NSCA NATIONAL STRENGTH AND CONDITIONING ASSOCIATION

The Tactical Strength and Conditioning Facilitator (TSAC-F) as a Professional Standard in Law Enforcement

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Executive Summary

The modern law enforcement officer is an individual required to perform unpredictable, high-intensity physical work and athletic actions, often after prolonged sedentary periods, while carrying body armor and a loaded duty belt and operating under acute psychological stress. Unlike the professional and collegiate athletes they

may physically resemble, the overwhelming majority of officers train without qualified oversight. The predictable consequence is a workforce that carries an injury and cardiovascular burden well above the civilian norm, at direct, recurring, and largely modifiable cost to the employing agency.

A **Tactical Strength and Conditioning Facilitator (TSAC-F)** is the credentialed professional whose defined role is to close that gap: conducting occupational needs analyses, screening and assessing officers, designing and supervising injury-reducing and performance-enhancing training, and building a standardized, legally defensible human-performance system that survives personnel turnover. The TSAC-F is certified by the National Strength and Conditioning Association and as stated by Alvar et al. (1):

> "*The TSAC-F is a specialized professional who uses an evidence-based approach (evaluating current research and scientifically based training methodologies) in conjunction with field experience to optimize occupational physical preparedness and to reduce injury risk among tactical athletes.*"

Moreover, this credential is the only tactical strength and conditioning certification accredited by the National Commission for Certifying Agencies (NCCA), the recognized benchmark for credential rigor.

This document advocates for the hiring of Tactical Strength and Conditioning Facilitators (TSAC-F) within law enforcement agencies and health and wellness programs. The information presented in this document will focus on the need for health and wellness support among LEOs and how a TSAC-F can facilitate development in these program areas. Lastly, discussion about demonstrating return on investment will be presented.

Introduction

Law enforcement officers (LEOs) serve a vital role in society by enforcing local, state, and federal laws, maintaining public safety, protecting property, and responding to emergencies. Due to the nature of the job, LEOs may be required to rapidly transition from predominantly sedentary activities to maximal levels of physical exertion. Examples include chasing a fleeing suspect on foot, applying use-of-force techniques, and pushing and pulling equipment and people (8,32) while performing tasks ranging from desk duties and driving to attending a domestic dispute and arresting uncooperative individuals (31). Patrol officers may also carry an additional 10 kg of personal protective equipment (PPE) (2,9,10,14,34,39-42,48), while Special Weapons and Tactics (SWAT) officers can carry more than 20 kg of PPE (27,35,38). Rapid shifts in physical demands, compounded by the need to wear heavy protective gear, dramatically increase the metabolic and biomechanical stress experienced by the LEO. Consequently, LEOs need to maintain an acceptable level of physical fitness to perform key job functions throughout their occupational lifespan. Beyond its physical demands, policing is associated with an elevated risk of cardiovascular disease (CVD), with officers at greater risk of CVD events than the general population (37,46). Maintaining officer fitness helps sustain the physical capabilities required to safely and effectively execute critical job tasks but reduces injury risk and the likelihood of developing CVD (4). Given these job demands and impacts, the provision of services and support to LEOs should ideally be comparable to what is afforded to professional athletes (25).

Physical Fitness

It is well documented that physical fitness is directly and indirectly related to occupational performance in law enforcement. Research suggests that fitter officers are better able to perform essential tasks more efficiently (3,5,7,17,18,20,21,30). Likewise, numerous investigations suggest that poor officer fitness can lead to second-

order effects when completing job tasks. A prime example of this may be escalating the level of force when interacting with the public to offset a lack of physical abilities to resolve the situation by other means. Consequently, the development and maintenance of physical fitness are essential throughout the occupational life span to ensure officers are fit for duty and to preserve personal and public safety.

Various challenges influence officer fitness, health, and well-being. In academy training, physical training sessions are often applied using a one-size-fits-all approach, reducing fitness development and increasing injury risk (16,19,28). For police officers' workplace factors, most notably shiftwork, can lead to a reduced desire to exercise, poorer nutritional choices, increases in obesity, and subsequent comorbid concerns (e.g., metal health and physical health) (32,36). Health and wellness programs, with appropriate staffing support (such as TSAC-F (25)), can aid in maintaining and improving officer fitness within the challenges associated with the job of policing (22-24).

