

# Aerospace Physiology: Vice President, Special Projects

Meet Richard A. (Dick) Leland, an aerospace physiologist and former USAF Pilot who concentrates on Human Factors training and research for aviation and space and aeromedical training equipment design and manufacture at Environmental Tectonics Corporation (ETC).

Read more about his experience to see if aerospace physiology may be right for your future career.

**Profession:** Aerospace Physiologist

**Workplace:** Environmental Tectonics Corporation (ETC), National AeroSpace Training And Research (NASTAR) Center

**Education:** BA, Biology, MA Human Resources Development, Former USAF Command Pilot

**Years in practice:** 41

**My typical day:**

There is not really a “typical” day in my line of work. The great thing about aerospace physiology is that every day presents a new and exciting opportunity. I retired from the USAF as a Command pilot with over 3,100 flying hours (B-52H, T-38, T-37) and a rated aerospace physiologist. I have performed and supervised aircrew physiology training, physiological support for the USAF U-2 program, and emergency hyperbaric oxygen therapy. After retiring from the USAF I was employed by ETC. I was a Director of the Aeromedical Training Institute where I developed curriculum and taught aeromedical professionals worldwide how to instruct aircrew, Vice President for ETC’s Aircrew Training Systems division where I led the development and manufacture of aeromedical training equipment, and President of ETC’s NASTAR Center where I performed and supervised aviation and space training and research. As Vice President for Special projects I develop proposals and serve as the customer interface for major projects. From commanding the 9<sup>th</sup> Physical Support Squadron to training space flight participants for Virgin Galactic I have enjoyed a wealth of new experiences.

**My challenges and rewards:**

Aerospace physiology training of aircrews is unlike any other training that they receive because the aircrew may seldom have to put into practice the things that I have taught them, but when they have to, they must execute perfectly the first time, every time. Because, when an aircrew gets down to the executing those skills, it is often his / her last chance for survival. This has been my greatest challenge and being part of increasing aircrew safety has been my greatest reward.

**How my profession is different:**

First, there are few avenues to becoming a rated (i.e. piloting experience) aerospace physiologist. The USAF and the USN offer this avenue. Second, although human factors impact virtually everything a human does, aerospace physiology in the commercial sector is a small niche field. The most significant difference is the opportunity to do exciting and rewarding work.

**Skills I need:**

My skills were developed over a 40+ year career. They include USAF pilot, course developer, training manager, platform instructor, personnel and project manager, human resource specialist, and operations director, aerospace physiologist, Certified Hyperbaric Technician, life support officer, aircraft mishap investigator. I often joke that an aerospace physiologist knows a little about a lot of things, but not much about anything.

**Books I recommend:**

*Spatial Orientation Inflight*, 1993, Kent K Gillingham, Fred H. Previc

*Dressing for Altitude*, 2012, Dennis R. Jenkins

*Mind Sights*, Roger N. Shepard

**Online resources:**

[www.asma.org](http://www.asma.org)

[aeromed@lists.silverquick.com](mailto:aeromed@lists.silverquick.com)

