



NATIONAL MUSEUM OF THE UNITED STATES AIR FORCE®



FLIGHT SUITS

Sidcot Suit



Developed in 1917 for cold weather flights in open cockpit aircraft.

Heated Gloves



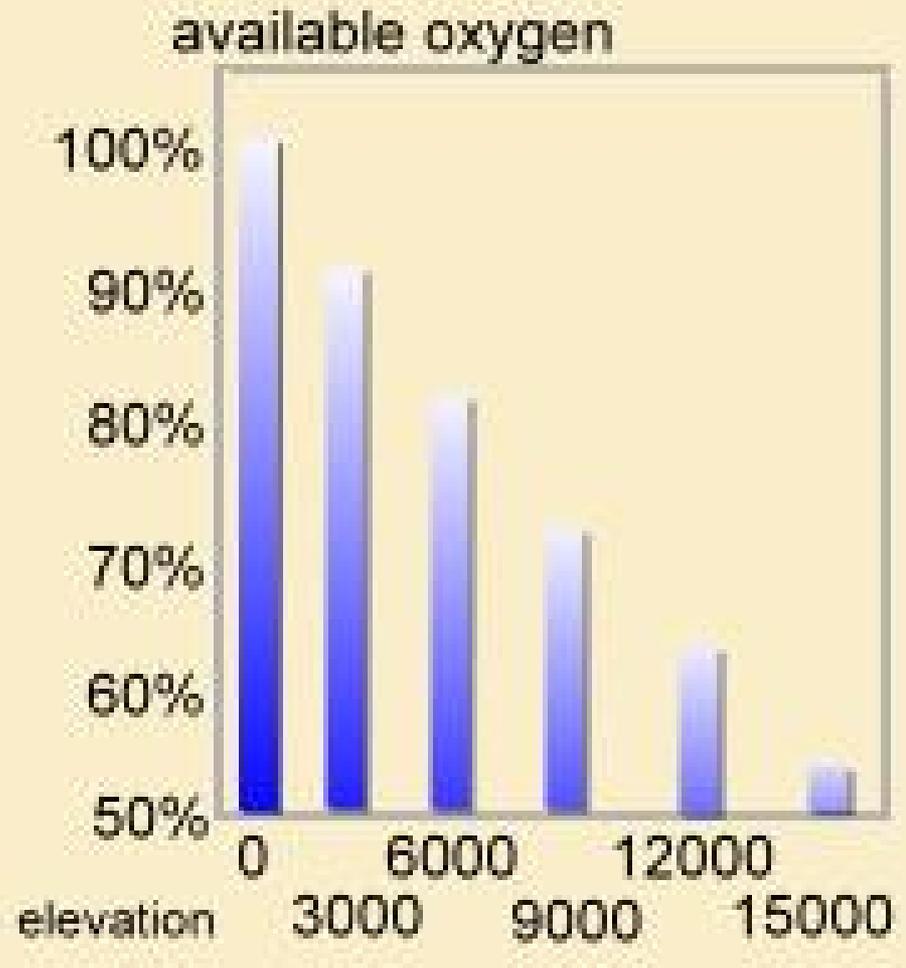
A crewmember puts on heated gloves during World War II period. Early pilots realized the need for gloves while flying in open or unheated aircraft.

Breathing Gear



Later model O2 mask for fighter pilots and crew. These masks provided much needed oxygen to pilots.

Oxygen and Altitude



Elmer



Experimental high -altitude flight suit developed in 1942, and ones tested by other pilots helped protect early pilots and crew.

Speed of Sound



A flight suit worn by Chuck Yeager during his X-1 test flights in 1947. Such water-cooled suits helped protect pilots from heat caused by friction and altitude

Pressure Pants



Pilots from Luke AFB modeling pressure pants used in higher altitude flights to control blood flow and prevent pilots from passing out.

Balancing Gravity



Very similar to pressure pants. Anti-gravity pants are used to encourage blood flow to the brain in flight while overcoming gravitational forces at higher altitudes.

