LES HORAIRES ATYPIQUES

Bulletin de veille scientifique : Novembre 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

Risks posed by nurses' working hours in the intensive care unit: a systematic review.

BACKGROUND: Nurses in intensive care units often work long shifts, leading to significant physical and mental strain. This strain can negatively impact their well-being and the quality of care they provide to patients. AIM: To evaluate the associations between nurses' working hours in intensive care units and outcomes related to risk identification, nurse well-being, patient safety, and institutional performance. METHODS: This systematic review was conducted under the methodological guidance of the Joanna Briggs Institute, grounded in a theoretical framework based on the Donabedian Model, and reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses 2020 statement. Literature searches were conducted from 2014 to 2024, with the assistance of an expert librarian, across the databases of Scopus, Medline/PubMed, CINAHL, Web of Science, Cochrane Library, and Google Scholar. Peer-reviewed empirical or primary studies, published in English or Turkish, focused on nurses working in adult intensive care units, addressed risks related to working hours, utilized experimental, quasi-experimental, cross-sectional, or longitudinal designs, and regression analysis methods to explore associations and predictive outcomes were included. Publications not in English or Turkish, lack of full-text access, grey literature, studies on official sections of the intensive care units, and studies not focusing on the risks of growth along with the working hours of officials in the intensive care units were excluded. RESULTS: A total of 902 articles were identified, and 16 studies met the inclusion criteria. The analysis suggests that extended working hours in intensive care units pose significant risks, particularly related to sleep disturbances, increased burnout, and medication errors. These risks affect nurses, patients, and institutions alike. CONCLUSION: The review highlights the importance of addressing the risks associated with long working hours in intensive care units. The primary risks identified include nurse-focused issues such as the development of sleep disturbances and increased burnout, as well as patient-focused risks like medication errors. These risks, along with their frequency and impact, underscore the need for improved scheduling and working conditions to ensure patient safety and nurse well-being. JOANNA BRIGGS INSTITUTE (JBI) REVIEW REGISTRATION: This systematic review was registered with the Open Science Framework proposed by the Joanna Briggs Institute Collaboration on August 10, 2024 and is available at https://doi.org/10.17605/OSF.IO/FTQBK. RELEVANCE TO CLINICAL PRACTICE: Healthcare organizations can use these findings as a resource in creating evidence-based programs to create a healthy work environment and ensure patient safety, and to minimize existing risks in institutions.

Lien vers l'article

SHIFT-48: Schedule and Health Improvements for Firefighters Transitioning to 48/96.

OBJECTIVE: Examine the effects of transitioning from a 24/48 to a 48/96 shift schedule on health and performance in firefighters assigned to a single, suburban station. METHODS: A longitudinal analysis was conducted over three time points in 11 male firefighters. Measures included VO2peak, peak power, blood pressure, resting heart rate, lipid profiles, and psychological assessments. Linear mixed-effects models analyzed changes across timepoints. RESULTS: Transitioning to the 48/96 schedule was associated with improvements in peak power (+27.1 W, $p = 0.042$), resting blood pressure (SBP -5.5 mmHg, $p = 0.05$, DBP -5.8 mmHg, $p = 0.04$), heart rate (-13.2 bpm. $p = 0.03$), sleep quality (ISI -2.6, $p = 0.03$), and alcohol use (AUDIT -1.8, $p = 0.02$); VO2peak did not reveal a significant time effect ($p > 0.05$).

CONCLUSIONS: Extended inter-shift recovery in a 48/96 schedule may promote cardiovascular recovery and readiness without negative health effects in similar departments.

Lien vers l'article

Activités physiques

Aucun article dans ce bulletin.

Autres pathologies

Risk for Diabetes From Long Working Hours and Night Work in the United States: Prospective Associations and Machine Learning Techniques.

Keller E, Chen L, Gao F, Li J. *Saf Health Work*. 2025 Sep;16(3):355-60.

BACKGROUND: Diabetes contributes significantly to death in the U.S., with many working-age individuals affected. This research determined the independent and joint associations of long working hours and night work with diabetes risk in U.S. workers, and their contribution to risk prediction. METHODS: This prospective study included 1,454 workers from the Midlife in the United States (MIDUS) study with 9-year follow-up. Long working hours included those working 55 or more hours per week. Night work involved those working 16 or more nights per year. Diabetes was determined by self-reported diagnosis or treatment. Multivariable Poisson regression analysis was applied to examine the prospective association of these work-related factors at baseline with incident diabetes. A gradient boosting machine learning model was used to investigate the contributions of both factors in predicting incident diabetes. RESULTS: Long working hours (RR and 95% CI = 1.60 [1.04, 2.46], $p < 0.05$) and night work (RR and 95% CI = 1.66 [1.05, 2.62], $p < 0.05$) were independently associated with the risk for diabetes, while controlling for baseline covariates. Gradient boosting analysis suggested long working hours and night work facilitated diabetes incidence. Exposure to both long working hours and night work increased the risk for diabetes (RR and 95% CI = 3.02 [1.64, 5.58], $p < 0.001$), suggesting additive interaction. CONCLUSION: Organizations may consider reducing hours on duty and improving shift systems for primary prevention of diabetes.

Lien vers l'article

Long Working Hours and Dyslipidemia: A Systematic Review and Meta-analysis.

Lee CY, Jeon SY, Ahn J, Song JH, Kang MY. *Saf Health Work*. 2025 Sep;16(3):268-80.

BACKGROUND: This study aimed to evaluate the association between long working hours and dyslipidemia risk, as well as changes in blood lipid levels, through a systematic review and meta-analysis. METHODS: A systematic review and meta-analysis were conducted in accordance with Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) and Meta-analysis Of Observational Studies in Epidemiology (MOOSE) guidelines. Studies were identified through PubMed, EMBASE, and Cochrane Library, with data published until October 2024. Observational and interventional studies examining the relationship between long working hours and dyslipidemia or lipid profiles were included. Dyslipidemia was defined based on low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), triglycerides (TG), or total cholesterol levels. Pooled odds ratios (ORs) were calculated using fixed-effects models and pooled unstandardized mean differences in the lipid levels were calculated using random-effects models, with subgroup analyses conducted to assess the effects of study design, lipid profiles, and exposure definitions. RESULTS: A total of 20 studies met the inclusion criteria. The resuls of meta-analysis showed that long working

hours are associated with a significant 10% increase in dyslipidemia risk (OR = 1.10, 95% CI: 1.04-1.17). Subgroup analyses revealed that the association was stronger in cohort studies (OR = 1.13, 95% CI: 1.05-1.20) and among individuals with high LDL-C levels (OR = 1.30, 95% CI: 1.01-1.67). Differences in HDL-C, LDL-C, TG, and total cholesterol were observed but were not statistically significant. CONCLUSION: Long working hours are modestly associated with an increased risk of dyslipidemia. These findings provide evidence for developing workplace-based dyslipidemia prevention programs.

Lien vers l'article

Cancers

Aucun article dans ce bulletin.

Risque routier, accidentologie

Prevalence, risk factors, and prevention strategies for intraoperative sharp object injuries among orthopedic surgeons: A cross-sectional study.

Alhomayani KM, Aljohani GS, Alzahrani AN, Alwagdani SA, Bukhary HA, Aljuaid FI. *Medicine (Baltimore)*. 2025 Oct 10;104(41):e44975.

Orthopedic surgeons are routinely exposed to occupational hazards from sharp instruments, with needlestick injuries affecting 80% to 90% of practitioners. These incidents increase the risk of blood-borne infections such as hepatitis B virus, hepatitis C virus, and human immunodeficiency virus. Beyond physical harm, such injuries cause psychological distress and financial strain. This study assessed the prevalence, perceived contributing factors, and prevention strategies for intraoperative sharp object injuries among orthopedic surgeons. This cross-sectional study, conducted from November 2023 to January 2024, examined intraoperative sharp object injuries among orthopedic surgeons in Saudi Arabia. Data were collected through an electronic questionnaire distributed by the Saudi Commission for Health Specialties, covering demographics, injury prevalence, percieved risk factors, and prevention strategies. A total of 105 surgeons participated. Sharp object injuries were reported by 90.5% (n = 95), with 68.6% (n = 72) sustaining multiple incidents. Specialists had the highest injury prevalence (94.4%; 51/54), compared with residents (72.7%; 16/22) and consultants (96.6%; 28/29), showing a significant association between role and injury frequency (χ^2 = 11.24, df = 4, P = .024). Mid-career professionals with 5 to 15 years of experience were most affected (94.4%; 51/54), compared with early-career (<5 years, 70.4%; 19/27) and late-career (>15 years, 88.9%; 16/18), with a significant association between years of experience and injury frequency (χ^2 = 24.29, df = 8, P = .002). Suture needles were the leading cause (52.6%), particularly during fracture management (86.3%). The most frequently perceived contributing factors were understaffing (27.4%), prolonged procedures (23.2%), and long working hours (17.9%). While 80% (n = 76) reported adopting preventive measures, adherence to safety protocols was inconsistent: 77.1% used personal protective equipment and 61.9% attempted to minimize distractions during surgery. This study found a high prevalence of sharp object injuries among orthopedic surgeons, particularly mid-career professionals. Suture needles, especially during fracture management, were the most frequently implicated instruments. Participants most often perceived systemic issues, including prolonged work hours, understaffing, and inconsistent adherence to safety protocols, as key contributors. Preventive strategies should focus on improving compliance with infection control measures, structured training, and institutional support for staffing and safety policies.

Lien vers l'article

Non-standard employment, paid sick leave, and income loss during COVID-19 self-isolation: cross-sectional findings from South Korea.

Hwang S. *Int J Equity Health*. 2025 Oct 8;24(1):255.

BACKGROUND: Testing and isolation are crucial measures to control infectious diseases, yet limited research has examined inequalities in the impact of these measures on individual earnings. This study aimed to assess whether income loss during COVID-19 self-isolation varied by workers' employment type in South Korea. METHODS: Cross-sectional data were collected via online surveys from March to September 2022. The analysis included 1,064 employees who tested positive for COVID-19, aged 20-65. Employment types were categorized as standard or non-standard, with the latter encompassing temporary, part-time, and atypical arrangements (multi-party employment arrangements or dependent self-employment). Multivariate logistic regression was used to examine the association between employment type and income loss during COVID-19 self-isolation. The mediating roles of access to paid sick leave and the level of compensation provided were assessed through a counterfactual framework. RESULTS: Overall, 30.5% of participants experienced decreased earnings while self-isolating due to COVID-19 infection. After adjusting for covariates, non-standard workers were three times more likely (adjusted odds ratio 2.96 [95% confidence interval 2.10-4.15]) to experience this income loss compared to standard employees. Among non-standard worker subgroups, atypical workers faced the highest risk (4.06 [2.52-6.55]), followed by part-time (3.02 [1.78-5.13]) and temporary workers (2.25 [1.44-3.51]). This disparity in income loss was attributed to two distinct pathways: non-standard workers having less access to paid sick leave (coverage gap) and, when such leave was available, being more likely than standard workers to receive compensation that was insufficient to maintain pre-isolation earnings (adequacy gap). Our mediation analysis indicated that these two pathways contributed almost equally (51% and 49%, respectively) to the observed income disparities. CONCLUSION: Both expanding access to paid sick leave and ensuring adequate compensation rates are needed to enable non-standard workers to comply with pandemic control measures without fear of income loss.

Lien vers l'article

Childcare provision for on-call workers in the NHS: Is the 24/7 service ideal matched by reality?

