

Kasia Badger

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Private Pilot Research - Aeromedical Factors (Hypoxia)

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Hypoxia is a serious health condition that is caused by a lack of oxygen supply in the brain or other vital organs and is caused by several factors, therefore being known by the following names and their conditions:

- Hypoxic: caused by lack of pressure due to high altitude
- Stagnant: caused by G-forces preventing oxygen flow from being supplied to the brain or other vital organs
- Hypemic: caused by damaged blood cells, which carry oxygen throughout the body
- Histotoxic: caused by toxin in the body, leading to ineffective blood cells

The following are the most common symptoms of Hypoxia, but can be different from person to person: cyanosis, tingling, headache, slower reaction, impaired judgment, euphoria, visual impairment, drowsiness, and dizziness. When it comes to hypoxia in aviation, the most common treatment method is to use supplemental oxygen. However, in order to prevent hypoxia, pilots often avoid flying at high altitude without either supplemental oxygen or aircraft pressurization. In fact, the FAA recommends pilots to use supplemental oxygen above 10,000 ft mean sea level (MSL) during the day and 5,000 ft mean sea level (MSL) at night.