

The Great Smoky Mountain Wildfires

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The Great Smoky Mountains National Park

- Most visited national park with 11.3 million annual visitors¹
- Main park entrance at the town of Gatlinburg, Tennessee²
- Wildfires of 2016 one of the largest natural disasters in Tennessee's history⁵
- The towns of Pigeon Forge and Gatlinburg were affected
- 14,000 people were evacuated⁵
- 14 fatalities



Cause of Death in Severely Compromised Remains

- Thermal burns vs. smoke inhalation
- The level of carbon monoxide in several of these cases argues against smoke inhalation alone
- Rely on scene and investigational information



Smoke inhalation and heart disease

- In natural disasters sudden cardiac death doubles⁸
- Exposure to smoke, fire, and the cardiac stress associated with fleeing represent exactly the kind of stress that would trigger sudden cardiac death



Direct Deaths in Disasters

- **Direct death:** a death directly attributable to the forces of the disaster or by the direct consequences of these forces⁹
 - Structural collapse
 - Flying debris
 - Radiation exposure
 - Fire
 - Flooding



Indirect Deaths in Disasters

- **Indirect death:** when the unsafe or unhealthy conditions present during a disaster contribute to a death⁹
 - Including pre-disaster preparation and post-disaster clean-up
 - Vehicular accidents
 - Electrocutation
 - Heart attacks



Indirect Deaths

- Four main factors⁹:
 - Power problems
 - Cardiovascular failure
 - Evacuation
 - Vehicular accidents
- Cardiovascular Failure is most common⁸
- Indirect fatalities increase with age⁸

Summary of Fatalities

- 14 fatalities
 - Direct deaths: 10
 - Smoke inhalation: 9
 - Falling debris: 1
 - Indirect deaths: 4
 - MVC: 2
 - Heart disease: 2

References

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