Cain D, Hickson B, Parker P. *Surgeon*. 2025 Oct 22.

BACKGROUND: The National Health Service (NHS) in the UK aims to deliver healthcare services around the clock. Major Trauma Centres (MTCs) are crucial in this operation, requiring continual 24/7 operations. Despite ef**: Is the 24/7 service ideal matched by reality?**

Cain D, Hickson B, Parker P. *Surgeon*. 2025 Oct 22.

BACKGROUND: The National Health forts to provide on-site nurseries catering to children aged 3 months to 5 years, there remains a significant gap in childcare provision for on-call workers. This shortfall particularly affects surgeons, nurses and military medical personnel whose shifts extend beyond standard nursery operating hours. This discrepancy raises concerns about the sufficiency of support for healthcare professionals with irregular schedules. AIMS: This study delves into the existing childcare facilities in NHS major trauma centres, aiming to identify challenges faced by on-call workers and propose strategies to bridge this childcare gap. By addressing these issues, the study contributes to discussions on how to best support healthcare professionals working 24/7 while ensuring the well-being of their children. METHODS: The research involved a review of in-house childcare facilities across all 27 MTCs in England. Data from named nurseries affiliated with the MTC official NHS websites were

examined, including nursery names, capacity, operating hours, and available services such as weekend placements and emergency out-of-hours cover. RESULTS: Results showed that out of 27 MTCs, 26 had on-site nurseries. However, only a fraction of these operated beyond standard hours, with none offering emergency or weekend services. This highlighted a significant deficit in comprehensive childcare support. The lack of childcare services tailored to the irregular schedules of NHS workers might impact career choices. This discrepancy sharply contrasts with childcare benefits provided in the private sector and government settings. CONCLUSION: The current NHS childcare provision falls short of meeting the demands of a 24/7 service, posing challenges for on-call workers. This underscores the urgent need for 24-h childcare facilities that align with the operational requirements of the NHS. Reforms in this critical area are imperative to address these shortcomings.

Lien vers l'article

Santé psychique

Working hours and depression in the HEAF cohort.

Tomic D, D'Angelo S, Walker-Bone K. *Occup Med (Lond)*. 2025 Oct 7.

BACKGROUND: Long working hours and unemployment adversely affect mental health. Modern policies aim to keep adults working to older ages. AIMS: To explore the bidirectional association between working hours and depression among older workers. METHODS: We used data from the Health and Employment After Fifty (HEAF) longitudinal study of adults aged 50-64 years recruited from English general practices. Participants completed baseline (2013-14) and annual (until 2019) questionnaires, including questions about working hours (<20, 20 to <35, 35-40, >40 h/week) and the Centre for Epidemiologic Studies Depression Scale (scores ≥16 used to define depression). The association between working hours and incident depression, and the reverse association between baseline depression and reducing working hours, were explored using Poisson regression. RESULTS: Of 3866 HEAF participants in paid work without baseline depression, 32% developed incident depression. Those who were financially comfortable and working <20 h (incidence rate ratio (IRR) 1.47, 95% CI 1.11-1.95) and those of intermediate financial status working 20-35 h (IRR 1.26, 95% CI 1.05-1.52) were at increased risk of depression. Among participants with depression at baseline, only men of intermediate financial status were more likely to decrease working hours (IRR 1.19, 95% CI 1.06-1.33) or stop working altogether. CONCLUSIONS: Incident depression was common in this older worker cohort and the risk varied by working hours and financial status. It is important to know more about reasons for leaving work in relation to depression to inform targeted strategies for supporting older adults to remain in work.

Lien vers l'article

The mediating role of internet use in the relationship between working hours and depressive symptoms: an analysis based on cross-lagged models.

Chen M, Liu J. *Front Psychol*. 2025;16:1656773.

BACKGROUND: Amidst the rapid development of the digital economy, prolonged working hours linked to mental health have become a global concern. OBJECTIVE: To examine the longitudinal interplay between working hours and depression, and the mediating role of internet use. METHODS: Utilizing a two-wave longitudinal dataset from the China Family Panel Studies (CFPS) spanning 2016 to 2018, we constructed a dynamic analysis sample of 4,900 workers aged 18-70. We employed cross-lagged panel models and semi-longitudinal mediation models to systematically investigate the bidirectional mechanisms between working hours and depressive symptoms. A key focus was to elucidate the mediating pathways of internet use and its heterogeneity across different groups. RESULTS: The cross-

lagged model revealed that working hours, internet use, and depressive symptoms showed dynamic interplay. Working hours, internet use, and depressive symptoms in 2016 positively predicted their respective outcomes in 2018. 2016 working hours positively predicted 2018 internet use ($\beta = 0.045$, $p < 0.001$) and 2018 depressive symptoms ($\beta = 0.027$, $p < 0.05$). Crucially, 2016 internet use negatively predicted 2018 depressive symptoms ($\beta = -0.032$, $p < 0.01$). The semi-longitudinal mediation model demonstrated that internet use mediated the working hours-depression symptoms link (effect = -0.0013, $p < 0.05$), meaning more work led to more internet use, which then reduced depression. This mediation was significant for women, married women, older adults, and stably employed groups. Furthermore, both online entertainment and online social interaction can significantly reduce the risk of depression, but this effect requires a usage frequency of at least 1-2 times per week. CONCLUSION: Excessive work harms mental health. Internet use mediates this effect, effectively buffering the psychological harm of overwork.

Lien vers l'article

Troubles cognitifs et de la vigilance
Aucun article dans ce bulletin.

Travail posté et de nuit

Généralités et prévention

Scoping review protocol on shift work variables associated with the health, safety, productivity, and well-being of land, air, and maritime transport workers in cargo and passenger services.

Castellucci I, Bravo G, Viviani C. *Medwave*. 2025 Oct 24;25(9):e3093.

INTRODUCTION: Shift work refers to labor arrangements that fall outside the standard daytime schedule and is associated with various health, safety, and productivity concerns. Numerous studies have linked shift work to sleep disturbances, chronic diseases, reduced well-being, and impaired performance. However, there is no consensus in the literature regarding which specific shift variables should be assessed, hindering comparability across studies and the formulation of evidence-based recommendations. OBJECTIVE: To explore which shift work variables have been investigated in the scientific literature in relation to the health, productivity, safety, and well-being of workers in land, air, and maritime transport, in both freight and passenger services. METHODS: A scoping review will be conducted following the PRISMA-ScR guidelines and the Joanna Briggs Institute methodology. The literature search will be performed in PubMed and Scopus, including studies published in English and Spanish between 2015 and March 2025. Two reviewers will independently screen titles, abstracts, and full texts using Rayyan, and extract relevant data using a predefined data charting form. Methodological quality will be assessed using validated tools such as the Mixed Methods Appraisal Tool (MMAT) or the JBI critical appraisal checklists. A narrative synthesis will be used to summarize and map the key findings. EXPECTED RESULTS: This review aims to enhance conceptual and methodological clarity in the study of shift work by providing a structured synthesis of the variables investigated in relation to key occupational outcomes. Findings will be relevant for researchers, occupational health professionals, and policymakers seeking to design more targeted and effective interventions.

Lien vers l'article

Activités physiques

Aucun article dans ce bulletin.

Autres pathologies

Risk for Diabetes From Long Working Hours and Night Work in the United States: Prospective Associations and Machine Learning Techniques.

Keller E, Chen L, Gao F, Li J. *Saf Health Work*. 2025 Sep;16(3):355-60.

BACKGROUND: Diabetes contributes significantly to death in the U.S., with many working-age individuals affected. This research determined the independent and joint associations of long working hours and night work with diabetes risk in U.S. workers, and their contribution to risk prediction. METHODS: This prospective study included 1,454 workers from the Midlife in the United States (MIDUS) study with 9-year follow-up. Long working hours included those working 55 or more hours per week. Night work involved those working 16 or more nights per year. Diabetes was determined by self-reported diagnosis or treatment. Multivariable Poisson regression analysis was applied to examine the prospective association of these work-related factors at baseline with incident diabetes. A gradient boosting machine learning model was used to investigate the contributions of both factors in predicting incident diabetes. RESULTS: Long working hours (RR and 95% CI = 1.60 [1.04, 2.46], $p < 0.05$) and night work (RR and 95% CI = 1.66 [1.05, 2.62], $p < 0.05$) were independently associated with the

risk for diabetes, while controlling for baseline covariates. Gradient boosting analysis suggested long working hours and night work facilitated diabetes incidence. Exposure to both long working hours and night work increased the risk for diabetes (RR and 95% CI = 3.02 [1.64, 5.58], $p < 0.001$), suggesting additive interaction. CONCLUSION: Organizations may consider reducing hours on duty and improving shift systems for primary prevention of diabetes.

Lien vers l'article

Individual and environmental factors influencing the dietary behaviour of healthcare workers during night shifts in the Netherlands: a qualitative study.

van Elk F, Oude Hengel KM, Dros C, Burdorf A, Lammers-van der Holst HM. *J Nutr Sci*. 2025;14:e69.

This qualitative descriptive study aimed to explore dietary habits among healthcare workers during night shifts and to identify individual and environmental factors that influence their dietary behaviour during night shifts. Individual semi-structured interviews were conducted with twenty-five healthcare night female workers, which were recruited via email invitations from managers and posters placed in central workplaces at a university medical centre in the Netherlands. The interview protocol was developed following an integrated behaviour change model focusing on individual (I-Change model, i.e., awareness, motivation, intention, and ability) and environmental (Environmental Research framework for weight Gain prevention at environmental level (EnRG), i.e., physical, policy-related, economic, and sociocultural) factors. Inductive analyses were conducted to explore dietary habits, while deductive thematic analysis was applied to identify potential factors influencing dietary behaviour. Female healthcare workers in night shifts generally made poorer dietary choices during night shifts than during other shifts. Seven key themes were coded for dietary behaviour. Based on the domains of the integrated behaviour change model, four individual and five environmental key themes were established, within which 41 sub-themes were coded. Key individual factors included awareness (i.e., lack of knowledge about timing and type of consumption) and motivation (i.e., attitude and efficacy to eat healthy). Critical environmental factors included physical and sociocultural work environment, organisation of work, and lack of organisational policies. To conclude, future dietary interventions for healthcare night workers should target both individual behaviours and the workplace environment, with an emphasis on raising awareness and enhancing organisational policies to promote healthy dietary habits.

Lien vers l'article

Sleep Disturbances and Metabolic Syndrome in Shift Workers: A Systematic Review.

Park DI, Wegener E. *Metab Syndr Relat Disord*. 2025 Oct;23(8):371-80.

Background: Poor sleep has been identified as a strong risk factor for metabolic syndrome. Shift workers, who often experience reduced and misaligned sleep due to nighttime work schedules, are particularly susceptible to both sleep disturbances and metabolic syndrome. However, the interplay among shift work, sleep disturbances, and metabolic syndrome remains insufficiently explored. This systematic review aimed to critically appraise, compare, and synthesize the current evidence on the pathways linking these factors. Methods: A comprehensive literature search was conducted across major electronic databases and peer-reviewed journals specializing in metabolic disorders and sleep disorders. Two independent reviewers screened titles, abstracts, and full texts for relevance. Methodological quality was assessed using the Newcastle-Ottawa Scale. Results: Out of 4,982 studies identified, 15 met the predefined inclusion criteria, encompassing diverse occupational groups with fixed and rotating shift patterns and totaling 37,147 participants. Most studies demonstrated a positive association between shift work and sleep disturbances, particularly among fixed night shift workers. Longer durations of night shift exposure were linked to increased risk of metabolic syndrome. Notably, reduced sleep quantity was more strongly associated with metabolic syndrome than impaired sleep

quality. The methodological quality of the included studies was moderate to high. Conclusion: This review highlights a consistent association between shift work, sleep disturbances, and metabolic syndrome. Shift work appears to impact both sleep health and metabolic outcomes independently. These findings underscore the need for targeted interventions and longitudinal studies to further elucidate causal pathways and inform occupational health strategies.

