

# NUTRITION AND GENERAL DUTY POLICE WORK: The Case of Surrey RCMP Officers



*Amanda V. McCormick, Irwin M. Cohen, and Darryl Plecas*

## Nutrition and General Duty Police Work: The Case of Surrey RCMP Officers

Good nutrition is important to staying healthy. This is especially important if your job requires you to be physically fit. Given their mandate, police officers must have a readiness to respond quickly and sometimes lastingly to extremely taxing physical situations (Anderson and Plecas, 2008; Anderson, Plecas, & Segger, 2001). Moreover, police work can be extremely stressful, typically involves shift work, and lacks opportunities to properly decompress during long shifts (Anderson, Litzenberger, & Plecas, 2002; Gilmartin, 2002). These basic features of police work provide several reasons why members should be attentive to good nutrition. Beyond that, good nutrition may assist officers to cope with stress or prevent the development of illnesses or diseases (Martinussen, Richardsen, & Burke, 2007). Yet, whether police officers pay sufficient attention to good nutritional habits while on shift is unknown.

Researchers from the School of Criminology and Criminal Justice at the University of the Fraser Valley examined this question by studying the minute-by-minute activities of 171 general duty constables of the Surrey Detachment of the Royal Canadian Mounted Police (RCMP)<sup>1</sup> during 441 full shift ride-alongs.<sup>2</sup> As a part of this comprehensive examination of general duty members, researchers tracked when and what officers ate and drank while on shift. The results were both interesting and alarming.

### What Officers Drink on Shift

Collectively, officers consumed a wide range of beverages during their work shifts – everything from sports drinks, energy drinks, milk, milkshakes, tea, juice, and of course, pop, coffee, and water. Nearly half of officers drank water (47%) and/or coffee (46%), while one-third drank pop. Of concern, on average, members only consumed two drinks of one kind or another per 12-hour shift. This is hardly enough fluid for most anyone to rehydrate adequately, let alone a working police officer during the summer. Even more troubling, when it came to drinking water, in nearly half of the shifts (46%), officers drank no water at all. When aggregating all of the shifts, officers drank, on average, less than one glass (0.7) of water per shift. In fact, only 13% of shifts involved a member drinking more than one glass of water.<sup>3</sup>

In considering the type and amount of beverages consumed by officers per shift, analyses were performed to examine differences across age, gender, years of service, watch assignment, and zone worked in. However, this analysis did not reveal any noteworthy differences other than the fact that older officers

---

<sup>1</sup> According to their website ([www.bc.rcmp.ca](http://www.bc.rcmp.ca)), the Surrey Detachment of the RCMP has nearly 600 police (regular and civilian) members and a support staff of over 200 municipal employees. Surrey RCMP is also the second largest municipal police force in the province based on authorized police strength alone.

