Airman 1st Class Joseph Malone, an aerospace physiological technician, properly fits a mask to Cadet 4th Class Greg Barry's flight helmet prior to chamber testing.

Airman 1st Class Joseph Malone explains the low-pressure oxygen tank that is used when an aircraft decompresses.

PTC tasked with training America's fighter pilots

by Airman Stephen Collier
49th Fighter Wing Public Affairs

The Air Force depends on its aircraft and aircrews to complete its mission of Global Reach, Global Power.

With all of the vital training that goes into our country's aircrews, it's no wonder the 49th Aeromedical-Dental Squadron's Physiological Training Center is so valuable in keeping those pilots and crews combat ready.

The PTC's mission is simple: train aircrews to withstand high amounts of gravitational forces to fight in modern-day fighter aircraft. Yet, this mission is not limited to just Air Force personnel, said Maj. Brenda Crook, commander of the aerospace physiology flight.

"We also provide this training not only to all USAF fighter pipline aircrew and those returning to the cockpit to fly high-G aircraft, but also to U.S. Naval and U.S. Marine Corps aviators," said Crook. "We also have trained NATO and foreign allies from German and Italian officers to Israeli and Japanese pilots."

Along with its mission of decreasing a pilot's risk of G-Induced Loss of Consciousness, or G-LOC, the PTC also provides aerospace physiology training for our country's military aircrews to include Department of Defense civilians. In addition, they provide high altitude airdrop mission support for high altitude personnel and supply deliveries that can be made either during wartime or on humanitarian missions.

"To accomplish our mission, we incorporate many types of equipment," said Crook. "Our life support equipment consists of masks, helmets, oxygen systems and G-suits. That equipment is used in several areas such as our altitude chamber, which tests people at different altitudes and the centrifuge, where we conduct acceleration training."

A lot of training is involved in PTC technician qualification. Together with the completion of career development courses, PTC members go to all available survival schools, Army airborne school and qualify on aircraft as well as physiological training to better understand what pilots experience at high G-forces.

Even with a busy training schedule driven by the Air Force, other service branches and foreign countries, the PTC still provides a mission to Holloman.

"We can provide great training to our 49th Fighter Wing warfighters in various ways," said Crook. "Our specialty helps to brief people about a wide variety of medical issues from simple things such as specific exercise programs and performance nutrition to more complex issues like fatigue and endurance management, stress management, alcohol and substance abuse, and driving safety briefings."

PTC staff members can hold different positions from logistics and operations to even a standard evaluations team. Each of the different functions within the PTC ensures a check-and-balance system is in place to not only do the job correctly, said Crook, but to do the job the best possible way.

"Just like anything accomplished at the wing, it takes a team of dedicated professionals to follow through on a common goal," said Crook. "It takes a crew of four to train each pilot that comes through the centrifuge. From both the squadron and group level, it takes a dedicated chain of command to support the PTC. We're grateful to have a group commander who realizes that even though we don't directly deal with patients on a day-to-day basis, all of us are still medics."

Just as important as a supportive chain of command are the people who work in a shop to fulfill its mission. Crook said it's that dedication that makes the PTC so successful.

"We have such a great medicine shop because we are on call 24 hours a day, seven days a week. Everytime we have training, everytime we have an emergency call come in, our people are ready to respond."

Crook said one of the most fulfilling parts of the PTC's job is knowing that we are part of the team that help aircrews successfully complete their mission and return home safely.

"We feel a great sense of pride knowing that our training helps the flyers safe in the harsh high-G enivronment," said Crook. "This is indeed the best career field in the Air Force."

Capt. David Welge, aerospace physiologist, adjusts a strap on Cadet 3rd Class Khadeejah Alsayegh's flight helmet during an altitude chamber test that tests a persons ability to operate in high altitudes.

Photos by Airman Stephen Collier

Staff Sgt. Ezra Thomas, an aerospace physiological technician, monitors Capt. Kirby Ensser, a pilot in training, during a centrifuge test.

Senior Airman Dacia Cheiner, an aerospace physiological technician, looks on at the smiling faces of the cadets of Air Force ROTC detachment 20 located at the University of Arizona at Tucson.