Lien vers l'article

Eating behaviors, home meal replacement consumption, and nutrition quotient: a comparative study of male shift and non-shift workers in Chungcheong, Korea.

Lee YJ, Pae M. *Nutr Res Pract*. 2025 Oct;19(5):758-72.

BACKGROUND/OBJECTIVES: Shift work, defined as employment outside standard working hours, is becoming increasingly common in industrialized countries. This study examined the differences in eating behaviors, home meal replacement (HMR) consumption, and nutrition quotient (NQ) between male shift and non-shift workers. SUBJECTS/METHODS: A total of 392 male workers (193 shift workers and 199 non-shift workers) in the Chungcheong region of Korea participated between May and July 2024. Data were collected using a self-administered questionnaire that assessed the general characteristics, eating behaviors, frequency of HMR consumption, perceived importance and satisfaction with the HMR attributes, and NQ. Statistical analyses were conducted using SPSS version 28.0, with $\chi(2)$ tests, independent t-tests, and analysis of covariance. RESULTS: Shift workers were significantly more likely to have lower education levels, lower monthly household income, and to be employed in manufacturing-related jobs than non-shift workers. They also showed more irregular meal timing, frequent late-night eating, higher smoking rates, less frequent physical activity, and poorer perceived sleep quality. Shift workers reported significantly more frequent consumption of specific HMR products, including gimbap/lunchboxes (0.51 vs. 0.37), sandwiches/burgers (0.43 vs. 0.36), microwavable snack foods (0.33 vs. 0.19), and frozen fried rice (0.21 vs. 0.12), based on a frequency score where 1 indicated once per week. No significant differences in the importance or satisfaction with HMR attributes were observed between the groups. In contrast, shift workers exhibited significantly lower total NQ scores (48.75 vs. 51.03), particularly in the balance and moderation domains. CONCLUSION: Shift workers had less favorable eating behaviors, more frequent consumption of certain HMR products, and lower NQ scores than their non-shift counterparts, underscoring the urgent need for targeted public health strategies tailored to work schedules.

Lien vers l'article

The acute effect of night work-related circadian misalignment on headache episodes: Results from the 1001 nights-cohort.

Harmsen R, Hansen JM, Matre D, Arup A, Garde AH, Nabe-Nielsen K. *Headache*. 2025 Oct;65(9):1554-64.

OBJECTIVES: We aimed to investigate the prevalence of headaches on days with night shifts compared with days with day shifts within the same individuals, accounting for work-related psychosocial stressors, physical job demands, and sleep duration and quality. This approach allowed us to isolate the impact of circadian misalignment due to night work from other potential headache triggers. BACKGROUND: Night work has been suggested to increase the risk of headaches, primarily due to circadian misalignment and disturbed sleep. Most previous studies compare night workers with day workers, but differences in job characteristics and tasks between these groups may introduce bias. To minimize this potential bias, we examined headache occurrence under different working conditions (night vs. day shifts) within the same individuals. METHODS: We used data from 14 days of repeated measurements in the 1001 nights-cohort, which includes female employees from the Danish hospital sector. Data were collected from September 2022 to April 2024. Participants completed diaries for 14

consecutive days, providing daily information on working hours, sleep, work-related psychosocial stressors, physical job demands, and headache occurrence (yes/no). Participants with data from at least one day shift and at least one night shift were eligible for inclusion in the analyses. In total, 522 participants contributed 3348 measurement days (1926 day shifts and 1422 night shifts). We estimated prevalence ratios (PRs) for headache occurrence while accounting for repeated measures within individuals and with adjustment for possible confounders (adjusted prevalence ratio [aPR]). RESULTS: Headache was reported on 21.5% of measurement days with day shifts and on 27.9% of measurement days with night shifts. Working a night shift was associated with a significantly higher headache prevalence (aPR, 1.31; 95% confidence interval, 1.13-1.52) compared with day shifts when adjusting for work-related psychosocial stressors, physical job demands, and sleep duration and quality. For consecutive night shifts, the similarly adjusted headache prevalence was highest on the measurement day with the second night shift (aPR, 1.20; 95% confidence interval, 1.02-1.42), using the first night shift as a reference. CONCLUSION: This study is the first to investigate the headache prevalence when working night shifts compared with day shifts while accounting for work-related psychosocial stressors and physical job demands. Neither these factors, nor shorter sleep duration or lower sleep quality, explained the increased headache prevalence observed when participants worked night shifts. Thus, other (cascading) effects and underlying mechanisms of night work-related circadian misalignment may be the primary drivers of headache in night shift workers.

Lien vers l'article

Cancers

Is Night Shift Work Associated with Ovarian Cancer? A Systematic Review and Meta-Analysis.

Arafa A, Alhussein M, Alayyan A, Sheerah HA, Ibrahim MS, Alasmari AS, et al. *Med Sci (Basel)*. 2025 Oct 12;13(4).

Background: Night shift work has been classified as a probable carcinogen due to its disruption of circadian rhythms. However, whether night shift work can increase the risk of ovarian cancer remains unclear. Herein, we investigated this association using a systematic review and meta-analysis. Methods: We systematically searched several databases until June 2025 for relevant studies. Effect estimates were extracted and pooled using a random-effects model to calculate odds ratios (ORs) with 95% confidence intervals (CIs). Heterogeneity across studies was assessed using the I(2) statistic, and publication bias was assessed using Egger's regression test and funnel plot asymmetry. Results: Seven studies (eight cohorts) involving >2.5 million women were included. Overall, night shift work was not significantly associated with ovarian cancer (OR = 1.13; 95% CI: 0.96, 1.32; I(2) = 49%). However, significant associations were observed in case-control studies (OR = 1.36; 95% CI: 1.12, 1.66; I(2) = 0.8%) and in high-quality studies (OR = 1.17; 95% CI: 1.00, 1.37; I(2) = 52%). Sensitivity analyses suggested that exposure misclassification in some cohort studies attenuated risk estimates. No publication bias was detected (z = -0.63, p = 0.53). Conclusions: While the overall findings did not demonstrate a statistically significant association, evidence from case-control studies that collected detailed information about night shift work suggests an increased ovarian cancer risk in night shift workers. Future large-scale prospective studies with detailed exposure assessments are warranted to confirm these findings.

Lien vers l'article

Risque routier, accidentologie

Time worked in shifts and occurrence of drowsiness events while driving: attenuating effect of physical activity.

BACKGROUND: Shift work disrupts circadian rhythms and is associated with adverse sleep outcomes, such as daytime sleepiness and drowsiness while driving. This study aimed to investigate the relationship between history of shift work, drowsiness events during driving, and the potential moderating effect of physical activity. METHODS: A cross-sectional investigation involved 1,413 male shift workers in an iron ore mining firm. Heavy machinery essential to the mining process was operated. A specific question from the Berlin Questionnaire was used to evaluate drowsiness while driving, asking whether participants had ever felt drowsy or fallen asleep while driving, regardless of whether the episode occurred during work-related or leisure-time driving. The main explanatory variable was the shift in working hours. The levels of physical activity were classified as low, moderate, and high using the IPAQ. Multivariate and descriptive logistic regression analyses were conducted. RESULTS: The majority of workers were aged 20 to 34 (45.1%), self-identified as non-white (77.2%), and had completed high school (76.0%). The average history of shift work time was 9.56 years (95% CI: 9.23-9.90), with 76% working for five years or more. Drowsiness events while driving were reported by 17.3% of workers. Multivariate analysis showed a significant association between history of shift work and drowsiness events, indicating a dose-response relationship, where longer history of shift work time increased the likelihood of drowsiness events (OR: 2.93 for 10-15 years; OR: 4.34 for > 15 years). However, physical activity acted as a moderating factor, demonstrating a dose-response effect in reducing this chance, with a reduction of 27.6% and 30.9% for moderate and high levels, respectively, compared to participants with a low level of activity. CONCLUSION: A longer history of shift work time increases the chance of drowsiness events during driving, but higher physical activity levels mitigate them.

Lien vers l'article

RPS et QVT

AI-driven shift scheduling: insights from a pilot in Safra Children's Hospital.

Lien vers l'article

Dialysis session timing and outcomes: mortality and hospitalization differences across morning, afternoon, and night shifts in hemodialysis patients.

The study aims to investigate the association between dialysis shift and all-cause death and hospitalization among patients on hemodialysis (HD). In this single-center retrospective analysis, we enrolled 395 patients on HD who received treatment at our center on June 1, 2022, with a 2-year follow-up period. Participants were grouped into three dialysis shifts: morning shift, afternoon shift, and night shift. The primary outcome was all-cause mortality. The secondary outcome was hospitalizations and the association between hospitalization and clinical parameters. A total of 395 patients were analyzed for all-cause mortality. Kaplan-Meier analysis revealed a significantly elevated mortality among afternoon-shift patients compared to other shift groups (p = 0.013). Multivariable Cox

regression confirmed that afternoon-shift was independently associated with an increased risk of mortality (adjusted HR 1.697, 95% CI 1.028-2.804). During a follow-up of two years, the remaining 272 surviving patients were evaluated for hospitalization events. The total number of hospitalization events and hospitalization per person-year were significantly lower in the night-shift group compared to other shifts. Furthermore, this group demonstrated the lowest incidence of access-related/HD-related hospitalization. Subsequent analyses identified: (1) negative association between SpKt/V and non-access-related events; (2) negative association between serum calcium and all-cause hospitalization; (3) negative correlation between left ventricular ejection fraction and access-related/HD-related events. Dialysis shift is associated with all-cause mortality and hospitalizations among patients on HD. However, this relationship is not directly driven by the temporal effects of the shift but rather by the fact that individuals with similar clinical characteristics tend to choose the same shift, leading to shift-specific differences in health outcomes.

[Lien vers l'article](#)

Job Satisfaction, Quality of Life, and Turnover Intention Among Nurses: A Comparative Study of Pattern-Based and Rotating Shift Schedules.

Jung YJ, Kim H. *Healthcare (Basel)*. 2025 Oct 10;13(20).

Background/Objectives: Shift work among nurses is associated with adverse outcomes, such as low job satisfaction, reduced quality of life, and high turnover intention. A pattern-based shift system has recently been introduced to provide more predictable and regular schedules. However, empirical research directly comparing the pattern-based shift system with traditional rotating shifts is lacking. Therefore, this study compared job satisfaction, quality of life, and turnover intention between nurses working under a pattern-based shift system and those working under a traditional rotating shift system. Methods: In total, 112 nurses (56 on a rotating shift and 56 on a pattern-based shift) were surveyed in this cross-sectional study. Job satisfaction was assessed using the Job Satisfaction Scale for Clinical Nurses, specifically developed for Korean nurses. Quality of life was measured using the Scale for Korean Adults' Quality of Life. The Turnover Intention Measurement Tool, developed for Korean nurses, was used to evaluate turnover intention. Results: Nurses working under a pattern-based shift system reported significantly higher job satisfaction and quality of life than those in a traditional rotating shift system. No significant difference in turnover intention was observed between the two groups. Conclusions: Pattern-based shift systems were associated with higher job satisfaction and quality of life than traditional rotating shift systems; however, their impact on turnover intention was not significant. These findings highlight the need for comprehensive strategies in scheduling reform, as schedule predictability may improve nurses' job satisfaction and quality of life but appears insufficient to reduce turnover intention, which is likely shaped by broader organizational and psychosocial factors.

