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Study: Urban night shift police more likely to suffer long-term job injuries

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The study assessed the association of daily shift schedules with injury leave and lengths of injury leave from 1994 to 2009 among a cohort of 419 officers from the City of Buffalo Police Department.

(Medical Xpress)—Police officers working the night shift are significantly more likely to suffer long-term on-the-job injuries than officers on day and afternoon shifts, according to new research conducted at the University at Buffalo.

The study found that, independent of age and gender, urban officers

working nights were three times more likely than those on the day shift, and 2.2 times more likely than those on the afternoon shift, to suffer injuries resulting in leaves of more than 90 days.

"Leaves of this length suggest more serious types of injury and indicate that night shift work poses a more significant threat to the life and health of officers than previously assumed," says epidemiologist John Violanti, PhD, principle author of the study "Shift work and long-term injury among police officers," published in the current edition of the Scandinavian Journal of Work and *Environmental Health*.

The study assessed the association of daily shift schedules with the occurrence of injury leave and lengths of injury leave from 1994 to 2009 among a cohort of 419 officers from the City of Buffalo Police Department.

Violanti, a research scientist in the UB Department of Social and Preventive Medicine, UB School of Public Health and Health Professions, says, "The study results also point to the problems long-term injuries provoke for police managers as long injury absences put a strain on police personnel who must cover for the injured officers.

"This could lead to health problems for them, as well," says Violanti, an expert on the relationship of police officer stress to serious health risks.

A previous study by this research team found that police on night shifts suffer more on the job injuries overall than their colleagues on day and afternoon shifts, and Violanti says there are several possible explanations for the high injury rates.

"Sleep disturbance and fatigue-related impairment provoked by circadian disruption have been reported in previous studies of night shift workers," Violanti says, "and have been found to affect the kind of

decision making that is required in fast-paced, ambiguous, high-risk police situations.

"Evening and night police shifts are inherently more active than day shifts, too. Not only do more crimes occur during these hours, but the calls for service are generally more hazardous and more frequent, which could result in more serious injuries," he says.

Subjects were comprised of 312 men and 107 women with an average age of 43 (range 27–70 years) who had completed the Buffalo Cardio-Metabolic Occupational Police Stress Study, a cross-sectional study designed to examine associations between physiological biomarkers of stress, subclinical metabolic and vascular disease markers, lifestyle and psychosocial symptomology among police officers.

In this study, 16 years of day-to-day work records enabled researchers to take into account differences in age and gender across shifts and draw conclusions more accurately than previous research that relied heavily on self-reported data. The shifts considered were: day (8 a.m. to 4 p.m.), afternoon (4 p.m. to 11 p.m.) and night (11 p.m. to 8 a.m.).

The percentages of subjects who worked predominantly on the day, afternoon, and night shifts were 41 percent, 32 percent and 27 percent, respectively. Violanti and his team followed the participants for the incidence of injuries that occurred while on duty.

Violanti says that night shift workers were younger and more likely to be male, had fewer years of work experience and were composed of a larger number of patrol officers (84 percent) than were the day shift workers. Overall 9.6% of the officers experienced a long term injury during the 16 year period. After adjustment for age and gender, long-term injury incidence rates were 3.1 times higher in night shift workers than in day shift workers and 2.2 times higher than in afternoon shift

workers.

In order to prevent long-term injuries in this critical population, Violanti suggests that future research take into account some of the factors examined in this study.

"Research that integrates frequency and duration of injuries would be worthwhile, as would objective measurement, over time, of sleep duration and workload. Both would enhance our understanding of the role these factors might play in influencing the risk of police injury," he says.

Violanti and his co-authors conducted a landmark 2012 study that found that police stress creates significant health risks, including more chronic disease and suicide, than in the general population.

More information: The article can be accessed by clicking "Download" from the journal's website at: www.sjweh.fi/show_abstract.php?abstract_id=3342.

Provided by University at Buffalo