Musculoskeletal Injuries

Musculoskeletal injuries, particularly sprains, strains and injuries associated with suspect control, represent some of the most common and costly injuries within policing populations (26). Less fit personnel, whether trainees or sworn officers, are also at greater risk of injury (32,45). Law enforcement officers face occupational injury rates 3-5 times higher than most professions, placing them among the highest-risk occupational groups in the United States (15,50). A National Institute for Occupational Safety and Health analysis of 50,793 law enforcement workers' compensation claims from Ohio (2001–2019) revealed the scope of this challenge: sprains represented 41% of all claims and contusions 17%, with 75% of claims associated with officers who filed multiple claims and 34% involving officers with five or more separate incidents (44). The visible costs, workers' compensation premiums, lost-time wages, modified duty assignments, and overtime for staffing shortages constitute only a portion of the total expense burden agencies already carry. Indeed, academy training alone generates 368.63 injuries per 1,000 recruits annually, creating immediate costs before officers even reach the field (28).

The TSAC-F may assist in mitigating these burdens through evidence-based physical preparedness and injury prevention programming tailored specifically to tactical populations. Officers in higher fitness categories have demonstrated lower worker's compensation claim rates, while mandatory fitness and screening programs have produced significant reductions in job-related injuries and associated costs (26,50). Furthermore, studies in tactical populations have demonstrated that targeted strength and conditioning interventions can improve movement quality, physical capacity, and injury resilience while reducing time-loss injuries (33). When integrated into agency wellness frameworks, TSAC-F directed programming may therefore represent cost-effective strategy for reducing worker's compensation burden, improving officer readiness and enhancing long-term workforce sustainability.

Health-Related Considerations

Given the need to respond to unpredictable situations that require high levels of physical intensity, fitness is self-evident for this population. However, the most frequently required job tasks for LEOs are sedentary (37,47). Consequently, a LEO may be engaged primarily in sedentary work and, at a moment's notice, be thrust into maximum or near-maximum physical activity. This may cause significant cardiovascular and musculoskeletal strain when performing the task and when recovering from such an event. Indeed, LEOs carry a disproportionate chronic disease burden relative to the working-age population. These disparities are often linked

to the sedentary nature of the job, hypervigilance, shift work, poor lifestyle choices, limited access to healthy food while on duty, and resource constraints (e.g., access to fitness facilities, guidance from qualified professionals) (12,13,50). A population-wide mortality analysis found that circulatory conditions (i.e., diseases affecting the heart, blood vessels, and circulation) was the leading cause of death among male officers, cancer (breast, lung, and female reproductive cancers) was ranked first among female officers, and all-cause mortality rates exceeded those of the broader working-age population for both sexes (43). Cardiometabolic profiling data indicated that about 90% of public safety workers meet the criteria for overweight or obesity, 30% present with hypertension, and nearly half carry risk factors associated with atherosclerotic CVD (49).

Worksite health and wellness programs are effective in reducing CVD risk factors, lowering healthcare expenditures, and decreasing absenteeism among law enforcement personnel, with fitter officers consistently showing fewer sick days and lower healthcare utilization (50). Tactical strength and conditioning programming, integrated into an agency's wellness policy and supported by regular health screening (25), may serve as a scalable tool for identifying high-risk personnel earlier in their careers and delivering structured interventions and education before chronic disease burden accumulates into disability and retirement costs.

Retention and Morale

Retention and morale remain persistent challenges within law enforcement agencies, where personnel are routinely exposed to chronic occupational stressors, operational fatigue, organizational strain, and repeated exposure to traumatic events. These factors have been associated with elevated rates of burnout, emotional exhaustion, disengagement, and turnover intentions among sworn personnel (29). Declining morale and staffing shortages not only affect workforce stability but may also impair operational readiness, institutional knowledge retention, and organizational effectiveness.