[Lien vers l'article](#)

Anesthesia Practice Shift Scheduling With a Generative Deep Learning Model.

Emeneker W, Heape S, Hartman G, Gillespie M, Perkins S. *Cureus*. 2025 Sep;17(9):e91800.

Anesthesiology scheduling techniques are inadequate to appropriately deal with modern anesthesia practice demands. Anesthesiologists are increasingly dissatisfied with their jobs in the face of inflexible schedules, increasing workload, and the complexity of practice. Decreasing autonomy and inherent responsibility lead to burnout and decreased job satisfaction. Unfortunately, equitable and timely shift scheduling that meets individual provider expectations remains a distant mirage. Technology has been promised as a means to decrease workload and improve productivity. But technology has not met these expectations. In real-world anesthesia practice, scheduling remains contentious and time-consuming. These failures are somewhat attributable to current scheduling systems and software. In

this paper, we present an alternative method of anesthesiology shift scheduling using advances in machine learning (ML). The development of this deep learning (DL) model for shift scheduling drastically reduces the effort required to create shift schedules that comply with the rules and regulations observed by anesthesia practices. A DL model architecture is developed, trained with shift schedule data from the Reno-Tahoe Anesthesia (RTA) group, and evaluated against the practice requirements. The DL model trained and evaluated demonstrates a Matthews Correlation Coefficient (MCC) of 0.9776 and balanced accuracy of 0.9531. The trained model reliably learns practice scheduling rules sufficient to generate new shift schedules in compliance with the rules. Furthermore, the trained model learns practice rules solely from past examples without requiring a human expert to codify the rules.

Lien vers l'article

Improving flexible working through electronic team rostering in 24-hour care settings.

Cooper L, Taylor S. *Nurs Manag (Harrow)*. 2025 Oct 28.

Flexible working is a priority highlighted by the NHS Long Term Workforce Plan. However, flexible working options can be limited when it comes to wards that operate shift patterns designed to cover a 24-hour-period, with staff expected to work a variety of shifts, including night shifts, which can be detrimental to their health and well-being. The service evaluation detailed in this article trialled the use of electronic team rostering (ETR) across two hospital departments providing 24-hour care. The evaluation surveyed 130 nurses to compare their experience of the baseline rostering system (a mixed paper and electronic system) and ETR. The survey sought to measure nurses' rostering satisfaction, the fairness of each system and the effect on nurses' work-life balance and well-being. The findings indicated that while some nurses identified system issues with the ETR, there were overall improvements in job satisfaction and perceptions of fairness, work-life balance and well-being.

Lien vers l'article

Childcare provision for on-call workers in the NHS: Is the 24/7 service ideal matched by reality?

Cain D, Hickson B, Parker P. *Surgeon*. 2025 Oct 22.

BACKGROUND: The National Health Service (NHS) in the UK aims to deliver healthcare services around the clock. Major Trauma Centres (MTCs) are crucial in this operation, requiring continual 24/7 operations. Despite ef**: Is the 24/7 service ideal matched by reality?**

Cain D, Hickson B, Parker P. *Surgeon*. 2025 Oct 22.

BACKGROUND: The National Health forts to provide on-site nurseries catering to children aged 3 months to 5 years, there remains a significant gap in childcare provision for on-call workers. This shortfall particularly affects surgeons, nurses and military medical personnel whose shifts extend beyond standard nursery operating hours. This discrepancy raises concerns about the sufficiency of support for healthcare professionals with irregular schedules. AIMS: This study delves into the existing childcare facilities in NHS major trauma centres, aiming to identify challenges faced by on-call workers and propose strategies to bridge this childcare gap. By addressing these issues, the study contributes to discussions on how to best support healthcare professionals working 24/7 while ensuring the well-being of their children. METHODS: The research involved a review of in-house childcare facilities across all 27 MTCs in England. Data from named nurseries affiliated with the MTC official NHS websites were examined, including nursery names, capacity, operating hours, and available services such as weekend placements and emergency out-of-hours cover. RESULTS: Results showed that out of 27 MTCs, 26 had on-site nurseries. However, only a fraction of these operated beyond standard hours, with none offering emergency or weekend services. This highlighted a significant deficit in comprehensive

childcare support. The lack of childcare services tailored to the irregular schedules of NHS workers might impact career choices. This discrepancy sharply contrasts with childcare benefits provided in the private sector and government settings. CONCLUSION: The current NHS childcare provision falls short of meeting the demands of a 24/7 service, posing challenges for on-call workers. This underscores the urgent need for 24-h childcare facilities that align with the operational requirements of the NHS. Reforms in this critical area are imperative to address these shortcomings.

Lien vers l'article

Does Working in Shifts Matter? A Comparative Study of Occupational Balance and Health Promoting Lifestyle Profile in Healthcare Workers.

Arslan Ö B, Fırat E, Abaoğlu H. *J Occup Environ Med*. 2025 Oct 7.

Objective: This study aimed to examine the impact of shift work on occupational balance and health-promoting lifestyle profile among healthcare workers.Methods: The study included 248 healthcare professionals working in public hospitals. Participants were divided equally into shift and non-shift work groups. Data were collected using a demographic information form, the Occupational Balance Questionnaire (OBQ), and the Health-Promoting Lifestyle Profile II (HPLP II).Results: Non-shift workers reported higher OBQ scores and higher scores in the spiritual growth, stress management dimensions, and total score of the HPLP II scale compared to shift workers. Work schedule was a significant predictor of occupational balance. Demographic differences such as age, gender, marital status, work experience, and income-expenditure balance varied between groups.Conclusions: Shift work negatively affects occupational balance and certain dimensions of health-promoting lifestyle profile in healthcare workers.

Lien vers l'article

Night-shift neuroradiology under pressure: what trends from a Dutch academic center tell us about future necessities.

Keil VC, Kist JW. *Eur Radiol*. 2025 Oct 17.

Lien vers l'article

Santé psychique
Aucun article dans ce bulletin.

Troubles cognitifs et de la vigilance
Mechanism, contributing factors, and coping strategies of alarm fatigue in intensive care nursing: a qualitative study.

Zhu L, Wei S, An Y, Hu W, Xie X. *Front Public Health*. 2025;13:1654389.

OBJECTIVE: To explore the mechanism, contributing factors of alarm fatigue among nurses in Intensive Care Units (ICUs), and to develop targeted coping strategies. METHODS: A combination of purposive and snowball sampling was employed to recruit 27 frontline clinical nurses from various ICU departments. Semi-structured interviews were conducted, and an inductive content analysis of the interview transcripts was performed based on Cognitive Load Theory and the Job Demands-Resources Model. RESULTS: The study found that alarm fatigue involves dynamic shifts among three cognitive

states-cognitive reserve deficit, cognitive load balance, and cognitive overload-with overload being the immediate trigger. Nurses often enter ICU work with limited cognitive reserves. Whether they maintain balance or enter overload depends on the intensity of alarm-related demands and the availability of supportive resources. High-intensity demands for alarm response, such as high alarm frequency, persistent false alarms, multitasking, night shifts, and work-family conflict, are risk factors for alarm fatigue. Resources for alarm response may function as either effective or inadequate support, aligning with protective or risk factors, respectively. Effective support helps alleviate cognitive load and includes effective team collaboration, management's emphasis on alarm management, comprehensive theoretical training, high psychological adaptability, a strong sense of responsibility, and extensive work experience. Conversely, inadequate support increases cognitive load and includes lack of practical training, absence of formal regulations, outdated and malfunctioning equipment, crowded and noisy layout, emotional personality traits, insufficient or poor sleep, and suboptimal health status. CONCLUSION: Cognitive load as a mechanism linking the interaction between alarm response demands and available resources in the development of alarm fatigue among ICU nurses. To mitigate alarm fatigue, it is essential to reduce the intensity of alarm demands while enhancing resource support to relieve cognitive load. Organizational efforts should optimize alarm systems, establish formal protocols, and provide comprehensive training. Teams should reinforce collaboration and mutual support. Individually, nurses are encouraged to enhance psychological self-regulation and maintain sufficient sleep and physical health.

Lien vers l'article

Effects of Shift Work on Cognitive and Motor Performance in Nurses: A Systematic Review and Meta-Analysis.

Ulupınar F, Ulupınar S. *Worldviews Evid Based Nurs*. 2025 Oct;22(5):e70078.

BACKGROUND: Shift work-especially during night hours-adversely affects nurses' cognitive and motor performance, potentially compromising patient safety. Variations in shift duration and rotation patterns contribute to these effects. Implementing evidence-based strategies such as optimized scheduling, structured rest breaks, and supportive work environments may mitigate performance declines. These findings highlight the importance of organizational policies aimed at protecting both healthcare workers and patient outcomes. METHODS: A comprehensive search across PubMed, Cochrane Library, and Web of Science identified 22 studies with 224 comparison data points for inclusion. Study quality was assessed using the ROBINS-I tool across seven bias domains. Analyses were performed using Python, applying random-effects models to account for heterogeneity (Cochran's Q, I^2), with Egger's test used for publication bias assessment. RESULTS: Day shifts led to a small performance decline (Hedges' $g = 0.238$, 95% CI [0.155, 0.321]), while night shifts caused a more substantial decline (Hedges' $g = 0.386$, 95% CI: 0.320 to 0.451). Motor performance across all shift types showed a moderate effect size (Hedges' $g = 0.326$, 95% CI [0.210, 0.442]). Comparing day shifts to nonstandard shifts, a small effect size (Hedges' $g = 0.220$, 95% CI [0.171, 0.269]) highlighted reduced performance under irregular shift conditions. High heterogeneity in night shifts ($I^2 = 86.8\%$) suggested variability in study designs and methodologies. LINKING EVIDENCE TO ACTION: Shift work, particularly night shifts, negatively impacts cognitive and motor performance, posing risks to clinical safety. The variability in shift durations (6-17 h) and different shift rotation strategies contributed to heterogeneity. Targeted interventions, including optimized scheduling, adequate rest breaks, and supportive workplace practices, are needed to mitigate negative effects. This meta-analysis provides evidence-based insights into the detrimental effects of shift work on nurses' performance, supporting the development of policies and strategies to promote safer clinical environments and enhance healthcare quality. TRIAL REGISTRATION: PROSPERO.

Lien vers l'article

A Systematic Review of Literature on the Association Among Sleep, Cortisol Level and Cardiovascular Health Within the Healthcare Shift Worker Population.

Sukor ANA, Juliana N, Abdul Hamid N, Teng N, Ithnin M, Azmani S, et al. *Biomedicines*. 2025 Oct 17;13(10).

Shift workers are commonly associated with circadian misalignment due to irregular working hours, which often leads to poor sleep quality and is associated with HPA axis misalignment and changes in cardiovascular outcome. Background: This systematic review aimed to investigate the association between cortisol production and cardiovascular health with sleep quality in healthcare shift workers. Methods: A comprehensive search of PubMed, Web of Science, and Scopus was conducted for studies published between 2010 and 2025, according to PRISMA guidelines. Fourteen studies met the inclusion criteria. Results: Among the included studies, eight studies focused on the relationship between sleep quality and cortisol regulation, five studies investigated the link between sleep quality and cardiovascular health, and one study examined sleep quality, cortisol regulation, and cardiovascular outcome. A significant relationship between cortisol and sleep quality was observed, as lower cortisol levels upon awakening were associated with low sleep quality. Several studies reported that sleep disturbances were associated with adverse cardiovascular outcomes, including reduced heart rate variability (HRV) and increased risk of metabolic syndrome. Conclusions: This review highlights existing literature on the critical role of sleep quality as a key factor in cortisol level and cardiovascular health in shift workers, along with the factors influencing circadian rhythm.