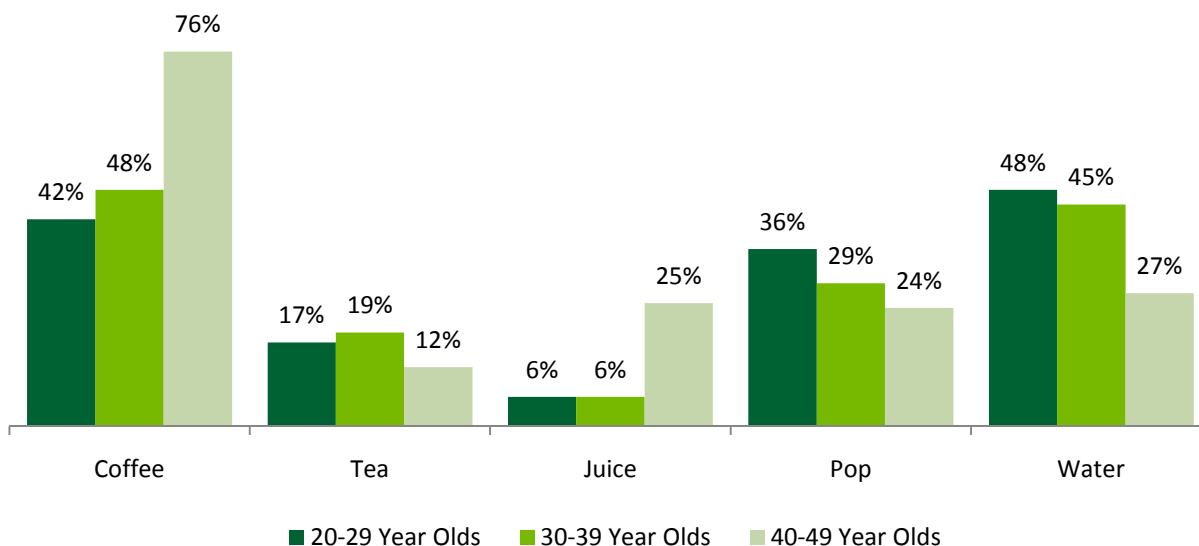
<sup>2</sup> For a detailed description of the study's methodology and general results, please see Plecas, McCormick, & Cohen (2010). RCMP Surrey Ride-Along Study: General Findings. Report Prepared for Surrey RCMP. The results indicated that the representation of general duty officers, in terms of their gender, age, marital status, years of service, and ethnicity, as well as the shift characteristics, such as the distribution of ride-alongs by Watch, zone, day of the week, night-shift vs. day-shift, and shift cycle was both evenly distributed and provided for excellent generalizability to the full detachment.

<sup>3</sup> This is a particularly critical finding when one considers that all of these ride-alongs occurred during the summer months.

were much more likely than younger officers to drink coffee, and much less likely to drink water (see Figure 1). Regardless of this particular finding, the important point is that, as a group, regardless of age, officers are clearly not drinking nearly enough water while on shift.

As indicated in Figure 1, the most commonly consumed beverage among members was coffee, and coffee is high in caffeine content. The Centre for Addictions and Mental Health advises that up to 300 mg of caffeine per day is safe. In order to assess the amount of caffeine members consumed during a 12-hour shift, the average mg levels of caffeine for each beverage type were multiplied by the number of each type of drink consumed during a shift. Then, each total was summed to reflect the total amount of caffeine consumed in a typical shift. In a 12-hour shift, among members who drank at least one drink that contained caffeine, the average amount of caffeine consumed was 116 mg with a range of 30 mg to 385 mg. Given the health risks of excessive caffeine consumption, It was encouraging to find that members did not typically consume a lot of caffeine during their shifts.