Occupational health literature demonstrates that employees who maintain higher levels of physical and psychological well-being tend to exhibit greater work engagement, improved productivity, and lower rates of burnout and attrition (6,11). Within law enforcement, structured fitness and wellness initiatives may provide comparable benefits due to the profession's uniquely demanding operational environment. The TSAC-F may serve to address these concerns by integrating evidence-based strength and conditioning principles with occupational performance and injury-reduction strategies tailored specifically to tactical populations. By improving physical preparedness, reducing injury risk, and promoting sustainable health practices, TSAC-F-informed programming may contribute to improved morale, greater perceptions of organizational support, and enhanced retention among law enforcement personnel.

Demonstrating Return on Investment (ROI)

For agencies who wish to hire a TSAC-F or support current peer fitness leaders to obtain this certification, it is important that appropriate metrics (e.g., employee work satisfaction, staff turnover, injury trends, medical costs) are provided to demonstrate Return on Investment (ROI). It is further suggested that each agency determines and routinely reassesses the primary metrics based on the agency's needs and priorities. Nonetheless, and to reiterate, given the job demands it is essential that LEOs receive appropriate support from appropriately trained and certified staff to maintain health and safety and avoid potential litigation due to contraindicated practices (25).

Conclusion: A Defensible TSAC-F ROI Statement

Occupational injury, chronic disease, and workforce attrition are compounding cost drivers with a shared upstream determinant: a workforce whose physical demands consistently exceed its preparation and ongoing support. The information presented demonstrates that these costs are measurable, patterned and addressable. Cardiovascular disease is the leading cause of death among male law enforcement officers nationally, with excess mortality beginning with LEOs in their 40s. Turnover costs routinely exceed the per-officer training investment for every officer who separates before full operational productivity. Agencies that treat physical readiness as a funded administrative priority rather than a discretionary benefit reduce insurance expenditure, stabilize staffing, and extend productive career duration.

The TSAC-F certification provides a structured, evidence-informed professional standard for delivering these outcomes across the career span, Law enforcement agencies, risk managers, and municipal administrators are encouraged to evaluate integration of certified human performance professionals into agency wellness policy as a funded, accountable component of workforce management, not as optional programming. The burden is documented, the intervention is effective, and the return, measured in readiness, officer health and career longevity, reduced liability, and avoided cost, is substantial and measurable.

References

1. Alvar, BA, Sell, K, and Dawes, JJ. Tactical Strength and Conditioning Overview, In *NSCA's Essentials of Tactical Strength and Conditioning*. Alvar, BA, Sell, K, and Dawes, JJ, eds. Human Kinetics: Champaign, IL, 2026. pp. 1-6.
2. Baran, K, Dulla, J, Orr, R, et al. Duty loads carried by the Los Angeles Sheriff's Department deputies. *J Aust Strength Cond*. 26(5):34-38. 2018.
3. Beck, AQ, Clasey, JL, Yates, JW, et al. Relationship of physical fitness measures vs. occupational physical ability in campus law enforcement officers. *J Strength Cond Res*. 29(8):2340-2350. 2015.
4. Bowen, JM. Stress inoculation training and critical thinking skills: California law enforcement academies. *Int J Train Res*. 22(3):215-231. 2024.
5. Canetti, EFD, Dawes, JJ, Drysdale, PH, et al. Relationship between metabolic fitness and performance in police occupational tasks. *J Sci Sport Exerc*. 3(2):179-185. 2021.
6. Cohen, C, Pignata, S, Bezak, E, et al. Workplace interventions to improve well-being and reduce burnout for nurses, physicians and allied healthcare professionals: A systematic review. *BMJ Open*. 13(6):e071203. 2023.
7. Dawes, JJ, Lindsay, K, Bero, J, et al. Physical fitness characteristics of high vs. low performers on an occupationally specific physical agility test for patrol officers. *J Strength Cond Res*. 31(10):2808-2815. 2017.
8. Decker, A, Hilton, B, Dawes, J, et al. Physiological demands of common occupational tasks among Australian police officers: A descriptive analysis. *Ann Work Expo Healt*. 66(7):960–966. 2022.
9. Dempsey, PC, Handcock, PJ, and Rehrer, NJ. Impact of police body armour and equipment on mobility. *Appl Ergon*. 44(6):957-961. 2013.
10. Frick, KA, Agostinelli, PJ, Neal, FK, et al. Protective gear negatively impacts police officer mobility, stability, and power generation. *J Funct Morphol Kinesiol*. 10(3):344. 2025.
11. Gallup Inc. Employee Wellbeing: What It Is, Why It Matters and How to Improve It. Retrieved August 7, 2026, from https://www.gallup.com/workplace/404105/importance-of-employee-wellbeing.aspx.aspx
12. Gu, JK, Charles, LE, Burchfiel, CM, et al. Long work hours and adiposity among police officers in a US northeast city. *J Occup Environ Med*. 54(11):1374-1381. 2012.
13. Hartley, TA, Burchfiel, CM, Fekedulegn, D, et al. Health disparities in police officers: Comparisons to the U.S. general population. *Int J Emerg Ment Health*. 13(4):211-220. 2011.

