



## CIVIL AIR PATROL - NORTHEAST REGION UNITED STATES AIR FORCE AUXILIARY

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**Newsletter**

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## DO YOU HAVE THE FLU



### FLU Season !!!

Does this sound familiar - Sniffing, groggy and afraid that you have caught the flu, you drag yourself in to work or school anyway. Or you as a parent send your kids to school! So you go

to work or school and hope for the best. The best bet in all reality is if you are sick stay home or risk infecting those around you.

Have you ever been in a meeting and one person is coughing and sneezing throughout the entire meeting. Then a week later many of those present at that meeting are sick!!!!

The 2012-2013 flu season has taken the lives of almost 40 children as the U.S. Centers for Disease Control and Prevention (CDC) continue to urge people to take their flu shots while researchers believe they might have found what's making this year's season problematic.

It is still not too late to get a flu shot.

While getting a flu vaccine each year is recommended by the CDC as the first and most important step in protecting against the flu, there also are drugs that can treat influenza. These are called "influenza antiviral drugs" and they are an important treatment option for the flu. Antiviral drugs come in the form of pills, liquid or an inhaler. They fight the flu by keeping flu viruses from reproducing in the body. Antiviral drugs must be prescribed by a doctor. Influenza antiviral drugs only work against influenza viruses and they will not help against other viruses that may cause illness symptoms similar to the flu.

Studies in adults show that treatment with antiviral drugs may reduce more serious flu-

related complications like pneumonia and hospitalizations. While no such studies have been done on children, antiviral drugs may be similarly helpful for reducing more serious flu-related complications in children.

### SYMPTOMS

Initially, the flu may seem like a common cold with a runny nose, sneezing and sore throat. But colds usually develop slowly, whereas the flu tends to come on suddenly. And although a cold can be a nuisance, you usually feel much worse with the flu.

Common signs and symptoms of the flu include:

- Fever over 100 F (38 C)
- Aching muscles, especially in your back, arms and legs
- Chills and sweats
- Headache
- Dry cough
- Fatigue and weakness
- Nasal congestion

### When to see a doctor

If you have flu symptoms and are at risk of complications, see your doctor right away.



## Safety Tidbits and topics for discussion

### Fire Drill Checklist

- The escape plan has been discussed with all family members.
- Start the drill with everyone in their room, pretending to be asleep.
- Signal the start of the drill by sounding the smoke alarm. It is especially important for children to recognize the sound of the smoke alarm.
- Practice using your main escape routes first. Do not run. Just go quickly and calmly outside and to the meeting place.
- The family meeting place is located safely away from the building and out of the way of the arriving fire department.
- Everyone arrives at the family meeting place in under two minutes.
- Someone pretends to go call 911 for help. They know what information to give the 911 dispatcher.

### FIRE EXTINGUISHERS

A properly operated fire extinguisher can stop a small fire and keep it from growing.

An ABC, multipurpose dry chemical extinguisher is the recommended type.

Before using, be sure you:

- know how to use it
- know how to tell if the fire is safe to fight
- have called 911
- have alerted others to evacuate
- can quickly exit if needed



## USE CAUTION AROUND ICE

In the Northeast have had some very strange temperatures recently and in most areas the ICE IS UNSAFE.

For Ice fishing, ice skating, snowmobiling and other activities we may find ourselves wondering if it's safe to venture onto a frozen pond or lake. Be careful around bodies of water. Ground Teams may go into unfamiliar terrain and find themselves in an unstable situation. Ice doesn't always form in a uniform thickness over a waterbody. So people can feel that the ice is safe in one place, when it's actually very thin nearby. That false sense of security can have deadly consequences."

**Here are a few guidelines for ice safety that could save your life.**

Never assume the ice - on any water body - is thick enough to support your weight. Check it! Start at the shoreline

and, using an auger, spud or axe, make test holes at intervals as you proceed. As a rule of thumb, (for new, clear ice) there should be a minimum of 4 to 6 inches of ice to support a few, well-dispersed people; 6 to 7 inches for small, on-foot, group activities; and at least 8 to 10 inches for snowmobile activities.

Crossing ponds or lakes (water body) there are 2 periods to avoid when accidents are likely to occur. Early in the season when slush ice doesn't freeze together or late in the season when the ice melts at an uneven rate. Look for bluish ice that is at least 4 to 6 inches thick. Dark snow and dark ice are other signs of weak spots.