Lien vers l'article

Time worked in shifts and occurrence of drowsiness events while driving: attenuating effect of physical activity.

de Menezes-Júnior LAA, de Oliveira FLP, Machado-Coelho GLL, Pimenta FAP, do Nascimento Neto RM, de Freitas SN. *BMC Public Health*. 2025 Oct 8;25(1):3393.

BACKGROUND: Shift work disrupts circadian rhythms and is associated with adverse sleep outcomes, such as daytime sleepiness and drowsiness while driving. This study aimed to investigate the relationship between history of shift work, drowsiness events during driving, and the potential moderating effect of physical activity. METHODS: A cross-sectional investigation involved 1,413 male shift workers in an iron ore mining firm. Heavy machinery essential to the mining process was operated. A specific question from the Berlin Questionnaire was used to evaluate drowsiness while driving, asking whether participants had ever felt drowsy or fallen asleep while driving, regardless of whether the episode occurred during work-related or leisure-time driving. The main explanatory variable was the shift in working hours. The levels of physical activity were classified as low, moderate, and high using the IPAQ. Multivariate and descriptive logistic regression analyses were conducted. RESULTS: The majority of workers were aged 20 to 34 (45.1%), self-identified as non-white (77.2%), and had completed high school (76.0%). The average history of shift work time was 9.56 years (95% CI: 9.23-9.90), with 76% working for five years or more. Drowsiness events while driving were reported by 17.3% of workers. Multivariate analysis showed a significant association between history of shift work and drowsiness events, indicating a dose-response relationship, where longer history of shift work time increased the likelihood of drowsiness events (OR: 2.93 for 10-15 years; OR: 4.34 for > 15 years). However, physical activity acted as a moderating factor, demonstrating a dose-response effect in reducing this chance, with a reduction of 27.6% and 30.9% for moderate and high levels, respectively, compared to participants with a low level of activity. CONCLUSION: A longer history of shift work time increases the chance of drowsiness events during driving, but higher physical activity levels mitigate them.

Lien vers l'article

Département EAM

Auricular acupressure combined with auricular acupoint massage enhances cognitive function in night shift nurses: a P300 wave analysis.

Li X, Zhang Z, Xiao L, Zhang X, Yao H, Li F, et al. *Front Hum Neurosci*. 2025;19:1626528.

OBJECTIVES: Night-shift work is associated with cognitive impairments, but convenient, effective, and acceptable traditional Chinese medicine-based interventions remain limited. This study aimed to evaluate the effects of auricular acupressure combined with auricular acupoint massage on cognitive function in night-shift nurses, using P300 wave parameters from electroencephalography analysis as objective metrics. METHODS: Eighty nurses (40 days-shift, 40 night-shift) participated. The intervention included auricular acupressure and massage targeting six points, performed daily for 4 weeks. Cognitive function was assessed using the Insomnia Severity Index (ISI), Montreal Cognitive Assessment (MoCA) and Mini-Mental State Examination (MMSE). P300 amplitude and latency were measured. RESULTS: Night-shift nurses had significantly higher ISI scores and lower MoCA attention, memory, and total scores compared to day-shift nurses (all p < 0.05). Before the intervention, After FDR correction for multiple comparisons, P300 amplitude was significantly lower at the T4 electrode site (q = 0.020) in the night-shift group. P300 latency remained significantly prolonged at sites Fz (q = 0.020), F3 (q < 0.001), F4 (q = 0.035), and T5 (q = 0.033). Post-intervention, the night-shift group demonstrated significant increases in P300 amplitude at F3, F4, T3, T4, T5, and T6 (all q < 0.05) and significant reductions in P300 latency at Fz, F4, F7, T5, and T6 (all q < 0.05). Notably, several sites with affected P300 amplitude and latency before the intervention showed significant improvement following intervention. CONCLUSION: Auricular acupressure and massage significantly improved cognitive function in night-shift nurses, evidenced by enhanced P300 parameters. This non-invasive, cost-effective intervention shows promise for alleviating cognitive impairments from shift work.

Lien vers l'article

Associations Between Salivary Cortisol, DHEA-S, and Alpha-Amylase and Longitudinal Sleep Disruption in Shift-Working Healthcare Professionals: A Pilot Study.

Salahuddin MF, Sukararuji K, Sharifi M, Odia KAF, Manzar MD, Pandi-Perumal SR, et al. *Nat Sci Sleep*. 2025;17:2611-23.

BACKGROUND: Shift work is a well-established disruptor of sleep, yet the biological mechanisms driving sleep disturbances remain poorly understood. Salivary cortisol (HPA axis), α-amylase (sympathetic-adrenomedullary output), and DHEA-S (adrenal androgen with anti-glucocorticoid/resilience properties) are candidate indicators of stress-related sleep disruption. We therefore examined whether changes in these biomarkers were associated with 6-month sleep trajectories in health professionals. METHODS: In a prospective 6-month repeated-measures design, 52 healthcare professionals (daytime vs rotating shifts; mean age 31.4 ± 9.4 years; 57% female) completed validated sleep assessments, PROMIS Sleep Disturbance, PROMIS Sleep Impairment, the Sleep-Wake Disorder Index (SWDI), and the NIH 7-day Sleep Diary, at baseline and six-month follow-up. Salivary cortisol, Dehydroepiandrosterone Sulfate (DHEA-S), and alpha-amylase were collected on the morning of Day 7 of each diary period. Change scores (Δ = follow-up - baseline) were computed. Repeated-measures ANOVA, Pearson correlations, and multivariable regressions assessed group differences and biomarker-sleep associations. RESULTS: Compared with daytime workers, rotating shift workers reported significantly greater increases in sleep disturbance, impairment, and reduced sleep efficiency over time (all p < 0.05). Reductions in cortisol and alpha-amylase were significantly associated with worsening PROMIS Sleep Disturbance and SWDI scores (r = -0.65 and -0.53, respectively; p < 0.05). Multivariable regression showed that decreased cortisol (β = -41.845, p = 0.0064) and increased DHEA-S (β = 0.001, p = 0.0405) associated with worsening PROMIS Sleep Impairment. A combined model including reduced cortisol, and increased DHEA-S associated with greater PROMIS Sleep Disturbance (adjusted R² = 0.698). CONCLUSION: In this pilot, changes in

salivary cortisol and DHEA-S were associated with longitudinal changes in sleep. These results suggest potential utility for biomarker-informed risk stratification, warranting confirmation in larger, controlled studies.

Lien vers l'article

Sleep Disturbances and Metabolic Syndrome in Shift Workers: A Systematic Review.

Park DI, Wegener E. *Metab Syndr Relat Disord*. 2025 Oct;23(8):371-80.

Background: Poor sleep has been identified as a strong risk factor for metabolic syndrome. Shift workers, who often experience reduced and misaligned sleep due to nighttime work schedules, are particularly susceptible to both sleep disturbances and metabolic syndrome. However, the interplay among shift work, sleep disturbances, and metabolic syndrome remains insufficiently explored. This systematic review aimed to critically appraise, compare, and synthesize the current evidence on the pathways linking these factors. Methods: A comprehensive literature search was conducted across major electronic databases and peer-reviewed journals specializing in metabolic disorders and sleep disorders. Two independent reviewers screened titles, abstracts, and full texts for relevance. Methodological quality was assessed using the Newcastle-Ottawa Scale. Results: Out of 4,982 studies identified, 15 met the predefined inclusion criteria, encompassing diverse occupational groups with fixed and rotating shift patterns and totaling 37,147 participants. Most studies demonstrated a positive association between shift work and sleep disturbances, particularly among fixed night shift workers. Longer durations of night shift exposure were linked to increased risk of metabolic syndrome. Notably, reduced sleep quantity was more strongly associated with metabolic syndrome than impaired sleep quality. The methodological quality of the included studies was moderate to high. Conclusion: This review highlights a consistent association between shift work, sleep disturbances, and metabolic syndrome. Shift work appears to impact both sleep health and metabolic outcomes independently. These findings underscore the need for targeted interventions and longitudinal studies to further elucidate causal pathways and inform occupational health strategies.

Lien vers l'article

Cross-Sectional Analysis of Sleep Quality and Vascular Health in Shift- and Day-Working Nurses.

Saharov G, Salti B, Bareya M, Keren-Politansky A, Nadir Y, Shochat T. *Clocks Sleep*. 2025 Oct 11;7(4).

Sleep disturbances and shift work are associated with increased cardiovascular risk, possibly through disruptions in endothelial and hemostatic function. While prior studies link acute sleep deprivation to vascular dysfunction, the impact of chronic sleep quality and circadian misalignment on endothelial health in healthy individuals, particularly shift workers, remains underexplored. The aim of this study was to examine the association between objectively measured sleep quality and endothelial/hemostatic function in healthy female hospital nurses, comparing shift and day workers, and considering time-of-day variation. In this repeated-measures study, 100 female nurses (51 shift, 49 day workers) aged 25-50 wore actigraphy devices for 7-14 days to assess total sleep time (TST), sleep efficiency (SEF), and wake after sleep onset (WASO). Endothelial function was measured using EndoPAT (Reactive Hyperemia Index-RHI). Hemostatic markers included plasminogen activator inhibitor-1 (PAI-1), von Willebrand factor (VWF), heparanase and heparanase procoagulant activity assessed by ELISA, and chromogenic assays in morning and evening. TST was not associated with any vascular outcomes. Poor sleep quality (low SEF, high WASO) was significantly associated with reduced RHI and elevated PAI-1 level, heparanase level, and heparanase procoagulant activity levels. Regression models revealed significant main effects of SEF and WASO on endothelial and coagulation markers, with some interactions depending on shift type and time of measurement. No significant associations were found for VWF. Impaired sleep quality, but not sleep duration, is associated with endothelial dysfunction and procoagulant activation, particularly among shift-working nurses. These

findings suggest that sleep quality may play a critical role in vascular health and support the use of sleep-based interventions to reduce cardiovascular risk in shift-working populations.

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

Aucun article dans ce bulletin.

Cancers

Association of Occupational and Lifestyle Factors with Mammography-Detected Breast Neoplasia.

Almilaibary A, H FEB. *Med J Islam Repub Iran*. 2025;39:72.

