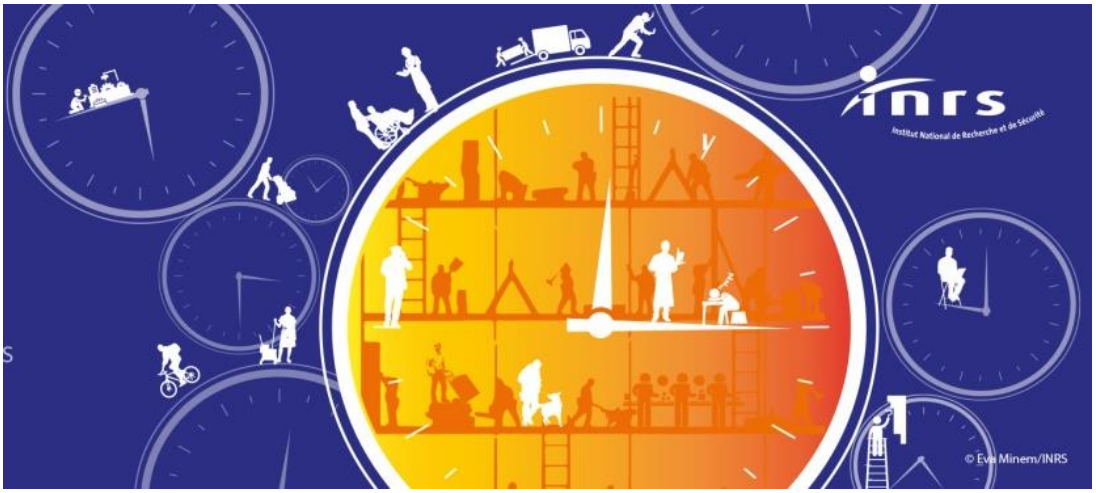
LES HORAIRES ATYPIQUES

Bulletin de veille scientifique : Juin 2025



Objectifs : réaliser une veille scientifique sur les horaires atypiques

La validation des informations fournies (exactitude, fiabilité, pertinence par rapport aux principes de prévention, etc.) est du ressort des auteurs des articles signalés dans la veille. Les informations ne sont pas le reflet de la position de l'INRS. Les éléments issus de cette veille sont fournis sans garantie d'exhaustivité. Les liens mentionnés dans le bulletin donnent accès aux documents sous réserve d'un abonnement à la ressource.

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Horaires atypiques (HA)

Généralités et prévention

Aucun article dans ce bulletin.

Activités physiques

Aucun article dans ce bulletin.

Autres pathologies

Work or Wellness? Examining the Challenges of Low-Wage Workers with Type 2 Diabetes.

Schlesinger P, Asante P, Lipska K, Keene DE. *J Health Care Poor Underserved*. 2025;36(2):493-507.

Type 2 diabetes disproportionately affects low-income and racially marginalized communities. Several social and economic factors intersect to create and reproduce this unequal burden. This qualitative study explores how low-wage workers experience and navigate diabetes management in the workplace. Our findings highlight how unpredictable work schedules, lack of access to sick leave, and inflexible work environments with limited worker autonomy create significant barriers to diabetes self-management. These challenges are compounded by limited control over work conditions and societal norms that emphasize personal responsibility. To address these disparities, we propose multi-level interventions, including educational campaigns on workplace rights, policy changes promoting flexible scheduling and paid sick leave, raising the minimum wage to improve economic security, and routine screenings by health care providers to explore workplace factors that may be affecting diabetes control.

Lien vers l'article

The associations of long working hours and unhealthy diet with cardiometabolic outcomes and mortality in US workers.

Li X, Li J, Ren X, Xia T, Arah OA, Chen L. *Prev Med*. 2025 Jun;195:108275.

OBJECTIVES: To examine independent and joint associations of long working hours (LWH) and EAT-Lancet diet with cardiometabolic outcomes and mortality in US workers. METHODS: This prospective cohort included US workers from the National Health and Nutrition Examination Survey, with cross-sectional baseline data from 1999 to March 2020. A subsample of participants from 1999 to 2018 was linked to the National Death Index, with mortality follow-up through December 2019. The independent and joint associations of LWH (≥ 55 vs. < 55 h/week) and EAT-Lancet diet scores (low vs. high) with cardiometabolic outcomes and mortality were estimated using multivariable logistic and Cox proportional hazards models, respectively. RESULTS: LWH was associated with higher odds of obesity (OR = 1.20; 95%CI = 1.07, 1.34) among all workers and higher CVD mortality among workers with high CVD risk at baseline (HR = 1.64, 95%CI = 0.79, 3.12). Low diet scores were associated with higher odds of obesity (OR = 1.34, 95%CI = 1.21, 1.42) and diabetes (OR = 1.33, 95%CI = 1.01, 1.76) among all workers. Working hours and diet scores were jointly associated with obesity and CVD mortality, indicating by the relative excess risk due to interaction greater than zero among all workers. CONCLUSIONS: LWH and unhealthy diet are independent risk factors and may interact to exacerbate adverse cardiometabolic health outcomes.

Lien vers l'article

Cancers

Aucun article dans ce bulletin.

Risque routier, accidentologie

Aucun article dans ce bulletin.

RPS et QVT

Great Debates-Shift Work Versus One Day at a Time: 12- Versus 24-Hour Call Duration in Acute Care Surgery.

Meshkin D, McGillen P, Martin MJ, Burruss S. *Am Surg*. 2025 May 27:31348251341955.

Optimal shift length for acute care surgery remains an ongoing debate that takes into consideration the impact of fatigue on performance, patient outcomes, and provider well-being. The data is conflicting on whether 12- or 24-hour calls are best. Proponents for the 24-hour shift model cite that it fosters superior continuity of care with fewer handoffs, enhances surgical training and does not negatively impact patient outcomes. Supporters of the 12-hour shift model cite enhanced focus, reduced errors, and promotion of patient safety without compromising training requirements or skill acquisition. A thorough look at the practice environment, frequency of calls, and handoff processes are needed to decide on whether a 12- or 24-hour call schedule will be utilized for trainees and attendings.

Lien vers l'article

The impact of working patterns on therapeutic radiographers' experience of work-life balance: A qualitative study at a cancer treatment centre in Wales.

Allan S, Courtier N, Mundy L. *Radiography (Lond)*. 2025 May;31(3):102951.

INTRODUCTION: Current and projected demand for NHS radiotherapy services outstrips projected capacity. One solution to increase treatment capacity seen in UK radiotherapy centres has been to adapt the treatment hours and working patterns of therapeutic radiographers. This study explores radiographers' experiences of the impact of working extended treatment hours on their work-life balance and wellbeing. METHOD: Eligible Radiographers were employed in a substantive NHS AfC Band 6 Therapeutic Radiographer role. A descriptive qualitative design utilising semi-structured interviews allowed participants freedom to reflect upon individual experiences. The interview schedule and process were piloted before data collection in October 2023. Anonymised data were analysed using content analysis. RESULTS: Six participants were recruited. Our findings reveal different outlooks between radiographers of different ages, life-stage, personal circumstances and caring responsibilities. The importance for work-life balance of non-working weekends and flexibility, reliability and predictability of shift scheduling were common categories. There was concern that further changes to working patterns would lead to diminished work-life balance and wellbeing. As Radiographers' priorities regarding work-life balance were dynamic, agency to easily adapt working hours was seen as the ideal. CONCLUSION: Opportunities to flexibly adapt working hours to suit personal circumstances are viewed as key to maintaining a healthy and rewarding work-life balance. Our findings reveal a desire for more openness to adaptation requests and highlight the need for future research into the transparency of parity between request grounds and the competing needs of services and the

individual. IMPLICATIONS FOR PRACTICE: Poor work-life balance risks burnout in TRs, with consequent retention issues and lower quality patient care.

Lien vers l'article

Santé psychique

Overwork and changes in brain structure: a pilot study.

Jang W, Kim S, Kim Y, Lee S, Choi JY, Lee W. *Occup Environ Med*. 2025 May 18;82(3):105-11.

OBJECTIVES: To investigate the effects of overwork on brain structure to better understand its impact on workers' cognitive and emotional health. The goal was to provide evidence for the potential neurological risks associated with prolonged working hours. METHODS: A total of 110 healthcare workers were classified into overworked (≥52 hours/week; n=32) and non-overworked groups (n=78). Brain volume differences were assessed using voxel-based morphometry (VBM) and atlas-based analysis. General linear models adjusted for age, sex and total intracranial volume were applied, and correlation analyses explored relationships between weekly working hours and brain volume in regions with significant differences. RESULTS: Overworked individuals exhibited significant changes in brain regions associated with executive function and emotional regulation. Atlas-based analysis revealed a 19% increase in left caudal middle frontal gyrus volume in the overworked group compared with the non-overworked group (p=0.006). VBM showed peak increases in 17 regions, including the middle frontal gyrus, insula and superior temporal gyrus (p<0.05). Correlation analyses indicated a positive association between weekly working hours and brain volume changes in the middle frontal gyrus and insula. CONCLUSIONS: This study provides preliminary evidence that overwork is associated with structural brain changes, particularly in regions linked to cognition and emotion. These findings provide novel neurobiological evidence linking prolonged working hours to structural brain changes, emphasising the need for further research to understand the long-term cognitive and emotional implications of overwork.

Lien vers l'article

Troubles cognitifs et de la vigilance

Nursing Work Schedules, Specialties, Sleep Hygiene, and the Impact on Sleep Health.

Rejto N, de Castro AB, Ward TM, Willgerodt M, Walsh E. *West J Nurs Res*. 2025 May 29:1939459251340219.

BACKGROUND: Sleep is an important determinant of health and well-being. Poor sleep among nurses is associated with medical errors, poor decision-making, and decreased patient safety. National research priorities have underscored the need to understand the impact of nursing job characteristics on sleep health and mitigation strategies. OBJECTIVE: We aimed to test whether sleep hygiene behaviors moderated the association between job characteristics and sleep health among nurses. METHODS: A cross-sectional analysis was conducted on data from the Nurses' Health Study 3 (N = 1272). Logistic regression analysis tested the modifying effect of sleep hygiene behaviors when examining the association between job characteristics and sleep health among nurses practicing in various care settings and specialties. RESULTS: Sleep hygiene behaviors were associated with increased odds of healthy sleep on workdays and work-free days; however, sleep hygiene did not moderate associations between job characteristics and sleep health. Working 12-hour or longer shifts was not associated with decreased odds of healthy sleep compared with working <12-hour shifts on workdays or work-free days. Working in schools and critical care was associated with 50% or higher odds of

unhealthy sleep compared with working in the operating room and oncology on work-free days. DISCUSSION: Findings suggest sleep hygiene behaviors cannot fully mitigate the effect of job characteristics on sleep health. Study results indicate sleep health may vary by nursing care setting and specialties. Future research should consider factors that may impact sleep health such as short staffing, commuting during work, and time off between shifts.

Lien vers l'article

Overwork and changes in brain structure: a pilot study.

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Lien vers l'article

Travail posté et de nuit

Généralités et prévention

Night Shift Work Associates with All-Cause and Cause-Specific Mortality: A Large Prospective Cohort Study.

Chang Q, Zhu Y, Liang H, Cheng J, Li D, Lin F, et al. *J Gen Intern Med*. 2025 May;40(7):1635-45.

BACKGROUND: Health problems associated with shift work and night shift work are gaining increasing public attention. OBJECTIVE: To investigate the association between night shift work and the hazard of mortality. DESIGN: Prospective cohort study. PARTICIPANTS: A total of 283,579 individuals with paid employment or self-employment aged 37-73 years were included from the UK Biobank with a median follow-up period of 14.0 years. MAIN MEASURES: Participants were divided into day workers and shift workers, including the frequency of night shifts, to evaluate the association between baseline work schedules and all-cause and cause-specific mortality using the Cox proportional hazards model. Additionally, 75,760 participants with work histories were assessed for the association between average frequency and cumulative years of exposure to night shift work and all-cause and cause-specific mortality. KEY RESULTS: Compared with that of day workers, the adjusted hazard of all-cause mortality was increased by 12.0% (hazard ratio [HR], 1.12; 95% confidence interval [CI], 1.07-1.18) in shift workers, particularly in those with no or rare night shifts (approximately 16.1%; HR, 1.16; 95% CI, 1.08-1.25) and those with irregular night shifts (approximately 9.2%; HR, 1.09; 95% CI, 1.00-1.19). Moreover, a non-linear relationship was identified between cumulative night shift years and all-cause and cause-specific mortality. Only individuals who worked night shifts for 20-30 years exhibited a substantially increased hazard of all-cause (HR, 1.52; 95% CI, 1.15-2.00) and cardiovascular disease (CVD; HR, 2.08; 95% CI, 1.16-3.71) mortality. CONCLUSIONS: Shift workers, particularly those with rare or irregular night shifts, exhibited an increased hazard of mortality. Additionally, participants who worked night shifts for 20-30 years exhibited a substantially increased hazard of all-cause and CVD mortality.

Lien vers l'article

[Night-shift work: can we prevent the adverse health effects?].

Kogevinas M. *Arch Prev Riesgos Labor*. 2025 Apr 20;28(2):9-20.

Night-shift work has become a structural component of modern economies, supporting essential services from healthcare and transportation to logistics and manufacturing. But with this systemic need comes a significant burden on health. Mounting evidence links night-shift work to a wide range of adverse outcomes, from acute fatigue to chronic diseases including cancer. While scientific understanding of its mechanisms has grown rapidly, preventive policies — both at institutional and individual levels — have lagged behind. In this article, I argue that the health consequences of night-shift work are no longer an occupational hazard to be suffered, but a modifiable public health issue requiring targeted prevention strategies….

Lien vers l'article

Acute Medical Care by Nocturnists: A Narrative Review.

Haber LA, Tien J, Echaniz M, Makam AN. *J Gen Intern Med*. 2025 May;40(7):1584-9.

Nocturnists are the principal means by which hospital medicine groups currently ensure continuous overnight coverage of hospitalized patients within academic medical centers and community hospitals. Yet despite their involvement in most aspects of overnight care, a comprehensive review of the impact of nocturnists in the hospital is absent. Here we examine the physiologic effects of overnight work on clinicians, the quality of medical care delivered by nocturnists in floor and intensive care units, the

impact of nocturnist presence on trainee supervision and graduated autonomy in academic settings, and prevalent staffing models. Nocturnists serve diverse roles across institutions, including performing overnight admissions and consultations, managing patients, supervising trainees, and participating in rapid response activations. Physiologically, nocturnists may experience circadian misalignment and sleep deprivation, which can impact cognitive function and results in potential long-term health risks to those working overnight. Studies show mixed results of nocturnist impact on patient outcomes, with comparative observational analyses revealing no significant differences in mortality, readmissions, or length of stay, despite perceived benefits. Nocturnist presence has been shown to enhance resident supervision and educational value of overnight rotations without compromising decision-making autonomy, though trainees' fear of revealing knowledge gaps persists. Overnight staffing models vary, with some institutions employing dedicated nocturnists and others using hybrid models; the heterogeneity of nocturnist responsibilities across institutions makes determining ideal models difficult. Compensation is typically greater for nocturnists, but the role's sustainability and impact on overall group retention remain unknown. Nocturnist programs are essential to provide continuous care of hospitalized patients and meet trainee supervision mandates, yet their full impact on patient and educational outcomes requires further investigation. Future research should aim to optimize staffing models to enhance patient care, trainee education, and clinician well-being.

Lien vers l'article

Activités physiques

The Effects of Cognitive Behavioral Therapy for Insomnia on Physical Activity Before and After Time in Bed Among Shift Workers.

Sochal M, Feige B, Spiegelhalder K, Ell J. *J Clin Med*. 2025 May 6;14(9).

Background: Sleep and physical activity (PA) are bidirectionally related, with PA having a positive effect on sleep, and sleep quality influencing PA the following day. However, little is known about the effects of clinical interventions for sleep disorders on PA. Therefore, the aim of this secondary analysis is to evaluate the impact of cognitive behavioral therapy for insomnia (CBT-I), the first-line treatment for insomnia, on PA. Methods: Thirty-eight nurses with shift work disorder and insomnia were randomly assigned to either CBT-I or a waitlist control group. PA was measured for one week before (T0) and after the intervention/waiting period (T1) using actigraphy and sleep diary items. The impact of CBT-I on the PA parameters was analyzed using linear mixed models. In addition, correlations of pre-to-post-treatment changes in PA and pre-to-post-treatment changes in the clinical outcomes (insomnia severity, sleep efficiency, depression) were explored in the CBT-I group. Results: CBT-I increased actigraphy-derived PA during the two hours ($\beta = 26.17$, SE = 9.41, $p = 0.009$) and one hour ($\beta = 13.24$, SE = 4.57, $p = 0.006$) after time in bed, and resulted in a higher percentage of self-reported days with PA ($\beta = 19.11$, SE = 9.36, $p = 0.049$) compared to the waitlist control group. No significant correlations were found between the changes in PA and clinical outcomes, except for a moderate positive correlation between changes in self-reported sleep efficiency and changes in PA one hour before time in bed ($r = 0.56$, $p = 0.013$). Conclusions: This is the first study to investigate the impact of CBT-I on PA, providing preliminary evidence of the potential positive effects. Further studies with larger sample sizes and randomized controlled designs with continuous PA monitoring are needed to confirm these preliminary results.

Lien vers l'article

Autres pathologies

The Effectiveness of Time-Restricted Eating as an Intermittent Fasting Approach on Shift Workers' Glucose Metabolism: A Systematic Review and Meta-Analysis.

Koh JYJ, Tan CYH, Li M, Liu MH, Chew HSJ. *Nutrients*. 2025 May 15;17(10).

Background/Objectives: Shift workers face higher risks of impaired glucose metabolism due to irregular eating habits and circadian misalignment. Time-restricted eating (TRE) could improve glucose metabolism by aligning food intake with the circadian clock, but its effectiveness remains unclear. Methods: Ten electronic databases (PubMed, EMBASE, Cochrane Library, CINAHL, PsycINFO, Scopus, Web of Science, ProQuest Dissertations and Theses, Science.gov, and ClinicalTrials.gov) were searched from journal inception to September 2024. Only randomized controlled trials (RCTs) involving shift workers were included. Meta-analyses with sensitivity analyses were conducted using a random-effects model to pool glucose metabolism and sleep outcomes, with heterogeneity and quality assessments performed. Results: Six RCTs were included. TRE demonstrated positive but non-significant effects on glucose metabolism outcomes: fasting blood glucose (weighted mean difference [WMD]: -0.02 mmol/L, 95% confidence interval [CI]: -0.13 to 0.10, I(2) = 0%), fasting blood insulin (WMD: -5.77 pmol/L, 95% CI: -85.62 to 74.08, I(2) = 92%), HOMA-IR (WMD: -0.50, 95% CI: -2.76 to 1.76, I(2) = 82%), 2 h postprandial glucose (WMD: -0.65 mmol/L, 95% CI: -3.18 to 1.89, I(2) = 86%), total sleep time (g = 0.07, 95% CI: -0.23 to 0.37, I(2) = 0%), and sleep efficiency (g = -0.05, 95% CI: -0.63 to 0.53, I(2) = 62%). Sensitivity analyses yielded similar findings, and overall certainty of evidence was rated 'very low'. Conclusions: While TRE shows potential for improving the glucose metabolism in shift workers, current evidence remains inconclusive due to small sample sizes and study limitations. Future research should prioritize well-powered TRE RCTs in shift workers that adhere to a 6-10 h eating window. Incorporating early-TRE schedules with sleep hygiene may optimize metabolic outcomes, with circadian biomarkers analyzed to better elucidate the mechanistic pathway implicated.

