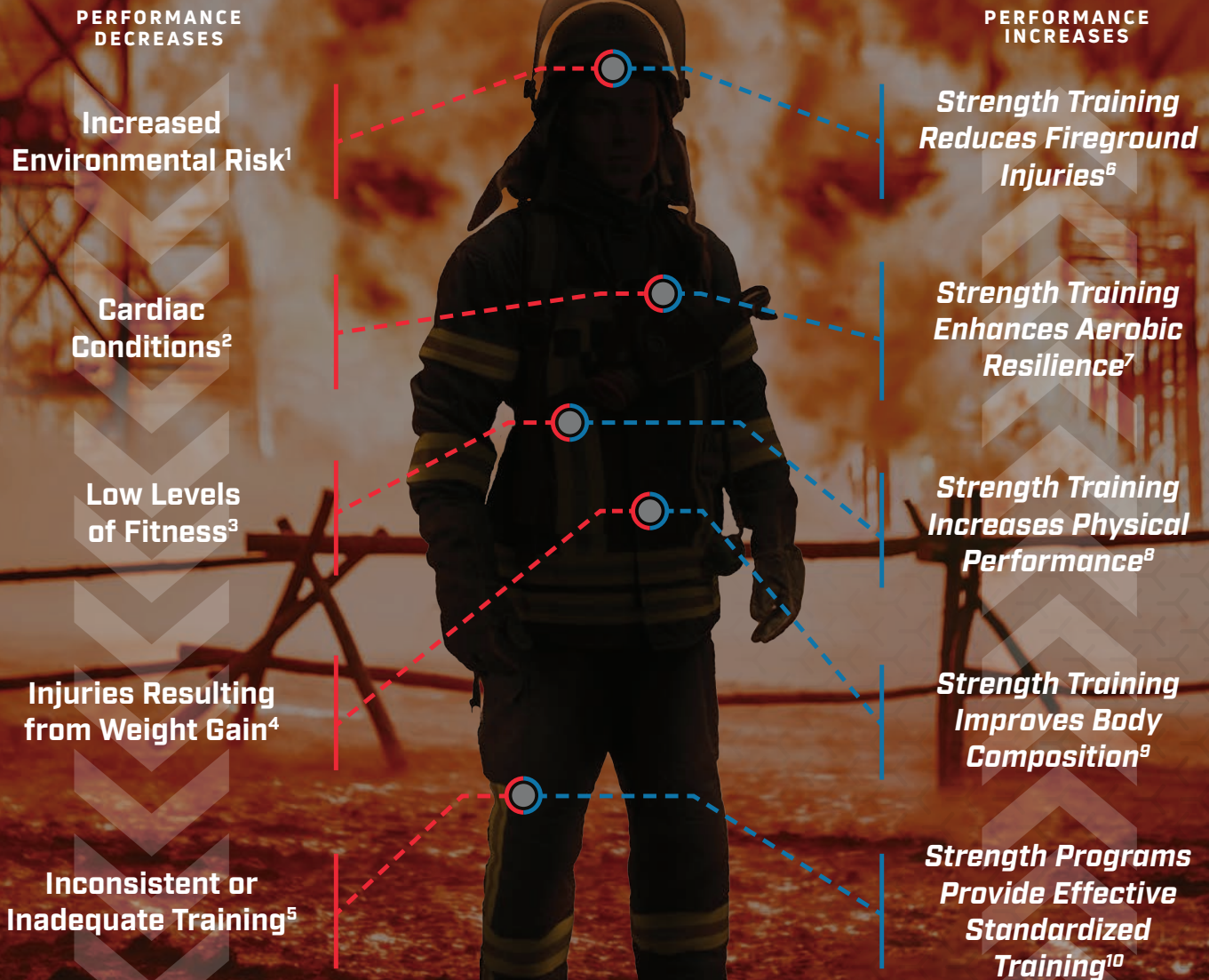


STRENGTH MATTERS FOR FIREFIGHTERS



Firefighters face unique environmental challenges and extreme physical demands as they perform their job duties. Increasingly, programs and institutions are investing in strength and conditioning to combat high rates of injuries and fatalities, elevate job task performance, and increase retention.

Consider the Evidence-based Benefits of Strength & Conditioning



[NSCA.com/Tactical](https://www.nscacom.com/Tactical)

“Proper strength and conditioning training has been shown to be feasible, acceptable, and effective in firefighter populations.”

National Fire Protection Association. 2018.
NFPA 1582: standard on comprehensive occupational medical program for fire departments

NSCA Tactical Strength and Conditioning Solutions

1 Gold-Standard Strength and Conditioning Certifications

CSCS® - Certified Strength and Conditioning Specialist®

TSAC-F® - Tactical Strength and Conditioning Facilitator®

2 Strength and Conditioning Research Journals

The Journal of Strength and Conditioning Research

The Strength and Conditioning Journal

The TSAC Report

3 Training for Tactical Strength and Conditioning Professionals

NSCA Tactical Annual Training

NSCA Tactical Strength and Conditioning Course

1 Increased Environmental Risk

"Firefighters work in dangerous and complex environments, which increases their risk for injuries and fatalities."

Haynes HJG, Molis JL. U.S. firefighter injuries: 2016: National Fire Protection Association Fire Analysis and Research Division; 2017.

2 Cardiac Conditions

"The majority of firefighter line-of-duty deaths are due to cardiovascular events, combined with poor health, low fitness levels, and high prevalence of overweight and obesity, compounds the dangerous nature of the occupation."

Hollerbach et al. Journal of Occupational Medicine and Toxicology (2019) 14:12

"Most career and volunteer firefighters do not meet the minimal fitness threshold to return-to-duty after a cardiac event."

