A console crew flies the altitude chamber under the close supervision of Lt. Col. Lance Annicelli (back left), a U.S. Air Force instructor, and Col. Camilo Bernal (right), the Colombian air force flight director.
Instructors assist South American forces

Story and photos by Tech. Sgt. Samuel Bendet
Inside the altitude chamber, Colombian and U.S. crew members make final recommendations to students who are preparing for a chamber flight. Their assistance in the process helps reduce the risk of decompression sickness.

“I one of my biggest challenges during the deployment was to ensure our instruction was being accurately translated,” Annicelli said.

Since 1970, Colombian pilots and physiologists have trained at the U.S. Air Force School of Aerospace Medicine at Brooks City-Base, Texas, and Randolph AFB. But the Colombian Air Force is a nation that is making strides to become more independent with their flying program, and that’s why they had their own chamber built, said Lt. Col. Charles Gerstenecker, military group mission chief in Bogota.

“When I was at SOUTHCOM (Southern Command), our big focus was to create regional centers so that we can assist Latin American countries in helping themselves,” he said.
“Colombia is trying to improve the human performance of its pilots, physicians and all crewmembers in the Colombian air force and military.”

The Colombian air force, for example, was paying close to $250,000 annually to have their aircrews sent to Randolph to be certified on the altitude chamber, Gerstenecker said. Once their new chamber is certified, other partner nations like Peru, Chile, Argentina and Uruguay will be able to send their students there, versus sending them all the way to the United States for their training needs, he added.

Today, the Colombian air force has around 3,000 pilots and crewmembers made up of both enlisted and officers. They will require chamber training every five years, said Col. Camilo Bernal, director of the aeromedical certification office at Colombia’s Aerospace Medicine Center.

“Colombia is trying to improve the human performance of its pilots, physicians and all crewmembers in the Colombian air force and military,” Bernal said.

He said they see the potential for research and development through hypobaric environments for such safety concerns as hypoxia, spatial disorientation and night vision — with or without night-vision goggles.

“Right now, we don’t have the in-between — that is, the (chamber) technicians or even aerospace physiologists,” Bernal said. “So what we are doing here in Colombia is creating these positions and career paths to meet our needs.”

In the meantime, to run the altitude chamber, they use a 20-man team consisting of highly trained flight surgeons, cardiologists, psychologists, nurses, physicians, radiologists, audiologists, sports medicine physicians and ophthalmologists, balancing both their primary professions and secondary duties.

“Our next step is to become certified by the United States Air Force so that we will be able to support our neighboring countries’ physiology requirements,” Bernal said.

They’ll simply have to ensure that the students who go to train in the world’s highest altitude chamber have time to acclimate to the thin air of the Andes. 🧬

**Colombian bacteriologist Maj. Amparo Mora** serves as part of the console crew controlling the altitude chamber flight. The automated chamber system allows for both computer-aided adjustments to the altitude profile and the calibrated pressure.

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**Donning an aviator oxygen mask**, Colombian Maj. Alexandra Mejia, an aerospace medicine specialist, is ready for a hypobaric chamber flight.