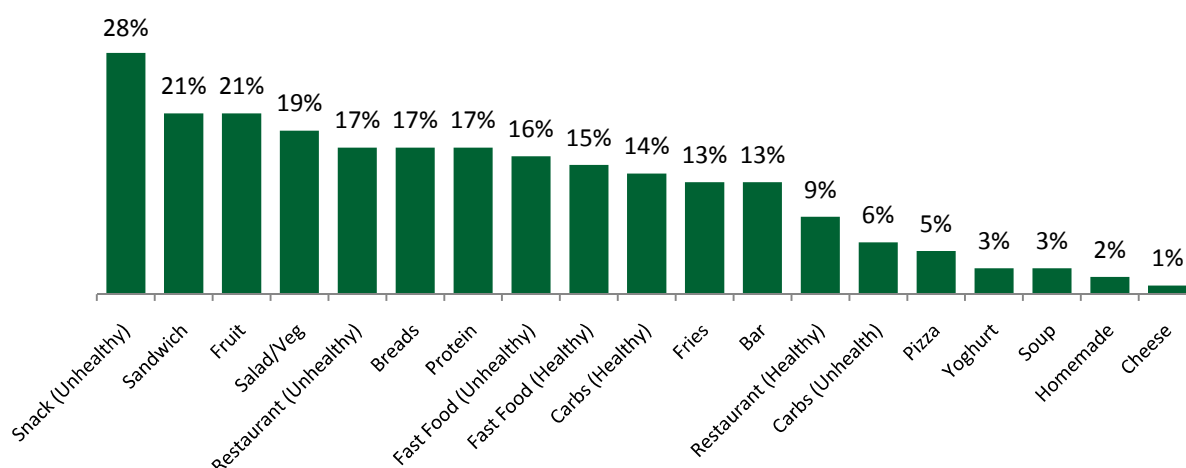
**FIGURE 1: TYPE OF BEVERAGE CONSUMED BY AGE OF POLICE OFFICER**



## What Officers Eat on Shift

In the overwhelming majority of shifts (90%) officers were eating something. Unfortunately though, the most common types of foods consumed were unhealthy snacks (28%), such as fast food snack wraps, chips, or beef jerky, followed by fruits (21%) and sandwiches (21%). Here, sandwiches were identified as ordinary sandwiches, pitas, and wraps. Another 15% of shifts involved the consumption of healthy fast food, primarily Subway sandwiches. Healthy foods consumed in restaurants were most commonly sushi. Pizza was separated into its own category where it represented 5% of the foods consumed over these shifts (see Figure 2)

**FIGURE 2: TYPES OF FOODS CONSUMED BY POLICE OFFICERS DURING THEIR SHIFT**

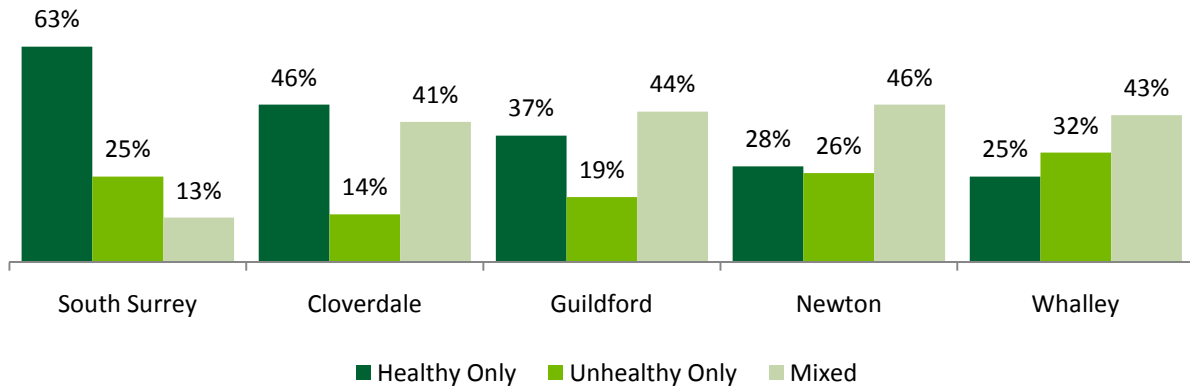


For the purposes of further analysis, the type of food consumed was divided into healthy or unhealthy groups. Healthy foods included healthy fast food (e.g. subway sandwiches), healthy foods served in restaurants (e.g. sushi), salad/vegetables, yoghurt, burgers (not fast food), healthy carbohydrates (e.g. rice), protein (e.g. chicken, nuts), soup, fruit, and bars (e.g. granola, protein). Unhealthy foods included fast food, some restaurant foods (e.g. grilled, fried), bread (e.g. bagels, croissants), pizza, fries, unhealthy carbohydrates (e.g. perogies), and snacks (e.g. beef jerky). Sandwiches were left out of these groupings as in many cases it could not be determined whether the sandwich was healthy or not. With this in mind, members were categorized into one of three groups – those who ate a mix of healthy and unhealthy foods during their shifts (43%), those who ate only healthy foods (32%), and those who ate only unhealthy foods (25%).