BACKGROUND: Breast cancer is the most common malignancy affecting women, with higher mortality and morbidity. The early identification and diagnosis are the cornerstone of successful treatment and reduction of morbidity and mortality. Mammography is the gold standard screening tool. This work is designed to investigate the potential association between breast cancer and environmental factors related to lifestyle. METHODS: A cross-sectional study was done by collecting data from medical records of patients diagnosed with early diagnosed and well-established diabetes mellitus attending our university hospital; 300 women were screened by mammography for breast cancer. Women with positive results were assigned as the study group (n=39), while women with negative results were assigned as the control group (n=261). All were evaluated by the standard clinical approaches, and a pre-prepared questionnaire was used to collect data about social, environmental, and lifestyle factors. The collected data were submitted to statistical analysis using the Statistical Package for Social Science for Windows, version 20 (IBM, Chicago, USA). RESULTS: There was significant increase (P<0.001) of body mass index, hormone replacement therapy, age at first and last deliveries age at last baby and wearing tight bra; while there was significant decrease (P<0.001) of menarche, number of living children, mean age of weaning, and breast feeding in the study than the control group. In addition, there was significant increase (P<0.001) of long duration or night shift work, exposure to dangers at work, passive smoking, and use of kohl, drugs, crowding index, old painting, non-cemented ground, TV at bed rooms, pesticide exposure in the study than the control group. With multiple regression analysis, the early menarche, use of hormone replacement therapy, older age at first or last delivery, number of living children, mean age at weaning, breast feeding, tight bra, exposure to dangers at work, passive smoking, use of cosmetics (kohl), persons at home and crowding index remains the significant (P<0.001) associates with detected breast cancer. CONCLUSION: This study used mammography as the gold-standard detection tool to identify neoplasia cases and analyze their association with environmental and occupational risk factors.

[Lien vers l'article](#)

Aucun article dans ce bulletin.

RPS et QVT

Empathy, Burnout, and Perceived Stress Among Postgraduate Medical Trainees in India: A Cross-Sectional Study.

Lal JV, Mirza K, Krishnakumar M, Johnson RC, D'Souza MC. *Indian J Orthop*. 2025 Oct;59(10):1744-52.

BACKGROUND: Specialty training has eroded empathy among residents, worsening burnout and perceived stress. With long working hours, limited resources and the need for a competent and compassionate workforce in India, the dearth of literature on burnout, empathy and stress among trainees is apparent. OBJECTIVE: We assessed the prevalence of empathy among postgraduate residents in India in correlation with burnout and perceived stress. METHODS: This was a cross-sectional descriptive multicenter study conducted in India in 2024. An anonymous tailored questionnaire was disseminated to postgraduate residents in India using google forms. Empathy and perceived stress were assessed using Short-Form 8-Item Empathy Quotient (EQ-8) questionnaire and Perceived Stress Scale-4 (PSS-4) respectively. Burnout was assessed using components of Maslach Burnout Index. RESULTS: 249 of 400 invited residents (response rate: 62.25%) participated in this study. Women had higher mean EQ-8 scores (men: 7.5 ± 3.5, women: 9.1 ± 3.5, $p = 0.000$) and lower PSS-4 ($p = 0.000$). Residents identifying as mentors to juniors had significantly higher EQ-8 ($p = 0.009$), significantly lower PSS-4 ($p = 0.014$), and lower EE ($p = 0.011$) and DP ($p = 0.011$). Long working hours with less time to study and for personal endeavors was significantly associated with lower PSS-4, lower EE, and lower DP scores. There was a linear correlation between DP and PSS-4, and EE and PSS-4, irrespective of EQ-8. CONCLUSION: Women and residents identifying as mentors to juniors had significantly higher empathy. Female residents and those working in a supportive environment with fewer working hours were less burnt out and less stressed. SUPPLEMENTARY INFORMATION: The online version contains supplementary material available at 10.1007/s43465-025-01491-6.

Lien vers l'article

Assessing the range of deployment for an intra-hospital medical emergency team.

Heinold F, Moerer O, Wieditz J, Harnisch LO, Struk T. *Intern Emerg Med*. 2025 Oct;20(7):2103-10.

Medical emergency teams (MET) play a crucial role in managing hospital emergencies. This single-center, retrospective cohort study at the University Medical Center Göttingen examines deployment patterns and operational challenges. Using the National Advisory Committee for Aeronautics (NACA) score, it assesses case severity, emergency care trends, and the influence of location and timing on patient outcomes. All MET calls handled by the Department of Anesthesiology from June 2019 to June 2023 were analyzed based on emergency documentation. 522 emergency protocols were analyzed. The most common reasons for MET activation were cardiovascular problems (32%), resuscitation (22%) and respiratory distress (15%). ROSC was achieved in 54.4% of CPR cases (62 out of 114 patients). On weekends, distribution of NACA scores shifted towards higher scores, $OR = 1.831$ (95% CI [1.298-2.583], $p = 0.001$). The severity of cases varied significantly between emergency locations (NACA score ≥ 5: public area: 1.3%, general ward: 56,8%, IMC: 65,2% and ICU: 86,8%, $p < 0.001$). There is a significant positive rank correlation of 0.566 (95%-CI [0.505-0.622], $p < 0.001$) between the NACA score and the duration of MET deployment. Severe emergencies (NACA 5-7) mainly occur on weekends and during late/night shifts, requiring specialized support. Higher NACA scores correlate with prolonged deployments, often exceeding 60 min. Optimizing alert systems and personnel planning is crucial for sustaining patient safety and care continuity.

Lien vers l'article

Empathy, Burnout, and Perceived Stress Among Postgraduate Medical Trainees in India: A Cross-Sectional Study.

Lal JV, Mirza K, Krishnakumar M, Johnson RC, D'Souza MC. *Indian J Orthop*. 2025 Oct;59(10):1744-52.

BACKGROUND: Specialty training has eroded empathy among residents, worsening burnout and perceived stress. With long working hours, limited resources and the need for a competent and compassionate workforce in India, the dearth of literature on burnout, empathy and stress among trainees is apparent. OBJECTIVE: We assessed the prevalence of empathy among postgraduate residents in India in correlation with burnout and perceived stress. METHODS: This was a cross-sectional descriptive multicenter study conducted in India in 2024. An anonymous tailored questionnaire was disseminated to postgraduate residents in India using google forms. Empathy and perceived stress were assessed using Short-Form 8-Item Empathy Quotient (EQ-8) questionnaire and Perceived Stress Scale-4 (PSS-4) respectively. Burnout was assessed using components of Maslach Burnout Index. RESULTS: 249 of 400 invited residents (response rate: 62.25%) participated in this study. Women had higher mean EQ-8 scores (men: 7.5 ± 3.5, women: 9.1 ± 3.5, $p = 0.000$) and lower PSS-4 ($p = 0.000$). Residents identifying as mentors to juniors had significantly higher EQ-8 ($p = 0.009$), significantly lower PSS-4 ($p = 0.014$), and lower EE ($p = 0.011$) and DP ($p = 0.011$). Long working hours with less time to study and for personal endeavors was significantly associated with lower PSS-4, lower EE, and lower DP scores. There was a linear correlation between DP and PSS-4, and EE and PSS-4, irrespective of EQ-8. CONCLUSION: Women and residents identifying as mentors to juniors had significantly higher empathy. Female residents and those working in a supportive environment with fewer working hours were less burnt out and less stressed. SUPPLEMENTARY INFORMATION: The online version contains supplementary material available at 10.1007/s43465-025-01491-6.

Lien vers l'article

Characterizing potential subtypes and influencing factors of burnout in emergency department nurses by latent profile analysis.

Lan L, Chen X, Zhang H, Zhong L, Ye L. *Front Public Health*. 2025;13:1654398.

OBJECTIVE: This study aims to explore the heterogeneity of burnout among emergency department nurses, identify the factors influencing burnout in different subtypes of emergency nurses, and provide targeted strategies and measures to reduce burnout in emergency department nurses. METHODS: A cross-sectional survey was conducted from December 26, 2023, to January 18, 2024, involving 1,555 emergency nurses from 30 tertiary hospitals in China. The survey was distributed via an online questionnaire platform, which included general demographic information and the Maslach Burnout Inventory (MBI). The collected data were analyzed using latent profile analysis, Kruskal-Wallis H test, and multiple logistic regression. RESULTS: A total of 1,555 questionnaires were sent out in this survey, and finally 1,540 were included for data analysis. The average burnout score among emergency nurses was (4.77 ± 6.16). Occupational burnout could be categorized into three subtypes: low burnout-low professional efficacy (C1), low burnout-high professional efficacy (C2), and high burnout-low professional efficacy (C3). The proportions of these subtypes were 41%, 32.3%, and 26.7%, respectively. Significant differences in the latent categories of burnout were observed for age ($\chi(2) = 31.749$, $P < 0.001$), education level ($\chi(2) = 6.778$, $P = 0.034$), professional title ($\chi(2) = 21.928$, $P < 0.001$), years of work ($\chi(2) = 29.269$, $P < 0.001$), weekly working hours ($\chi(2) = 52.493$, $P < 0.001$), number of night shifts ($\chi(2) = 34.685$, $P < 0.001$), and monthly income ($\chi(2) = 18.994$, $P < 0.001$). CONCLUSION: Occupational burnout is prevalent among emergency nurses, with significant heterogeneity in burnout types. Burnout is associated with age, education level, professional title, number of night shifts, weekly

working hours, and monthly income. The heterogeneity of burnout subtypes and their influencing factors provides a basis for future personalized interventions.

Lien vers l'article

Analysis of factors affecting mental health of automobile manufacturing workers based on structural equation modeling.

Pang S, Chen F, Liang X, Cai D, Ye M. *Work*. 2025 Oct 28:10519815251388936.

BackgroundDue to the unique nature of their work, automotive manufacturing workers are prone to mental health issues. However, in China, few studies have explored the interactive mechanisms among factors affecting their mental health.ObjectiveThis study analyzes the mental health status of workers in the automotive manufacturing industry in Chongqing, China, aiming to provide assistance in improving their mental well-being.MethodsUsing the stratified cluster sampling method, 1296 survey subjects were randomly selected. Data were collected through a questionnaire survey and analyzed using structural equation modeling.ResultsThe prevalence of mental health problems was 20.91%. The results of univariate analysis showed that gender, age, marital status, average weekly working hours, and the need to work night shifts had varying degrees of effect on workers' mental health ($P < 0.05$). Structural equation modeling showed that occupational health literacy, work-related musculoskeletal disorders (WMSDs), and working time arrangement all had an effect on mental health, with total effects of -0.153, 0.269, and 0.204, respectively, with occupational health literacy having an indirect effect of -0.034 on mental health through WMSDs.ConclusionsThe detection rate of mental health problems among automobile manufacturing workers in Chongqing is high, and the level of occupational health literacy, the occurrence status of WMSDs, and the schedule of working hours are related to the occurrence of mental health problems, with WMSDs having the greatest impact on the mental health of manufacturing workers.

Lien vers l'article

Burnout among trauma surgeons: a systematic review and meta-analysis.

Kirdar-Smith S, Knight A, Twumasi R. *Trauma Surg Acute Care Open*. 2025;10(4):e001873.

BACKGROUND: Burnout is increasingly recognized as a critical occupational issue impacting physician well-being and patient care. Although surgeons are known to experience high burnout rates, the specific burden among trauma surgeons remains poorly researched. This systematic review and meta-analysis focuses on burnout exclusively among trauma surgeons. We aim to analyze the prevalence of burnout among trauma surgeons and identify associated factors by analyzing their alleviating and exacerbating influences through systematic review, meta-analysis, and meta-regression. METHODS: Following PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) and MOOSE (Meta-analysis of Observational Studies in Epidemiology) guidelines, we used a combination of searching databases, individual journals and cross-referencing. Two independent reviewers screened studies measuring burnout in trauma surgeons. A random-effects meta-analysis was performed using logit-transformed proportions. Heterogeneity was assessed using I^2 statistics and meta-regression examined the impact of measurement tools. RESULTS: Analysis of 19 studies (n=4,634) revealed a pooled burnout prevalence of 60.0% (95% CI 46.9% to 74.4%) with substantial heterogeneity (I^2=97.9%, p<0.0001). Studies using the Maslach Burnout Inventory (n=13) showed high emotional exhaustion (35.2%) and depersonalization (45.6%), but maintained strong personal accomplishment (75.3%). Key burnout-exacerbating factors included younger age, long working hours, and administrative burden, whereas protective factors included mentorship and protected non-clinical time. CONCLUSIONS: Trauma surgeons experience among the highest burnout rates reported among surgical specialties, warranting systemic physician-centric interventions, with a shift in focus from diagnosis to prevention. Despite significant occupational stressors, persistently high personal accomplishment levels suggest

specialty-specific resilience factors, meriting further investigation. Evidence-based strategies, including formal mentorship programs, psychological risk management models, and protected non-clinical time have the potential to mitigate burnout.

