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

Diagram showing the percentage of available oxygen at different elevations:
- 0% elevation: 100%
- 3000 elevation: 90%
- 6000 elevation: 80%
- 9000 elevation: 70%
- 12000 elevation: 60%
- 15000 elevation: 50%
Elmer

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

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

Additional Resources are available online at