

Firefighting and Atrial Fibrillation

INCREASED RISK WITH FIRE EXPOSURE

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Key Findings:

- A study of 10,860 U.S. firefighters found that **AFib risk increases with the number of fires fought annually**.
- After accounting for factors like high blood pressure and smoking, researchers identified a **14% increased risk of AFib for every 5 additional fires fought per year**.
- AFib prevalence:
 - 2.0% in those who fought 0–5 fires/year
 - 4.5% in those who fought 31+ fires/year
- For firefighters aged 60 or younger, 2.5% had AFib—**significantly higher** than the general population (0.1–1.0%).

Why the Risk is Higher:

- **Toxin exposure:** Inhalation and skin absorption of particulate matter, benzene, and other harmful substances.
- **Physical and mental stress:** Intense exertion, high adrenaline, long hours.
- **Heat stress and dehydration:** Increase heart rate and risk of arrhythmias.

Prevention Strategies:

1. **Health Monitoring:**
 - Regular cardiovascular screening, especially for AFib symptoms (palpitations, shortness of breath, fatigue).
 - Early detection through systematic screening programs.
2. **Risk Factor Management:**
 - Control high blood pressure, diabetes, sleep apnea, and lung disease aggressively.





- Promote heart-healthy lifestyles (diet, exercise, smoking cessation).
- 3. **Protective Measures:**
 - Enhance PPE use to limit exposure to harmful substances.
 - Implement cooldown and rehydration protocols after fire events.
- 4. **Medical Guidance:**
 - Educate firefighters about AFib and safe treatment options.
 - Address concerns of blood thinner use with tailored care plans due to increased bleeding risk.

Conclusion:

Firefighters face a heightened risk of AFib, with exposure increasing that risk incrementally. Proactive health monitoring and targeted prevention are essential to protect this vital workforce.

SIGN-IN AND ACKNOWLEDGMENT

Name	Signature	Date