National Fire Protection Association. 2018. NFPA 1582: standard on comprehensive occupational medical program for fire departments

3 Low Levels of Fitness

"Load carriage, common in firefighter job duties, reduces physical tolerance, capacity, and efficiency, demonstrating the need for proper strength and conditioning training."

Smith DL, Fehling PC, Hultquist EM, Lefferts WK, Barr DA, Storer TW, Cooper CB. Firefighter's personal protective equipment and the chronotropic index. Ergonomics. 2012;55(10):1243-51.

"Firefighting requires optimal levels of power, strength, muscular endurance, and anaerobic/aerobic endurance."

Abel MG, Mortara AJ, Pettitt RW. Evaluation of circuit-training intensity for firefighters. J Strength Cond Res. 2011;25(10):2895-901.

Dennison KJ, Mullineaux DR, Yates JW, Abel MG. The effect of fatigue and training status on firefighter performance. J Strength Cond Res. 2012;1101-9.

4 Injuries Resulting from Weight Gain

"Comorbidities related to weight gain include heart disease, stroke, type 2 diabetes and certain types of cancer which are highly prevalent among the firefighter population."

Jahnke SA, Poston WSC, Haddock CK, Jitnarin N. Injury among a population based sample of career firefighters in the Central USA. Injury prevention. 2013;19(6):393-8

Poplin GS, Roe DJ, Burgess JL, Peate WF, Harris RB. Fire fit: assessing comprehensive fitness and injury risk in the fire service. Int Arch Occup Environ Health. 2016;89(2):251-9.

"Many firefighters experience significant weight gain over the course of an approximate 25-year career. As a firefighter's weight increases, their cardiorespiratory fitness plummets and their risk of cardiovascular disease (CVD) increases."

Durand G, Tsismenakis AJ, Jahnke SA, Baur DM, Christophi CA, Kales SA. Firefighters physical activity: relation to fitness and cardiovascular disease risk. Med Sci Sports Exerc. 2011.

5 Inconsistent or Inadequate Training

"There are no nationally-enforced fitness or physical activity requirements for firefighters, which leads to inconsistent fitness training within and between fire departments, substandard fitness levels, and greater risks for obesity, injury, and cardiovascular-related events."

Haddock CK, Poston WSC, Jahnke SA. Addressing the epidemic of obesity in the United States fire service: a report prepared for the national volunteer fire council. 2011

"Proper strength and conditioning training in firefighters requires adequate training in multiple fitness areas."

National Fire Protection Association. 2018. NFPA 1582: standard on comprehensive occupational medical program for fire departments.

6 Strength Training Reduces Fireground Injuries

"Studies have shown that firefighters who engaged in regular physical training were less likely to incur a serious injury on the fireground."

Jahnke SA, Poston WSC, Haddock CK, Jitnarin N. Injury among a population based sample of career firefighters in the Central USA. Injury prevention. 2013;19(6):393-8

Poplin GS, Roe DJ, Burgess JL, Peate WF, Harris RB. Fire fit: assessing comprehensive fitness and injury risk in the fire service. Int Arch Occup Environ Health. 2016;89(2):251-9.

7 Strength Training Enhances Aerobic Resilience

"Increased physical fitness is related to lower levels of injury/illness, reduced absenteeism, increased productivity, and increased work capacity for firefighters."

Dennison KJ, Mullineaux DR, Yates JW, Abel MG. The effect of fatigue and training status on firefighter performance. J Strength Cond Res. 2012;1101-9.

"Individuals who are more conditioned can perform at a lower relative capacity, for longer periods, recover faster, and perform subsequent tasks more easily than less conditioned individuals."

Knapik, JJ. The importance of physical fitness for injury prevention: Part 1. J Spec Oper Med 15: 123-127, 2015.

8 Strength Training Increases Physical Performance

"Firefighters who train regularly and possess higher fitness levels tend to perform job-specific tasks more efficiently than untrained firefighters."

Michaelides MA, Parpa KM, Henry LJ, Thompson GB, Brown BS. Assessment of physical fitness aspects and their relationship to firefighters' job abilities. J Strength Cond Res 2011;25(4), 956-965.

"Increased physical fitness is directly related to improved job task performance in firefighters."

Poston WS, Haddock CK, Jahnke SA, Jitnarin N, Tuley BC, Kales SN. The prevalence of overweight, obesity, and substandard fitness in a population based firefighter cohort. J Occup Environ Med. 2011;53(3):266-73.

9 Strength Training Improves Body Composition

"Strength and conditioning training has been shown to increase strength, performance and body composition."

Fleck, SJ. Periodized strength training: A critical review. J Strength Cond Res 13: 82-89, 1999.

Rhea, MR, Phillips, WT, Burkett, LN, Stone, WJ, Ball, SD, Alvar, BA, and Thomas, AB. A comparison of linear and daily undulating periodized programs with equated volume and intensity for local muscular endurance. J Strength Cond Res 17: 82-87, 2003.

10 Strength Programs Provide Effective Standardized Training

"If fitness programs can be implemented at the fire academy level, physical fitness training can become habitual for young firefighters."

Hollerbach et al. Journal of Occupational Medicine and Toxicology (2019) 14:12

"Proper strength and conditioning training has been shown to be feasible, acceptable, and effective in firefighter populations."

Hollerbach et al. Journal of Occupational Medicine and Toxicology (2019) 14:12

NSCA
TACTICAL

Since 2005, the National Strength and Conditioning Association has partnered closely with tactical professionals to develop strength and conditioning solutions to increase performance and reduce injury among law enforcement personnel. We look forward to working with you.

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