



Firefighter Synopsis

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Authored by Jelmini, Jacob D.

Every eight minutes a firefighter is injured.¹ Firefighting is documented as one of the most hazardous occupations in the United States.² Over the past 40 years the rate of fireground injury has remained relatively constant despite a decrease in fires reported.³ Moreover, the number of injuries at non-fire emergencies has increased by 42 percent.² Almost 65,000 firefighter injuries occurred while on-duty in 2020, an increase of seven percent from previous years.² Persistent firefighter injury, therefore, amounts to both a physical challenge for individual firefighter personnel, as well as a significant financial hardship for individual fire companies. In fact, the costs associated with firefighter injury is estimated between \$1.8 billion to \$6.7 billion per year, resulting in approximately \$58000 to \$232000 per fire department per year or \$1700 to \$6200 per injured firefighter per year (2022 adjusted estimates).⁴ More specific to the state of Florida, the cost of occupational injury ranges from \$1390 to \$1561 (2022 adjusted estimates).⁵ When investigating firefighter injury by type, sprains, strains, and muscular pain are consistently the highest reported cause of firefighter injury.¹⁻⁴ International reports note worker's compensation and medical claims resulting from MSK injuries equate to approximately \$430000 per fire department per year.⁶ A more recent study of a large US metropolitan fire department found strains alone equated to \$15 million of the approximately \$50 million in total medical costs.⁷

Developing a comprehensive injury prevention strategy, therefore, is critical for overall firefighter health and wellness. Previous evidence has demonstrated the efficacy of exercise interventions on health and fitness in firefighting, such as improvements in body fat percentage, aerobic capacity, and muscular strength.⁸ Moreover, implementation of an occupation-specific low back education program noted over a 70% reduction in number of days lost due to low back-related injuries.⁹ However, despite evidence supporting exercise and injury prevention strategies, no systematic injury prevention program has been established in the firefighter setting. Therefore, having direct access to an on-site healthcare provider, particularly one that specializes in MSK injury prevention, may prove beneficial to individual fire companies.

An athletic trainer (AT) is a certified and licensed healthcare professional recognized by the American Medical Association, whose skills include examination of clinical diagnosis, rendering primary and emergency care, as well as providing wellness promotion education and therapeutic/rehabilitation interventions.¹⁰ Additionally, an AT assesses and treats MSK injuries within the field of sports medicine on a daily basis. While typically seen within "traditional" athletic populations, an AT's specialization in exercise prescription, such as exercise maintenance programs and mobility exercises, makes them an ideal healthcare provider in a firefighter setting. Companies in the industrial setting report that employing an athletic trainer decreases healthcare costs by 50%, with 100% of industrial companies reporting a favorable return on investment.¹¹ The Fairfax County (Virginia) Police Department documented a decrease in overall medical costs by 49.5%, as well as a significant decrease in MSK injuries by 86.3% since their utilization of an AT.¹² Fire departments across the US, such as Seattle FD and Denver FD, are already employing ATs for their respective departments as their unique skills and knowledge-base have proven to be of tremendous value in other medical settings. While firefighting is considered an "emerging" setting for ATs, particularly in the tactical athlete population (e.g. firefighter, military, police), their employment across the US will only continue to grow as having an on-site AT enables immediate access to medical assessment and implementation of a preventative treatment program.

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