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Oxygen System

OXYGEN AND THE ATMOSPHERE

- Air composed principally of 78 percent nitrogen and 21 percent oxygen.
- The remaining 1 percent is made up of various gases in smaller quantities.

HUMAN RESPIRATION AND CIRCULATION

- Without oxygen, humans and animals die very rapidly.
- A reduction in the normal oxygen supply alters the human condition.
- It causes important changes in body functions, thought processes, and the maintainable degree of consciousness.
- The resultant sluggish condition of mind and body produced by insufficient oxygen is called **hypoxia**.
- As the pressure is reduced, less oxygen is forced into and absorbed by the blood.

- **Below 7 000 feet** above sea level, the available oxygen quantity and pressure remain sufficient for saturation of the blood with oxygen.
- **Above 7 000 feet**, however, the oxygen pressure becomes increasingly insufficient to saturate the blood.
- **At 10 000 feet** mean sea level (MSL), saturation of the blood with oxygen is only about 90 percent of normal. Long durations at this altitude can result in headache and fatigue, both symptoms of hypoxia.

- **At 15 000 feet MSL**, oxygen transfer to the bloodstream drops to 81 percent of saturation. This typically results in sleepiness, headache, blue lips and fingernails, and increased pulse and respiration. Worse yet, vision and judgment become impaired and safe operation of an aircraft becomes compromised.
- **At 22 000 feet MSL** only 68 percent saturation.
- **At 25 000 feet MSL** for 5 minutes, where oxygen transfer to the blood is reduced to approximately 50 percent saturation, causes unconsciousness.

- **The negative effects of reduced atmospheric pressure & Low oxygen can be reduced by**

- 1. Increase the pressure of the oxygen or,**

- **When utilized, the percentage of oxygen available for breathing remains the same; only the pressure is increased.(Used in Large transport aircraft)**

- 2. Increase the quantity of oxygen in the air mixture.**

- **By increasing the quantity of oxygen available in the lungs, less pressure is required to saturate the blood. This is the basic function of an aircraft oxygen system. Increasing the level of oxygen above the 21 percent.**

If a foreigner gives birth on a plane while flying over the United States, the baby is automatically a U.S. citizen.



Today's Amazing Fact???????

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Any Questions?????



धन्यवाद

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