Lien vers l'article

The experiences of night shift workers following three different dietary weight loss interventions: a qualitative study using behaviour change theory.

Davis C, Kleve S, Huggins CE, Bonham MP. *Int J Behav Nutr Phys Act*. 2025 May 28;22(1):64.

BACKGROUND: Shift workers are an estimated 15%-30% of the workforce in developed countries, who are disproportionally at risk of living with overweight or obesity. Dietary guidance is a component recommended for obesity management, however lacks consideration of the lifestyle and circadian disruption experienced by night shift workers. There is a lack of evidence addressing both weight loss and the metabolic consequences of eating at night. Intermittent fasting (IF) may provide metabolic benefits if fasting is aligned with night shifts. The Shifting Weight using Intermittent Fasting in night shift workers study compares three weight-loss interventions: 1) continuous energy restriction (CER); or twice-per-week IF with 2) fasting during night shifts or 3) day fasting. This study aims to explore the experiences of participants while following the interventions to understand how intervention features and external enablers or barriers influence engagement. METHODS: Forty-seven semi-structured interviews (22 baseline, 25 follow-up) were conducted with 33 participants. Eighteen participants also completed optional fortnightly audio diaries to enrich data collected on experiences over time. Interviews and diaries were analysed using the five-steps of framework analysis and themes were deductively mapped to behaviour change frameworks and the social-ecological model. RESULTS: Analysis resulted in seven major themes and 27 subthemes. Three main themes describe intervention factors influencing engagement: 1) Simplicity and ease, 2) Support and accountability, and 3) An individualised approach is sometimes needed. Four themes described external factors to the interventions influencing engagement: 4) Personal motivation and attitudes, 5) Physiological influences of eating behaviours, 6) Social support at home and work, and 7) Work structure and

environment. CONCLUSIONS: Across all three interventions, participants valued the ease of interventions, which was the clear dietary prescription and focus on two days per week for IF, or a focus on small changes for CER. Behavioural regulation and providing meals/snacks were identified as critical features. Modifications to address identified enablers/barriers include: providing flexible fasting periods; addition of fatigue management initiatives; increased focus on non-weight related health changes during periods of slowed weight-loss; implementation in workplace settings to harness social support; and providing a healthier food environment.

Lien vers l'article

Impaired Responses to In Vitro Lipopolysaccharide-Induced Stimulation After Long-Term, Rotating Shift Work.

Jackson DM, Castanon-Cervantes O. *Int J Environ Res Public Health*. 2025 May 17;22(5).

Shift work is a common labor practice affecting nearly 30% of the U.S. workforce. Long-term, rotating-shift work is particularly harmful to health. Persistent sleep deprivation in shift workers, among other factors, facilitates the development of a state of subclinical but chronic systemic inflammation with a high incidence and prevalence of infections and inflammation-related pathologies, suggesting an underlying disruption of immune responses. However, despite this state of chronic immune activation, cell-mediated inflammatory responses in rotating-shift workers are poorly understood. Here, we used lipopolysaccharide (LPS) to stimulate peripheral blood mononuclear cells (PBMCs) isolated from rotating-shift workers and healthy day-shift workers and investigate their immune responses. The results showed that PBMCs from rotating-shift workers had a dampened inflammatory response. Specifically, the secretion of LPS-induced TNF-α in culture supernatants was significantly reduced compared to the response found in PBMCs from day-shift workers. However, anti-inflammatory responses, reflected by the secretion of LPS-induced IL-10, were indistinguishable between PBMCs from day-shift and rotating-shift workers. In addition, the correlation between the plasma concentration of lipopolysaccharide-binding protein (LBP, a marker of systemic inflammation) and LPS-induced responses was disrupted only in rotating-shift workers, suggesting that in this group, an impaired mechanism that weakens the relationship between pro- and anti-inflammatory signaling may underlie the hypo-responsiveness of PBMCs. Our results suggest that persistent subclinical systemic inflammation in rotating-shift workers disrupts cell-mediated immunity, increasing the risk of infection and other inflammation-related pathologies in this population.

Lien vers l'article

Cancers

Nurse night shift work and risk of gastrointestinal cancers.

Guo L, Li X. *Front Public Health*. 2025;13:1532623.

The prevalence of night-shift employment is on the rise among full-time and part-time workers globally. Those engaged in night-shift work encounter various biological challenges, including exposure to artificial light during nighttime and disruptions to their circadian rhythms. These factors, along with changes in daily routines and activities, may pose significant risks to the health of night workers. Notably, the number of individuals working overtime or on night shifts has increased across various sectors, particularly in transportation, healthcare, and manufacturing. The International Agency for Research on Cancer (IARC) has classified night-shift work as probably carcinogenic to humans (IARC Group 2A). Subsequent research has identified several potential mechanisms through which night-shift work may contribute to carcinogenicity: (1) disruption of circadian rhythms, (2) suppression of melatonin levels due to nighttime light exposure, (3) physiological alterations, (4) lifestyle changes,

and (5) reduced vitamin D levels resulting from inadequate sunlight exposure. Colorectal cancer (CRC) poses a significant public health challenge, ranking as the second leading cause of cancer-related death worldwide in 2020. Other than CRC, other gastrointestinal cancers are also creating a great global health issue because of their morbidity and mortality rates. In this review, we highlight the role of night shifts in disturbing circadian rhythm and how this action leads to carcinogenesis in the GI tract.

Lien vers l'article

Risque routier, accidentologie

Aucun article dans ce bulletin.

RPS et QVT

Great Debates-Shift Work Versus One Day at a Time: 12- Versus 24-Hour Call Duration in Acute Care Surgery.

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Lien vers l'article

Development and implementation of paging and escalation guidelines to improve interprofessional communication on surgical units.

Kochis MA, Franko LR, Swierzewski K, Parmar A, Algeri S, Gartland RM. *BMJ Open Qual*. 2025 May 6;14(2).

INTRODUCTION: Suboptimal interprofessional communication in the surgical inpatient setting has important implications for patient safety. Our departmental quality committee identified numerous safety events resulting from discordant expectations between surgical floor nurses and surgical residents or advanced practice providers (APPs) who serve as responding clinicians (RCs), and from reluctance to escalate clinical concerns. Alphanumeric paging is frequently used to communicate, but there are opportunities to enhance its effectiveness. This initiative sought to improve perceptions of communication and responsiveness between nurses and RCs by providing a shared language and set of expectations about the urgency of pages, appropriate responses and the process of escalation to other team members if necessary. METHODS: An interprofessional team of surgical faculty, nurses and residents solicited input from surgical floor nurses, operating room nurses, residents, APPs and attendings on their perceptions of communication barriers among team members via online surveys and focus groups. Guidelines were iteratively developed. They specify that every page should be classified as STAT, Urgent, Please Call or FYI. Each classification is associated with an expected response time and pathway for contacting alternative team members if no response is received. After 3 months of implementation on our hospital's two main general surgery units, follow-up online surveys with

multiple-choice and free-response questions assessed perceived impacts on communication and clinical care. Differences in categorical variables were assessed with χ(2) tests, and free text was analysed inductively. RESULTS: After implementation, nurses reported favourable effects on communication, including significantly improved responsiveness during night shifts and timeliness from RCs during day shifts. Residents and attendings perceived the intervention to have overall neutral to mildly positive effects on communication. CONCLUSIONS: Paging and Escalation Guidelines are a feasible approach to enhance the perceptions of communication between nurses and RCs by aligning expectations, streamlining responses and decreasing barriers to escalation.

Lien vers l'article

Shift Type and Resilience Training Effect on Nurse Outcomes.

Montgomery AP, Carter JL, Stevens JB, Beam T, Blackburn C, Dick TK, et al. *West J Nurs Res*. 2025 May 24:1939459251340779.

BACKGROUND: Nursing shift work disrupts circadian rhythms, negatively impacting physical and mental health. Night shift workers face the added challenge of shift work disorder. Resilience training may help mitigate these effects and improve perceived organizational support. OBJECTIVE: We aimed to examine the effect of the Community Resilience Model(®) training on outcomes (ie, perception of organizational support, resilience, burnout, distress, and intention to leave) among shift workers at an academic medical center while exploring differences in demographics, work characteristics, and outcomes by shift type (day vs night). METHODS: Training was offered to all nursing roles. Work characteristics, demographics, and nurse outcomes were collected via an online survey. Binomial logistic regressions were conducted for all outcomes. RESULTS: Of our sampling (N = 878), 52.6% were nurse staff, 23% usually worked night shifts, and 28% attended training. Night shift workers reported significantly lower perceptions of organizational support (P = .03) and resilience (P = .005). Over 55% of night shift workers reported burnout compared to 45% of day shift workers. Sixty-three percent of night and 51% of day shift workers were distressed (P = .002). Training attendees reported significantly higher perceptions of organizational support. Participants reporting higher perceived organizational support also reported less burnout, distress, and intention to leave. CONCLUSION: Participants in resilience training rated higher perceptions of organizational support, particularly among night shift workers, who reported lower support, resilience, and higher burnout and distress. These results suggest that resilience training may benefit night shift workers by enhancing support and reducing negative outcomes.

Lien vers l'article

The relationship between sleep deprivation and the worsening of mood disorders in health professionals working night shifts.

da Silva AA, Vieira BA, Dos Santos JCC. *Dement Neuropsychol*. 2025;19:e20240186.

Although the impact of sleep deprivation on the development of psychological disorders is widely recognized, little is known about the longitudinal relationship between sleep quality and mood disorders, specifically among health professionals. OBJECTIVE: The objective of this study was to investigate the relationship between sleep quality and the incidence of mood disorders among health professionals who work night shifts, focusing on anxiety, depression, and stress. METHODS: This is an observational, cross-sectional, and quantitative study, approved by the Ethics Committee of the Christus University Center (Unichristus), in accordance with Resolution 466/12. It was carried out using an online questionnaire via Google Forms, in the city of Fortaleza, Ceará. RESULTS: A total of 45 health professionals from different areas took part in the survey, including nursing technicians, physiotherapists, nurses, and doctors. The results indicated a high incidence of sleep disorders, especially among nursing staff, with average scores of 11-13 on the Pittsburgh Sleep Quality Index

(PSQI). The correlations found between sleep quality (as measured by the PSQI) and the symptoms of depression, anxiety, and stress were weak to moderate, with correlation coefficients (r) of 0.37, 0.44, and 0.48, respectively. CONCLUSION: The results suggest that there is an urgent need for interventions to improve sleep quality and reduce stress among health professionals working night shifts. Despite the promising findings, the study recommends further research to explore these relationships in more depth.

Lien vers l'article

Bovine tuberculosis in cattle slaughtered at Addis Ababa abattoir in Ethiopia and workforce awareness of zoonotic risk.

Ahmed FM, Girma M, Worku G, Tadesse T, Medhin G, Waddell SJ, et al. *PLoS One*. 2025;20(5):e0321844.

BACKGROUND: Bovine tuberculosis (bTB) is endemic and of zoonotic importance in Ethiopia. Despite this, there is limited recent information on the prevalence of bTB in cattle slaughtered at abattoirs. This study aimed to estimate the prevalence of bTB in cattle slaughtered at Addis Ababa municipality abattoir based on tuberculous lesions and region of difference (RD4) deletion typing and to assess the current practice and the awareness of occupational workers to zoonoses. METHODS: A total of 502 cattle slaughtered at the municipality abattoir (260 in the day shift and 242 in the night shift) were included in this cross-sectional study. Data collection and laboratory investigations included postmortem examination, culture and bacteriological examination, molecular characterization of positive isolates using region of difference (RD4) deletion typing and spoligotyping. Knowledge of zoonotic infection risk and practices was investigated through a questionnaire administered to 58 abattoir workers and 58 butchers. RESULTS: Based on postmortem examination, bTB suspected lesion was identified in 4.58% of cattle and it was significantly associated with, the age, breed and body condition of the animals. The detection of tuberculosis lesions during the night shift of the slaughter program was 1.54 times that of the day shift which is not statistically significant but warrants future study with a larger sample size. The gross lesions were predominately found in the lung and associated lymph nodes (65.5%). Of the 23 bTB suspected tuberculous lesions cultured, 11 (47.83%) tissue samples were culture-positive, and four isolates were RD4-positive, identifying M. bovis. Spoligotyping patterns were also effectively detected in four isolates. The observed spoligotype patterns were two SB1477 strains, and SB1176 and SB0133 strains. In the questionnaire survey, 79.31% of abattoir workers were aware of bTB, however, 93.10% of butchers did not know of bTB and understood less about preventing cross-infection. CONCLUSION: Bovine tuberculosis is evident in cattle reaching the abattoir in Addis Ababa with nearly similar gross lesion pathology-based prevalence of bTB to prior findings reported from the same abattoir a decade ago. This suggests that despite efforts to control the disease in cattle, the prevalence remains largely unchanged. Although statistically non-significant, the trend showing higher odds of detecting tuberculous lesions during the night suggests a need for improved meat inspections during the night shift and the need for larger future studies.

Lien vers l'article

Santé psychique

Development and validation of a prediction model for the depressive symptom risk in commercial airline pilots.

Zhang J, Chen X, Zhang L, Qi H, Zhang E, Chen M, et al. *Epma j*. 2025 Jun;16(2):285-98.

BACKGROUND/AIMS: Shift workers, such as medical personnel, and pilots, are facing an increased risk of depressive symptoms. Depressive symptoms significantly impact an individual's quality of life and

affect work performance, decision-making abilities, and overall public safety. This study aims to establish a multidimensional depressive symptom prediction model based on a large sample of commercial airline pilots to facilitate early identification, prevention, and personalized intervention strategies. METHODS: This population-based study included 11,111 participants, with 7918 pilots in the training set and 3193 pilots in the external validation set. Depressive symptom severity was assessed using the Patient Health Questionnaire-9 (PHQ-9). Physiological, psychological, and lifestyle factors potentially associated with depressive symptom risk were collected. The optimal predictors for model development were selected using the Boruta algorithm combined with the LASSO method, and a nomogram was developed using multivariate logistic regression to predict depressive symptoms in pilots. The model performance was evaluated using Receiver Operating Characteristic (ROC) curves, calibration curves, and accuracy measures, such as the Brier score and Spiegelhalter z-test. Additionally, decision curve analysis (DCA) was performed to assess the model's clinical utility. RESULTS: A total of 7918 pilots were included in the training set and 3193 were included in the external validation set. Five characteristic indicators were selected based on their significance in the prediction of depressive symptom risk: living status, alcohol drinking, family history of mental health disorder, subjective health, and subjective sleep quality. The model showed acceptable overall discrimination (AUC(train) = 0.836, 95%CI 0.818 to 0.854; AUC(validation) = 0.840, 95%CI 0.811 to 0.868) and calibration (Brier score(train) = 0.048; Brier score(validation) = 0.051). The decision curve analysis showed that the net benefit was superior to intervening on all participants or not intervening on all participants. CONCLUSIONS: This study provides a reliable tool for early prediction and customized management of depressive symptoms among commercial airline pilots. This approach promotes the development of the field by transitioning from passive mental health care to active mental health prevention, emphasizing personalized prevention strategies.

Lien vers l'article

Shift Type and Resilience Training Effect on Nurse Outcomes.

Montgomery AP, Carter JL, Stevens JB, Beam T, Blackburn C, Dick TK, et al. *West J Nurs Res*. 2025 May 24:1939459251340779.

BACKGROUND: Nursing shift work disrupts circadian rhythms, negatively impacting physical and mental health. Night shift workers face the added challenge of shift work disorder. Resilience training may help mitigate these effects and improve perceived organizational support. OBJECTIVE: We aimed to examine the effect of the Community Resilience Model(®) training on outcomes (ie, perception of organizational support, resilience, burnout, distress, and intention to leave) among shift workers at an academic medical center while exploring differences in demographics, work characteristics, and outcomes by shift type (day vs night). METHODS: Training was offered to all nursing roles. Work characteristics, demographics, and nurse outcomes were collected via an online survey. Binomial logistic regressions were conducted for all outcomes. RESULTS: Of our sampling (N = 878), 52.6% were nurse staff, 23% usually worked night shifts, and 28% attended training. Night shift workers reported significantly lower perceptions of organizational support (P = .03) and resilience (P = .005). Over 55% of night shift workers reported burnout compared to 45% of day shift workers. Sixty-three percent of night and 51% of day shift workers were distressed (P = .002). Training attendees reported significantly higher perceptions of organizational support. Participants reporting higher perceived organizational support also reported less burnout, distress, and intention to leave. CONCLUSION: Participants in resilience training rated higher perceptions of organizational support, particularly among night shift workers, who reported lower support, resilience, and higher burnout and distress. These results suggest that resilience training may benefit night shift workers by enhancing support and reducing negative outcomes.

Lien vers l'article

The relationship between sleep deprivation and the worsening of mood disorders in health professionals working night shifts.

da Silva AA, Vieira BA, Dos Santos JCC. *Dement Neuropsychol*. 2025;19:e20240186.

Although the impact of sleep deprivation on the development of psychological disorders is widely recognized, little is known about the longitudinal relationship between sleep quality and mood disorders, specifically among health professionals. OBJECTIVE: The objective of this study was to investigate the relationship between sleep quality and the incidence of mood disorders among health professionals who work night shifts, focusing on anxiety, depression, and stress. METHODS: This is an observational, cross-sectional, and quantitative study, approved by the Ethics Committee of the Christus University Center (Unichristus), in accordance with Resolution 466/12. It was carried out using an online questionnaire via Google Forms, in the city of Fortaleza, Ceará. RESULTS: A total of 45 health professionals from different areas took part in the survey, including nursing technicians, physiotherapists, nurses, and doctors. The results indicated a high incidence of sleep disorders, especially among nursing staff, with average scores of 11-13 on the Pittsburgh Sleep Quality Index (PSQI). The correlations found between sleep quality (as measured by the PSQI) and the symptoms of depression, anxiety, and stress were weak to moderate, with correlation coefficients (r) of 0.37, 0.44, and 0.48, respectively. CONCLUSION: The results suggest that there is an urgent need for interventions to improve sleep quality and reduce stress among health professionals working night shifts. Despite the promising findings, the study recommends further research to explore these relationships in more depth.

Lien vers l'article

Troubles cognitifs et de la vigilance

Altered Structure-Function Coupling Associated with Attention Decline in Shift Work Disorder.

Wu Z, Feng S, Li K, Dong L, Zhang L, Ning Y, et al. *Nat Sci Sleep*. 2025;17:989-1001.