Lien vers l'article

Troubles cognitifs et de la vigilance

Aucun article dans ce bulletin.

Lien vers l'article

Département EAM

Travail posté et de nuit facteur de risque

Généralités et prévention

Aucun article dans ce bulletin.

Activités physiques

Aucun article dans ce bulletin.

Autres pathologies

Work-Related Factors and Their Influence on Body Mass Index: A Retrospective Cohort Study in the French Tertiary Sector.

Soprani A, Soprani A, Zulian V, Iannelli A, Carandina S. *J Clin Med*. 2025 Oct 20;14(20).

Background/Objectives: Work environments play a crucial role in shaping lifestyle behaviors that influence body weight, yet the relationship between occupational factors and obesity remains underexplored. This study assessed the impact of work-related conditions on body mass index (BMI) trends in a large cohort of tertiary sector employees in France. Methods: A retrospective observational analysis was conducted using occupational health data from 23,853 employees in Paris. BMI changes were assessed through linear regression models, and associations between occupational exposures (e.g., night work, sedentary roles) and BMI variation were examined. Results: A total of 23,853 employees were analyzed. The mean age at first visit was 45.4 years (range 16-82), and 59% were women. Employees belonged to various socio-professional categories, with more than half in executive or intermediate positions. At baseline, 24% were overweight and 8.5% obese. Mean BMI was 23.5 kg/m(2) in women and 24.7 kg/m(2) in men, with average annual increases of 0.15 and 0.12 kg/m(2), respectively (p < 0.05). Conclusions: Work-related factors, particularly night shifts, sedentary roles, and lower occupational status, contribute to BMI increases among tertiary sector employees.

[Lien vers l'article](#)

Knowledge, Attitudes, and Practices Regarding Their Own Urinary Incontinence Among Female Clinical Nurses in Shenzhen, China: A Cross-Sectional Study.

Chen P, Liu X, Ren W, Chen L, Cai W. *Int Urogynecol J*. 2025 Oct 30.

INTRODUCTION AND HYPOTHESIS: Urinary incontinence (UI) affects 31-46.7% of female clinical nurses, adversely impacting their work performance and quality of life, yet remains underreported and undertreated. On the basis of the Knowledge, Attitudes, and Practices (KAP) framework, this study aimed to: (1) develop and validate a questionnaire about the KAP of clinical nurses with UI regarding their own condition; and (2) investigate the current KAP status and examine the associations between demographic and occupational factors and KAP levels. The findings are expected to inform targeted interventions to improve awareness, early recognition, and self-management of UI among clinical nurses with UI. METHODS: This multicenter cross-sectional study (March-May 2025) recruited clinical nurses with UI from eight tertiary hospitals via convenience sampling. A 32-item Nurses' Self-UI KAP Scale was developed and validated to assess their KAP levels, followed by an analysis of influencing factors based on the questionnaire data. Descriptive statistics and multiple linear regression were performed. RESULTS: The validated 32-item Nurses' Self-UI KAP Scale demonstrated high reliability (Cronbach's $\alpha = 0.956$; S-CVI = 0.913). Among 415 clinical nurses with UI, the mean scores were: knowledge 7.08 ± 2.9, attitude 36.98 ± 7.54, and practice 36.37 ± 7.69. The two lowest-scoring knowledge items revealed key misconceptions: that UI is a normal part of aging and that one should

urinate immediately upon feeling the urge. Additionally, more than half of the clinical nurses with UI concealed their condition despite expressing willingness to seek treatment, and only 50.6% adhered to recommended management strategies. Multiple linear regression revealed significantly lower KAP scores in clinical nurses with UI aged 25 years or older relative to those under 25 years (β(25-35 years) = -13.582, β(36-44 years) = -12.929, β(>44 years) = -15.943), and in those working 3-4 or 5-6 night shifts per month relative to those with no night shifts (β(3-4 shifts) = -4.304, β(5-6 shifts) = -6.086). Conversely, clinical nurses with UI with 1-2 pregnancies or $\geq$ 3 pregnancies had significantly higher KAP scores relative to those who had never been pregnant (β(1-2 pregnancies) = 4.304, β($\geq$3 pregnancies) = 9.431). CONCLUSIONS: Clinical nurses with UI had basic UI knowledge, positive attitudes, and proactive behaviors. However, several issues persisted, including voiding management strategies and concerning its etiology, a tendency to conceal the condition despite willingness to seek treatment, and low adherence to management protocols. Age, night shifts, and parity influenced KAP, supporting targeted education to improve awareness and care engagement.

Lien vers l'article

Bidirectional interactions between circadian rhythms and the gut microbiome.

Bautista J, Ojeda-Mosquera S, Altamirano-Colina A, Hidalgo-Tinoco C, Di Capua Delgado M, López-Cortés A. *Appl Microbiol Biotechnol*. 2025 Oct 10;109(1):218.

Circadian rhythms are endogenous, near-24-h cycles that synchronize physiological and behavioral functions with environmental cues such as light/dark cycles and food intake. While the central pacemaker in the suprachiasmatic nucleus orchestrates these rhythms, peripheral clocks distributed across organs, including the gastrointestinal tract, exhibit autonomous oscillations that are crucial for local homeostasis. Concurrently, the gut microbiota undergoes diurnal fluctuations in composition and metabolic activity that are tightly coupled to host circadian mechanisms. Recent discoveries reveal a bidirectional relationship: host clocks influence microbial dynamics through feeding behavior, immune signaling, and epithelial renewal, whereas microbial metabolites such as short-chain fatty acids (SCFAs) and bile acids modulate circadian gene expression in peripheral tissues. Disruptions in circadian alignment, whether due to genetic mutations, lifestyle factors like shift work and irregular eating, or environmental perturbations, lead to microbial dysbiosis, metabolic dysfunction, inflammation, and heightened disease susceptibility. Conversely, altered microbiota rhythms can feed back into host systems, impairing metabolic control, immune responses, and neuroendocrine signaling. This reciprocal regulation extends to disease contexts, where circadian-microbiota misalignment contributes to obesity, type 2 diabetes, inflammatory bowel disease, and even neuropsychiatric disorders. This review synthesizes current insights into the molecular and physiological cross-talk between host circadian clocks and the gut microbiota. We discuss how temporal dynamics at the cellular, systemic, and microbial levels are integrated and how their disruption underlies pathogenesis. We further explore the potential of chronobiotics and chrononutrition, including time-restricted feeding (TRF) and bioactive dietary compounds, as emerging strategies to restore circadian-microbial synchrony and improve metabolic health. Understanding this intricate dialogue between host and microbiome may pave the way for personalized, time-based interventions to enhance healthspan and prevent disease occurrence or progression. KEY POINTS: • Circadian rhythms and microbiota form a bidirectional regulatory feedback loop. • Disruption of circadian-microbial synchrony drives metabolic and inflammatory disease. • Chrononutrition offers novel strategies to restore health via circadian-microbiota alignment.

Lien vers l'article

Département EAM

Cancers

Prolonged exposure to artificial light and carcinogenesis: A systematic review of oncostatic mechanisms associated with melatonin pathways.

Barboza G, Oliveira J, Ferreira A, Lopes R, Cupertino M. *Photochem Photobiol*. 2025 Oct 14.

Light pollution from widespread artificial illumination affects photosensitive organisms, including humans. Prolonged exposure to artificial light at night (ALAN), particularly blue light, is associated with melatonin suppression and circadian disruption, both implicated in carcinogenesis. This systematic review investigated the relationship between extended ALAN exposure and malignant neoplasms, identifying associated cancer types and biological mechanisms. A search was conducted in PubMed/Medline and Scopus using PRISMA guidelines. Original studies evaluating associations between ALAN, light pollution, or blue light and cancer in humans were included. Eighteen studies demonstrated a positive link between ALAN and breast cancer, with mechanisms involving interference in the cell cycle, DNA repair, oxidative stress, and activation of oncogenic pathways. Night-shift work correlated with increased breast cancer risk, reduced melatonin levels, and hormonal dysregulation. Exogenous melatonin showed oncostatic potential, reversing epigenetic changes induced by ALAN and reducing tumor burden. Melatonin suppression may promote tumor progression through circadian gene disruption and hormonal imbalance. While findings support a consistent link between ALAN exposure and oncogenesis-especially breast and prostate cancers-methodological variability and confounding factors, such as genetic predisposition and lifestyle, limit generalization. Further studies are needed to clarify mechanisms and explore preventive strategies, including light pollution control and melatonin-based interventions.

[Lien vers l'article](#)

Association of Occupational and Lifestyle Factors with Mammography-Detected Breast Neoplasia.

Almilaibary A, H FEB. *Med J Islam Repub Iran*. 2025;39:72.

BACKGROUND: Breast cancer is the most common malignancy affecting women, with higher mortality and morbidity. The early identification and diagnosis are the cornerstone of successful treatment and reduction of morbidity and mortality. Mammography is the gold standard screening tool. This work is designed to investigate the potential association between breast cancer and environmental factors related to lifestyle. METHODS: A cross-sectional study was done by collecting data from medical records of patients diagnosed with early diagnosed and well-established diabetes mellitus attending our university hospital; 300 women were screened by mammography for breast cancer. Women with positive results were assigned as the study group (n=39), while women with negative results were assigned as the control group (n=261). All were evaluated by the standard clinical approaches, and a pre-prepared questionnaire was used to collect data about social, environmental, and lifestyle factors. The collected data were submitted to statistical analysis using the Statistical Package for Social Science for Windows, version 20 (IBM, Chicago, USA). RESULTS: There was significant increase (P<0.001) of body mass index, hormone replacement therapy, age at first and last deliveries age at last baby and wearing tight bra; while there was significant decrease (P<0.001) of menarche, number of living children, mean age of weaning, and breast feeding in the study than the control group. In addition, there was significant increase (P<0.001) of long duration or night shift work, exposure to dangers at work, passive smoking, and use of kohl, drugs, crowding index, old painting, non-cemented ground, TV at bed rooms, pesticide exposure in the study than the control group. With multiple regression analysis, the early menarche, use of hormone replacement therapy, older age at first or last delivery, number of living children, mean age at weaning, breast feeding, tight bra, exposure to dangers at work, passive smoking, use of cosmetics (kohl), persons at home and crowding index remains the significant (P<0.001) associates with detected breast cancer. CONCLUSION: This study used mammography as the

gold-standard detection tool to identify neoplasia cases and analyze their association with environmental and occupational risk factors.

Lien vers l'article

Confounding Effects of Lifestyle Factors in Cancer Risk Estimation for Occupational Radiation Exposure.

Park EJ, Bang YJ, Lee WJ. *Saf Health Work*. 2025 Sep;16(3):310-6.

