

# Police Officer Back Health: Preliminary Findings

Zutz, A. and Anderson, G.

Many sources attribute lower back pain to occupation. Understanding the physical requirements of police work and the literature linking driving and heavy lifting, twisting and turning, one could predict a high incidence of lower back problems in the police force. While Brown et al. found the one-year prevalence rates of lower back pain in RCMP members to be within those reported for the general population (25-62%), police officers fall within the upper end of normal with prevalence rates of 44-62%. The purpose of this study was to develop a method to explore the prevalence of LBP in general duty police officers, while examining the level of disability associated with the LBP and factors that the officers attribute to LBP occurrence.

## Methods:

The research involved a two part questionnaire that was distributed to a convenience sample (n= 30) of general duty police officers during their shift briefing.

The back health questionnaire was a multi-categorical questionnaire collecting individual demographical data, workplace circumstances, and self-reported lifestyle behaviors, physical activity and fitness, low back pain and back pain with daily living. In addition to the questionnaire the Oswestry Disability Questionnaire was included to assess the level of disability attributed to back pain.

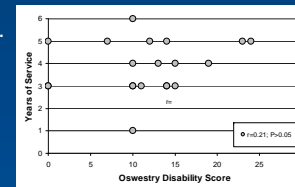
Descriptive statistics and Pearson two-tailed bivariate correlations were calculated using SPSS v.12 software. Data were typically expressed as a percent of the total sample, and where applicable, percent of those reporting LBP.

## Results:

Subject's age ranged from 31-50 years, with 2 female respondents and 19 male respondents. With a response rate of 71 percent, the data received indicates that most officers have or had experienced LBP.

**Job Descriptions** – Job descriptions of the respondents varied. The majority of police officers were currently working in either general duty (33%) or investigation (38%).

**Reported Lower Back Pain** – Eighty six percent of the officers report having lower back pain. Of those, 55% reported occasional, 25 % often., and 10 % daily back pain; 37 % reported that their pain limits them from standing for prolonged periods of time, while 27 % report that it limits them from prolonged sitting; 53 % claim that their sleep is affected. The length of time they experienced back pain was positively related to years of service ( $r=0.53$ ;  $p < 0.05$ ) but not age ( $r=0.38$ ;  $p>0.05$ ).



**Time off work** – The majority of the officers (90%) report that they have used 0-4 days of their sick leave in the last 12 months to cover days when LBP limited their function.

**Treatment and Response to Treatment** – Of those officers afflicted with back pain, most responded well to various treatments. Treatment: (65%) physician (22%), physiotherapy (17%), chiropractic care (50%) , massage therapy (33%). Medications (58%): analgesic (26%), anti-inflammatory (37%), muscle relaxants (27%)

**Duty Belt and Police Car** – Sixty one percent (61%) of the police officers attributed their low back pain to the police belt/vest and the seat in the police car, while 39% attributed sitting or driving for long periods of time to lower back pain.

**Oswestry Questionnaire** –Of those reporting LBP most (94%) fell into the Minimal Disability Category while 6% reported a Moderate Disability. The Oswestry Disability Score was significantly related to years of back pain ( $r=0.62$ ;  $p<0.05$ ).

## Discussion:

Research in policing, while having identified that lower back pain is a major concern, has not clearly demonstrated those factors associated with higher incidence of lower back pain. The high incidence of lower back pain may be associated with many occupational stressors – the physical stress of arresting a suspect, driving, getting in and out of a vehicle with body armor and gun belts – or lifestyle related issues that are associated with police work – shift work, sedentary nature of the job, and lower fitness with increased years of service; body armor, vehicular exposure and sports participation may be associated with a more rapid onset of back pain in asymptomatic police officers. Prolonged sitting and sustained posture in combination with exposure to whole body vibration may also leave police susceptible to LBP . Further, after remaining in a static position for a prolonged period (such as sitting while driving), subsequent reactions and movements are more likely to cause injury (such as suspect control, arrest, or getting in and out of a car).

The high incidence rate of LBP in police officers, with little time taken for recovery from injury and ineffective use of the health care system, reinforces the need for effective prevention and treatment methods. While the majority LBP has an etiology in muscular strain, officers sought chiropractic care and bone-base treatment. Further, without complete recovery, officers were using a pharmaceutical based treatment that would leave them drowsy and less capable of making quick and concise decisions. Absenteeism due to lower back trouble, the use of analgesics to control lower back pain, and occupation are important risk indicators of self-reported work incapacity. For this reason, LBP education, treatment and prevention should be undertaken by police agencies.

## References:

- Brown, J.J., Wells, G.A., Trotter, A.J., Bonneau, J. and Ferris, B. (1998). Back pain in a large Canadian police force. *Spine*. (23) 7: 821-827.
- Fairbank, J.C., Davies, J.B., Couper, J. and O'Brien, J. (1980). The Oswestry low back pain disability questionnaire. *Physiotherapy*. (66)8:271-273.