Captain Joseph Kittinger



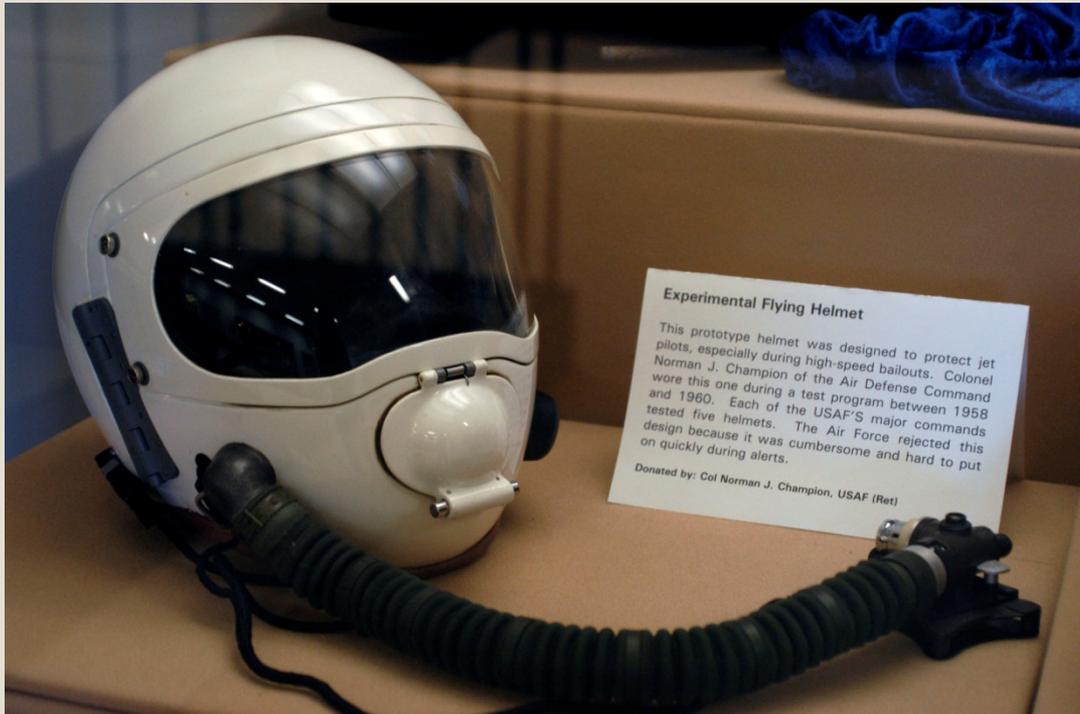
While testing Air Force flight suits, Kittinger jumped from a height of 120,900 feet in 1960. He fell for over 4 minutes and reached speeds up to 614 miles per hours. His tests helped determine flight suit efficacy at higher altitudes.

Protective Helmets - Early Helmets



This early helmet has a face mask and a pipe-stem used to supply oxygen need at higher elevations.

Helmets in Test Flights



Experimental Flying Helmet

This prototype helmet was designed to protect jet pilots, especially during high-speed bailouts. Colonel Norman J. Champion of the Air Defense Command wore this one during a test program between 1958 and 1960. Each of the USAF's major commands tested five helmets. The Air Force rejected this design because it was cumbersome and hard to put on quickly during alerts.

Donated by: Col Norman J. Champion, USAF (Ret)

This helmet was used between 1958-1960 to determine its efficacy in the event of a high speed ejection.

Goggles and “Shorty” Schroeder



In 1920, Schroeder flew at 33, 000 feet in minus 65 degrees. When he took off his goggles to get oxygen, his eyes froze open.

Although they eventually thawed, this signified the need for goggles in open aircraft.

Other Protective Clothing- Fire Protection



Today,
Nomex®
suits are
provided to
flight crews for
fire protection
in case of
emergency.

More Resources



**Additional Resources
are available online at
www.nationalmuseum.af.mil/education/teacher/index.asp**