#### Ice Safety Chart

Ice (In Inches)	Maximum Safe Load
4	One person on foot
6	Group in single file

7 1/2	Cars - two tons gross (weight) snowmobiles
8 - 12 tons)	Light Truck (2 1/2 tons)
12 - 15	Medium Truck

If you fall through...don't panic. Spread arms and hands out on the unbroken ice and kick your feet and work forward. Once you're on the ice roll forward away from the hole.

If ice at the shoreline is cracked or squishy, stay off. Don't go on the ice during thaws. Avoid honey-combed ice, dark snow and dark ice. Ice is generally thinner where there is moving water, such as at inlets and outlets, around wharves, bridge abutments, islands, and objects that protrude through the ice.

## Review—>Beware of aircraft upper wing surface ice accumulation

Fine particles of frost or ice, the size of a grain of table salt and distributed as sparsely as one per square centimeter over and airplane wing's upper surface, can destroy enough lift to prevent a plane from taking off. Almost virtually imperceptible amounts of ice on an aircraft wing's upper surface during takeoff can result in significant performance degradation. Small, almost visually imperceptible amounts of ice distributed on an airplane's wing upper surface cause the same aerodynamic penalties as much larger (and more visible) ice accumulations. Small patches of ice or frost can result in localized, asymmetrical stalls on the wing, which can result in roll control problems during lift off.

It is nearly impossible to determine by observation whether a wing is wet or has a thin film of ice. A very thin film of ice or frost will degrade the aerodynamic performance of any airplane. Ice accumulation on the wing upper surface may be very difficult to detect from the cockpit, cabin, or front and back of the wing because it is clear/white.

Most understand that visible ice contamination on a wing can cause severe aerodynamic and control penalties, but it is apparent that many pilots do not recognize that minute amounts of ice adhering to a wing can result in similar penalties.

All must be aware that no amount of snow, ice or frost accumulation on the wing upper surface should be considered safe for takeoff. It is critically im-



portant to ensure, by any means necessary, that the upper wing surface is clear of contamination before takeoff. The NTSB believes strongly that the only way to ensure that the wing is free from critical contamination is to touch it. With a careful and thorough preflight inspection, including tactile inspections and proper and liberal use of deicing processes and techniques, airplanes can be operated safely in spite of the adversities encountered during winter months.

Pilots may observe what they perceive to be an insignificant amount of ice on the airplane's surface and be unaware that they may still be at risk because of reduced stall margins resulting from icing-related degraded airplane performance. Depending on the airplane's design

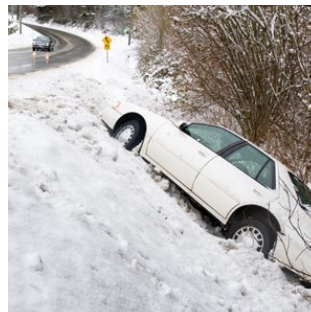
(size, high wing, low wing, etc.) and the environmental and lighting conditions (wet wings, dark night, dim lights, etc.) it may be difficult for a pilot to see frost, snow and rime ice on the upper wing surface from the ground or through the cockpit or other windows. Frost, snow, and rime ice may be very difficult to detect on a white upper wing surface and clear ice can be difficult to detect on an upper wing surface of any color.

Many pilots may believe that if they have sufficient engine power available, they can simply "power through" any performance degradation that might result from almost imperceptible amounts of upper wing surface ice accumulation. However, engine power will not prevent a stall and loss of control at lift off, where the highest angles of attack are normally achieved. Some even believe that if they cannot see ice or frost on the wing from a distance, or maybe through a cockpit or cabin window, it must not be there – or if it is there and they cannot see it under those circumstances, then the accumulation must be too minute to be of any consequence.

## Winter Driving Tips

- Plan your travel, selecting both primary and alternate routes.
- Let someone know your travel routes and itinerary so that, if you don't arrive on time, officials will know where to search for you.
- Check latest weather information on your radio.
- Try not to travel alone - two or three people are preferable.
- Travel in convoy (with another vehicle) if possible.
- Drive carefully and defensively. Watch for ice patches on bridges and overpasses.
- If a storm begins to be too much for you to handle, seek refuge immediately.
- Remember hypothermia (rapid loss of body temperature) can happen to anyone!
- Stay in your car until help arrives!
- An accident or severe weather situation can occur at any time. If you are not the one driving your driver must be aware of the effects of cold weather in the event he or she becomes stranded.

