



FORCE SCIENCE[®] NEWS

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Be sure to check out the 2018 line-up of *Force Science* training options at: www.forcescience.org/training.html

SPECIAL NOTICE:

The latest report on unintentional firearms discharges that we summarized in *Force Science News*#348 [10/17/17] can now be accessed online, in full and free of charge. The publisher of the research paper in the peer-reviewed journal *Applied Ergonomics* is making the content openly available until Feb. 4, 2018, by [clicking here](#).

The paper, "Further analysis of the unintentional discharge of firearms in law enforcement," presents findings to date in an ongoing investigation by a team from the Force Science Institute. The study explores the context, officer behavior, and casualties associated with UDs and includes prevention-oriented training tips.



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INSTITUTE

I. New study: Anti-fatigue training yields big benefits for officers

Can just four hours of instruction on sleep problems and improvement help tired cops face the job with significantly less fatigue?

Results of a recently published pilot study with the Royal Canadian Mounted Police suggest that's possible.

In a first-of-its-kind test, researchers headed by Dr. Lois James of Washington State U. in Spokane have found that simple, straightforward fatigue-management information packaged for police can not only increase sleep quality and satisfaction but can also have a positive impact on rest-related mental and physical health as well.

"Any anti-fatigue program that works is literally a lifesaver," says Dr. Bill Lewinski, executive director of the Force Science Institute, which was not involved in this study. "Fatigue from sleep deprivation robs officers not only of a sense of personal wellbeing but also profoundly affects the cognitive abilities vital to their survival—alertness, decision-making, resilience from stress. So when we talk about counter-fatigue measures, we're talking potentially about life-or-death implications."

Zzzzzzzz PROBLEMS. The volunteer participants in James' study were 61 employees of the RCMP in the province of Saskatchewan, white male constables (frontline patrol officers) predominately, with some sworn personnel of higher rank and a few civilians included. They averaged 11 years in law enforcement, served in both rural and urban jurisdictions, generally were married or in a domestic partnership with kids living at home, tended to work eight- or nine-hour rotating shifts plus overtime, and

were often on call even when off-duty. Average age was 38.

Their responses to an anonymous, self-reporting questionnaire surfaced sleep patterns and problems common among cops.

- Although the majority reported their "quality of life" as being good or very good overall, only 21% were "satisfied" with their sleep.

- Close to half (45%) suffered from insomnia, with 14% claiming their sleep was disrupted by sleep apnea.

- On average, they got about six hours' sleep per 24-hour period, but that number jumped to nearly eight hours during non-working periods. This suggests they were trying to "catch up" from "insufficient sleep quality," a strategy that's ineffective, according to the researchers. Indeed, 70% reported being routinely "bothered by tiredness/fatigue."

- There were prolific reports of mood disorders: 20% were bothered by depression; 26% by anxiety; 16% by what they felt was PTSD; 12% by "frequent temper outbursts"; 32%, 55%, and 63% respectively were "distressed" by feeling "hopeless," "blue," or "tense" on a regular basis.

- In the realm of physical health, the majority (59%) were generally satisfied with their status, but over half reported "routinely" suffering from headaches and 41%—an "alarming" number, in the researchers' view—complained of "neck/back/spine trouble." This data provided baseline measurements for the study and overall reflected "considerable

sleep, health, and wellness problems,” James writes.

KNOWLEDGE Rx. Members of the RCMP’s Fitness and Lifestyle Unit were trained by the research team to, in turn, educate the study’s participants on sleep health and wellness.

Across three to four hours of instruction, the RCMP trainers exposed the participants in small groups of five to 10 to a copyrighted anti-fatigue program that had earlier been developed for the Calgary (Alberta) Police Service by one of James’ research team, Dr. Charles Samuels.

Samuels, a physician on the medical faculty of the University of Calgary, is the medical director of the Centre for Sleep & Human Performance, a prominent Canadian sleep lab and testing facility.