INTRODUCTION: Previous studies on shift work disorder (SWD) have revealed altered functional and structural brain networks underlying attention decline. However, changes in structure-function coupling (SFC) and their relationship with attention decline remain unknown. This study aimed to examine the role of changed SFC in abnormal attentional network function in SWD. METHODS: Thirty-four patients with SWD and thirty-two healthy controls were recruited. All participants underwent resting-state functional magnetic resonance imaging (fMRI) and diffusion tensor imaging (DTI) scans. All participants underwent an attentional network test to evaluate their functions. Finally, Pearson's correlation analysis was conducted to analyze the association between aberrant attentional network function and altered structural and functional connectivity (SC-FC) coupling in patients with SWD. RESULTS: Compared to healthy subjects, decreased alerting and executive functions were found in patients with SWD. In addition, we observed decreased SC-FC coupling in patients with SWD, specifically in the left anterior cingulate gyrus (T = -3.6449, P = 0.0003), central opercular cortex (T = -3.7187, P = 0.0002), middle frontal gyrus (T = -3.8342, P = 0.0001), and parietal operculum cortex (T = -3.6121, P = 0.0003), compared with healthy subjects. Better altering performance was significantly associated with lower SC-FC coupling in the anterior cingulate gyrus of patients with SWD (r = -0.51, P = 0.002). DISCUSSION: Our findings unravel that the decreased SC-FC coupling in the anterior cingulate gyrus may contribute to the impaired altering network function in SWD, which can further understand the neural mechanisms of impaired attention in SWD and inform a potentially therapeutic intervention for SWD patients.

Lien vers l'article

Co-designed resources to improve sleep health in young shiftworkers: a qualitative study.

Shriane AE, Vincent GE, Ferguson SA, Gupta CC, Kolbe-Alexander T, Sprajcer M, et al. *Sleep Med*. 2025 Jul;131:106511.

INTRODUCTION: Shiftwork contributes to poor sleep and circadian disruption, leading to adverse health outcomes. With a high number of young adults (18-25 years) engaging in shiftwork, exposure to these health challenges can occur from early adulthood. Therefore, there is an urgent need for age- and career-stage-appropriate resources focused on sleep health to mitigate poor health outcomes as early as possible. Given the absence of such resources, this study aimed to develop tailored, evidence-based sleep health materials for young shiftworkers. METHODS: A participatory approach was employed, with co-designers (n = 48) attending 1-2 online workshops to develop sleep health resources for young shiftworkers. Co-designers included young, experienced, and previous shiftworkers, workplace health and safety experts, and science communications specialists, who worked alongside academic experts. Workshops explored which sleep health topics co-designers believe are important for young shiftworkers. Reflexive thematic analysis of workshop transcripts identified key themes, which were aligned with current scientific evidence, forming both the structure and content of the resulting sleep health resources for young shiftworkers. RESULTS: Analysis of workshop transcripts identified five themes: sleep science, impacts of poor sleep, habits impacting sleep, strategies to improve sleep, and recommendations for workplaces. Themes were populated with evidence-based information to develop a website, a pictorial infographic, an animated video, and a social media presence. DISCUSSION: Tailored, evidence-based sleep health resources for young shiftworkers were co-designed, with qualitative data elucidating individual and work-related sleep health themes. Future studies should evaluate the resources to determine their impact on knowledge and behaviour.

Lien vers l'article

Nursing Work Schedules, Specialties, Sleep Hygiene, and the Impact on Sleep Health.

Rejto N, de Castro AB, Ward TM, Willgerodt M, Walsh E. *West J Nurs Res*. 2025 May 29:1939459251340219.

BACKGROUND: Sleep is an important determinant of health and well-being. Poor sleep among nurses is associated with medical errors, poor decision-making, and decreased patient safety. National research priorities have underscored the need to understand the impact of nursing job characteristics on sleep health and mitigation strategies. OBJECTIVE: We aimed to test whether sleep hygiene behaviors moderated the association between job characteristics and sleep health among nurses. METHODS: A cross-sectional analysis was conducted on data from the Nurses' Health Study 3 (N = 1272). Logistic regression analysis tested the modifying effect of sleep hygiene behaviors when examining the association between job characteristics and sleep health among nurses practicing in various care settings and specialties. RESULTS: Sleep hygiene behaviors were associated with increased odds of healthy sleep on workdays and work-free days; however, sleep hygiene did not moderate associations between job characteristics and sleep health. Working 12-hour or longer shifts was not associated with decreased odds of healthy sleep compared with working <12-hour shifts on workdays or work-free days. Working in schools and critical care was associated with 50% or higher odds of unhealthy sleep compared with working in the operating room and oncology on work-free days. DISCUSSION: Findings suggest sleep hygiene behaviors cannot fully mitigate the effect of job characteristics on sleep health. Study results indicate sleep health may vary by nursing care setting and specialties. Future research should consider factors that may impact sleep health such as short staffing, commuting during work, and time off between shifts.

Lien vers l'article

Co-designed resources to improve sleep health in young shiftworkers: a qualitative study.

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INTRODUCTION: Shiftwork contributes to poor sleep and circadian disruption, leading to adverse health outcomes. With a high number of young adults (18-25 years) engaging in shiftwork, exposure to these health challenges can occur from early adulthood. Therefore, there is an urgent need for age- and career-stage-appropriate resources focused on sleep health to mitigate poor health outcomes as early as possible. Given the absence of such resources, this study aimed to develop tailored, evidence-based sleep health materials for young shiftworkers. METHODS: A participatory approach was employed, with co-designers (n = 48) attending 1-2 online workshops to develop sleep health resources for young shiftworkers. Co-designers included young, experienced, and previous shiftworkers, workplace health and safety experts, and science communications specialists, who worked alongside academic experts. Workshops explored which sleep health topics co-designers believe are important for young shiftworkers. Reflexive thematic analysis of workshop transcripts identified key themes, which were aligned with current scientific evidence, forming both the structure and content of the resulting sleep health resources for young shiftworkers. RESULTS: Analysis of workshop transcripts identified five themes: sleep science, impacts of poor sleep, habits impacting sleep, strategies to improve sleep, and recommendations for workplaces. Themes were populated with evidence-based information to develop a website, a pictorial infographic, an animated video, and a social media presence. DISCUSSION: Tailored, evidence-based sleep health resources for young shiftworkers were co-designed, with qualitative data elucidating individual and work-related sleep health themes. Future studies should evaluate the resources to determine their impact on knowledge and behaviour.

Lien vers l'article

Wake Up Call: A Qualitative Study of Nursing and Medical Managers' Perceptions and Support for Nurses' Night Shift Napping in Intensive Care Units.

Mahran GSK, Abu Aqoulah EA, Seleem E, Hawash MAE, Ahmed RDM. *Nurs Crit Care*. 2025 May;30(3):e70056.

BACKGROUND: Night shift work in healthcare settings is associated with increased fatigue, decreased alertness and potential risks to patient safety. While nurses napping during night shifts has been proposed as a strategy to mitigate these effects, its implementation remains controversial and understudied from a managerial perspective. AIM: This study aimed to explore nursing and medical managers' perceptions of, and support for nurses' night shift napping policies in intensive care units. STUDY DESIGN: A qualitative descriptive approach was employed from the beginning of March 2024 to the end of October 2024, utilising semi-structured interviews with 40 nursing and medical managers from various intensive care units. Participants were purposively sampled to ensure diversity in experience and department. Interviews were audio-recorded, transcribed verbatim and analysed using thematic analysis. RESULTS: Five main themes emerged: (1) Understanding perceptions of night shift napping, (2) perceptions of the benefits of night shift napping, (3) assessing support for night shift napping, (4) barriers and challenges of applying napping strategies and (5) developing effective implementation strategies to facilitate the successful adoption of napping policies. While most managers acknowledged the potential benefits of night shift napping, they expressed apprehension about its practical implementation, staff coverage concerns and the potential for policy abuse. Supportive managers emphasised the importance of education, structured guidelines and gradual cultural change to successfully integrate napping practices. CONCLUSION: The findings suggest that while there is growing recognition of the potential benefits of night shift napping, significant barriers to implementation persist. The results can inform the development of evidence-based napping policies

and guide strategies to address managerial concerns, ultimately improving night shift working conditions and patient care quality. RELEVANCE TO CLINICAL PRACTICE: Researching the perceptions and support of nursing and medical managers for night shift napping in ICUs is relevant to clinical practice, as it can provide insights into the potential benefits, challenges and strategies for implementing such policies. These findings may ultimately improve patient safety, staff well-being and quality of care.

Lien vers l'article

The Effects of Cognitive Behavioral Therapy for Insomnia on Physical Activity Before and After Time in Bed Among Shift Workers.

Sochal M, Feige B, Spiegelhalder K, Ell J. *J Clin Med*. 2025 May 6;14(9).

Background: Sleep and physical activity (PA) are bidirectionally related, with PA having a positive effect on sleep, and sleep quality influencing PA the following day. However, little is known about the effects of clinical interventions for sleep disorders on PA. Therefore, the aim of this secondary analysis is to evaluate the impact of cognitive behavioral therapy for insomnia (CBT-I), the first-line treatment for insomnia, on PA. Methods: Thirty-eight nurses with shift work disorder and insomnia were randomly assigned to either CBT-I or a waitlist control group. PA was measured for one week before (T0) and after the intervention/waiting period (T1) using actigraphy and sleep diary items. The impact of CBT-I on the PA parameters was analyzed using linear mixed models. In addition, correlations of pre-to-post-treatment changes in PA and pre-to-post-treatment changes in the clinical outcomes (insomnia severity, sleep efficiency, depression) were explored in the CBT-I group. Results: CBT-I increased actigraphy-derived PA during the two hours ($\beta = 26.17$, SE = 9.41, $p = 0.009$) and one hour ($\beta = 13.24$, SE = 4.57, $p = 0.006$) after time in bed, and resulted in a higher percentage of self-reported days with PA ($\beta = 19.11$, SE = 9.36, $p = 0.049$) compared to the waitlist control group. No significant correlations were found between the changes in PA and clinical outcomes, except for a moderate positive correlation between changes in self-reported sleep efficiency and changes in PA one hour before time in bed ($r = 0.56$, $p = 0.013$). Conclusions: This is the first study to investigate the impact of CBT-I on PA, providing preliminary evidence of the potential positive effects. Further studies with larger sample sizes and randomized controlled designs with continuous PA monitoring are needed to confirm these preliminary results.

Lien vers l'article

Development of the Dysfunctional Beliefs about Sleep for shift Workers scale (DBSW) for shift-working registered nurses.

Song J, Duman ZT, Suh S, Chung S. *Psychol Health Med*. 2025 May 29:1-12.

INTRODUCTION: We aimed to develop a sleep-related dysfunctional beliefs scale that can be applied specifically to shift workers. METHODS: The Dysfunctional Beliefs about Sleep for shift Workers scale (DBSW) was developed under the standard rating scale development process. We conducted two online surveys to run an exploratory factor analysis (EFA, Study I, N = 323) and a confirmatory factor analysis (CFA, Study II, N = 300) for the new scale. The convergent validity of the DBSW was explored with pre-existing rating scales, including the Dysfunctional Beliefs and Attitudes about Sleep-16 scale (DBAS-16), Insomnia Severity Index (ISI), and Glasgow Sleep Effort Scale (GSES). RESULTS: We finally selected 10 items after EFA, and we observed that the scale has three factors. Based on the CFA, the three-factor model with a 10-item DBSW showed good fits for the model (CFI = 0.971, TLI = 0.959, RMSEA = 0.050, SRMR = 0.042). The internal consistency of reliability of the DBSW were excellent based on the McDonald's omega value of 0.802. Convergent validity analyses revealed significant correlations between the total DBSW score and ISI ($r = 0.54$, $p < 0.01$), DBAS-16 ($r = 0.74$, $p < 0.01$), and GSES ($r = 0.48$, $p < 0.01$). Three factors (Dysfunctional beliefs, Control, and Shift work) of the DBSW

were correlated with each other: total score of DBSW, ISI, DBAS-16, and GSES scores. CONCLUSIONS: The DBSW is a rating scale that can measure sleep-related cognition specific to shift workers with good reliability and validity.

Lien vers l'article

The beneficial influence of night-shift napping on brain core cognition networks in nurses experiencing sleep deprivation: A preliminary resting-state fMRI study.

Zhang XH, Huang HW, Zeng JY, Chen HJ, Lin YJ. *Sleep Med*. 2025 Jul;131:106503.

PURPOSE: This study investigated the restorative effects of napping on cognitive brain networks in night-shift nurses experiencing sleep deprivation (SD). METHODS: Functional magnetic resonance imaging data and neurocognitive assessments were collected from 20 nurses during three sessions (rested wakefulness (RW), SD, and night-shift napping (NS-NAP)). Functional connectivity (FC) was performed in three core cognitive networks, including the default-mode network (DMN), central executive network (CEN), and salience network (SN). RESULTS: The SD session showed decreased FC across almost the entire DMN, while only showed increased FC in several key nodes of the CEN and SN. Napping partially mitigated SD-related FC alterations within the DMN and essentially restored FC abnormities in both the CEN and SN. Changes in neurocognitive performance observed between SD and NS-NAP sessions were correlated with alterations in FC within the DMN. CONCLUSION: The functional integration of core neurocognitive networks can be restored to varying degrees through appropriate NS-NAP practices, potentially improving neurocognitive performance in nurses experiencing SD. CLINICAL TRIAL NUMBER: not applicable.

Lien vers l'article

Effects of photobiomodulation on the sleep quality and quality of life of night-shift nurses.

Lin MY, Chen CC, Chen MJ, Hwang LL, Wu JH, Su CT. *Lasers Med Sci*. 2025 May 13;40(1):221.

Quality of life (QoL) and sleep quality are critical to the well-being of night-shift nurses. This study evaluates the therapeutic effects of an 830 nm laser array on QoL and sleep quality among this population. A total of 60 night-shift nurses participated in the study. The 830 nm laser array was applied to the palm and a localized painful area at an energy density of 252 J/cm(2). Changes in QoL and sleep quality were assessed using standardized questionnaires, including the Pittsburgh Sleep Quality Index (PSQI), the Athens Insomnia Scale (AIS), the MOS 36-item short-form health survey, v. 2 (SF-36v2), and the World Health Organization Quality of Life Brief Version (WHOQOL-BREF). Following treatment, participants exhibited significant reductions in global PSQI ($p < 0.001$) and AIS scores ($p < 0.001$), indicating improved sleep quality. Positive changes were also observed in global scores on the SF-36v2 ($p < 0.01$) and the WHOQOL-BREF ($p < 0.05$). Additionally, pain levels were significantly reduced during the one-month treatment period ($p < 0.001$). The beneficial effects of photobiomodulation are sustained for a duration of at least one month. This approach offers a promising means of mitigating the adverse effects of night shifts and improving overall well-being.

Lien vers l'article

Reach of an Occupational Health and Safety Program to Improve Sleep and Fatigue Among Nurses.

Hittle BM, Guerin R, Wong IS. *West J Nurs Res*. 2025 May 24:1939459251340273.

BACKGROUND: Training and education may benefit nurses whose nonstandard work hours put them at risk of poor sleep, fatigue, and ensuing adverse health and safety outcomes. The National Institute for Occupational Safety and Health (NIOSH) published "Training for Nurses on Shift Work and Long Work Hours" in 2015 as a free online resource which remains one of the few trainings available on this

topic. However, the extent to which nurses have completed the program and the characteristics of current learners have not been examined. OBJECTIVE: We aimed to describe the potential reach of the NIOSH Training for Nurses between May 2015 through December 2020. METHODS: Data were obtained on learners who received continuing education credits upon completion of the NIOSH Training for Nurses. We applied a widely used implementation and evaluation framework, RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance), to describe the potential reach of the nurses' training and provide descriptive statistics of learners. RESULTS: From 2015 to 2020, 7899 learners from different occupations received continuing education credits for completing the training. Approximately 60% of learners were nurses and 30% were students. Among nurses, most were Registered Nurses (93%), with few Licensed Practical Nurses (6%) and Advanced Practice Nurses (2%). In 2020, the number of learners who were nurses represented only 0.09% of all licensed US nurses. CONCLUSION: A renewed dissemination plan may help extend training reach to the larger population of licensed US nurses. The NIOSH training remains a seminal, freely available, online resource for nurses, filling a critical gap in training to manage work-related fatigue.

Lien vers l'article

Altered Structure-Function Coupling Associated with Attention Decline in Shift Work Disorder.

Wu Z, Feng S, Li K, Dong L, Zhang L, Ning Y, et al. *Nat Sci Sleep*. 2025;17:989-1001.

INTRODUCTION: Previous studies on shift work disorder (SWD) have revealed altered functional and structural brain networks underlying attention decline. However, changes in structure-function coupling (SFC) and their relationship with attention decline remain unknown. This study aimed to examine the role of changed SFC in abnormal attentional network function in SWD. METHODS: Thirty-four patients with SWD and thirty-two healthy controls were recruited. All participants underwent resting-state functional magnetic resonance imaging (fMRI) and diffusion tensor imaging (DTI) scans. All participants underwent an attentional network test to evaluate their functions. Finally, Pearson's correlation analysis was conducted to analyze the association between aberrant attentional network function and altered structural and functional connectivity (SC-FC) coupling in patients with SWD. RESULTS: Compared to healthy subjects, decreased alerting and executive functions were found in patients with SWD. In addition, we observed decreased SC-FC coupling in patients with SWD, specifically in the left anterior cingulate gyrus (T = -3.6449, P = 0.0003), central opercular cortex (T = -3.7187, P = 0.0002), middle frontal gyrus (T = -3.8342, P = 0.0001), and parietal operculum cortex (T = -3.6121, P = 0.0003), compared with healthy subjects. Better altering performance was significantly associated with lower SC-FC coupling in the anterior cingulate gyrus of patients with SWD (r = -0.51, P = 0.002). DISCUSSION: Our findings unravel that the decreased SC-FC coupling in the anterior cingulate gyrus may contribute to the impaired altering network function in SWD, which can further understand the neural mechanisms of impaired attention in SWD and inform a potentially therapeutic intervention for SWD patients.

Lien vers l'article

Fatigue and coping strategies among Chinese night-shift nurses: a cross-sectional study.

He B, Zhang Y, Qian S, Ye Q, Ren Y, Wang Z. *BMC Nurs*. 2025 May 8;24(1):500.

BACKGROUND: Night-shift work is a crucial component of nursing but is associated with significant fatigue, which may impact both nurse well-being and patient safety. Understanding the levels of fatigue and the coping strategies employed by nurses can help develop effective interventions. This study aimed to assess the fatigue levels of Chinese night-shift nurses and explore commonly used anti-fatigue strategies. METHODS: A cross-sectional study was conducted in Zhejiang Province, China, using the Occupational Fatigue Exhaustion/Recovery Scale (OFER) questionnaire. The survey assessed acute and chronic fatigue levels, fatigue recovery, and anti-fatigue strategies among nurses. Statistical

analysis was performed using SPSS 26.0. RESULTS: Among the 371 valid responses, chronic fatigue levels (66.41 ± 24.17) were higher than acute fatigue levels (57.31 ± 15.61). Nurses with higher education levels reported lower acute fatigue, while older, more experienced nurses and those working in higher-grade hospitals had lower chronic fatigue. Common coping strategies included naps (63.88%) and stimulant consumption (54.72%), with coffee (45.37%) and milk tea (23.28%) being the most popular drinks. CONCLUSION: Our findings indicate that Chinese night-shift nurses experience substantial fatigue, especially chronic fatigue, which is influenced by factors including education, age, clinical experience, exercise frequency, and hospital grade. Although personal coping strategies are common, they fall short in mitigating fatigue, underscoring the need for comprehensive interventions that combine individual and organizational measures. CLINICAL TRIAL NUMBER: not applicable.