14. Hoinatski, R, Rodacki, C, de Oliveira Weimer, RM, et al. Load carriage does not reduce absolute mechanical power output but reduces agility in elite military police officers. *Int J Occup Saf Ergon*. 30(4):1069-1076. 2024.
15. Holloway-Beth, A, Forst, L, Freels, S, et al. Occupational injury surveillance among law enforcement officers using workers' compensation data, Illinois 1980 to 2008. *J Occup Environ Med*. 58(6):594-600. 2016.
16. Lockie, R, Dulla, J, Orr, R, et al. Importance of ability-based training for law enforcement recruits. *Strength Cond J*. 43(3):80-90. 2021.
17. Lockie, R, Dawes, JJ, Sakura, T, et al. Relationships between physical fitness assessment measures and a workplace task-specific physical assessment among police officers: A retrospective cohort study. *J Strength Cond Res*. 37(3):678-683. 2023.
18. Lockie, RG, Dawes, JJ, Balfany, K, et al. Physical fitness characteristics that relate to Work Sample Test Battery performance in law enforcement recruits. *Int J Environ Res Public Health*. 15(11):2477. 2018.
19. Lockie, RG, Hernandez, JA, Moreno, MR, et al. 2.4-km run and 20-m multistage fitness test relationships in law enforcement recruits after academy training. *J Strength Cond Res*. 34(4):942-945. 2020.
20. Lockie, RG, Moreno, MR, McGuire, MB, et al. Relationships between isometric strength and the 74.84-kg (165-lb) body drag test in law enforcement recruits. *J Hum Kinet*. 74:5-13. 2020.
21. Lockie, RG, Moreno, MR, Rodas, KA, et al. With great power comes great ability: Extending research on fitness characteristics that influence Work Sample Test Battery performance in law enforcement recruits. *Work*. 68(4):1069-1080. 2021.
22. Lockie, RG, Dawes, JJ, and Orr, RM. Health and fitness data for police officers within a health and wellness program: Implications for occupational performance and career longevity. *Work*. 73(3):1059-1074. 2022.
23. Lockie, RG, Orr, RM, and Dawes, JJ. Fit (and healthy) for duty: Blood lipid profiles and physical fitness test relationships from police officers in a health and wellness program. *Int J Environ Res Public Health*. 19(9):5408. 2022.
24. Lockie, RG, Orr, RM, and Dawes, JJ. Slowing the path of time: Age-related and normative fitness testing data for police officers from a health and wellness program. *J Strength Cond Res*. 36(3):747-756. 2022.
25. Lockie, RG and Dawes, JJ. High-performance programs for first responders: Considerations and potential benefits of implementation. *Strength Cond J*. 46(4):447-453. 2024.
26. Lyons, K, Radburn, C, Orr, R, et al. A profile of injuries sustained by law enforcement officers: A critical review. *Int J Environ Res Public Health*. 14(2):142. 2017.
27. Marins, E, Barbosa, O, Machado, E, et al. Profile of self-reported physical tasks and physical training in Brazilian Special Operations Units: A web-based cross-sectional study. *Int J Environ Res Public Health*. 17(19):7135. 2020.
28. Maupin, DJ, Canetti, EFD, Schram, B, et al. Profiling the injuries of law enforcement recruits during academy training: a retrospective cohort study. *BMC Sports Sci Med Rehabil*. 14(1):136. 2022.
29. McCarty, WP and Skogan, WG. Job-related burnout among civilian and sworn police personnel. *Police Q*. 16(1):66-84. 2013.
30. Moreno, MR, Dulla, JM, Dawes, JJ, et al. Lower-body power and its relationship with body drag velocity in law enforcement recruits. *Int J Med Sci*. 12(4):847-858. 2019.
31. Orr, R, Hinton, B, Wilson, A, et al. Investigating the routine dispatch tasks performed by police officers. *Safety*. 6(4):54. 2020.
32. Orr, R, Canetti, EFD, Gough, S, et al. Police fitness: An international perspective on current and future challenges. *Sports*. 13(7):219. 2025.
33. Orr, RM, Pope, R, Johnston, V, et al. Soldier occupational load carriage: A narrative review of associated injuries. *Int J Inj Contr Saf Promot*. 21(4):388-396. 2014.
34. Orr, RM, Kidd, D, Canetti, E, et al. Profiling loads worn by a state police service while on duty. *Work*: https://doi.org/10.1177/1051981526142022. 2026.
35. Pryor, RR, Colburn, D, Crill, MT, et al. Fitness characteristics of a suburban Special Weapons and Tactics team. *J Strength Cond Res*. 26(3):752-757. 2012.

