Advice Sheet - Personal Safety during Wildfires

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Categories: Environment

Wildfire - any unwanted and unplanned fire burning in forest, shrub, or grass - is one of the most destructive natural forces known to man and can occur year-round all over the world. Although sometimes started by lightning, 90 percent of wildfires are caused by humans. Examples of human-caused wildfires include unattended campfires, sparks from vehicles or equipment, or arson.

The severity of wildfires is determined by three major factors:

- **Weather:** Dry, hot, and windy weather increases the likelihood of a major wildfire. These conditions make ignition easier, allow fuels to burn and spread rapidly and increase fire intensity. High wind speeds, in particular, can transform a small, easily controllable fire into a catastrophic event in a matter of minutes.

- **Topography:** Slope steepness is one of the most influential topographic features on fire behavior: as slope steepness increases, so does the rate at which a fire will spread. Additionally, uneven and steep terrain make containment efforts more difficult for responding authorities. Other important topographic features include aspect (south- and southwest-facing slopes usually have more fires) and steep, narrow drainages (chimneys). The loss of vegetation due to wildfires can cause further problems due to an increased threat of flash flooding and mudflows.

- **Fuel:** Wildfire fuels usually consist of living vegetation and dead plant material. Houses and other structures may also become a source of fuel.

Hazards Associated with Wildfires

Wildfires can have negative health consequences that extend beyond extinguishing the fire. Smoke associated with wildfires is a mixture of gases and fine particles from burning trees, plants, and sometimes building materials, which can pose major health concerns. Such smoke can hurt the eyes, irritate the respiratory system, and may worsen symptoms for people who have pre-existing respiratory conditions - such as respiratory allergies, asthma, or chronic obstructive pulmonary disease (COPD). Smoke from wildfires poses health concerns not only for people in the immediate area, but also those in areas downwind of the wildfire *(Check out Crisis24's Advice Sheet on health effect of smoke exposure)*.

Steps to Take to Minimize Risk of Wildfire

When planning a outdoor trip, develop a safety plan. Ensure that you are traveling to a safe environment and that you are prepared with the proper equipment to help keep the environment free of accidental wildfire. The plan should also address what to do in case you are threatened by a wildfire.

Include the following in your safety plan:

- Know the area. If camping, make sure to plan an escape route should you need to evacuate the area.
- Develop a checklist including packing necessary fire-prevention items, clearing the area of nearby brush before lighting your campfire, and having a full tank of gas if evacuation is necessary.
- Be prepared to use proper campfire extinguishing techniques. Adhering to a few simple rules and reminders can help keep outdoor parks and woodland areas safe.
- Know if fire or travel restrictions are in effect in the area to which you are traveling. Call the local fire department, forest service, or government representatives to make sure the area is restriction-free.
- Be aware of weather forecasts. If you are traveling during fire season, avoid potentially dangerous weather patterns, including excessive heat, low humidity, and strong winds.

How To Protect Your Home From Wildfires

- Build, renovate, or make repairs with fire-resistant materials.
- Reduce possible ember penetration by installing metal mesh screens over outside vents. Repair or replace loose or damaged shingles, roof tiles, windows, or screens.
- Set up outdoor water sources with hoses that can reach the entire property.
- Create a fire-resistant zone by reducing flammable materials within at least 9 metres (30 feet) from your home. Clear the zone of leaves, debris, and any other flammable material. Trim tree limbs which are 4.5 m (15 feet) or below to the ground. Remove flammable lawn furniture.
- Choose a room that can be sealed off from the outside air. Close all doors and windows. Use an air cleaner to reduce exposure to smoke.
- Before evacuating, move furniture to the center of the room and remove curtains and drapes. Close all windows and doors and turn off the gas.

What To Do If Threatened by Wildfires

At the first sign of a wildfire, leave the area immediately by established trails or roadways. Contact fire officials as soon as possible. Do not wet clothes; wet clothing will scald with high heat. Use a cloth to cover your mouth and nose to minimize smoke inhalation. Escape downhill but avoid canyons and chutes. Run into the wind if it is blowing towards the fire and perpendicular to the wind if it is blowing from behind the fire. Move towards burned areas which are less likely to catch fire. If escape route is blocked, go to the nearest lake or stream. Stay in the water while the fire passes overhead or is stopped by the water barrier. Contact local authorities via mobile phone or radio to notify them of your location and situation.

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