The program informed participants in four areas:

1. The science of sleep
2. Sleep disorders
3. Sleep apnea, and
4. Fatigue countermeasures.

The latter, says James, included how-to instruction on topics such as strategic napping, caffeine management, improvement of sleep hygiene, light therapy, and hydration.

Samuels adds, in an email to *Force Science News*: “Strategic napping and the strategic use of caffeine for improved alertness are the cornerstone of fatigue countermeasures. There is substantial human research and evidence to support the

idea of consuming caffeine either before or after a 30-minute nap prior to a night shift. This countermeasure can improve alertness on night shift and potentially mitigate fatigue-related human-performance errors.”

In the training course, James writes, participants learned about “basic sleep needs, how to identify symptoms of sleep disorders, how to get screened for sleep disorders, and how to combat fatigue and improve sleep hygiene on a day-to-day basis.” The training was interactive, with “open discussion about sleep-related questions and concerns,” and included a PowerPoint presentation “with videos of case studies.”

RETESTING & RESULTS. Four weeks after completing the educational session, the participants were retested with the same comprehensive questionnaire they’d filled out before the training. The results, James notes, showed “many positive health benefits.”

For instance:

- The number of participants reporting satisfaction with their sleep quality nearly doubled.
- Those complaining of insomnia dropped from nearly half of the pool to less than one-third.
- The number feeling symptoms of PTSD was cut in half.
- Those suffering routinely from headaches declined from 51% to 27%, while those reporting neck/back/spine trouble went from 41% to 26%.

- Marked improvement was noted in the adverse mood categories, and more participants reported feeling “satisfied” overall with their physical health.

In commenting on the training, the participants “were very positive,” James reports. One explained: “It’s really helped me and [my spouse] and has made a huge difference in our life. One of the things I took from it the most is that you have to be selfish about your sleep. You have to make it a priority. I’ve been sleeping a lot more...”

IMPLICATIONS. “Our findings suggest that fatigue-management training holds promise for improving police sleep, health, and wellness, and would be culturally accepted by police officers if implemented elsewhere,” James writes.

Among the policy considerations arising from the study, she believes, are “the creation of ‘restorative rest areas’ for strategic napping, development of a managers’ tool kit to guide supervisors in better supporting members who are chronically fatigued, increased awareness of the importance of monitoring employee work hours, and provision of sleep screening resources.”

Dr. Samuels told *FSN* that the study results have “motivated the RCMP senior management to continue the fatigue-management project on a larger scale, through its Fitness and Lifestyle Division.”

Correcting sleep deprivation among LEOs is an urgent problem with critical implications that cannot just be “willed away,” James argues. She quotes the pioneering sleep researcher Dr. William Dement:

“Not only is fatigue associated with individual misery, but it can also lead to counterproductive behavior. It is well known that impulsiveness, aggression, irritability, and angry outbursts are associated with sleep deprivation....”

“[P]olice work is the one profession in which we would want all practitioners to have adequate and healthful sleep to perform their duties at peak alertness levels.”

The pilot study, titled “Evaluating the Effectiveness of Fatigue Management Training to Improve Police Sleep Health and Wellness,” appears in the *Journal of Occupational and Environmental Medicine*. A free abstract and a link to the full report for a fee are available by [clicking here](#).

NOTE ABOUT ONLINE TRAINING. The full fatigue-management content used in the study is available for other agencies only by arrangement with Dr. Samuels. However, an abbreviated, one-hour version is accessible for officers online through the Canadian Police Knowledge Network, a nonprofit educational service for law enforcement worldwide. For more information or to register, [click here](#).

Dr. Samuels, president of the Canadian Sleep Society, can be reached at: dr.samuels@centreforsleep.com. Dr. James, a WSU assistant professor affiliated with the University’s Sleep & Performance Research Center, can be reached at: lois_james@wsu.edu.