Interestingly, there was a difference in these three groups by which of the five different zones in the city a shift occurred. Specifically, nearly half of the shifts occurring in Whalley (43%), Guildford (44%), Newton (46%), and Cloverdale (41%) involved the consumption of both healthy and unhealthy foods; however, only a very small proportion of shifts in South Surrey (13%) had this pattern. Instead, approximately two-thirds of the shifts in South Surrey (63%) involved the consumption of only healthy food. One possible explanation for this finding could be that this is a reflection of the type of places available to eat in South Surrey as opposed to elsewhere in the city (i.e. South Surrey is the most upscale part of the city). Similarly, Whalley, which had the highest percentage of unhealthy eating, and the only zone to have more unhealthy than healthy eating, is the least upscale part of the city (see Figure 3).



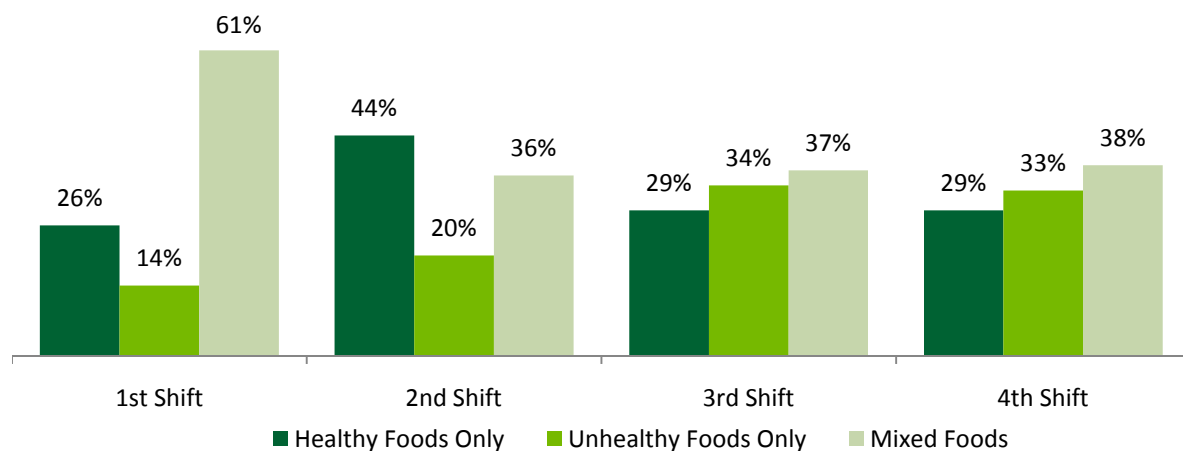
**FIGURE 3: PROPORTION OF HEALTHY, UNHEALTHY, AND MIXED FOOD CONSUMPTION BY ZONE**



There was also a difference in whether a member ate healthy or unhealthy foods as a result of working a day shift or a night shift. Working on the night shift, officers were significantly more likely to eat unhealthy food only (31%) compared to members who worked the day shift (19%) which was likely a result of fewer available nutritious options. Officers during the day shift were significantly more likely to eat a mix of healthy and unhealthy foods (48%) compared to the night shift (38%); however, there were no substantial differences in the likelihood of eating exclusively healthy foods by time of shift (33% for day shift compared to 31% for night shift).