Lien vers l'article

Comparison of Tailored Versus Standard Group Cognitive Behavioral Therapy for Shift Worker Insomnia: A Randomized Controlled Trial.

Grünberger T, Höhn C, Schabus M, Pletzer BA, Laireiter AR. *Clocks Sleep*. 2025 May 9;7(2).

Shift workers are at increased risk of insomnia. The standard treatment (cognitive behavioral therapy for insomnia) poses significant challenges for this demographic due to irregular work and sleep schedules. New approaches are still considered insufficient due to high attrition or insufficient effectiveness. Our preliminary study identified sleep-relevant state and trait factors (see secondary outcomes) for incorporation into an innovative manual that addresses sleep in an implicit manner. The objective was to reduce the focus on insomnia and to replace regularity-based interventions. With a sample of 55 insomniacs (67.74% male, mean age 41.62 years), standard and customized treatments were compared using pre-treatment, post-treatment, and three-month follow-up measurements (RCT, self-assessment data). Our linear mixed models revealed the main significant effects of the measurement point for the primary (insomnia severity, sleep quality, sleep onset latency, total sleep time, daytime sleepiness) and the secondary outcomes (selection: anxiety/depression, dysfunctional beliefs, arousal, emotional stability, concern). No main effects of the condition or interaction effects were identified. Non-inferiority and equivalence tests demonstrated that the customized treatment is equivalent to standard therapy, which is a favorable outcome in light of the implicit approach. Consequently, this innovative approach warrants further exploration, incorporating the present results.

Lien vers l'article

Protocol for a pilot hybrid type I effectiveness-implementation study to improve help-seeking for sleep disorders in the future healthcare workforce: The Sleep Check Before Shift Work trial.

Dunbar C, Sansom K, Lovato N, Vakulin A, Loffler KA, Nguyen K, et al. *Sleep Adv*. 2025 Apr;6(2):zpaf020.

Sleep disorders are prevalent in shift workers but are commonly undiagnosed and unmanaged. This poses considerable safety, productivity, and health risks. There is limited education or early intervention to encourage awareness of, and treatment for, sleep disorders in young adults who will transition into careers requiring shift work. This study aims to investigate (a) the clinical effectiveness of simulated shift work exposure and cognitive performance feedback for prompting help-seeking for sleep problems, and (b) the feasibility and acceptability of implementing this intervention for future healthcare workers. A hybrid type I effectiveness-implementation trial will be conducted from June 2024 to December 2025 with prospective healthcare workers currently enrolled in a medicine, paramedicine, or nursing degree. Ninety adults (18-39 years) who self-report sleep disturbances will be recruited and complete a combination of structured clinical interviews, screening questionnaires, remote monitoring technology, and overnight polysomnography (PSG). Participants will be randomized across three conditions, with varying exposure to a simulated transition to night shift

without sleep, and cognitive performance feedback. All individuals will attend a diagnostic appointment with a sleep psychologist or sleep physician and discuss help-seeking pathways for their sleep. The primary outcomes will be help-seeking from a health professional for sleep (yes/no), time to help-seeking (days), and road safety-related events over 12 months. Process evaluation will explore the feasibility and acceptability of this approach from the participants' perspective.

Lien vers l'article

The relationship between sleep deprivation and the worsening of mood disorders in health professionals working night shifts.

da Silva AA, Vieira BA, Dos Santos JCC. *Dement Neuropsychol*. 2025;19:e20240186.

Although the impact of sleep deprivation on the development of psychological disorders is widely recognized, little is known about the longitudinal relationship between sleep quality and mood disorders, specifically among health professionals. OBJECTIVE: The objective of this study was to investigate the relationship between sleep quality and the incidence of mood disorders among health professionals who work night shifts, focusing on anxiety, depression, and stress. METHODS: This is an observational, cross-sectional, and quantitative study, approved by the Ethics Committee of the Christus University Center (Unichristus), in accordance with Resolution 466/12. It was carried out using an online questionnaire via Google Forms, in the city of Fortaleza, Ceará. RESULTS: A total of 45 health professionals from different areas took part in the survey, including nursing technicians, physiotherapists, nurses, and doctors. The results indicated a high incidence of sleep disorders, especially among nursing staff, with average scores of 11-13 on the Pittsburgh Sleep Quality Index (PSQI). The correlations found between sleep quality (as measured by the PSQI) and the symptoms of depression, anxiety, and stress were weak to moderate, with correlation coefficients (r) of 0.37, 0.44, and 0.48, respectively. CONCLUSION: The results suggest that there is an urgent need for interventions to improve sleep quality and reduce stress among health professionals working night shifts. Despite the promising findings, the study recommends further research to explore these relationships in more depth.

Lien vers l'article

Examining the impact of occupational stress and shift work schedules on the cognitive functions among firefighters in normal condition.

Askari A, Feyzi V, Farhadi A, Dashti A, Poursadeqiyan M, Salehi Sahl Abadi A. *Work*. 2025 Jun;81(2):2662-9.

Background:Firefighters are exposed to a wide range of psychological and physical hazards. Objective: The present study, in 2023 was conducted to investigate the impact of job-related stress and shift work on the cognitive abilities of firefighters in an oil field located in western Iran. Methods: The cognitive performance and job stress levels of study participants were evaluated using IVA-2 software version 2020 and OSIPOW questionnaire, respectively. Results were analyzed using SPSS software version 2022. Results: The study found a significant discrepancy in cognitive performance between day and night shifts ($P < 0.001$) for firefighters. During the day shift, Auditory Persistence and Visual Stamina had the highest (100.88) and lowest (84.04) scores, respectively, while the night shift had higher scores in Auditory Speed and Visual Sensory-Motor. Overall, cognitive performance was better during the day shift, but both shifts had a notable gap in average scores with a baseline. Shift work is connected to role duality ($P < 0.05$), responsibility ($P < 0.001$), and the physical environment ($P < 0.001$). Furthermore, the attention scale is connected to the physical environment ($P < 0.05$). Conclusion: Firefighters' performance is impacted by shift work and job stress, even under normal conditions. To maintain and improve cognitive abilities, corrective actions should focus on improving efficiency,

creating suitable working conditions, and improving shift work management. Prioritizing individual responsibility is also suggested based on the correlation between stress and cognitive performance.

Lien vers l'article

HA comme facteur de risque

Généralités et prévention

Aucun article dans ce bulletin.

Activités physiques

Aucun article dans ce bulletin.

Autres pathologies

Work or Wellness? Examining the Challenges of Low-Wage Workers with Type 2 Diabetes.

Schlesinger P, Asante P, Lipska K, Keene DE. *J Health Care Poor Underserved*. 2025;36(2):493-507.

Type 2 diabetes disproportionately affects low-income and racially marginalized communities. Several social and economic factors intersect to create and reproduce this unequal burden. This qualitative study explores how low-wage workers experience and navigate diabetes management in the workplace. Our findings highlight how unpredictable work schedules, lack of access to sick leave, and inflexible work environments with limited worker autonomy create significant barriers to diabetes self-management. These challenges are compounded by limited control over work conditions and societal norms that emphasize personal responsibility. To address these disparities, we propose multi-level interventions, including educational campaigns on workplace rights, policy changes promoting flexible scheduling and paid sick leave, raising the minimum wage to improve economic security, and routine screenings by health care providers to explore workplace factors that may be affecting diabetes control.

Lien vers l'article

Cancers

Occupational, socioeconomic factors and cancer mortality in participants of the Longitudinal Study of Adult Health (ELSA-Brazil): a multiple correspondence analysis.

Bernardino D, Otero UB, Pimenta IT, Giatti L, Griep RH, Fonseca M. *Rev Bras Epidemiol*. 2025;28:e250022.

OBJECTIVE: To investigate the joint relationships between cancer mortality, occupational factors, and socioeconomic characteristics among Brazilian civil servants. METHODS: This is a cross-sectional study with data from 116 active workers at the baseline of the Longitudinal Study of Adult Health (ELSA-Brazil) (2008-2010), who died of malignant neoplasms over a 10-year follow-up period. Multiple Correspondence Analysis was used to graphically interpret the association between occupation, work stress, working hours, work regime, and socioeconomic factors with cancer mortality. RESULTS: The association between variable categories resulted in four groups and allowed us to identify two broad, distinct profiles of workers. The first was characterized as women, aged between 50 and 72 years, working hours of up to 40 hours a week, no exposure to night work, standard work schedule, low job strain, higher education or graduate degree level of education, active work, noncarcinogenic occupations, and death from non-work-related cancer. The second profile was characterized by men, elementary school and high school levels of education, aged between 35 and 49 years, passive work, high job strain, on-call work regime, exposure to night work, carcinogenic occupations, and death from

work-related cancer. CONCLUSION: Work-related cancer death was associated with worse socioeconomic conditions and occupational circumstances unfavorable to workers' health.

Lien vers l'article

Risque routier, accidentologie

Occupational profile and prevalence of workplace accidents among beach workers.

Cremonese C, Awoniyi AM, Dos Santos MS, Silva JDS, Nunes TS, Dias WP, et al. *PLoS One*. 2025;20(5):e0318288.

BACKGROUND: Workplace accidents (WAs) are acute, often preventable events that result in injuries or functional impairments, typically arising from occupation-related activities. In 2019, an estimated 395 million workers worldwide suffered non-fatal work-related injuries, with 330,000 fatalities, the majority occurring in low- and middle-income countries (LMICs) like Brazil. The true figures may be considerably higher due to underreporting, as many informal workers lack adequate social protection and may avoid reporting accidents for fear of jeopardizing their livelihood. OBJECTIVE: To assess the prevalence of WAs and their association with demographic and occupational determinants among beach workers in Salvador, Bahia, Brazil, between 2023 and 2024. METHODS: A cross-sectional epidemiological study was conducted with 579 urban beach workers in Salvador from November 2023 to March 2024. Following ethical approval and participants' consent, questionnaires were administered to gather data on sociodemographic and occupational characteristics, workplace environments and processes, workplace-related injuries and illnesses, and history and characteristics of WA. WA prevalence and prevalence ratios were calculated, and associations were analyzed using a Poisson regression model with robust variance. RESULTS: Among the workers, 59.4% were males, 25% were aged ≤29 years and 11.4% were ≥60 years. Black and brown individuals represented 92.9% of the population. The most performed activities were street vendors (43.6%) and waiters (25%). Informal employment was reported by 72.3% of workers, 70.2% worked ≥9 hours per day, and 88% had no occupational training. The overall WA prevalence observed was 40.3%, with workers ≤29 years old having a 2.59 times higher likelihood of experiencing WA compared to those ≥60 years old. The most common WAs were punctures (42.7%), cuts (28.4%) and burns (12.1%). CONCLUSIONS: The high prevalence of WA among beach workers, especially those ≤29 years old, may be associated with inadequate working conditions, including long working hours and lack of occupational training. These findings highlight the need for targeted interventions to improve working conditions and reduce WA risks.

Lien vers l'article

RPS et QVT

Occupational Stress in Healthcare Professionals in Spain: A Multicenter Study.

González-Pascual M, Pérez-Ferreiro M, Rodríguez de Castro S, Cerro-González MDC, Recio-Vivas AM. *Hisp Health Care Int*. 2025 Jun;23(2):102-6.

Introduction: Occupational stress significantly impacts healthcare professionals in the Spanish public hospital system. This study, conducted from April to June 2022, focuses on analyzing stress levels using the Nursing Stress Scale through an online survey. Methods: A cross-sectional study was carried out using an online survey from April to June 2022 in four hospitals. The Nursing Stress Scale was used to comprehensively assess stress levels among healthcare professionals. Results: The findings revealed a substantial contrast in stress outcomes based on personal circumstances. Healthcare professionals in

stable partnerships and with children exhibited lower stress levels, acting as protective factors during the pandemic. Conversely, those engaged in rotating shifts, especially those working over 60 h per week, showed a sevenfold increase in high-stress probability ($p < 0.05$). Temporary contract holders and those with heightened exposure to COVID-19 reported elevated stress levels, highlighting the complex dynamics impacting the mental well-being of healthcare workers. Conclusions: Findings emphasize the necessity for targeted interventions to safeguard healthcare professionals' well-being, focusing on the psychological consequences of factors like rotating shifts and extended working hours. Protective elements such as stable partnerships and parenthood could serve as a foundation for initiatives supporting work-life balance, potentially involving government policies and hospital management.

Lien vers l'article

Santé psychique

Increase in workload among genitourinary oncologists drives burnout: Insights from the BUCARE survey.

Kahharov A, Tsimafeyeu I, Kaidarova D, Polatova D, Guliyev F, Ongarbayev B, et al. *Urol Oncol*. 2025 May;43(5):324-7.

BACKGROUND: Burnout is a significant issue among GU oncologists, driven by increasing workloads and the emotional demands of patient care. This study aims to identify the prevalence, risk factors, and potential interventions to address burnout in this population. METHODS: A comprehensive survey, including a visual mood assessment, was conducted among 674 GU oncologists. The survey assessed work conditions, mood, and burnout indicators, alongside demographic and professional characteristics. RESULTS: Among the respondents, 72% (482 out of 674) displaying symptoms of burnout, characterized by high emotional exhaustion and/or depersonalization. Key risk factors included long working hours (more than 8 hours per day for 54% of respondents), high patient volumes (48% managing over 15 patients daily), and night shifts (16%). Despite signs of burnout in 72% of participants, a visual mood assessment showed that 72% reported being in a good or excellent mood. Additionally, 92% of respondents expressed passion for their work, and 84% showed a strong desire for professional development. CONCLUSIONS: Burnout is prevalent among GU oncologists, despite their dedication to their profession. Strategic interventions, such as expanding the workforce and reducing daily patient volumes, are essential to mitigate burnout and improve well-being.

Lien vers l'article

Troubles cognitifs et de la vigilance

Compassion fatigue among medical students and its relationship to medical career choice: a cross-sectional survey.

Zhong X, Chen J, Yang B, Li G. *BMC Med Educ*. 2025 May 21;25(1):742.

BACKGROUND: Compassion fatigue can lead to various physical and mental health issues and reduce the work efficiency and motivation of medical professionals. This study explored the prevalence of compassion fatigue among medical students and its relationship to their decision to continue working in clinical medicine after graduation from medical school. METHODS: A cross-sectional survey was conducted with clinical medicine students in several hospitals in Southwest China using convenience methods. The Chinese version of the Compassion Fatigue Scale was used to measure compassion fatigue. Additionally, the desire to have a career in clinical medicine after graduation was investigated

to determine its relationship to compassion fatigue. RESULTS: A total of 473 medical students participated in the survey. Among the participants, 46 experienced mild compassion fatigue, 205 experienced moderate compassion fatigue, and 210 experienced severe compassion fatigue. The regression analysis showed that a night shift frequency of 2-3 times/week (odds ratio (OR) = 5.33, 95% confidence interval (CI) [1.35, 21.0]), working 8-10 h per day (OR = 2.30, 95% CI [1.01, 5.22]), or working 10 h per day or more (OR = 8.64, 95% CI [1.99, 37.6]) were factors of severe compassion fatigue. Furthermore, 158 participants reported that they did not often or always want to pursue a career in clinical work after graduation. Regression analysis revealed that low empathy satisfaction was an independent risk factor for students not wanting to continue in clinical practice post-graduation (odds ratio = 2.30, 95% CI [1.00, 5.31]). CONCLUSION: Compassion fatigue is common among medical students and may significantly influence their intention to pursue a medical career after graduation. Educational institutions, medical facilities, and relevant departments should prioritize addressing compassion fatigue in medical students and implementing effective preventive and interventional strategies.

Lien vers l'article

Travail posté et de nuit facteur de risque

Généralités et prévention

Aucun article dans ce bulletin.

Activités physiques

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Autres pathologies

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Cancers

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Lien vers l'article

Risque routier, accidentologie

Prevalence and predictors of percutaneous injuries among health workers in Ghana: a cross-sectional study.

Tawiah PA, Appiah-Brempong E, Okyere P, Adu-Fosu G, Ashinyo ME, Edziah FS, et al. *Front Public Health*. 2025;13:1561098.

BACKGROUND: Percutaneous injuries (PI) persist as a prevalent healthcare issue, affecting over a third of healthcare workers worldwide on an annual basis. Globally, a few studies have documented the relationship between PI and factors like work pressure and shift systems. Additionally, limited evidence

exists on how these factors contribute to this issue specifically in Ghana. OBJECTIVE: The study examined exposure to PI and its predictors among health workers in Ghana. METHODS: An analytic cross-sectional study involving multiple health facilities in the Greater Accra region was conducted between January 30 and May 31, 2023. A survey was carried out among 602 healthcare workers across 10 public and private hospitals. Study participants were selected using simple random sampling. Analysis was performed using Stata 15 software, and factors associated with PI were identified using log-binomial regression analysis, with a significance level set at $p < 0.05$. RESULTS: The prevalence of PI was 26.9% (95% CI: 23.4-30.6%). More work experience [APR = 0.97 (0.94, 0.99)], being on a mix of day, evening and night shifts [APR = 1.69 (1.26, 2.27)], frequent experience of work pressure [APR = 1.32 (1.00, 1.75)], frequent [APR = 0.59 (0.40, 0.88)], and constant [APR = 0.55 (0.40, 0.7)] adherence to standard precautions were factors significantly associated with PI. CONCLUSION: Shift schedules and work pressure contributed to the substantial rate of PI among healthcare workers in Ghana. It is imperative for health authorities to establish and enforce safety policies prioritizing pressure reduction and fostering a safety-oriented culture across all shifts.

Lien vers l'article

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Lien vers l'article

RPS et QVT

The Relationship Between Moral Sensitivity, Missed Nursing Care and Moral Distress Among New Nurses: A Cross-Sectional Study.

Xu X, Wang Y, Meng J, Xia X, Cao W, Liu Y. *J Clin Nurs*. 2025 Jun;34(6):2262-75.

