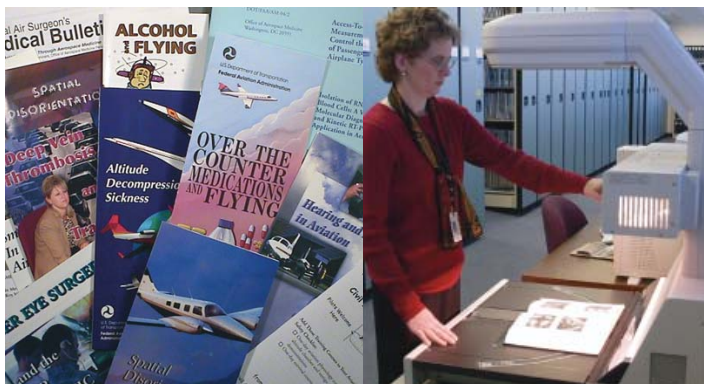
- Train civil aviation pilots and FAA aircrews in aviation physiology and global survival skills.



CAMI's General Aviation Pilot Trainers teach pilots to recognize and manage the symptoms of spatial disorientation.

- Disseminate aeromedical information to the civil aviation community through publications (print and online) and participation (lectures and practical demonstrations) in the National Aviation Safety Program.

- Provide specialized aerospace medical library services.



Bottom line: Resources that directly enhance aviation safety.

Aerospace Human Factors Research

Human factors scientists study the behavior and performance of people, both in laboratory studies and while at work in aviation environments. Human factors are the characteristics of human beings that are applicable to the design of systems and devices of all kinds. These include selecting the right person for the job and determining the skills, tasks, training, and equipment that influence performance, especially for safety-critical jobs like those of aircrew members and air traffic controllers.

Aviation is a demanding work environment; our scientists look for ways to achieve harmony between individuals and their tasks, between the operator and the computer, aircraft, or display.

A pilot, serving as a research subject, flies the CAMI Advanced General Aviation Research Simulator during an assessment of the human factors of advanced displays.



New Advanced Air Traffic Control Research Simulator. Researchers validate design objectives to ensure that controllers and equipment perform harmoniously.



Bottom line: Improving performance, efficiency, and overall aviation safety.

Aerospace Medical Research

Aerospace medical issues are studied by scientists, engineers, and technical specialists working in two major laboratories.

Bioaeronautical Sciences Research

- Supports aircraft accident investigation through medical and toxicological analysis.
- Researchers develop improved analytical procedures and evaluate pilot performance-related aspects of drugs and alcohol.
- Medical and accident databases support research activities regarding pilot certification and performance.
- Atmospheric radiation research and analysis relative to aircraft occupant safety and health.



The CAMI Toxicology Lab assists in determining the medical causes of fatal aviation accidents.

Protection and Survival Research

- Biodynamic and cabin evacuation research to improve occupant survivability in aircraft accidents.
- Physiological aspects of altitude and the aircraft environment research to support improved protective systems and safety procedures.
- Medical and vision research to support the certification of aircrew.



Smoke evacuation study in realistic conditions.



The 747 Aircraft Environment Research Facility being utilized for evaluation of simulated emergency aircraft evacuation.

Bottom line: Applied medical research teams evaluate the adverse events that occur in aerospace operations and discover methods to enhance human safety, security, health, and performance.

Occupational Health

CAMI's health professionals administer Federal Aviation Administration occupational health programs for agency employees at the Mike Monroney Aeronautical Center. These programs are mandated by the Occupational Safety and Health Act; and Executive Order 12196, Occupational Safety and Health Programs for Federal Employees. They also provide professional advice and technical knowledge to the Federal Air Surgeon and other agency officials. A professional, technical, and clerical staff manages programs in occupational medicine, clinical services, and industrial hygiene.



Occupational health programs help to improve the health and safety of FAA employees who work in potentially hazardous locations across the country.



Bottom line: Occupational health programs improve the safety and health standards of employees and the aviation community.



The Civil Aerospace Medical Institute is located at the Mike Monroney Aeronautical Center in Oklahoma City, Oklahoma.
For more information about programs, services, and publications, visit our Web site:

GENERAL INFORMATION FOR PHYSICIANS

www.faa.gov/ (+)

- How to become an aviation medical examiner
- Continuing medical education for aviation medical examiners
- [..other_visit/aviation_industry/designees_delegations/designee_types/ame/ametraining](#)
- *Guide for Aviation Medical Examiners*
- [..about/office_org/headquarters_offices/avs/offices/aam/ame/guide](#)

FOR RESEARCHERS

- Office of Aerospace Medicine Technical Reports
- [..library/reports/medical/oamtechreports/index.cfm](#)

FOR PILOTS

www.faa.gov/ (+)

- Medical certification information for pilots
- [..licenses_certificates/medical_certification/get](#)
- Locate an aviation medical examiner in your area
- [..pilots/amelocator](#)
- Pilot and air traveler safety information
- [..passengers/fly_safe/health](#)
- Physiological Training and Basic Survival Classes
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