If your car should become disabled, stay with the vehicle, running your engine and heater for short intervals. Be sure to "crack" a window in the vehicle to avoid carbon monoxide build-up.



## Oxygen issues for General Aviation pilots

U.S. Department of Transportation

Most people I know (pilots included) agree that oxygen is an essential requirement for life.

But many pilot's understanding of how their body uses oxygen is less than adequate when considering its importance to safe flight. This understanding is not overly complicated and so it is simply a matter of reviewing the basics from time to time.

Pure oxygen is nonflammable, meaning that it will not burn (although it readily supports combustion of other flammable substances).

Oxygen combines with most other elements and is instrumental in the existence of hundreds of thousands of organic compounds. It's little wonder then that our survival also depends on such an important element.

While the portion of the atmosphere we fly in is a fairly homogeneous conglomeration of gases (what we call air), its' primary components are nitrogen (~78%) and oxygen (~21%). All other gases comprise the remaining one per cent, along with water vapor which varies from one per cent to about five per cent on a given day.

These percentages remain relatively constant with changes in altitude, but as we should all recall, the pressure exerted by air decreases as we climb. Since the weight of air at sea level on a standard day is 14.7 PSI and oxygen content is 21 per cent, it will exert a partial pressure of about 3.1 PSI.

This pressure is sufficient to oxygenate the blood at sea level. However, as we climb, this partial pressure decreases even though the percent content of oxygen remains the same. At some point the pressure is so low that oxygen can no longer be effectively forced into the bloodstream and we begin to experience symptoms of hypoxia.

As a result, in an unpressurized aircraft, we need to have supplemental oxygen at an altitude around 10,000 MSL and higher during prolonged periods of flight.

Fly high enough and not even supplemental oxygen is sufficient; we must now receive that oxygen under pressure to force it into the blood stream.

Since the symptoms of hypoxia (lack of oxygen to the organs) are sometimes subtle, it's important to review what to expect with increases in altitude.

It is generally accepted that the first organs to be affected by the lack of oxygen are the eyes. The pilot may not notice these symptoms during daylight hours, and below about 10,000 feet it presents no significant problem for safety. On the other hand, at night above 5,000 to 6,000 feet our eyes are more susceptible to the effects of oxygen deprivation.

Above 10,000 feet prolonged flight generally leads to fatigue and sluggishness, so pilots flying unpressurized aircraft from 10,000 feet up to 13,000 feet for more than 30 minutes are required to have and use supplemental oxygen.

Bearing in mind that there is wide variability in susceptibility to hypoxia, above 15,000 feet the average pilot can add drowsiness, headaches, and poor judgment to the list of symptoms and also expect them to occur in as little as 30 minutes from arrival at those altitudes.

The first noticeable vision decrements starts around 18,000 feet with general blurriness. At 20,000 feet it only takes about 15 minutes for

a loss of muscular control to set in. Judgment, reasoning and memory go right out the window as well.

Above around 22,000 feet it takes just minutes for the average person to lose consciousness. In an even worse case, there are about 15-20 seconds of useful consciousness at 40,000 feet. Keep in mind that above about 30,000 feet cabin altitude, the partial pressure of oxygen is too low for conventional supplemental oxygen systems, and so we must have a system that delivers oxygen under positive pressure to force the oxygen into the blood stream. One can think of a positive pressure system as effectively reducing the cabin altitude in which we are trying to breath.



Certain drugs, either in combination or alone, effectively increase the pilot's susceptibility to hypoxia, so consult with your doctor prior to flying at altitude with any new medicines.

Individual symptoms to hypoxia vary from one person to another, so symptoms you hear about from a friend may or may not be the same as what you are likely to experience. Age also leads to changes in symptoms and the altitude of onset. The only good way to know exactly how you will respond to the onset of hypoxia is to experience it under controlled circumstances.

High altitude training, with an altitude chamber flight, is the best way to gain this knowledge about your own symptom set.

For most people, an additional symptom to those presented is cyanosis. Cyanosis is generally noticed in the extremities and lips. So a bluish appearance of lips and fingernails is usually a good sign of hypoxia onset.

Sometimes the first signs of hypoxia are a general inability to solve simple math problems.

