

What it's like in aerospace medicine: Shadowing Dr. Ortega

AUG 14, 2019

Staff News Writer

As a medical student, do you ever wonder what it's like to specialize in aerospace medicine? Meet Hernando J. Ortega Jr., MD, MPH, an AMA member and a featured physician from San Antonio in the AMA's "Shadow Me" Specialty Series, which offers advice directly from physicians about life in their specialties. Check out his insights to help determine whether a career in aerospace medicine might be a good fit for you.



“Shadowing” Dr. Ortega, who goes by “Joe” or his aviator call sign “Bugs.”

Specialty: Aerospace medicine.

Practice setting: Government/military.

Employment type: Independent contractor, U.S. Air Force.

Years in practice: 33 years in medicine, 19 years as an aerospace medicine specialist.

A typical day and week in my practice: After graduating from medical school, I was going to become a plastic surgeon. I had no idea about aerospace medicine; never heard of it. I attended medical school on a Health Professions Scholarship Program for the U.S. Air Force. During my Air Force surgery internship, I cared for many military retirees who had served in World War II, Korea and Vietnam. Some were pilots and regaled me with stories of their flight surgeons and the unique situations they found themselves in with their flight docs around the world, both in training and in combat.

No two stories were alike. They encouraged me to try out being a flight surgeon before “growing up” in medicine. At the time, anything sounded better than every-other-night call! So I volunteered to be a flight surgeon and went to an overseas F-16 fighter unit. What a great time: great patients, challenging medicine, world travel, and flying in fighter jets! I haven’t looked back.

The typical day as a flight surgeon is anything but typical! Part of the day might be spent in clinic doing sick call or annual examinations (flight physicals), but the rest of the day might be attending other squadron-level activities, or participating in base-level emergency response exercises, or investigating mishaps or accidents, or giving safety briefings to different groups, or training with deployment medical equipment, or monitoring a centrifuge training run, or monitoring a neutral buoyancy lab extravehicular activity (spacewalk) training session, or studying up on treatments for biological or chemical agent exposure, or—the best—flying with your pilots or astronauts.

The varying duties of flight surgeon require you to be able to independently perform a huge array of clinical and operationally relevant activities in a remote location with minimal support. Your afternoon and evening might be in the flying squadron talking with pilots about the human factors they encountered during their sorties for the day, discussing proper G-straining techniques, hypoxia symptoms or techniques to maximize night vision, or circadian rhythms and dyssynchrony or planning a test run in the Dragon space capsule or finalizing a flight safety briefing for your pilots the next morning. Your presence with the unit and the pilots or astronauts builds the trust required to make the hard calls when required.

Since no week is typical, it can range from 40–100-plus hours per week, depending on the training and operational requirements for the week or month. I currently work 40–50 hours a week in a medical standards office, reviewing medical records for those applying to become Air Force pilots or wanting to enter the armed forces. The range of medical issues to deal with is vast but includes lots of ophthalmology, pulmonology, orthopedics, dermatology, and even psychiatry—everything from

pilocytic astrocytoma to eczema to keratoconus. It keeps you on your medical toes. If you are deployed to combat, it is 24/7.

The most challenging and rewarding aspects of aerospace medicine: The biggest challenge is performing quality medicine and risk assessment in a nonthreatening way to a high-performing population of driven individuals. This typically requires doing so in nontraditional medical settings (i.e., not in the clinic). Occasionally, a good person develops a bad condition that is going to end their career as a pilot or astronaut.

That, along with losing a friend in an airplane or spacecraft accident, are the toughest situations for most flight surgeons. The 2003 Columbia disaster was particularly shocking, as I was friends with many of the crew. And a few days after the crash, I was called in from Germany to help with the accident investigation.

The most rewarding aspect is returning an aviator or astronaut to full unrestricted flight duties following a serious medical event. Flying a perfect Immelmann turn is a really strong second!

Three adjectives to describe the typical aerospace medicine specialist: Clinically good, flexible outside-the-box thinker, very outcome-oriented or performance-minded. Get 'er done!

How my lifestyle matches, or differs from, what I had envisioned: I had no idea what aerospace medicine was in medical school, so I had no clue as to what the lifestyle would be. But it was immediately challenging and rewarding—and fun!

It differed from typical medicine in that it wasn't hospital- or clinic-based. I've even practiced on the space shuttle on the landing runway after spaceflight. It involved lots of travel, some to remote areas not routinely visited (Africa, Asia, Antarctica!). But I was single at the time, so this didn't bother me. I met my wife in the Air Force so she understood the military lifestyle. Four wonderful kids later, family and work life balance were not a problem.

Skills every physician in training should have for aerospace medicine but won't be tested for on the board exam: Great interpersonal and communication skills and an open, adventurous mind! Strong clinician with high levels of honesty and integrity, as well as a sincere desire to serve others and to pursue excellence in all you do.

One question physicians in training should ask themselves before pursuing aerospace medicine: Do you really want to spend eight-plus hours every day in clinic chasing RVUs? If yes, go into regular clinical medicine. If no, then consider becoming a flight surgeon.

Books every medical student interested in aerospace medicine should be reading: *Jonathon Livingston Seagull*, by Richard Bach; *Flying Vistas: The Human Being As Seen Through the Eyes of the Flight Surgeon*,

by Isaac H. Jones, MD; *Testing the Limits: Aviation Medicine and the Origins of Manned Space Flight*,
by Maura Phillips Mackowski.

The online resource students interested in aerospace medicine should follow: The Aerospace Medical Association. Follow them on Twitter @Aero_Med.

Quick insights I would give students who are considering aerospace medicine: Sign up for a Health Professions Scholarship with the Air Force, Army or Navy. This can get rid of your medical student debt and get you on the road to a fascinating experience as a flight surgeon.

Song to describe life in aerospace medicine: Kenny Loggins, “Danger Zone.”

More about choosing a specialty

The AMA’s Specialty Guide simplifies medical students’ specialty selection process, highlight major specialties, detail training information, and provide access to related association information. It is produced by FREIDA™, the AMA Residency & Fellowship Database®.