II. “Blue Lives Matter”: Powerful true cases to help officers survive

Some of the most important lessons in law enforcement are taught by involuntary instructors.

These teachings come from the grave, imparted by officers who made the ultimate sacrifice and, regrettably, often unwittingly abetted their own sad fate through misjudgments, vulnerable tactics, and flawed decision-making.

Beginning decades ago with the groundbreaking writing of the late and legendary homicide detective Pierce Brooks of the Los Angeles PD, reconstructed cases of officer fatalities have formed the core of officer survival training—an ongoing effort to turn the tragedy of officers’ murders into life-saving insights to protect today’s brothers and sisters of the badge who face similar mortal risks.

Following in that tradition, two other authors associated with Los Angeles law enforcement—Steve Cooley and Robert Schirn—have written a new book, *Blue Lives Matter: In the Line of Duty*.

Across 268 pages, this collection of in-depth case studies recreates a series of officer killings in compelling detail, comprising what they intend as a respectful “memorial and tribute” to those who lost their lives as well as an instructive “guidebook and training manual” for departments and individual readers.

Cooley, a former LAPD reserve officer and a career prosecutor, served three terms as DA for Los Angeles County, ending in 2012. A strong proponent of the death penalty for cop killers, he responded to many active

crime scenes where officers had been shot and killed or seriously wounded during his tenure. “To this day,” he says, “I have a strong emotional reaction when I hear about the murder of a police officer.”

Schirn has spent some five decades as an LA prosecutor, compiling an impressive 90% conviction rate in major felony jury trials he has handled. He’s the “unofficial historian” of the DA’s office and, along with Cooley, he interviewed prosecutors and investigators involved in the cases they recount to unearth “never-before-released details” about the fatal consequences.

The authors were assisted with *Blue Lives Matter* by Greg Meyer, a certified Force Science Analyst, who as an LAPD captain formerly headed the department’s prestigious training academy. Cooley describes Meyer as “one of the nation’s foremost experts on police tactics and officer safety.” Meyer helped formulate the “Lessons Learned” segments of the book that follow each of the case-history narratives.

Of the eight cases the authors reconstruct, one was internationally famous—the spine-chilling hostage-cop drama of the Onion Field, in which one officer was murdered and another’s life was destroyed in the aftermath.

The others made local headlines briefly, then were eclipsed by newer cycles of “breaking news.” Yet they remain relevant today for their teaching powers and their reminder of the persistent, day-to-day dangers officers confront—traffic stops that suddenly explode in violence, drug-fueled suspects with surprising strength and deadly menace, ambushes by vengeful arrestees,

tense undercover stings that unexpectedly go south, and so on.

Each case Cooley and Schirn analyze is dissected step by step, from the lethal event and its prelude, through the investigation and prosecution, and including the emotional toll on those left behind. In addition to the Lessons Learned that Meyer identifies, each case is imbedded with additional pivotal moments that creative instructors can develop into memorable teaching points.

Meyer told *Force Science News*: “We truly believe that lives will be saved if officers and police leaders take these ‘lessons learned’ to heart by ensuring that they are emphasized in training, as well as in daily practice on the street.”

The book is intended to be the first in a series utilizing the same format.

Meanwhile, *Blue Lives Matter* is available through Amazon.com

III. Editor’s note: *Force Science News* for non-English language readers

Recently an email from a Spanish marine landed in our in-box, requesting permission to translate an article from *Force Science News* into Spanish and post it on a website he operates for Spanish-speaking LEOs and military personnel.

We’ve had such requests in the past from other bilingual professionals who see the value of making our reports available to non-English reading officers. We’ve always been willing to cooperate on a one-time or ongoing basis, provided proper credit is given.

If you’re fluent in another language and wish to share the our reports with a non-English oriented law enforcement audience, please let us know at: editor@forcescience.org. We’ll gladly give you particulars on how to proceed.

Written by Force Science Institute
December 13th, 2017

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