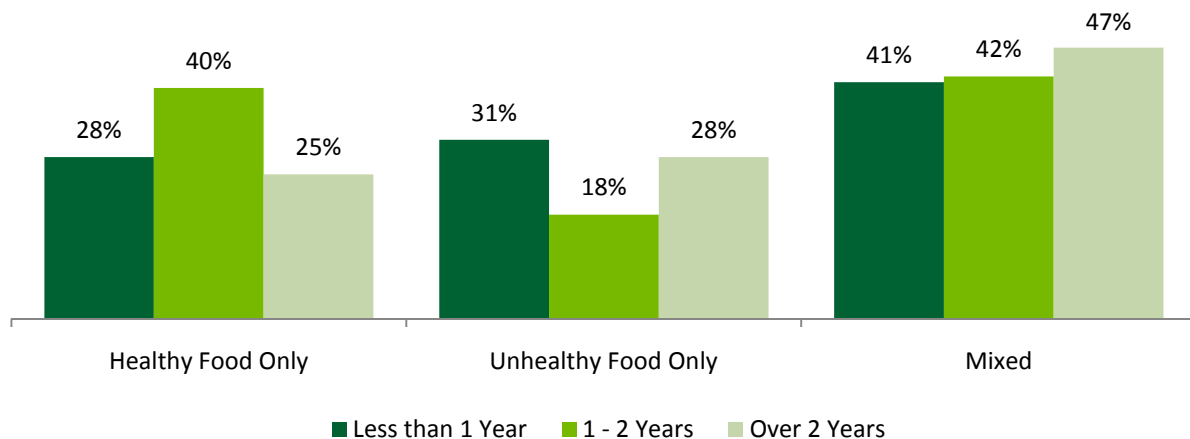
As demonstrated in Figure 4, shift cycle also significantly influenced the tendency to consume certain types of foods. In effect, the proportion of shifts in which a member ate only unhealthy foods increased as officers' moved from their first through fourth shift in a cycle. This might be a result of fatigue as the body craves higher fat and higher carbohydrate foods the more tired it gets.

**FIGURE 4: SHIFT CYCLE AND NUTRITION**



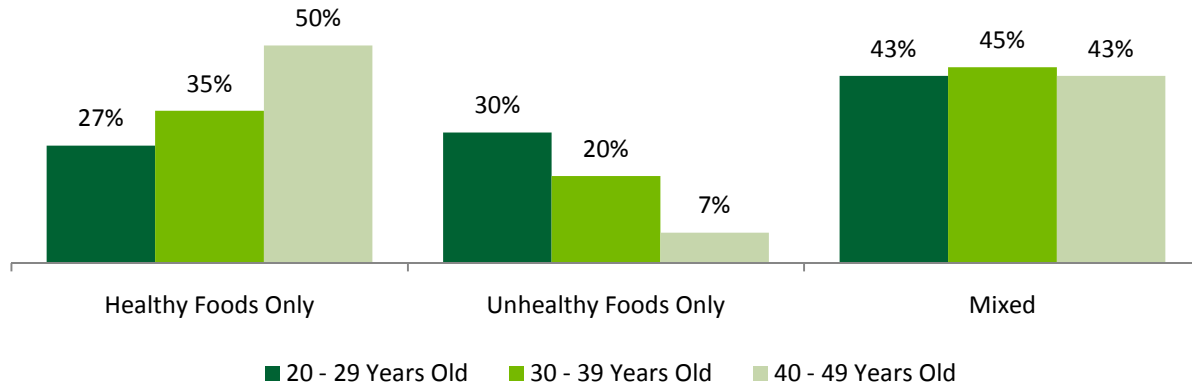
In addition to some differences based on shift characteristics, officer characteristics were also examined. Officers who had served one to two years were significantly more likely to eat only healthy foods during their shifts (40%) compared to rookies (28%) and those who had two years or more of service (25%). This group was also less likely to eat exclusively unhealthy foods during their shifts (18%) compared to rookies (31%) or those with two or more years of service (28%). Of note, a near majority in each service group ate a mix of healthy and unhealthy foods on their shifts (see Figure 5).

**FIGURE 5: HEALTHY VERSUS UNHEALTHY FOOD CONSUMPTION BY MONTHS OF SERVICE**



What was interesting was that the patterns demonstrated in Figure 5 were not reproduced when the age of officers was analyzed against what officers ate during a shift. While it was not surprising that nearly half of the officers from each age group ate a mix of healthy and unhealthy foods during a shift, the oldest group of officers were the most likely to eat exclusively healthy foods (50%) compared to exclusively unhealthy foods (7%) (see Figure 6). In fact, the general pattern suggested that food choices on shifts got better as one got older. As indicated by Figure 6, while there were nearly equal proportions of officers between the ages of 20 to 29 years old who ate exclusively healthy foods (27%) and unhealthy food (30%), among those in the 30 to 39 years old age range, the proportion eating exclusively healthy foods increased to more than one-third (35%) and the proportion from that age group that ate exclusively unhealthy foods dropped to one-fifth. So, while those who were officers for longer periods of time did not necessarily make healthier eating choices, older officers tended to do so at a greater rate than younger members.