Resolving hypoxia in a passenger or pilot is relatively easy if supplemental oxygen is available. Otherwise, a descent to lower altitude is warranted.

There are three basic types of oxygen systems for aircraft use: gaseous, liquid, and chemical. The basic light aircraft supplemental oxygen system is generally gaseous and uses the familiar bright green oxygen bottle (at least green at the top) to differentiate it from other less pure forms of the gas.

The usual medical oxygen is not nearly pure enough (too much water content) for use in aviation. Aviator's oxygen will be in the neighborhood of 99.5 per cent pure to eliminate the possibility of water freezing within the delivery lines and potentially blocking the flow of oxygen to users.

The advantages of a gaseous system make it ideal for small aircraft. They are easy to handle, and transport. They are easy to service and relatively low cost to install. Some systems are portable, so you need not take it on every flight!

The only disadvantages over other oxygen systems are that connections are prone to leaks and a delivery pressure regulator is required due to the high pressure under which the oxygen is stored.

Oxygen is critical to safe flight and knowing one's own response to a lack of oxygen is also very useful information. In lieu of knowing how you'll respond to hypoxia, remember the common symptoms and watch for them when flying at high altitude. Realize that you cannot always recognize the onset of symptoms so follow the recommendations and regulations for oxygen use.



# HYPOTHERMIA



symptoms within 30 minutes, or if symptoms get progressively worse despite self-care.

**Symptoms/Signs:**

- Shivering
- Numbness in hands and feet
- Confusion, sleepiness, physical exhaustion, slurred speech, memory lapses
- Slow and shallow breathing; slow and weak heart-beat
- Cool, pale skin; fingers, toes, and lips may be slightly blue
- Cessation of shivering with diminished alertness or loss of consciousness
- Slow pulse and breathing (severe hypothermia)

The thermometer outside doesn't have to register below freezing for cold weather to threaten your health. Temperatures up to 50 degrees F can be deadly, particularly when accompanied by rain, wind, or your own physical exhaustion. Even when temperatures are above 50 Hypothermia can still be a real threat. So we all need to be able to recognize the signs and symptoms of Hypothermia.

Hypothermia, which is a mild to severe drop in the body's core temperature, can easily be prevented. Just knowing the weather forecast and preparing for the cold by dressing appropriately can literally mean the difference between life and death. Severe hypothermia requires emergency medical intervention. However, any amount of body cooling needs to be taken seriously and treated with caution and care. Be aware of your body's first warning signals that it's getting too cold: It's an important first step toward eliminating a potentially dangerous threat to your health.

**Seek Emergency Care If:** Anyone with symptoms of hypothermia suffers from diminished alertness, mental confusion, or loses consciousness. Self-care measures don't relieve hypothermia

**Primary Care:**

If this is not an emergency, there are some things you can do to treat yourself, or an over-chilled friend or family member:

- Move to a warm, sheltered area.
- Use blankets or skin-to-skin contact (i.e., torso to torso) to raise body temperature or to keep warm.
- In cases of very mild hypothermia, a warm bath can help restore body temperature.
- Remove any wet clothes and replace with dry clothes or blankets.
- Keep the head covered. Drink hot tea, broth, or water.
- Avoid alcohol altogether.