Moral sensitivity, missed nursing care and moral distress among healthcare professionals have received considerable attention in recent years. These factors represent important healthcare challenges for new nurses (graduation to 2 years of work experience). However, studies on the

relationships among these variables in the context of new nurses in China remain lacking. AIMS: To explore the relationships among moral sensitivity, missed nursing care and moral distress in the context of new nurses in China. RESEARCH DESIGN: A cross-sectional descriptive survey was conducted. PARTICIPANTS AND RESEARCH CONTEXT: A total of 228 new nurses were recruited from three tertiary hospitals in Qingdao, Shandong Province, China. Participants provided their sociodemographic and professional information and completed the Chinese Moral Sensitivity Questionnaire-Revised Version, the Chinese Missed Nursing Care Survey Version and the Chinese Moral Distress Scale-Revised Version. The data were analysed using Spearman's correlation analysis and multiple linear regression analysis. RESULTS: The means and standard errors of moral sensitivity, missed nursing care and moral distress were 40.71 (0.39), 9.82 (0.78) and 34.87 (2.41), respectively. The variable of missed nursing care exhibited a significant negative relationship with moral sensitivity and a significant positive relationship with moral distress. Regression analysis revealed that the main factors influencing new nurses' moral distress were educational background, nature of job, current unit, frequency of night shifts and the dimensions of moral strength and responsibility. These factors can explain 14.9% of the total variation. CONCLUSION: The findings revealed that higher rates of missed nursing care were associated with lower moral sensitivity and greater moral distress among new nurses. Therefore, developing interventions to reduce missed nursing care may be a promising strategy for improving moral sensitivity and preventing moral distress among new nurses. IMPLICATIONS FOR THE PROFESSION AND/OR PATIENT CARE: In hospitals, moral distress can be improved by focusing on modifiable factors such as staffing resources, leading to better promoting new nurses' health and improving the quality of care. This study can highlight practices accounting for moral sensitivity and missed nursing care in nursing research and training programmes. REPORTING METHOD: Strengthening the reporting of observational studies in epidemiology (STROBE) statement. PATIENT OR PUBLIC CONTRIBUTION: No patient or public contribution.

Lien vers l'article

Prevalence of medication administration errors and its determinants among nurses in Ethiopia: a systematic review and meta-analysis.

Wudu MA, Bayked EM, Bekalu YE, Birhanu TA. *BMC Nurs*. 2025 May 16;24(1):544.

BACKGROUND: Despite nurses being the backbone of patient care, medication administration errors (MAEs) remain a serious risk to patient safety in low-income countries, including Ethiopia. However, the previous review was outdated, included fewer than 10 studies, focused solely on tertiary hospitals, and did not pool determinants. As a result, this meta-analysis aimed to determine the pooled prevalence of MAEs and their determinants among nurses in Ethiopia, addressing gaps in the study setting, time, and outcomes. METHODS: The study protocol was registered in PROSPERO. Observational studies conducted in Ethiopia and published in English from 2010 to 2024 were included. PubMed, Scopus, EMBASE, and Google Scholar databases were used to search for studies. The Joanna Briggs Institute (JBI) checklist was used to evaluate the quality of the studies, with three authors participating in the process. Data analysis for the pooled magnitude of MAEs and their determinants was conducted using STATA 17 software with the DerSimonian and Laird random-effects model. Heterogeneity was assessed via Cochrane's Q-test and the I^2 statistic, while publication bias was evaluated through funnel plots, Egger's test, and Doi plot. RESULTS: Of the 264 articles retrieved, 18 studies, including 4,314 nurses, were included in the meta-analysis. The pooled magnitude of MAEs among nurses in Ethiopia was 57% (95% CI: 49-64%). Moreover, inadequate work experience [OR = 3.64; 95% CI: (3.32, 3.96); I^2=0.00%], interruptions [OR = 3.53; 95% CI: (3.19, 3.87); I^2=0.00%], lack of guideline availability [OR = 2.14; 95% CI: (1.63, 2.66); I^2=0.00%], lack of training [OR = 3.22; 95% CI: (2.67, 3.77); I^2=0.00%], night shifts [OR = 3.89; 95% CI: (3.37, 4.41); I^2=0.00%], and a nurse-patient ratio ≥ 1:10 [OR = 2.82; 95% CI: (2.19, 3.45); I^2=0.00%] were identified as determinants of MAEs among nurses. CONCLUSION: The magnitude of MAEs in the current review was substantially higher compared to global reports and studies in Africa, highlighting the need for urgent intervention. Furthermore,

inadequate work experience, interruptions, lack of guideline availability and training, night shifts, and a nurse-patient ratio ≥ 1:10 were identified as determinants of MAEs among nurses. This suggests that providing training, disseminating guidelines in accessible formats, improving staffing ratios, and fostering a culture of safety are crucial steps to reduce MAEs. CLINICAL TRIAL NUMBER: Not applicable.

Lien vers l'article

Do dental nurses and trainee dental nurses suffer from job-related stress and could mentorship help them to cope with that stress?

Williams M, Cook N, Krysmann M. *Br Dent J*. 2025 May 19.

Background Stress in dentistry is widely researched and the evidence is that it is a stressful profession. Research has mainly focused on dentists and oftentimes the rest of the team has not been considered. Working in dentistry relies on teamwork and the multidisciplinary team; therefore, it is of paramount importance that all members of the team are researched.Aim To investigate current perceptions of stress and its triggers in dental nurses (DNs) (including trainee dental nurse [TDNs]) and explore if mentoring could help.Methodology Case study design with a phenomenological aspect. Perceptions of DNs/TDNs around stress in dentistry and its triggers and perceptions of mentoring were collected using on online questionnaire. The questionnaire was posted on Facebook using closed professional groups. The questionnaire invited interested participants to opt-in to take part in semi-structured interviews to gather more detailed insights into stress in dentistry relating to their own experiences, triggers and coping mechanisms. The semi-structured interviews were conducted and recorded on Microsoft Teams. Data were analysed using reflexive thematic analysis (RTA).Results In total, 61 DNs/TDNs with various amounts of professional experience, backgrounds and working environments completed the questionnaire, and five chose to take part in semi-structured interviews. In answering the questionnaire, all participants reported that working in dentistry is stressful, where 92% said that they are suffering or have suffered from burnout and 95% thought that having a mentor would be beneficial. The analysis of the semi-structured interviews resulted in six themes: nature of the problem - emotions, team, burnout and money; triggers - regulation/complaints, patients, time and communication; coping mechanisms - time off, reducing hours and talking; support - peers, management and friends; self-doubt - training, confidence and imposter syndrome; and mentoring - seen as a positive, unknown and mentees choice of mentor.Conclusions DNs/TDNs face job-related stress. Since they are hired members of the team, they frequently have no influence over their working environment, which fosters multiple triggers of stress. Mentoring could be a support system and coping technique. Implementation of mentorship in the early phases of a DN's/TDN's training/career may assist to lessen the negative effects of stress, such as burnout, and thus lower the number of registered employees quitting the field.

Lien vers l'article

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Lien vers l'article

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Lien vers l'article

Development of standard job classification codes for building a job-exposure matrix for police officers.

Choi S, Park JH, Kim I, Jang J, Min J, Koh SB, et al. *Ann Occup Environ Med*. 2025 May;37:e10.

BACKGROUND: This study aimed to develop standard job categories for constructing a job-exposure matrix (JEM) for police officers in South Korea and to evaluate their applicability. METHODS: We examined standard job codes related to police personnel management and compared them with job classifications from police publications. Using R Shiny, we developed a web-based search tool for standard codes. A pilot survey of 130 police officers assessed the codes' applicability and relevance to

health-related hazardous factors. RESULTS: Eighty-seven standard functional codes used in the police personnel management system POOL were organized into minor categories as the basic units of standard jobs. These were grouped into 20 sub-major categories and further consolidated into 10 major categories to develop the standard job codes. The responses to the standard job codes in the pilot survey were 75% accurate compared with the final expert evaluation results and 99.2% accurate compared with the algorithm-based automatic allocation results. The results of the job-hazardous factor network analysis revealed that the most frequently reported hazardous factor was emotional labor, followed by night shifts and electromagnetic waves. Emotional labor was identified as the top hazardous factor in six out of the nine standard job categories. CONCLUSIONS: The standard job codes developed in this study were designed in connection with the personnel management system for police officers, making them well-suited for constructing a comprehensive JEM for the entire police force.

Lien vers l'article

Intergenerational differences in turnover intention of nurses: a cross-sectional survey in Jiangsu province, China.

Hu G, Wang Z, Zhang C, Xu J, Shen Z, Peng L, et al. *Front Psychiatry*. 2025;16:1550623.

PURPOSE: This study aimed to learn the turnover intention of nurses in the workplace and analyze the influencing factors, commonalities, and differences from the perspective of intergenerational differences. METHODS: Between 4 September and 5 October 2023, a stratified cluster sampling was conducted among 2299 nurses at 16 tertiary hospitals in Jiangsu Province in China, using the questionnaire composited of General sociodemographic information, Work-Family Conflict Scale, Perceived Social Support Scale, Resilience Scale, and Turnover Intention Scale. SPSS v26.0 was performed to analyze data. RESULTS: A total of 2112 participants were included. The turnover intention of "Generation X" (born between 1965 and 1980) nurses was lower than that of "Generation Y" (born between 1981 and 1996) and "Generation Z" (born between 1997 and 2012). Work-family conflict was a common influencing factor on the turnover intention of three generations of nurses ($P < 0.05$). Family-work conflict ($\beta = 0.099$, $P < 0.001$), other support ($\beta = -0.169$, $P < 0.001$), resilience ($\beta = -0.103$, $P < 0.001$), night shifts ($\beta = 0.047$, $P = 0.033$), the number of children ($\beta = -0.054$, $P = 0.041$) and occupational diseases ($\beta = -0.108$, $P < 0.001$) were specific influencing factors of turnover intention among "Generation Y" nurses. Resilience ($\beta= -0.172$, $P = 0.001$) and family support ($\beta = -0.188$, $P = 0.001$) were specific factors of turnover intention in "Generation Z" nurses. CONCLUSION: This study reveals the intergenerational differences in the turnover intention of nurses and its influencing factors. The turnover intention of "Generation Y" and "Generation Z" nurses is higher than that of "Generation X", and work-family conflict is the common factor of their turnover intention. It is suggested that hospital managers formulate targeted intervention strategies to reduce turnover intention according to the intergenerational characteristics of nurses.

Lien vers l'article

Santé psychique

Burnout and risk factors among anesthesia residents and fellows in a conflict-affected context: A national cross-sectional survey.

Yazbeck Karam V, Akiki Z, Salame W, Assaf G, Chahine C, Nawwar R, et al. *PLoS One*. 2025;20(5):e0322940.

BACKGROUND: Burnout is an occupational hazard caused by chronic exposure to excessive work-related stress, negatively impacting both clinicians' well-being and patient safety. Anesthesiology is particularly demanding, and this stress is further exacerbated in regions affected by conflict, where residents and fellows are confronted with additional stressors beyond the usual challenges of medical training. This study aims to assess the proportion and predictors of burnout among anesthesia residents and fellows in Lebanon, a conflict-affected context, by identifying specific drivers of burnout in this population, while also evaluating their association with sociodemographic characteristics. METHODS: A cross-sectional study involving electronic, voluntary, and anonymous survey was sent to all Lebanese anesthesiology residents and fellows at all levels of training, between May and October 2024. The survey utilized the Copenhagen Burnout Inventory (CBI) in addition to other questions. Bivariate and multivariable analyses identified predictors of CBI subscales (personal, work-related, and client-related burnout respectively). An alpha of 0.05 was used to determine statistical significance. RESULTS: Approximately 71% of participants reported personal burnout, with 32% classified as having a high level. Additionally, 68% reported work-related burnout, with 22% in the high category, and 36% experienced client-related burnout, with 5% classified as high. Moreover, experiencing mental health problems, reporting the need for pharmaceutical or psychological assistance, living with family and covering night shifts were found to be significantly and positively associated with different burnout dimensions. CONCLUSION: Burnout levels among anesthesiology residents in conflict-affected areas appear elevated in reference to international studies, which is concerning given the additional stressors associated with ongoing regional conflict. The continuous escalation of these challenges is likely to exacerbate burnout over time. Targeted interventions to manage burnout are crucial for trainees' well-being and the effective functioning of medical institutions, particularly in conflict-affected regions where the stressors are compounded.

Lien vers l'article

The Relationship Between Moral Sensitivity, Missed Nursing Care and Moral Distress Among New Nurses: A Cross-Sectional Study.

Xu X, Wang Y, Meng J, Xia X, Cao W, Liu Y. *J Clin Nurs*. 2025 Jun;34(6):2262-75.

Moral sensitivity, missed nursing care and moral distress among healthcare professionals have received considerable attention in recent years. These factors represent important healthcare challenges for new nurses (graduation to 2 years of work experience). However, studies on the relationships among these variables in the context of new nurses in China remain lacking. AIMS: To explore the relationships among moral sensitivity, missed nursing care and moral distress in the context of new nurses in China. RESEARCH DESIGN: A cross-sectional descriptive survey was conducted. PARTICIPANTS AND RESEARCH CONTEXT: A total of 228 new nurses were recruited from three tertiary hospitals in Qingdao, Shandong Province, China. Participants provided their sociodemographic and professional information and completed the Chinese Moral Sensitivity Questionnaire-Revised Version, the Chinese Missed Nursing Care Survey Version and the Chinese Moral Distress Scale-Revised Version. The data were analysed using Spearman's correlation analysis and multiple linear regression analysis. RESULTS: The means and standard errors of moral sensitivity, missed nursing care and moral distress were 40.71 (0.39), 9.82 (0.78) and 34.87 (2.41), respectively. The variable of missed nursing care exhibited a significant negative relationship with moral sensitivity and a significant positive relationship with moral distress. Regression analysis revealed that the main

factors influencing new nurses' moral distress were educational background, nature of job, current unit, frequency of night shifts and the dimensions of moral strength and responsibility. These factors can explain 14.9% of the total variation. CONCLUSION: The findings revealed that higher rates of missed nursing care were associated with lower moral sensitivity and greater moral distress among new nurses. Therefore, developing interventions to reduce missed nursing care may be a promising strategy for improving moral sensitivity and preventing moral distress among new nurses. IMPLICATIONS FOR THE PROFESSION AND/OR PATIENT CARE: In hospitals, moral distress can be improved by focusing on modifiable factors such as staffing resources, leading to better promoting new nurses' health and improving the quality of care. This study can highlight practices accounting for moral sensitivity and missed nursing care in nursing research and training programmes. REPORTING METHOD: Strengthening the reporting of observational studies in epidemiology (STROBE) statement. PATIENT OR PUBLIC CONTRIBUTION: No patient or public contribution.

Lien vers l'article

Increase in workload among genitourinary oncologists drives burnout: Insights from the BUCARE survey.

Kahharov A, Tsimafeyeu I, Kaidarova D, Polatova D, Guliyev F, Ongarbayev B, et al. *Urol Oncol*. 2025 May;43(5):324-7.

BACKGROUND: Burnout is a significant issue among GU oncologists, driven by increasing workloads and the emotional demands of patient care. This study aims to identify the prevalence, risk factors, and potential interventions to address burnout in this population. METHODS: A comprehensive survey, including a visual mood assessment, was conducted among 674 GU oncologists. The survey assessed work conditions, mood, and burnout indicators, alongside demographic and professional characteristics. RESULTS: Among the respondents, 72% (482 out of 674) displaying symptoms of burnout, characterized by high emotional exhaustion and/or depersonalization. Key risk factors included long working hours (more than 8 hours per day for 54% of respondents), high patient volumes (48% managing over 15 patients daily), and night shifts (16%). Despite signs of burnout in 72% of participants, a visual mood assessment showed that 72% reported being in a good or excellent mood. Additionally, 92% of respondents expressed passion for their work, and 84% showed a strong desire for professional development. CONCLUSIONS: Burnout is prevalent among GU oncologists, despite their dedication to their profession. Strategic interventions, such as expanding the workforce and reducing daily patient volumes, are essential to mitigate burnout and improve well-being.

Lien vers l'article

Occupational Burnout in Nurses Is due to Long-Term Work Stress Rather Than COVID-19 Pandemic Event.

Cao Y, Dong Y, Shi L, Chappell K, Jia Z, Yan T, et al. *J Adv Nurs*. 2025 May 28.

AIM: This study aims to explore occupational burnout among Chinese nurses from two perspectives: first, by comparing changes in emotional exhaustion, depersonalisation and personal accomplishment before and after the COVID-19 pandemic; and second, by identifying long-term work-related stressors and structural factors contributing to burnout. DESIGN: A mixed-methods approach was adopted, combining a systematic review with qualitative interviews. The qualitative component involved semi-structured interviews with 53 hospital-employed nurses from various departments and regions across China, focusing on the three core dimensions of occupational burnout. METHODS: The systematic review included both Chinese and English-language studies published between 2016 and 2023 that used the Maslach Burnout Inventory to assess burnout among nurses. A total of 22 studies met the inclusion criteria, selected independently by two researchers using the JBI critical appraisal tool. In parallel, the qualitative interviews explored nurses' subjective experiences and coping strategies

related to work stress, emotional fatigue and professional identity. RESULTS: Bayesian factor analysis indicated no significant differences in emotional exhaustion (BF(01) = 2.202), depersonalisation (BF(01) = 2.761) or personal accomplishment (BF(01) = 2.747) before and after the pandemic. Qualitative findings revealed that burnout was primarily driven by long-standing systemic stressors, including promotion pressure, clinical workload, organisational demands and work-family conflict. Although many nurses relied on self-regulation strategies to maintain psychological stability, they continued to experience ongoing physical and emotional exhaustion. Some reported emotional numbness, but most retained empathy and a strong sense of responsibility. Their sense of personal accomplishment often stemmed from patient recovery and recognition of professional value. CONCLUSION: Occupational burnout among Chinese nurses remained largely stable before and after the COVID-19 pandemic. Its root causes stem from persistent work-related stressors and systemic issues, rather than the pandemic itself. Effective mitigation requires institutional strategies, including better staffing, clear career pathways and sustained emotional support. IMPACT: Short-term crisis responses alone are insufficient to address enduring burnout. Nursing leadership should prioritise systemic reforms-such as optimising shift schedules, defining promotion channels and integrating regular psychological support-to enhance nurse well-being and care quality. PATIENT OR PUBLIC CONTRIBUTION: No patient or public contribution.

Lien vers l'article

Burnout Among Health Professionals Working in Intensive Care Units of Southern Ethiopia: A Multicenter Cross-Sectional Study.

Hailu S, Gurmu M, Husen G, Tesfaye A, Muleta B, Yeshitila H, et al. *Int J Public Health*. 2025;70:1608337.

OBJECTIVE: This study aimed to investigate the prevalence and associated factors of burnout among health professionals working in intensive care units. METHODS: After receiving ethical clearance from the institutional review board of Dilla University College of Health Sciences with protocol unique number duirb/033/23-05, a multicenter cross-sectional study was conducted. Binary and multivariate logistic regressions were used to assess the relationship between burnout syndrome as dependent and various personal job factors as independent factors. RESULTS: The overall prevalence of BOS among HCPs working in the selected university hospitals of southern Ethiopia is 38.1%. Health professionals who worked at night duty were 4.15 times more likely to be in a state of burnout as compared to those who were on day duty shift [AOR = 4.15, 95%CI (1.27-13.58)]. CONCLUSION: Burnout is a great public health concern. Age, marital status, workload, working the night shift, fear of patient death, less quipped setup, and absence of extra-time duty payment were among the predictive variables.

Lien vers l'article

Troubles cognitifs et de la vigilance

Compassion fatigue among medical students and its relationship to medical career choice: a cross-sectional survey.