**FIGURE 6: HEALTHY VERSUS UNHEALTHY FOOD CONSUMPTION BY AGE GROUP**



Overall, the results respecting what police officers ate while at work suggested that there were a significant proportion that were not eating healthy. Part of the reason for these eating patterns may be that members are either not willing to or not able to take enough time during their shifts to eat healthy foods (Cohen, Plecas, & McCormick 2011). It is also possible that the ability to consistently eat healthy foods is a product of where and when an officer works in Surrey. At the same time though, the issue is also related to the age of officers and no doubt other personal characteristics not considered here.

### What to Do About Members' Nutrition and Water Consumption

While this study finds that Surrey RCMP officers need to drink much more water and eat healthier while on shift, this is probably something that most members are already aware of. In fact, the situation is undoubtedly similar for police officers in most busy policing jurisdictions in North America. Assuming that, as a group, police officers know how important nutrition is to their immediate and long-term health, the question is how do members improve their nutrition given the realities of police work?

One thing police agencies could consider doing, if they have not already, is arranging for healthy take-away snacks and water bottles to be available at the main station and other stations. Many officers consume these types of snacks; however, many also mix these with unhealthy foods, including chocolate bars, snack wraps, and fries or chips. In this regard, it is worth noting that the Province of British Columbia recently introduced legislation restricting the provision of unhealthy foods in snack machines located in schools. Rather than machines providing access to chips, chocolate bars, and pops, these machines now provide more healthy options, including vegetable sticks and dip, yoghurt, and juice. Moreover, these machines are refrigerated and also provide sandwiches that are kept cool. Presumably, such machines could provide an option for members that would reduce their decision to use fast food outlets while on the road.

At the same time, police agencies could consider how they might facilitate the ability of officers to have a free supply of water with them while on the road. One option might be to provide a water cooler/machine at the station that would allow officers to fill a bottle that they could take on the road. That being said,

having a water container in the car is not entirely convenient, as most patrol cars do not have cup/container holders.

Finally, police agencies need to seriously consider what steps they might take to facilitate officers being able to take their fully allotted break time which would potentially enhance their ability to eat nutritiously. Managers should actively encourage their officers to take breaks.



## References

- Anderson, G. and Plecas, D. G. Anderson and D. Plecas. 2008. *Physical Abilities Requirement Evaluation (PARE): Discrete Item Analysis*. A report prepared for the Royal Canadian Mounted Police (National Headquarters). August,
- Anderson, G., Litzenberger, R., and Plecas, D. (2002). Physical Evidence of Police Officer Stress. *Policing: An International Journal of Police Management and Strategies*, Vol. 25, Number 2.
- Anderson, G., Plecas, D., and Segger, T. (2001). Police Officer Physical Ability Testing: Re-validating a Selection Criterion. *Policing: An International Journal of Police Management and Strategies*, Vol. 24, Number 1.
- Cohen, I.M., Plecas, D., & McCormick, A.V. (2011). *Getting a Break in General Duty Police Work: The Case of Surrey RCMP Officers*. Centre for Public Safety and Criminal Justice Research. University of the Fraser Valley.
- Gilmartin, K.M. (2002). *Emotional Survival for Law Enforcement: A Guide for Officers and their Families*. Arizona: E-S Press.
- Martinussen, M., Richardsen, A.M., & Burke, R.J. (2007). Job Demands, Job Resources, and Burnout among Police Officers. *Journal of Criminal Justice*, 35: 239-249.
- Plecas, D., McCormick, A.V., & Cohen, I.M. (2010). *RCMP Surrey Ride Along Study: General Findings*. Centre for Public Safety and Criminal Justice Research. University of the Fraser Valley.