### HYPOTHERMIA FIRST AID

<p><b>ALL CASES</b></p> <ul style="list-style-type: none"> <li>• Move victim to dry shelter and warmth</li> <li>• Handle gently</li> <li>• Remove wet clothes — cut off if necessary</li> <li>• Apply mild heat (comfortable to your skin) to head, neck, chest and groin — use hot water bottles, warm moist towels</li> <li>• Cover with blankets or sleeping bag; insulate from cold — including head and neck</li> </ul>	<p style="text-align: right;">F°    C°</p> <p style="text-align: right;">99.6°    37.6°</p> <p style="text-align: right;">↓</p> <p style="text-align: right;">NORMAL</p>
<p><b>MILD CASES</b></p> <ul style="list-style-type: none"> <li>• Primary task is to prevent further heat loss and allow body to rewarm itself</li> <li>• Give warm, sweet drinks — <i>no alcohol</i></li> <li>• Apply mild heat source to stabilize temperature and/or</li> <li>• Exercise to generate heat</li> <li>• Hot shower to point of perspiring</li> <li>• Keep victim warm for several hours</li> </ul>	<p style="text-align: right;">97°    36°</p> <p style="text-align: right;">↓</p> <p style="text-align: right;">MILD CONDITION</p>
<p><b>MODERATE CASES</b></p> <ul style="list-style-type: none"> <li>• Same as above</li> <li>• Offer sips of warm liquids only if victim is fully conscious and able to swallow without difficulty — <i>no alcohol</i></li> <li>• Have victim checked by doctor</li> </ul>	<p style="text-align: right;">93°    34°</p> <p style="text-align: right;">↓</p> <p style="text-align: right;">MODERATE CONDITION</p>
<p><b>SEVERE CASES</b></p> <ul style="list-style-type: none"> <li>• Obtain medical advice as soon as possible using your radio</li> <li>• Assist victim, but avoid jarring him — rough handling may cause cardiac arrest or ventricular fibrillation of heart</li> <li>• No food or drink</li> <li>• Observe for vomiting and be prepared to clear airway</li> <li>• Ignore pleas of "Leave me alone, I'm O.K.:" Victim is in serious trouble — keep continuous watch over victim</li> <li>• Lay victim down in bunk, wedge in place, elevate feet, keep immobile; no exercise</li> <li>• Apply external mild heat to head, neck, chest and groin — keep temperature from dropping, but avoid too rapid a temperature rise.</li> <li>• Transport soon, gently, to hospital</li> </ul>	<p style="text-align: right;">90°    32°</p> <p style="text-align: right;">↓</p> <p style="text-align: right;">SEVERE CONDITION</p>
<p><b>CRITICAL CASES</b></p> <ul style="list-style-type: none"> <li>• Always assume patient is revivable — don't give up — pulse very difficult to feel</li> <li>• Handle with extreme care</li> <li>• Tilt the head back to open the airway — look, listen and feel for breathing and pulse for one to two full minutes</li> <li>• If there is any breathing or pulse, no matter how faint or slow, do not give CPR, but keep a close watch on vital sign changes</li> <li>• Stabilize temperature with available heat sources, such as naked chest-to-back warming by other crew member (leave legs alone)</li> <li>• If no breathing or no pulse for one to two full minutes, begin CPR immediately</li> <li>• Medical help imperative — hospitalization needed</li> </ul>	<p style="text-align: right;">82°    28°</p> <p style="text-align: right;">↓</p> <p style="text-align: right;">CRITICAL CONDITION</p>

Body temperature (taken rectally)





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### Operational Risk Management

Is a logic-based, common sense approach to making calculated decisions on human, material and environmental factors associated with any type of activity



## Remember—Remember –Remember

We take Safety very seriously and Safety is an everyday thing that needs to be included in everything that we do. Safety can not be neglected or bypassed just because it is more convenient to do so.

**BE SAFE**

### SafeTips For the Smokers out there

#### Stamp Out Smoking Fires

Careless smoking is the leading cause of fire deaths in our country. Do you know what causes these fire deaths? Carelessly discarded smoking materials.

From hot ashes dumped into the garbage to a cigarette falling on to a couch cushion, carelessly discarded smoking materials kills hundreds of people every year. These types of fires are too common. With a little attention you can prevent these fires and save lives. Remind friends and family members to be safe and follow these safety tips.

**Never smoke in bed, when sleepy.**

**Always use large, oversized ashtrays.**

**Make certain ashes are cold before dumping ashtrays into the garbage.**

**Check for cigarettes or ashes that may have fallen between couch and chair cushions after a party.**

### SafeTips

#### SMOKE ALARMS SAVE LIVES

#### Count your smoke alarms

It is recommends you install at least one smoke alarm on every level of your home, including one in every bedroom.

#### Check your smoke alarms

Press the test button on smoke alarms each month to make certain they are still working.

#### Vacuum your smoke alarms

Clean smoke alarms each month of dust and cobwebs to keep them working properly.

#### Change your batteries

Change smoke alarm batteries at least once a year, or as soon as the alarm “chirps” warning that the battery is low. An easy way to remember is in the fall when clocks are changed from Daylight Saving Time. Long-life batteries do not need to be changed yearly.

#### Change your alarm

Replace smoke alarms once every ten years.

#### Know the sound

Make sure everyone in the home can hear and recognize the sound of the smoke alarm and knows how to react immediately. Assistive devices are available for those who are deaf or hard of hearing.