c corregional work design, including around-the-clock operations and routine pressure to participate in overtime work may have additional consequences for health and retention of an ageing corrections workforce. In this study, we examined the implications of shift work and extended work hours for officers’ ability to maintain workability, health, and well-being in the face of stressful work demands, with attention focused on officer age (chronological age and psychological age) as a risk variable for increased negative outcomes.

Methods As part of a Total Worker Health intervention study, corrections officers at a state correctional system in the northeastern USA participated in Wave 1 (n=335) or Wave 2 (n=260) of a survey that assessed physical and psychosocial work demands, work schedules, and several aspects of personal health and work–life balance. ANCOVA and moderated multiple regression analyses were used to examine the interactive effects of work schedule and age on relationships between work demands and worker health and well-being. An additional data collection in the same correctional system has recently been completed and will form the basis for follow-up analyses.

Results Initial findings indicate that corrections officers in this sample are at risk of several negative physical and mental health outcomes (e.g., obesity, depressive symptoms, burnout). Psychosocial features of corrections work, including work schedules, interacted with correctional officer age, with stronger negative consequences for several aspects of personal health and well-being among chronologically and psychologically older officers.

Conclusion In the face of an ageing corrections workforce, our findings suggest that particular attention should be paid to interventions that mitigate the impact of nightwork and overtime on the health and well-being of older officers.

CIRCADIAN AND SLEEP HOMEOSTATIC INTERVENTION STRATEGIES FOR OLDER SHIFT WORKERS

Introduction Night work is associated with shorter sleep and greater chronic disease risk compared with day work, and older shiftworkers report even greater difficulty sleeping compared with younger workers. We tested a sleep and circadian rhythm intervention to examine whether it improved sleep duration and cortisol, a marker of physiological stress.

Methods 26 healthy adults (57.6±3.9 y) who were not shiftworkers participated. Four laboratory Day shifts were followed by four Night shifts. Participants slept at home and maintained ~8 hour sleep schedules for a week before study and on Day shifts. After the first Night shift, participants were randomised into groups with different sleep instructions: control ad lib sleep (n=9); 8 hour evening sleep plus a light intervention (n=9); 8 hour evening sleep (n=5). The evening sleep groups were instructed to get into bed between 1–2 pm and remain in bed attempting to sleep for 8 hour. Sleep was monitored by actigraphy. At the start of the 4th Day shift and end of the 4th Night shift, a blood sample was taken for cortisol assay.

Results The sleep duration and cortisol level of the groups were not different at baseline. The 8 hour evening sleep groups showed similar sleep durations following night and day shifts, while the control group had shorter sleep (p<0.001). At the end of the 4th Night shift, the 8 hour evening sleep groups had significantly lowered cortisol levels compared with the control group (p<0.02).

Discussion Our preliminary data indicate an 8 hour scheduled evening sleep episode after night shifts results in longer sleep in older shiftworkers, and this was associated with lower cortisol levels. While this remains to be tested in actual night workers, it suggests that the sleep intervention may have implications for improved health outcomes in older shiftworkers.

1617d SHIFTWORK AND METABOLIC HEALTH RISKS – WHAT DOES THE LITERATURE CONCLUDE?

Introduction Although the metabolic health effects of shift work have been extensively studied, a systematic synthesis of the available research is lacking. This review aimed to systematically summarise the available evidence of longitudinal studies linking shift work with metabolic risk factors.

Methods A systematic literature search was performed. Studies were included if (1) they had a longitudinal design; (2) shift work was studied as the exposure; and (3) the outcome involved a metabolic risk factor, including anthropometric, blood glucose, blood lipid, or blood pressure measures. Eligible studies were assessed for their methodologic quality. A best evidence synthesis consisting of three levels of evidence was used to draw conclusions per outcome: strong, moderate or insufficient evidence.

Results Thirty-nine articles describing 22 studies were included. Strong evidence was found for a relation between shift work and increased body weight/BMI, risk for overweight, and impaired glucose tolerance. For the remaining outcomes (waist circumference, blood lipids, and blood pressure), there was insufficient evidence.

Discussion Shift work seems to be associated with body weight gain, risk for overweight, and impaired glucose tolerance. Overall, lack of high–methodologic quality studies and inconsistency in findings led to insufficient evidence in assessing the relation between shift work and other metabolic risk factors. To strengthen the evidence, more high-quality longitudinal studies that provide more information on the shift work...