Zhong X, Chen J, Yang B, Li G. *BMC Med Educ*. 2025 May 21;25(1):742.

BACKGROUND: Compassion fatigue can lead to various physical and mental health issues and reduce the work efficiency and motivation of medical professionals. This study explored the prevalence of compassion fatigue among medical students and its relationship to their decision to continue working in clinical medicine after graduation from medical school. METHODS: A cross-sectional survey was conducted with clinical medicine students in several hospitals in Southwest China using convenience methods. The Chinese version of the Compassion Fatigue Scale was used to measure compassion fatigue. Additionally, the desire to have a career in clinical medicine after graduation was investigated

to determine its relationship to compassion fatigue. RESULTS: A total of 473 medical students participated in the survey. Among the participants, 46 experienced mild compassion fatigue, 205 experienced moderate compassion fatigue, and 210 experienced severe compassion fatigue. The regression analysis showed that a night shift frequency of 2-3 times/week (odds ratio (OR) = 5.33, 95% confidence interval (CI) [1.35, 21.0]), working 8-10 h per day (OR = 2.30, 95% CI [1.01, 5.22]), or working 10 h per day or more (OR = 8.64, 95% CI [1.99, 37.6]) were factors of severe compassion fatigue. Furthermore, 158 participants reported that they did not often or always want to pursue a career in clinical work after graduation. Regression analysis revealed that low empathy satisfaction was an independent risk factor for students not wanting to continue in clinical practice post-graduation (odds ratio = 2.30, 95% CI [1.00, 5.31]). CONCLUSION: Compassion fatigue is common among medical students and may significantly influence their intention to pursue a medical career after graduation. Educational institutions, medical facilities, and relevant departments should prioritize addressing compassion fatigue in medical students and implementing effective preventive and interventional strategies.

Lien vers l'article

Predicting the use of sugar and caffeine as countermeasures to sleepiness in London bus drivers.

Pilkington-Cheney F, Filtness A, Haslam C, Miller KA. *Ind Health*. 2025 May 20;63(3):276-87.

Sleepiness is a significant workplace safety hazard and prevalent in shift workers including bus drivers. Several aspects of professional driving can result in shortened sleep and increased sleepiness, which has the potential to result in workplace injuries, incidents and crashes. Caffeine is an effective sleepiness countermeasure; however, private and professional drivers also report using potentially ineffective countermeasures such as sugar. By identifying factors which predict use of specific countermeasures (e.g., sugar, caffeine), educational initiatives could be targeted towards encouraging effective use. A subset of data was analysed from a driver sleepiness survey with London bus drivers (n=1,335). Univariate and multivariate logistic regressions were conducted to determine which factors separately predicted use of sugar (n=238) or caffeine (n=238) as a sleepiness countermeasure. Being female, having higher self-reported sleep quality and waking indexes and actively doing something to stay awake were predictive of sugar use. Age, sleeping pill use and actively doing something to stay awake were the strongest predictors of caffeine. However, many predictors from the univariate analyses were the same for both sugar and caffeine. Although tailored initiatives could be developed, broader education relating to managing sleepiness should be implemented for all bus drivers to encourage effective countermeasure use.

Lien vers l'article

Interventions to Improve the Sleep of Nurses: An Integrative Review.

Owen CN, Lach HW. *West J Nurs Res*. 2025 May 24:1939459251341830.

BACKGROUND: Adequate sleep is critical for nurses, affecting their physical, emotional, and occupational health. Nurses suffer from higher levels of sleep disorders than the national average, especially night-shift nurses, with rates as high as 61%. Irregular work/sleep patterns and occupational stress are the main contributors to inadequate sleep for nurses. Not only does this issue impact nurses, but insufficient sleep has been linked to billions of dollars lost due to decreased productivity and medical errors. PURPOSE: This integrative review explores and evaluates existing research on nonpharmacologic interventions designed to improve sleep function and quality for nurses. METHODS: A systematic search was performed to find research interventions that improved nurses' sleep. CINAHL, Scopus, and OVID Medline databases were searched using the terms (sleep OR circadian rhythm) AND (intervention OR sleep hygiene) AND (nurs*). After the initial search, reference lists and secondary sources were evaluated for potential articles for inclusion. RESULTS: This review included

33 articles. Interventions included exercise, lighting manipulation, supplements, aromatherapy, education, music therapy, and mindfulness/meditation. All 7 exercise interventions included in this review improved participants' sleep length and quality. Nearly all mindfulness and aromatherapy interventions that promote relaxation and stress reduction were effective. Exposing nurses to bright light did not necessarily correlate with increased sleep but did improve fatigue levels at work. CONCLUSION: Prioritizing sleep can ensure the health and safety of nurses, and further research is still needed. Health care organizations can positively impact this problem by implementing effective practices to improve the sleep health of nurses.

Lien vers l'article

Latent profile analysis of factors influencing sleep quality in ICU nurses cross-sectional study.

Li L, Hua J, Xu Q, Wu J, Zhang Y, Li F, et al. *Sci Rep*. 2025 May 12;15(1):16450.

This study aims to identify the potential classifications of sleep disturbances within the ICU nurse population, and to compare the between-group differences in demographic data and sleep characteristics. Through convenience sampling, ICU nurses from three tertiary A-level hospitals in China were selected as research subjects from March to May 2024. A survey was conducted using a demographic data questionnaire, the PSQI scale, the DASS-21 scale, and the BPS scale, and the data on the sleep quality of ICU nurses was collected via electronic questionnaires. This research also utilized latent class analysis to examine the symptomatic traits of sleep quality in ICU nurses. Additionally, it applied univariate analysis and unordered multinomial logistic regression models to determine the factors influencing the various categories of their sleep quality. A total of 545 questionnaires were distributed, of which 522 were validly returned, yielding an effective response rate of 95.7%. Four potential sleep quality profiles were identified, including "high sleep quality - no sleeping pills," "medium sleep quality - low sleeping pills," "medium sleep quality - medium sleeping pills," and "low sleep quality - high sleeping pills," with proportions of 43.7%, 40.6%, 10.5%, and 5.2%, respectively. Unordered multinomial logistic regression analysis indicated that the number of night shifts per week, marital status, BPS scores, FSS scores, and DASS-21 scores were key factors affecting the sleep quality classification of ICU nurses($P < 0.05$). The sleep quality characteristics of ICU nurses are diverse and can be divided into four different categories. Therefore, nursing managers should be aware of this heterogeneity and take corresponding intervention measures based on the classification of nurses to ensure their sleep quality and promote psychological health.

Lien vers l'article

Focusing on sleep health for all, not just sleep disorders.

Chaput JP. *Can J Public Health*. 2025 Apr;116(2):316-20.

Sleep is increasingly recognized as a critical pillar of overall health, yet public health efforts have traditionally focused on treating sleep disorders rather than promoting sleep health for all. This article argues that the time has come to shift the emphasis from a disorder-centric approach to one that prioritizes sleep health for everyone. Sleep health extends beyond the absence of disorders and involves achieving optimal sleep quality, duration, and consistency. Poor sleep is linked to numerous health problems, including cardiovascular disease, type 2 diabetes, mental health disorders, and impaired cognitive function. Focusing on sleep health can help prevent these conditions and reduce healthcare costs. Moreover, addressing sleep health disparities, particularly among lower-income populations, shift workers, and racial and ethnic minorities, is crucial for achieving health equity. This article outlines strategies such as public awareness campaigns, workplace policies, school-based interventions, and policy advocacy to promote sleep health. By fostering a sleep-healthy society, we can improve individual and public health outcomes, enhance productivity, and reduce the economic burden associated with poor sleep. Ultimately, a comprehensive approach to sleep health offers

significant benefits that extend beyond the treatment of sleep disorders, promoting a healthier and more equitable society.

Lien vers l'article

The Relationship Between Sleep Quality and the Risk of Medication Errors in Nurses Working in Surgical Wards: A Multicenter Study.

Aksel Demir T, Koçaşli S. *J Clin Nurs*. 2025 May 14.

AIM: Determination of the relationship between sleep quality and the risk of medication errors in nurses working in surgical services. METHODS: This multicenter, descriptive and correlational study was conducted with 192 nurses working in surgical wards of all training and research hospitals in Ankara, the capital of Türkiye, between January and December 2023. Data were collected using the "Nurse Information Form," "Pittsburgh Sleep Quality Index," "Epworth Sleepiness Scale," and "Medication Administration Error Scale." The suitability of numerical variables for normal distribution was examined graphically and with the Shapiro-Wilk test. Additionally, Mann-Whitney test, Kruskal-Wallis, Bonferroni, and Spearman's Rank Correlation Coefficient tests were used in the analyses. The STROBE checklist was followed in writing the study. RESULTS: The median age of nurses was 27.0 (IQR = 8.0) years, and 38.5% were in the 21-25 age group. Among the nurses, 81.3% stated that they had sleep problems due to working hours, and 44.3% stated that they made medication errors due to insomnia. The nurses' Pittsburgh Sleep Quality Index total score median was 12.00 (IQR = 9.00), Epworth Sleepiness Scale score was 11.00 (IQR = 8.75), and Medication Administration Error Scale score was 85.00 (IQR = 25.75). No statistically significant relationship was found between nurses' Epworth Sleepiness Scale and Medication Administration Error Scale scores ($r(s) = 0.042$; $p = 0.565$). A statistically significant low-level relationship was found between the nurses' Epworth Sleepiness Scale score and the total Pittsburgh Sleep Quality Index score ($r(s) = 0.387$; $p < 0.001$). Statistically significant weak and very weak relationships were found between Medication Administration Error Scale and subjective sleep quality, sleeping pill use, and daytime dysfunction ($p < 0.05$). CONCLUSION: The study found that nurses had poor sleep quality and daytime sleepiness. It was determined that nurses with sleep problems were at a higher risk of making medication errors. PUBLIC CONTRIBUTION: Based on these results, it is recommended that nurses' working hours be planned to support their sleep patterns, and nurses be provided with adequate rest time during shift work hours. Additionally, nurses should be educated about sleep hygiene and the effects of sleep disorders, and more research should be conducted to understand the causes of medication errors and develop preventive strategies. RELEVANCE TO CLINICAL PRACTICE: The basic principle of healthcare is to "do no harm." Among healthcare professionals, nurses have great responsibility in preventing medical errors. However, the excessive workload, high number of patients under their care, and working in a day-night shift system lead to fatigue and sleep deprivation. Sleep problems increases their tendency to make mistakes. This study aims to contribute evidence to the literature on the impact of sleep problems on medication errors.

Lien vers l'article

Chronobiologie

Animal

Muscle peripheral circadian clock drives nocturnal protein degradation via raised Ror/Rev-erb balance and prevents premature sarcopenia.

Kelu JJ, Hughes SM. *Proc Natl Acad Sci U S A*. 2025 May 13;122(19):e2422446122.

How central and peripheral circadian clocks regulate protein metabolism and affect tissue mass homeostasis has been unclear. Circadian shifts in the balance between anabolism and catabolism control muscle growth rate in young zebrafish independent of behavioral cycles. Here, we show that the ubiquitin-proteasome system (UPS) and autophagy, which mediate muscle protein degradation, are each upregulated at night under the control of the muscle peripheral clock. Perturbation of the muscle transcriptional molecular clock disrupts nocturnal proteolysis, increases muscle growth measured over 12 h, and compromises muscle function. Mechanistically, the shifting circadian balance of Ror and Rev-erb regulates nocturnal UPS, autophagy, and muscle growth through altered TORC1 activity. Although environmental zeitgebers initially mitigate defects, lifelong muscle clock inhibition reduces muscle size and growth rate, accelerating aging-related loss of muscle mass and function. Circadian misalignment such as shift work, sleep deprivation, or dementia may thus unsettle muscle proteostasis, contributing to muscle wasting and sarcopenia.

Lien vers l'article

Exercise as a Synchronizer: Effects on Circadian Re-Entrainment of Core Body Temperature and Metabolism Following Light-Dark Cycle Inversion in Mice.

Ciorciari AM, Irizarry E, Montaruli A, Lamia KA. *J Pineal Res*. 2025 Apr;77(3):e70057.

Core body temperature (CBT) is a crucial marker of circadian synchrony, reflecting behavioral, metabolic, and environmental adaptations. Disruptions to CBT rhythms, as seen in shift workers or jetlag, indicate desynchronization and can lead to significant health consequences. Exercise is a potent non-photic zeitgeber that may help align circadian rhythms with external cues, but its role in re-entrainment following abrupt phase shifts remains unclear. This study investigated whether voluntary exercise accelerates the re-entrainment of CBT and metabolic rhythms in mice subjected to a 12-h light-dark cycle inversion (LDI). Fifteen C57BL/6 J mice underwent LDI and were divided into two groups. Mice in the control (CTRL) group remained sedentary throughout the experiment while mice in the other group were provided running wheels for 2 weeks after LDI. CBT was continuously monitored using implanted telemetric capsules and metabolic parameters were assessed before and 2 weeks after LDI. Mice that had access to running wheels (RW mice) initially displayed a greater disruption of CBT rhythmicity following LDI, suggesting unstructured physical activity may temporarily exacerbate misalignment, acting as a conflicting signal. Despite this, exercise accelerated recovery, as the phase of the CBT rhythm in RW mice re-aligned to the new light-dark cycle faster than that of the CTRL mice did. The phase of VO_2 rhythms in RW mice also showed trends toward faster realignment. These findings highlight the dual role of exercise as a zeitgeber, capable of both disrupting and accelerating circadian realignment depending on timing. Voluntary exercise may thus serve as an effective intervention to restore circadian synchrony and metabolic homeostasis in individuals experiencing circadian disruptions.

Lien vers l'article

Homme

Effect of KLF15-Mediated Circadian Rhythm on Myocardial Infarction: A Narrative Review.

Zhao J, Chen Z, Yang J, Duan L, Yang H, Cai D, et al. *Int J Mol Sci*. 2025 May 18;26(10).

Normal circadian rhythms are essential for organisms to adapt to diurnal changes and maintain an optimal state of physiological function. Disturbances in circadian rhythms such as shift work and working at night increase the risk of cardiovascular disease. Myocardial infarction exhibits a marked circadian rhythm, usually peaking in the early morning. Krüppel-like factor 15 (KLF15), a transcription factor with a circadian rhythm, plays an important role in cardiac physiopathology. It has a protective effect against myocardial injury after myocardial infarction by regulating energy metabolism and inflammatory factors, among other pathways. Currently, the association between circadian rhythm, KLF15, and myocardial infarction is unclear, thus this paper reviews how circadian rhythm influences the role of KLF15 in myocardial infarction, aiming to reveal the association between circadian rhythm, KLF15, and myocardial infarction, and to explore the underlying mechanisms, to provide new theoretical insights and therapeutic strategies for the clinical treatment of myocardial infarction.

Lien vers l'article

The beneficial influence of night-shift napping on brain core cognition networks in nurses experiencing sleep deprivation: A preliminary resting-state fMRI study.

Zhang XH, Huang HW, Zeng JY, Chen HJ, Lin YJ. *Sleep Med*. 2025 Jul;131:106503.

PURPOSE: This study investigated the restorative effects of napping on cognitive brain networks in night-shift nurses experiencing sleep deprivation (SD). METHODS: Functional magnetic resonance imaging data and neurocognitive assessments were collected from 20 nurses during three sessions (rested wakefulness (RW), SD, and night-shift napping (NS-NAP)). Functional connectivity (FC) was performed in three core cognitive networks, including the default-mode network (DMN), central executive network (CEN), and salience network (SN). RESULTS: The SD session showed decreased FC across almost the entire DMN, while only showed increased FC in several key nodes of the CEN and SN. Napping partially mitigated SD-related FC alterations within the DMN and essentially restored FC abnormities in both the CEN and SN. Changes in neurocognitive performance observed between SD and NS-NAP sessions were correlated with alterations in FC within the DMN. CONCLUSION: The functional integration of core neurocognitive networks can be restored to varying degrees through appropriate NS-NAP practices, potentially improving neurocognitive performance in nurses experiencing SD. CLINICAL TRIAL NUMBER: not applicable.

Lien vers l'article

Development of the Dysfunctional Beliefs about Sleep for shift Workers scale (DBSW) for shift-working registered nurses.

Song J, Duman ZT, Suh S, Chung S. *Psychol Health Med*. 2025 May 29:1-12.

INTRODUCTION: We aimed to develop a sleep-related dysfunctional beliefs scale that can be applied specifically to shift workers. METHODS: The Dysfunctional Beliefs about Sleep for shift Workers scale (DBSW) was developed under the standard rating scale development process. We conducted two online surveys to run an exploratory factor analysis (EFA, Study I, N = 323) and a confirmatory factor analysis (CFA, Study II, N = 300) for the new scale. The convergent validity of the DBSW was explored with pre-existing rating scales, including the Dysfunctional Beliefs and Attitudes about Sleep-16 scale (DBAS-16), Insomnia Severity Index (ISI), and Glasgow Sleep Effort Scale (GSES). RESULTS: We finally selected 10 items after EFA, and we observed that the scale has three factors. Based on the CFA, the three-factor model with a 10-item DBSW showed good fits for the model (CFI = 0.971, TLI = 0.959,

RMSEA = 0.050, SRMR = 0.042). The internal consistency of reliability of the DBSW were excellent based on the McDonald's omega value of 0.802. Convergent validity analyses revealed significant correlations between the total DBSW score and ISI ($r = 0.54$, $p < 0.01$), DBAS-16 ($r = 0.74$, $p < 0.01$), and GSES ($r = 0.48$, $p < 0.01$). Three factors (Dysfunctional beliefs, Control, and Shift work) of the DBSW were correlated with each other: total score of DBSW, ISI, DBAS-16, and GSES scores. CONCLUSIONS: The DBSW is a rating scale that can measure sleep-related cognition specific to shift workers with good reliability and validity.

Lien vers l'article

Exercise-mediated muscle-hypothalamus crosstalk: Improvement for cognitive dysfunction caused by disrupted circadian rhythm.

Shi JX, Wang ZY, Wang SW, Shen Q, Tan X. *Life Sci*. 2025 Jul 15;373:123657.

In contemporary societal evolution, the increasing disruption of the natural sleep-wake cycle, attributable to factors such as shift work and overexposure to artificial light, has been paralleled by a marked escalation in the incidence of cognitive impairments and the prevalence of neurodegenerative diseases. Current management strategies for cognitive impairments include pharmacological and non-pharmacological interventions. Pharmacological interventions for cognitive impairments typically involve medications to manage cognitive symptoms and improve neurological functions. However, these drugs show limited long-term efficacy in slowing disease progression and may cause side effects. Given the widespread occurrence of cognitive dysfunction, it is crucial to develop accessible non-pharmacological interventions. Physical activity and exercise have emerged as pivotal lifestyle determinants known to exert a modulatory effect on the risk profile for cognitive dysfunction caused by disrupted circadian rhythms. The skeletal muscle, a dynamic tissue, undergoes a profound morphological and metabolic reconfiguration in response to physical exertion, along with the secretion of myokines. Additionally, the hypothalamus, particularly the ventromedial nuclei, arcuate nuclei, and the suprachiasmatic nucleus, have crucial functions in regulating physical activity, influencing energy metabolism, and managing circadian cycles. Nevertheless, the communication between the hypothalamus and skeletal muscle during exercise is not fully understood. This narrative review integrates current knowledge on the interaction between the hypothalamus and skeletal muscle during exercise, emphasizing its neuroendocrine effects and potential therapeutic implications for alleviating cognitive dysfunction associated with disrupted circadian rhythms.