36. Ramey, SL, Perkhounkova, Y, Moon, M, et al. The effect of work shift and sleep duration on various aspects of police officers' health. *Workplace Health Saf*. 60(5):215-22. 2012.
37. Ramey, SL, Perkhounkova, Y, Moon, M, et al. Physical activity in police beyond self-report. *J Occup Environ Med*. 56(3):338-43. 2014.
38. Robinson, J, Roberts, A, Irving, S, et al. Aerobic fitness is of greater importance than strength and power in the load carriage performance of specialist police. *Int J Med Sci*. 11(4):987-998. 2018.
39. Schram, B, Hinton, B, Orr, R, et al. The perceived effects and comfort of various body armour systems on police officers while performing occupational tasks. *Ann Occup Environ Med*. 30(1):15. 2018.
40. Schram, B, Orr, R, Pope, R, et al. Comparing the effects of different body armor systems on the occupational performance of police officers. *Int J Environ Res Public Health*. 15(5):893. 2018.
41. Schram, B, Orr, R, Hinton, B, et al. The effects of body armour on the power development and agility of police officers. *Ergonomics*. 62(10):1349-1356. 2019.
42. Schram, B, Orr, R, Hinton, B, et al. The effects of body armour on mobility and postural control of police officers. *J Bodyw Mov Ther*. 24(3):190-194. 2020.
43. Tanksley, PT, Barnes, JC, Blair, JP, et al. Mortality among law enforcement officers in the United States: a population-wide analysis of the National Occupational Mortality Surveillance data, 2020-2023. *Lancet Reg Health Am*. 52. 2025.
44. Tiesman, HM, Konda, S, Wurzelbacher, SJ, et al. On-duty Injuries Among Ohio Law Enforcement Officers. Retrieved August 7, 2026, from https://www.cdc.gov/niosh/bulletin/2023/leo-injuries.html
45. Tomes, C, Schram, B, Pope, R, et al. What is the impact of fitness on injury risk during police academy training? A retrospective cohort study. *BMC Sports Sci Med Rehabil*. 12(1):39. 2020.
46. Violanti, JM, Fekedulegn, D, Hartley, TA, et al. Life expectancy in police officers: A comparison with the U.S. general population. *Int J Emerg Ment Health*. 15(4):217-228. 2013.
47. Violanti, JM, Ma, CC, Fekedulegn, D, et al. Associations between body fat percentage and fitness among police officers: A statewide study. *Saf Health Work*. 8(1):36-41. 2017.
48. Wiley, A, Joseph, A, Orr, R, et al. The impact of external loads carried by police officers on vertical jump performance. *Int J Med Sci*. 13(6):1179-1189. 2020.
49. Wohlgemuth, KJ, Conner, MJ, Burnham, E, et al. Occupational health disparities: A profile of firefighters and police officers. *J Strength Cond Res*. 40(3):e297-e303. 2026.
50. Zimmerman, FH. Cardiovascular disease and risk factors in law enforcement personnel: A comprehensive review. *Cardiol Rev*. 20(4):159-166. 2012.