

## PERSONAL PROTECTIVE GEAR FOR AIR MEDICAL PROVIDERS

### *A Position Statement of the National Flight Paramedics Association*

#### INTRODUCTION

The National Flight Paramedics Association (NFPA) has the responsibility of taking an aggressive and proactive status regarding the protection of its members and other air medical service providers.

In a study completed in 1994, Dr. Robert Dodd concluded that "EMS helicopter occupants are at a greater risk of serious injury and death compared to occupants in similar non-EMS helicopters in survivable crashes." Based on that conclusion, methods to better protect air medical crew members must be investigated.

Helmets may "reduce the risk of a fatal head injury eight fold" and clearly provide an increase in the survivability of EMS helicopter occupants. In addition to helmets, Nomex suits provide an increase measure of survivability in EMS helicopter crashes. In the above mentioned study, post-crash fires are cited in 14% of all crashes. For Nomex to be useful, they must be used in conjunction with other protective equipment. Dr. Dodd cites that "a Nomex uniform provides little protection if the wearer experiences a head injury which renders them unconscious for 15 seconds after impact. Nomex will only provide the occupant additional seconds for escape, not unlimited protection. For crashworthiness to work, it must use a systems approach."

Another aspect of protective equipment for air medical crews is the energy absorbing seat. Although not readily available in the EMS helicopter market, these are proven to significantly reduce the risk of spinal injury to occupant of EMS helicopter crashes.

#### ASSOCIATION POSITION

Based on the scientific data currently available, the NFPA fully endorses the following:

Flight Paramedics wear helmets of appropriate size that are designed for use in EMS helicopter operations. These helmets shall be equipped with appropriate full visors to provide a greater measure of protection during all missions (day and night).

Flight Paramedics wear long sleeved Nomex uniforms of appropriate size and construction. Additionally, Flight Paramedics shall wear cotton/wool/nomex undergarments for further protection.

Flight Paramedics wear gloves constructed of a flame retardant material.

Flight Paramedics wear natural leather high top boots with cotton/wool socks. If metal zippers are used in boot construction, a leather shield shall be in place between the zipper and the inner side of the boot. Additionally, Flight Paramedics shall wear cotton/wool/nomex socks for further protection.

~~When available, the helicopter in which a Flight Paramedic works shall be equipped with energy absorbing seats.~~

**National  
Flight  
Paramedics  
Association**

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Dodd R, *The Cost Effectiveness of Air Medical Helicopter Crash Survival Enhancements*, Aviation Science and Technology, Inc: Bowie, MD 1994.

National Flight Nurses Association Safety Position Paper Task Force "NFNA Position Paper: Improving Flight Nurse Safety in Air Medical Helicopter Environment", *Hospital Aviation* 7:9 (September 1987): 43-52.

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