Lien vers l'article

Sleep research, quality and implementation priorities in the Veterans Health Administration: a white paper.

Shamim-Uzzaman QA, Zeidler MR, Boudreau EA, Chowdhuri S, Donovan LM, El-Solh A, et al. *J Clin Sleep Med*. 2025 May 16.

The Veterans Administration (VA) seeks to improve the quality of life and long-term health outcomes for Veterans facing unique sleep challenges related to their military service. The prevalence and burden of sleep disorders among military service members and Veterans are alarmingly high, often worsened by inadequate sleep environments, insufficient sleep, shift work, and exposure to trauma. VA's National Sleep Medicine Program Office (SMPO) has outlined key priorities for enhancing sleep medicine research and quality improvement. These recommendations reflect the consensus within the Sleep Research and Quality Improvement Subcommittee of the Field Advisory Board for the SMPO. These priorities include advancing sleep science at basic, clinical, and population levels; promoting sleep health through personalized treatment strategies tailored to Veterans; increasing funding for sleep research; establishing a network of VA sleep research centers to conduct high-quality, multi-center, collaborative studies; developing a veteran-specific portfolio of sleep research and innovations;

and optimizing the dissemination of diagnostic tools and therapies through quality improvement initiatives. VA aims to achieve these goals through a series of strategic objectives and milestones that consider importance, timeline, effort, and cost. Specific topics of interest are highlighted and investigators are encouraged to address knowledge gaps in these areas. This white paper seeks to strengthen sleep research within VA by developing a comprehensive pipeline of researchers and systematically evaluating strategies to improve sleep health care for Veterans. The ultimate goal is to generate actionable insights that could potentially influence broader sleep-related clinical guidelines and policies within and beyond the VA healthcare system.

Lien vers l'article

Circadian rhythmicity and reinforcement processing: a dataset of MRI, fMRI, and behavioral measurements.

Scislewska P, Zareba MR, Lengier J, Schirmer AE, Bebas P, Szatkowska I. *Sci Data*. 2025 May 20;12(1):823.

Circadian rhythmicity is a complex phenomenon that influences human behavior, emotionality and brain activity. A detailed description of individual differences in circadian rhythmicity could inform the design of educational systems, shift-worker schedules, and daily routines. Here we present a comprehensive dataset for studying diurnal rhythms and their relationship with human behavior. Thirty seven male participants (aged 20-30) filled in validated psychometric questionnaires assessing characteristics of the circadian rhythm, sleep quality, emotionality, personality traits, reward-punishment processing and attention deficits. Moreover, we acquired high-resolution anatomical T1-weighted images using magnetic resonance imaging (MRI), B0 fieldmaps for distortion corrections, and functional MRI (fMRI) during the Monetary Incentive Delay (MID) task, which is a common paradigm to assess human neural reinforcement processing. All files are organized in Brain Imaging Data Structure (BIDS) and openly available on OpenNeuro.org. Validation confirmed the high quality of the described dataset. The various psychological measures combined with neuroimaging data provide a strong foundation for exploring emotionality, affective processing, and attention in the context of brain activity and circadian influences.

Lien vers l'article

Altered Structure-Function Coupling Associated with Attention Decline in Shift Work Disorder.

Wu Z, Feng S, Li K, Dong L, Zhang L, Ning Y, et al. *Nat Sci Sleep*. 2025;17:989-1001.

INTRODUCTION: Previous studies on shift work disorder (SWD) have revealed altered functional and structural brain networks underlying attention decline. However, changes in structure-function coupling (SFC) and their relationship with attention decline remain unknown. This study aimed to examine the role of changed SFC in abnormal attentional network function in SWD. METHODS: Thirty-four patients with SWD and thirty-two healthy controls were recruited. All participants underwent resting-state functional magnetic resonance imaging (fMRI) and diffusion tensor imaging (DTI) scans. All participants underwent an attentional network test to evaluate their functions. Finally, Pearson's correlation analysis was conducted to analyze the association between aberrant attentional network function and altered structural and functional connectivity (SC-FC) coupling in patients with SWD. RESULTS: Compared to healthy subjects, decreased alerting and executive functions were found in patients with SWD. In addition, we observed decreased SC-FC coupling in patients with SWD, specifically in the left anterior cingulate gyrus (T = -3.6449, P = 0.0003), central opercular cortex (T = -3.7187, P = 0.0002), middle frontal gyrus (T = -3.8342, P = 0.0001), and parietal operculum cortex (T = -3.6121, P = 0.0003), compared with healthy subjects. Better altering performance was significantly associated with lower SC-FC coupling in the anterior cingulate gyrus of patients with SWD (r = -0.51, P = 0.002). DISCUSSION: Our findings unravel that the decreased SC-FC coupling in the anterior cingulate

gyrus may contribute to the impaired altering network function in SWD, which can further understand the neural mechanisms of impaired attention in SWD and inform a potentially therapeutic intervention for SWD patients.

Lien vers l'article

The Effects of Cognitive Behavioral Therapy for Insomnia on Physical Activity Before and After Time in Bed Among Shift Workers.

Sochal M, Feige B, Spiegelhalder K, Ell J. *J Clin Med*. 2025 May 6;14(9).

Background: Sleep and physical activity (PA) are bidirectionally related, with PA having a positive effect on sleep, and sleep quality influencing PA the following day. However, little is known about the effects of clinical interventions for sleep disorders on PA. Therefore, the aim of this secondary analysis is to evaluate the impact of cognitive behavioral therapy for insomnia (CBT-I), the first-line treatment for insomnia, on PA. Methods: Thirty-eight nurses with shift work disorder and insomnia were randomly assigned to either CBT-I or a waitlist control group. PA was measured for one week before (T0) and after the intervention/waiting period (T1) using actigraphy and sleep diary items. The impact of CBT-I on the PA parameters was analyzed using linear mixed models. In addition, correlations of pre-to-post-treatment changes in PA and pre-to-post-treatment changes in the clinical outcomes (insomnia severity, sleep efficiency, depression) were explored in the CBT-I group. Results: CBT-I increased actigraphy-derived PA during the two hours ($\beta = 26.17$, SE = 9.41, $p = 0.009$) and one hour ($\beta = 13.24$, SE = 4.57, $p = 0.006$) after time in bed, and resulted in a higher percentage of self-reported days with PA ($\beta = 19.11$, SE = 9.36, $p = 0.049$) compared to the waitlist control group. No significant correlations were found between the changes in PA and clinical outcomes, except for a moderate positive correlation between changes in self-reported sleep efficiency and changes in PA one hour before time in bed ($r = 0.56$, $p = 0.013$). Conclusions: This is the first study to investigate the impact of CBT-I on PA, providing preliminary evidence of the potential positive effects. Further studies with larger sample sizes and randomized controlled designs with continuous PA monitoring are needed to confirm these preliminary results.

Lien vers l'article

Exercise-mediated muscle-hypothalamus crosstalk: Improvement for cognitive dysfunction caused by disrupted circadian rhythm.

Shi JX, Wang ZY, Wang SW, Shen Q, Tan X. *Life Sci*. 2025 Jul 15;373:123657.

In contemporary societal evolution, the increasing disruption of the natural sleep-wake cycle, attributable to factors such as shift work and overexposure to artificial light, has been paralleled by a marked escalation in the incidence of cognitive impairments and the prevalence of neurodegenerative diseases. Current management strategies for cognitive impairments include pharmacological and non-pharmacological interventions. Pharmacological interventions for cognitive impairments typically involve medications to manage cognitive symptoms and improve neurological functions. However, these drugs show limited long-term efficacy in slowing disease progression and may cause side effects. Given the widespread occurrence of cognitive dysfunction, it is crucial to develop accessible non-pharmacological interventions. Physical activity and exercise have emerged as pivotal lifestyle determinants known to exert a modulatory effect on the risk profile for cognitive dysfunction caused by disrupted circadian rhythms. The skeletal muscle, a dynamic tissue, undergoes a profound morphological and metabolic reconfiguration in response to physical exertion, along with the secretion of myokines. Additionally, the hypothalamus, particularly the ventromedial nuclei, arcuate nuclei, and the suprachiasmatic nucleus, have crucial functions in regulating physical activity, influencing energy metabolism, and managing circadian cycles. Nevertheless, the communication between the hypothalamus and skeletal muscle during exercise is not fully understood. This narrative review

integrates current knowledge on the interaction between the hypothalamus and skeletal muscle during exercise, emphasizing its neuroendocrine effects and potential therapeutic implications for alleviating cognitive dysfunction associated with disrupted circadian rhythms.

Lien vers l'article

Circadian rhythmicity and reinforcement processing: a dataset of MRI, fMRI, and behavioral measurements.

Scislewska P, Zareba MR, Lengier J, Schirmer AE, Bebas P, Szatkowska I. *Sci Data*. 2025 May 20;12(1):823.

Circadian rhythmicity is a complex phenomenon that influences human behavior, emotionality and brain activity. A detailed description of individual differences in circadian rhythmicity could inform the design of educational systems, shift-worker schedules, and daily routines. Here we present a comprehensive dataset for studying diurnal rhythms and their relationship with human behavior. Thirty seven male participants (aged 20-30) filled in validated psychometric questionnaires assessing characteristics of the circadian rhythm, sleep quality, emotionality, personality traits, reward-punishment processing and attention deficits. Moreover, we acquired high-resolution anatomical T1-weighted images using magnetic resonance imaging (MRI), B0 fieldmaps for distortion corrections, and functional MRI (fMRI) during the Monetary Incentive Delay (MID) task, which is a common paradigm to assess human neural reinforcement processing. All files are organized in Brain Imaging Data Structure (BIDS) and openly available on OpenNeuro.org. Validation confirmed the high quality of the described dataset. The various psychological measures combined with neuroimaging data provide a strong foundation for exploring emotionality, affective processing, and attention in the context of brain activity and circadian influences.

Lien vers l'article

Roles of circadian clocks in macrophage metabolism: implications in inflammation and metabolism of lipids, glucose, and amino acids.

Dar MI, Hussain Y, Pan X. *Am J Physiol Endocrinol Metab*. 2025 May 1;328(5):E723-e41.

Macrophages are essential immune cells that play crucial roles in inflammation and tissue homeostasis and are important regulators of metabolic processes, such as the metabolism of glucose, lipids, and amino acids. The regulation of macrophage metabolism by circadian clock genes has been emphasized in many studies. Changes in metabolic profiles occurring after the perturbation of macrophage circadian cycles may underlie the etiology of several diseases. Specifically, chronic inflammatory disorders, such as atherosclerosis, diabetes, cardiovascular diseases, and liver dysfunction, are associated with poor macrophage metabolism. Developing treatment approaches that target metabolic and immunological ailments requires an understanding of the complex relationships among clock genes, disease etiology, and macrophage metabolism. This review explores the molecular mechanisms through which clock genes regulate lipid, amino acid, and glucose metabolism in macrophages and discusses their potential roles in the development and progression of metabolic disorders. The findings underscore the importance of maintaining circadian homeostasis in macrophage function as a promising avenue for therapeutic intervention in diseases involving metabolic dysregulation, given its key roles in inflammation and tissue homeostasis. Moreover, reviewing the therapeutic implications of circadian rhythm in macrophages can help minimize the side effects of treatment. Novel strategies may be beneficial in treating immune-related diseases caused by shifted and blunted circadian rhythms via light exposure, jet lag, seasonal changes, and shift work or disruption to the internal clock (such as stress or disease).

Lien vers l'article

Advancing Chrononutrition for Cardiometabolic Health: A 2023 National Heart, Lung, and Blood Institute Workshop Report.

Dashti HS, Jansen EC, Zuraikat FM, Dixit S, Brown M, Laposky A, et al. *J Am Heart Assoc*. 2025 May 6;14(9):e039373.

The circadian system maintains optimal biological functions at the appropriate time of day, and the disruption of this organization can contribute to the pathogenesis of cardiometabolic disorders. The timing of eating is a prominent external time cue that influences the circadian system. "Chrononutrition" is an emerging dimension of nutrition and active area of research that examines how timing-related aspects of eating and nutrition impact circadian rhythms, biological processes, and disease pathogenesis. There is evidence to support chrononutrition as a form of chronotherapy, such that optimizing the timing of eating may serve as an actionable strategy to improve cardiometabolic health. This report summarizes key information from the National Heart, Lung, and Blood Institute's virtual workshop entitled "Chrononutrition: Elucidating the Role of Circadian Biology and Meal Timing in Cardiometabolic Health," which convened on May 2 to 3, 2023, to review current literature and identify critical knowledge gaps and research opportunities. The speakers presented evidence highlighting the impact on cardiometabolic health of earlier and shorter eating windows and more consistent day-to-day eating patterns. The multidimensionality of chrononutrition was a common theme, as it encompasses multiple facets of eating along with the timing of other behaviors including sleep and physical activity. Advancing the emerging field of chrononutrition will require: (1) standardization of terminology and metrics; (2) scalable and precise tools for real-world settings; (3) consideration of individual differences that may act as effect modifiers; and (4) deeper understanding of social, behavioral, and cultural influences. Ultimately, there is great potential for circadian-based dietary interventions to improve cardiometabolic health.

Lien vers l'article

Seasonal timing and interindividual differences in shiftwork adaptation.

Kim R, Fang Y, Lee M, Kim DW, Tang Z, Sen S, et al. *NPJ Digit Med*. 2025 May 28;8(1):300.

Millions of shift workers in the U.S. face an increased risk of depression, cancer, and metabolic disease, yet individual responses to shift work vary widely. We find that a conserved biological system of morning and evening oscillators, which evolved for seasonal timing, may contribute to these interindividual differences. In this study, we analyze seasonality in medical interns working shifts, revealing that summer-winter variation correlates with increased circadian misalignment after shift work. Mathematical modeling suggests that seasonal timing influences the rate of adaptation to new schedules, predicting differential effects on morning and evening oscillators. Additionally, we examine genetic polymorphisms linked to seasonality in animals and find that human variants can impact how quickly circadian rhythms respond to schedule changes. Based on our findings, we hypothesize that the vast interindividual differences in shift work adaptation-critical for shift worker health-can in part be explained by biological mechanisms for seasonal timing.

Lien vers l'article

Liver as a nexus of daily metabolic cross talk.

Litwin C, Koronowski KB. *Int Rev Cell Mol Biol*. 2025;393:95-139.

Over the course of a day, the circadian clock promotes a homeostatic balance between energy intake and energy expenditure by aligning metabolism with nutrient availability. In mammals, this process is driven by central clocks in the brain that control feeding behavior, the peripheral nervous system, and humoral outputs, as well as by peripheral clocks in non-brain tissues that regulate gene expression

locally. Circadian organization of metabolism is critical, as circadian disruption is associated with increased risk of metabolic disease. Emerging evidence shows that circadian metabolism hinges upon inter-organ cross talk involving the liver, a metabolic hub that integrates many facets of systemic energy homeostasis. Here, we review spatiotemporal interactions, mainly metabolite exchange, signaling factors, and hormonal control, between the liver and skeletal muscle, pancreas, gut, microbiome, and adipose tissue. Modern society presents the challenge of circadian disturbances from rotating shift work to social jet lag and 24/7 food availability. Thus, it is important to better understand the mechanisms by which the clock system controls metabolic homeostasis and work toward targeted therapies.

Lien vers l'article

Chronobiology of Mood Disorders: The Role of the Biological Clock in Depression and Bipolar Disorder.

Geoffroy PA, Maruani J. *Biol Psychiatry*. 2025 May 15.

Mood disorders, including major depressive disorder, bipolar disorder, and seasonal affective disorder, exhibit significant heterogeneity, with disturbances in biological rhythms playing a central role. These disturbances not only contribute to the onset and progression of mood disorders but also serve as important predictors of relapse ("Chronos syndrome") and treatment response. Circadian disruptions, which are influenced by factors such as seasonality, jet lag, shift work, and childbirth, are hallmarks of mood episodes and are pivotal in transitions between mood states. Longitudinal studies have revealed a bidirectional relationship between circadian dysregulation and mood disorders, suggesting that biological clock abnormalities may both signal and predispose individuals to mood episodes. Despite their significance, no single circadian biomarker has demonstrated sufficient specificity or sensitivity for diagnostic precision. This underscores the urgent need for multimodal approaches that integrate circadian markers with other physiological and behavioral dimensions. Advancing mood disorder care requires biomarkers that capture individualized biological signatures, revealing circadian dysregulation and its interactions with multiple other physiological systems to enable precise subtyping and improved interventions. In this review, we emphasize the potential of integrating biological rhythms into a dimensional framework, leveraging advanced digital tools and mathematical models to provide ecologically-valid insights into mood disorder mechanisms. Such approaches aim to bridge the gap between clinical observations and biological underpinnings, paving the way for biologically informed classifications and personalized treatment strategies. By addressing the complexity of circadian disruptions and their interplay with other systems, this paradigm shift offers a promising path to enhancing mood disorder diagnostics and therapeutics.

Lien vers l'article

Circadian rhythms in muscle health and diseases.

Kelu JJ. *Int Rev Cell Mol Biol*. 2025;393:45-72.

All major life forms from bacteria to humans have internal clocks that regulate essential biological processes in a roughly 24-h cycle. In mammals, the central clock in the suprachiasmatic nucleus (SCN) is historically considered the top of a hierarchical organisation that dominates subordinate clocks in peripheral tissues and dictates the circadian behaviours of an organism. Recent studies, however, underscore the importance of the local circadian oscillators, such as the skeletal muscle clock, in regulating local metabolism and physiology. Studies in animal models show that the muscle peripheral clock per se is required for the expression of genes involved in glucose, lipid, and amino acid metabolism. Disruption of the muscle clock leads to glucose intolerance, insulin resistance, and alterations in muscle size and force. This highlights the vital role of the muscle clock in controlling muscle physiology and metabolism. In humans, a perturbation in the muscle circadian rhythms is seen

in metabolic disorders such as type 2 diabetes, and muscle diseases such as dystrophies. Disruption of muscle metabolism is also seen when the internal rhythms are misaligned with the external rhythms (circadian misalignments) as in shift work. Understanding the mechanisms by which the muscle clock regulates circadian functions may help the development of new strategies, such as chronotherapy, to potentially prevent or treat muscle pathologies and maintain muscle health.

Lien vers l'article

Association between sleep disturbance and metabolic dysfunctions in adipose tissue: Insights into melatonin's role.

Ratwani M, Bisht S, Prakash S. *Biochem Biophys Res Commun*. 2025 Jul 12;770:151978.

The increased prevalence of sleep disturbances in modern society is frequently linked to various metabolic disorders, including insulin resistance, obesity, hypertension, fatty liver disease, and cardiometabolic complications. Melatonin, a pineal gland-secreted neurohormone, plays a pivotal role in maintaining the circadian rhythm. It is involved in regulating adipose tissue development, lipid accumulation, browning of white adipose tissue, and activation of brown adipose tissue. The adipose tissue is a dynamic endocrine organ that secretes hormones and cytokines. Recent research has highlighted the significant role of melatonin in the modulation of lipid metabolism, adipogenesis, and thermogenesis in adipose tissues. Circadian rhythms are important in synchronizing metabolic functions with environmental cues, such as light and dark, feeding-fasting states, etc. Irregular sleep patterns, shift work, and exposure to artificial light at night disrupt these rhythms, affecting circadian regulation and compromising metabolic health. Melatonin imbalance due to sleep disturbances results in metabolic dysfunction, increased fat storage, and adipose tissue inflammation. As circadian rhythm and melatonin are both related, a change in circadian rhythm affects the physiology of adipose tissues thereby precipitating metabolic complications through melatonin signaling. This study attempted to understand the mechanisms by which melatonin influences adipose tissue activity, highlighting the role of circadian rhythms in this process. This will enable the development of melatonin-based therapies to mitigate the adverse effects of chronobiological disturbances on the physiology of adipose tissue. Understanding these interactions will provide novel insights for combating obesity and related metabolic conditions.

Lien vers l'article

Conduites addictives

Association of sociodemographic and occupational stress factors with smoking behavior among healthcare professionals: The mediating role of physical exercise.

Chaudhary FA, Shakoor A, Fareed MA, Khattak O, Alqarni MS, Issrani R, et al. *Tob Induc Dis*. 2025;23.

INTRODUCTION: Smoking remains a major preventable cause of mortality, posing a significant public health challenge globally. Healthcare professionals (HCPs), despite their pivotal role in promoting health, exhibit notable smoking behaviors influenced by occupational stress and sociodemographic factors. This study investigates these relationships and examines the mediating role of physical exercise in smoking behaviors among HCPs in Pakistan. METHODS: A cross-sectional study was conducted among 302 HCPs (medical doctors and dentists) recruited using a snowball sampling technique in Pakistan from March to July 2024. Data were collected using a self-administered online questionnaire assessing sociodemographic and occupational factors, smoking status and frequency, physical exercise, sleep quality, job satisfaction, and perceived stress. Smoking behavior was analyzed as current, past, or never smokers. Mediation analysis evaluated the role of physical exercise in the association between occupational stress and smoking behavior. RESULTS: Nearly half (49.3%) of participants were current smokers, with 36.7% smoking 6-20 cigarettes daily and 60.2% of the participants experiencing moderate to high levels of perceived stress. Higher smoking prevalence was associated with gender, frequent night shifts, longer working hours, low job satisfaction, frequent insomnia, and high perceived stress ($p<0.05$). Regular physical exercise (52.0%) emerged as a significant protective factor against smoking, with those exercising three or more times per week being significantly less likely to smoke (OR=0.05; 95% CI: 0.03-0.09, $p<0.001$). Mediation analysis showed that physical exercise partially mediated the relationship between perceived stress and smoking (indirect effect = -3.67, $p<0.001$), with a reduced direct effect of perceived stress on smoking after controlling for exercise (B= -1.56, SE=0.22, $p<0.001$). CONCLUSIONS: Occupational stress, coupled with sociodemographic and work-related factors, drives smoking behaviors among Pakistani HCPs. Physical exercise serves as a protective factor, mediating the relationship between perceived stress and smoking. Workplace interventions promoting stress management, physical activity, and job satisfaction are recommended to reduce smoking rates and foster healthier behaviors among HCPs, improving public health outcomes.

Lien vers l'article

Reproduction

Sleep characteristics in association with risk of sporadic anovulation among eumenorrheic women.

Freeman JR, Whitcomb BW, Bertone-Johnson ER, O'Brien LM, Dunietz GL, Purdue-Smithe AC, et al. *Chronobiol Int*. 2025 Apr;42(4):500-10.

Few studies have evaluated sleep characteristics, including social jetlag, with ovulatory dysfunction, which may be an indicator of subfertility and poor metabolic health. Our objective was to evaluate whether sleep characteristics, including sleep duration, chronotype, social jetlag, sleep latency, nocturnal awakenings, and shift work, were associated with risk of anovulation among eumenorrheic women. Participants had a history of pregnancy loss and regular menstrual cycles, but no history of infertility. Typical sleep characteristics were self-reported at baseline. Participants were followed up to the cycle of conception or up to six menstrual cycles. Fertility monitor data and reproductive hormone concentrations were used to assess anovulation. We used generalized estimating equations with log-Poisson distributions to estimate relative risks (RR). The study is registered at clinicaltrials.gov (NCT00467363). Sleep duration, social jetlag, sleep latency, and nocturnal awakenings were not associated with anovulation. Later chronotype was associated with greater anovulation risk (3(rd) vs. 2(nd) tertile RR: 1.33, 95% CI: 1.05-1.68; per 1-hour increase RR: 1.05 95% CI 1.00-1.11). The RR for rotating work was 1.14 (95% CI: 0.90-1.46) and for night shift work was 1.22 (95% CI: 0.98-1.52). These results suggest that later chronotype and potentially shift work may be related to menstrual cycle dysfunction.

Lien vers l'article

Night work during pregnancy and risk of cryptorchidism among male offspring: A Danish nationwide register-based cohort study.

Bertelsen C, Begtrup LM, Hammer PEC, Bonde JPE, Garde AH, Specht IO, et al. *Andrology*. 2025 May 7.

AIM: The aim was to investigate the association between night work during pregnancy and the risk of having a male offspring with cryptorchidism. Furthermore, we explored if the risk of cryptorchidism increased based on trimester-specific night work (gestational weeks 1-12 and 13-22) by sensitivity analyses. METHODS: This register-based cohort study was based on detailed objective working hour data for all employees in the five Danish regions (primarily hospital employees) between 2007 and 2015, retrieved from the Danish Working Hour Database (DWDH). Information on pregnancies and covariates was identified by linking DWDH with the Danish Medical Birth Register. Diagnoses of cryptorchidism were obtained from the Danish National Patient Register. We used logistic regression to investigate the association between different dimensions of night work during the first 32 pregnancy weeks and cryptorchidism. The adjusted models included maternal age, body mass index, socioeconomic position, and maternal smoking. RESULTS: The final cohort consisted of 12,915 singleton pregnancies in 11,404 women (primarily nurses), who worked at least one night shift during the first 32 pregnancy weeks. None of the dimensions of night work was associated with an increased risk of having offspring with cryptorchidism compared to day workers. We found the same tendency in the trimester-specific analyses. CONCLUSIONS: We found no increased odds among women working night shifts in healthcare during pregnancy and giving birth to male offspring with cryptorchidism. Future studies investigating night work in occupations other than healthcare are needed to rule out a potential association.

Lien vers l'article

Polyexposition

Aucun article dans ce bulletin.

Pathologies cardiovasculaires

Night shift work and indicators of cardiovascular risk: A systematic review and meta-analysis.

Erdem JS, Das MK, De Ryck E, Skare Ø, Lie JS, Bugge M, et al. *Environ Res*. 2025 Jul 1;276:121503.

Cardiovascular disease (CVD) is a leading cause of death worldwide, and shift workers have an increased risk of CVD. This comprehensive systematic review and meta-analysis aimed to assess the association between night shift work and cardiovascular risk indicators. A systematic literature search was performed according to the PRISMA 2020 guidelines using Medline, Embase, and Web of Science databases from inception through May 2024. Original manuscripts reporting relevant cardiovascular risk indicators and biomarkers in night shift workers were included. Risk of bias was assessed using the JBI's critical appraisal tools. When applicable, random-effect meta-analyses were performed. If suitable data were not available, a narrative synthesis was performed by combining p-values or vote-counting. Meta-regression analyses were performed to assess the contribution of sex, body mass index, and age as possible modifiers of effect. Evidence was weighed using an adapted GRADE. This study is registered in PROSPERO (CRD42022337285). Of the 8,387 studies identified, 81 were included in the synthesis, comprising 14 cohort and 67 cross-sectional studies. Moderate-confidence evidence was presented demonstrating increased inflammation, dyslipidaemia and impaired cardiac excitability among night shift workers. Dose-dependent effects were reported for these cardiovascular risk indicators, suggesting that the intensity and duration of night shift work contribute to risk of CVD. Furthermore, no association between night shift work and indicators of vascular dysfunction, deregulation of the autonomic nervous system, or altered homeostasis was observed. Considering this, regulatory and preventative initiatives are essential to reduce the cardiovascular risk among night shift workers.

Lien vers l'article

Effect of KLF15-Mediated Circadian Rhythm on Myocardial Infarction: A Narrative Review.

Zhao J, Chen Z, Yang J, Duan L, Yang H, Cai D, et al. *Int J Mol Sci*. 2025 May 18;26(10).

Normal circadian rhythms are essential for organisms to adapt to diurnal changes and maintain an optimal state of physiological function. Disturbances in circadian rhythms such as shift work and working at night increase the risk of cardiovascular disease. Myocardial infarction exhibits a marked circadian rhythm, usually peaking in the early morning. Krüppel-like factor 15 (KLF15), a transcription factor with a circadian rhythm, plays an important role in cardiac physiopathology. It has a protective effect against myocardial injury after myocardial infarction by regulating energy metabolism and inflammatory factors, among other pathways. Currently, the association between circadian rhythm, KLF15, and myocardial infarction is unclear, thus this paper reviews how circadian rhythm influences the role of KLF15 in myocardial infarction, aiming to reveal the association between circadian rhythm, KLF15, and myocardial infarction, and to explore the underlying mechanisms, to provide new theoretical insights and therapeutic strategies for the clinical treatment of myocardial infarction.

Lien vers l'article

Long working hours at midlife and arterial stiffness at older age in a 24-year prospective cohort.

Sisti CB, Gilbert-Ouimet M, Lavigne-Robichaud M, Brisson C, Milot A, Trudel X. *BMC Public Health*. 2025 May 17;25(1):1820.

BACKGROUNDS: This study aims to examine whether long working hours, repeatedly assessed at midlife, is associated with higher arterial stiffness at older age in a 24-year prospective study of white-

collar workers in Quebec City, Canada. METHODS: This study relied on a prospective cohort, initiated in 1991-1993 (T1) with two follow-ups after 8 years (T2, 1999-2001) and 24 years (T3, 2015-2018). Participants (N = 1,629, 51.3% women, mean age 37 ± 6.4 at T1) were randomly selected for arterial stiffness measurement at T3 using carotid-femoral pulse wave velocity (PWV). Long working hours (> 40 h/week) were assessed at T1 and T2. Mean differences in PWV were estimated using generalized linear models, accounting for sociodemographic factors, lifestyle-related risk factors, clinical factors and psychosocial stressors at work. RESULTS: Among participants who remained actively employed over the study period (age range: 21-59 at T1), long working hours at T1 were associated with a + 0.54 m/s (95% CI: 0.05; 1.02) increase in PWV, while repeated exposure at T1 and T2 was associated with a + 1.50 m/s (95% CI: 0.78; 2.21) increase. No association was observed among participants who retired between T2 and T3. CONCLUSION: The present study suggests that exposure to long working hours during midlife is associated with higher arterial stiffness, among aging workers. Workplace preventive strategies reducing long working hours may be effective to mitigate long-term arterial stiffening.

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Lien vers l'article

Prevalence of prehypertension and undiagnosed hypertension among urban bankers of Bangladesh: A cross-sectional study.

Munira SJ, Hasan MJ, Rafi MA, Shaheen S, Kabir MI. *J Public Health Res*. 2025 Apr;14(2):22799036251337641.

BACKGROUND: Bankers live a sedentary and highly stressful life that often leads to developing noncommunicable diseases (NCDs) such as hypertension, diabetes, mental disorders, etc. The study aims to assess the prevalence of undiagnosed hypertension and prehypertension among urban bankers in Bangladesh. DESIGN AND METHODS: Data from 365 bankers from five public and private banks in Bangladesh were collected using a pretested semistructured questionnaire. The Seventh Joint National Committee on Hypertension (JNC 7) guideline was followed to define prehypertension and undiagnosed hypertension. Multivariable logistic regression models were created to investigate the

associated factors. RESULTS: The prevalence of undiagnosed hypertension and prehypertension were 22.5% and 55.3%, respectively. Most of the bankers were males and 35-44 years of age. The risk of hypertension and prehypertension was significantly higher among males (Odds ratio [OR], 16.6; OR, 6.4), longer service duration (F, 3.6), prolonged working hours (OR, 3.8; OR, 3.1), smoking (OR, 6.2; OR, 3.4), overweight (OR, 6.8; OR, 2.4) and obese (OR, 8.9; OR, 3.4) bankers, respectively. After controlling for confounders, the predictors of hypertension were males (Adjusted odds ratio [aOR], 12.8; 95%CI, 2.7-60), current smokers (aOR, 2.9; 95%CI, 1-8), overweight (aOR, 5.1; 95%CI, 1.5-17.9), and obesity (aOR, 9.6; 95%CI, 2.4-38.2). For prehypertension, males (aOR, 9.7; 95%CI, 3.1-30.9) and obesity (aOR, 3.9; 95%CI, 1.5-10.3) were found as predictors. CONCLUSION: More than three-fourths of bankers in Bangladesh have either prehypertension or undiagnosed hypertension. Although this study included only urban banks, a large-scale study is recommended to understand the overall NCD risk factors burden among this professional group- bankers in Bangladesh.

Lien vers l'article

The associations of long working hours and unhealthy diet with cardiometabolic outcomes and mortality in US workers.

Li X, Li J, Ren X, Xia T, Arah OA, Chen L. *Prev Med*. 2025 Jun;195:108275.

OBJECTIVES: To examine independent and joint associations of long working hours (LWH) and EAT-Lancet diet with cardiometabolic outcomes and mortality in US workers. METHODS: This prospective cohort included US workers from the National Health and Nutrition Examination Survey, with cross-sectional baseline data from 1999 to March 2020. A subsample of participants from 1999 to 2018 was linked to the National Death Index, with mortality follow-up through December 2019. The independent and joint associations of LWH (≥ 55 vs. < 55 h/week) and EAT-Lancet diet scores (low vs. high) with cardiometabolic outcomes and mortality were estimated using multivariable logistic and Cox proportional hazards models, respectively. RESULTS: LWH was associated with higher odds of obesity (OR = 1.20; 95%CI = 1.07, 1.34) among all workers and higher CVD mortality among workers with high CVD risk at baseline (HR = 1.64, 95%CI = 0.79, 3.12). Low diet scores were associated with higher odds of obesity (OR = 1.34, 95%CI = 1.21, 1.42) and diabetes (OR = 1.33, 95%CI = 1.01, 1.76) among all workers. Working hours and diet scores were jointly associated with obesity and CVD mortality, indicating by the relative excess risk due to interaction greater than zero among all workers. CONCLUSIONS: LWH and unhealthy diet are independent risk factors and may interact to exacerbate adverse cardiometabolic health outcomes.

Lien vers l'article

Advancing Chrononutrition for Cardiometabolic Health: A 2023 National Heart, Lung, and Blood Institute Workshop Report.

Dashti HS, Jansen EC, Zuraikat FM, Dixit S, Brown M, Laposky A, et al. *J Am Heart Assoc*. 2025 May 6;14(9):e039373.

The circadian system maintains optimal biological functions at the appropriate time of day, and the disruption of this organization can contribute to the pathogenesis of cardiometabolic disorders. The timing of eating is a prominent external time cue that influences the circadian system. "Chrononutrition" is an emerging dimension of nutrition and active area of research that examines how timing-related aspects of eating and nutrition impact circadian rhythms, biological processes, and disease pathogenesis. There is evidence to support chrononutrition as a form of chronotherapy, such that optimizing the timing of eating may serve as an actionable strategy to improve cardiometabolic health. This report summarizes key information from the National Heart, Lung, and Blood Institute's virtual workshop entitled "Chrononutrition: Elucidating the Role of Circadian Biology and Meal Timing in Cardiometabolic Health," which convened on May 2 to 3, 2023, to review current literature and

identify critical knowledge gaps and research opportunities. The speakers presented evidence highlighting the impact on cardiometabolic health of earlier and shorter eating windows and more consistent day-to-day eating patterns. The multidimensionality of chrononutrition was a common theme, as it encompasses multiple facets of eating along with the timing of other behaviors including sleep and physical activity. Advancing the emerging field of chrononutrition will require: (1) standardization of terminology and metrics; (2) scalable and precise tools for real-world settings; (3) consideration of individual differences that may act as effect modifiers; and (4) deeper understanding of social, behavioral, and cultural influences. Ultimately, there is great potential for circadian-based dietary interventions to improve cardiometabolic health.

Lien vers l'article

Association between long working hours and poor cardiovascular health assessed by the American Heart Association's "Life's essential 8": findings from a nationally representative sample of Korean workers (2014-2021).

Baek SU, Yoon JH. *Postgrad Med J*. 2025 May 29.

BACKGROUND: Long working hours represent a major public health concern. We explored the association between working hours and the American Heart Association's "Life's Essential 8 (LE8)." METHODS: A nationwide sample comprising 21 062 Korean workers was analyzed. The LE8 scores (range 0-100) were calculated based on the following cardiovascular disease risk factors: diet, physical activity, nicotine exposure, sleep health, body mass index, blood lipid levels, blood glucose levels, and blood pressure. Cardiovascular health (CVH) was categorized as low (LE8: 0-49), intermediate (LE8: 50-59), and high (LE8: 80-100). Linear regression and multinomial logistic regression models were used for statistical analyses. RESULTS: The means of the LE8 scores for those working <35 h, 35-40 h, 41-48 h, 49-54 h, and ≥ 55 h per week were 69.4, 68.2, 66.8, 64.7, and 61.9, respectively. Among men, working 49-54 h per week [β: -1.43; 95% confidence interval (CI): -2.40, -0.45] and ≥55 h per week (β: -3.23; 95% CI: -4.11, -2.35) were associated with lower LE8 scores. Similarly, among women, working 49-54 h per week (β: -1.62; 95% CI: -2.72, -0.52) and ≥55 h per week (β: -2.88; 95% CI: -3.88, -1.88) had negative associations with LE8 scores. Working ≥55 h per week was associated with a 2.03-fold increase (95% CI: 1.53, 2.68) in the odds of low CVH among men and a 2.02-fold increase (95% CI: 1.37, 2.98) among women. CONCLUSION: Long working hours are associated with poor CVH, emphasizing the necessity of mitigating excessive working hours. Key message What is already known on this topic-The American Heart Association recently introduced "Life Essential 8 (LE8)," a metric assessing cardiovascular health. This study explored the association between long working hours and poor cardiovascular health among Korean adult workers. What this study adds-This study demonstrates that compared with working 35-40 h per week, working >48 h per week is associated with a reduced LE8 score. Specifically, working 49-54 h and ≥55 h per week are associated with increased odds of having poor cardiovascular health in both men and women, compared with working 35-40 h per week. Notably, long working hours showed a strong association with the health behavior factors of LE8. How this study might affect research, practice, or policy-This study suggests that promoting cardiovascular health based on the LE8 framework can be beneficial in mitigating the health burdens of long working hours.

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