BACKGROUND: The confounding effect of lifestyle factors is an important concern in occupational studies, particularly when the risk magnitude is relatively small. This study aimed to evaluate the potential confounding effects of lifestyle factors on the association between radiation exposure and cancer incidence. METHODS: Data from all Republic of Korean diagnostic medical radiation workers enrolled in the national dose registry were merged with cancer incidence records up to 2018. Excess relative risks (ERRs) for cancer were calculated using Poisson regression models to quantify the radiation dose-response relationship. Major lifestyle factors were imputed using multiple imputations by chained equations based on survey data. The confounding effects were assessed by comparing ERRs before and after adjustment for lifestyle factors. RESULTS: The baseline ERR for cancer incidence per Sievert was 0.44 (95% CI: -0.94, 1.83) after adjusting for attained age, sex, birth year, and employment duration. Further adjustment for lifestyle factors (smoking status, alcohol consumption, body mass index, physical exercise, sleep duration, and night shift work) did not substantially modify this risk coefficient, with change-in-estimate values ranging from 0% to 13.6%. Sensitivity analyses conducted with the survey-based cohort and sex-stratified analyses yielded consistent results. CONCLUSION: Our study found little evidence of significant confounding effects from unmeasured lifestyle factors on cancer risk when basic registry data variables were adjusted among medical radiation workers. Further studies are warranted to investigate the impact of unmeasured and unknown confounders to improve the accuracy of radiation risk estimates.

Lien vers l'article

The multifaceted impact of circadian disruption on cancer risk: a systematic review of insights and economic implications.

Clemente-Suarez VJ, Navarro-Jiménez E, Benitez-Agudelo JC, Beltrán-Velasco AI, Belinchón-deMiguel P, Ramos-Campo DJ, et al. *J Natl Cancer Cent*. 2025 Oct;5(5):524-36.

BACKGROUND: Circadian disruption has emerged as a significant risk factor for cancer, driven by mechanisms such as hormonal imbalances, impaired DNA repair, immune suppression, and metabolic dysregulation. Modern societal patterns-shift work, artificial light at night, and irregular sleep schedules-have exacerbated these risks. METHODS: We conducted a systematic review following Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines, screening over 500 studies published between 2003 and 2023 from PubMed, Scopus, Embase, ScienceDirect, and Web of Science. Inclusion criteria focused on peer-reviewed epidemiological and mechanistic studies linking circadian disruption with cancer risk. The Newcastle-Ottawa Scale was used for methodological quality assessment. RESULTS: A total of 75 high-quality studies were included. Strong evidence supports associations between circadian disruption and breast, prostate, and colorectal cancers, with limited but emerging evidence for melanoma and bladder cancer. Mechanistic pathways involve melatonin suppression, dysregulation of CLOCK and BMAL1 genes, reduced natural killer cell activity, and chronic inflammation due to metabolic imbalance. Light-at-night (LAN) exposure and prolonged night shift work were consistently identified as major risk factors. Furthermore, economic analyses reveal a substantial burden due to increased healthcare costs and productivity losses, particularly in shift work-dominated sectors. CONCLUSIONS: Circadian misalignment is a critical, yet often overlooked, contributor to cancer incidence and associated economic burdens. Public health

strategies-such as regulating shift schedules, reducing LAN exposure, and promoting chronotherapy-are essential to mitigate these risks. Further research should address sex-based differences, improve exposure measurement, and extend investigations to low- and middle-income countries.

Lien vers l'article

Risque routier, accidentologie

Aucun article dans ce bulletin.

RPS et QVT

Correlations among the nursing work environment, traumatic stress, and professional quality of life in Chinese midwives: A cross-sectional study.

Zhang X, Lun B, Ge H, Qu L. *PLoS One*. 2025;20(10):e0328686.

BACKGROUND: Midwives work in a high-stress, high-risk, and high-intensity delivery room environment, which exposes them to significant emotional challenges. Understanding the factors influencing midwives' professional quality of life (ProQoL) is crucial for maintaining their well-being. Although the nursing work environment plays a significant role in ProQoL, a gap in understanding how the nursing work environment and traumatic stress affect midwives' ProQoL remains, especially in Chinese midwives. AIM: The purpose of this study was to identify how the nursing work environment and traumatic stress are related to ProQoL in Chinese midwives. METHODS: An online questionnaire was administered to 232 midwives working in the delivery room of 59 hospitals in Henan Province, China. The participants were selected via a convenience sampling approach between November and December 2023. The data collection tools used were the Demographic and professional characteristics Questionnaire, Traumatic Stress Scale for Midwives (TSSM) (consisting of frequency and impact), Nursing Work Environment Scale (NWES), and ProQoL (consisting compassion satisfaction, burnout, and secondary traumatic stress). The data were analyzed via the Mann-Whitney U test, the Kruskal-Wallis H test, Spearman's correlation, and multiple linear regression. RESULTS: The study revealed that midwives reported moderate levels of compassion satisfaction (35.18 ± 7.703) and burnout (25.33 ± 4.334), alongside a low level of secondary traumatic stress (21.50 ± 5.464). Results showed that the nursing work environment was positively correlated with compassion satisfaction ($r = 0.610$) and negatively correlated with burnout ($r = -0.390$) and secondary traumatic stress ($r = -0.296$). Midwives' scores on the frequency and impact of traumatic stress were positively related to burnout ($r = 0.254$, $r = 0.452$) and secondary traumatic stress ($r = 0.281$, $r = 0.380$) but negatively related to compassion satisfaction ($r = -0.145$, $r = -0.383$). Multiple regression analysis results revealed that the nursing work environment, the impact of traumatic stress, major shifts, health condition and the frequency of traumatic stress predicted compassion satisfaction. The impact of traumatic stress, health condition, and the nursing work environment predicted burnout. The impact of traumatic stress, the nursing work environment and frequency of night shifts per month predicted secondary traumatic stress. CONCLUSIONS: The associations we identified among the nursing work environment, traumatic stress, and ProQoL suggest the potential importance of implementing a supportive nursing work environment and developing strategies such as trauma-informed care education and trauma management for midwives. These strategies are vital in improving midwives' ProQoL, thereby promoting their health and well-being.

Lien vers l'article

Cross-Cultural Validation of the Occupational Coping Self-Efficacy Scale for Nurses: A Cross-Sectional Study.

Zhai YX, Chai XY, Zhang GT, Xu F, Gao L. *Nurs Open*. 2025 Oct;12(10):e70333.

AIMS AND OBJECTIVES: To translate the Occupational Coping Self-Efficacy Scale for Nurses (OCSE-N) into a simplified Chinese version and test its reliability and validity among the Chinese nursing population. BACKGROUND: Coping self-efficacy beliefs are important self-appraisals of one's capability to cope with challenging situations. Using a reliable and valid instrument to assess nurses' coping self-efficacy is essential. However, in previous studies in China, a specific scale to assess nurses' occupational coping self-efficacy was not available. DESIGN: Cross-sectional study. METHODS: In total, 1172 of 1200 nursing staff selected by convenience sampling from 5 public hospitals in Shenzhen completed the investigation. The OCSE-N was translated and adapted using the Brislin translation-back translation method. Then, the internal consistency of the OCSE-N-CHI was measured by Cronbach's alpha. The construct validity of the OCSE-N-CHI was analysed by exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). RESULTS: The Cronbach's alpha of the OCSE-N-CHI was 0.882, and the test-retest reliability was 0.991 (95% CI: 0.985-0.993, $p < 0.01$). The correlation coefficients of each item and the total score were 0.482-0.683 ($p < 0.01$). After exploratory factor analysis, the scale extracted 2 common factors with a cumulative variance contribution of 67.508% and a commonality of 0.524-0.860 for each entry. The empirical factor analysis of each fit index met the recommended criteria. Statistical differences existed in the occupational coping self-efficacy scores of nurses with different marital statuses, different levels of satisfaction with their jobs, as well as their income, and different average numbers of night shifts per week. CONCLUSION: The reliability and validity of the OCSE-N-CHI are good, and it can be used as an assessment tool to evaluate the occupational coping self-efficacy of nursing staff in China. RELEVANCE TO CLINICAL PRACTICE: The OCSE-N-CHI can be completed by participants in less than 2 min and is considered a convenient and reliable measure of occupational coping self-efficacy for nurses. PATIENT OR PUBLIC CONTRIBUTION: After participants signed an informed consent form, questionnaires were completed in a conference room. The questionnaires were collected and entered in pairs in the office, and the data were analysed. Finally, the articles were written and revised.

[Lien vers l'article](#)

The relationship between professional moral courage and patient safety silence among nurses.

Yousofvand V, Sani N, Khazaei S, Torabi M. *BMC Nurs*. 2025 Oct 15;24(1):1286.

BACKGROUND: Patient safety silence-the deliberate withholding of concerns or observations related to patient safety-has emerged as a critical barrier to ensuring safe healthcare delivery. Among nurses, patient safety silence in the face of safety errors may result in adverse outcomes for patients. Given the ethical nature of speaking up, identifying psychological and moral determinants, such as professional moral courage, is essential. Therefore, this study aimed to examine the relationship between professional moral courage and patient safety silence among nurses. METHODS: A cross-sectional descriptive-correlational study was conducted from 2024 to 2025 in hospitals affiliated with Hamadan University of Medical Sciences. Using stratified sampling, 214 eligible nurses were selected for the study. Inclusion criteria were: at least one year of clinical experience, a bachelor's degree or higher in nursing, and provision of written informed consent. Incomplete questionnaires were excluded. Data were collected using a demographic information form, as described by Sekerka et al. Professional Moral Courage Scale, and the Tangirala and Ramanujam Patient Safety Silence Questionnaire. Ethical approval was obtained, and all procedures were conducted in accordance with the Declaration of Helsinki. RESULTS: A significant negative correlation was found between professional moral courage and patient safety silence ($r = -0.451$, $p < 0.001$). In the initial regression model, professional moral courage significantly predicted lower levels of patient safety silence ($\beta = -$

0.451, p < 0.001; Adjusted R² = 0.20). After incorporating demographic and occupational variables, the explained variance increased to 61.6% (Adjusted R^2 = 0.616), and professional moral courage remained a significant predictor (β = -0.270, p < 0.001). Factors associated with reduced patient safety silence included male gender, over 10 years of experience, and moderate to high job satisfaction. In contrast, insufficient ethics education, night shifts, high nurse-to-patient ratios, and burnout were associated with increased patient safety silence. CONCLUSION: Professional moral courage was found to have an inverse association with patient safety silence and remained a significant predictor even after adjusting for other factors. Male gender, longer experience, and job satisfaction reduced patient safety silence, while insufficient ethics education, night shifts, high workload, and burnout increased it. Therefore, strengthening professional moral courage through education and support may help reduce patient safety silence and improve safety culture in healthcare. CLINICAL TRIAL NUMBER: Not applicable.

[Lien vers l'article](#)

Italian oncology nurses' perceptions of empowering leadership styles: a descriptive cross-sectional exploratory study.

Vitale E, Rizzo A, Mea R, Chang YC. *BMJ Open*. 2025 Oct 5;15(10):e096579.

OBJECTIVE: The study aims to assess the associated influencing oncology nurses' perceptions of managers' empowering leadership style and to examine the influence of sex, work experience, shift work, membership of an oncology nursing association or a scientific society, nursing educational level and specialised nursing training in oncology on oncology nurses' perceptions of managers' empowering leadership style and its subdimensions. DESIGN: Descriptive cross-sectional study. SETTING: In March 2024, oncology nurses employed in oncology settings were invited to participate. PARTICIPANTS: All Italian oncology nurses who were currently employed were eligible to participate. MAIN OUTCOME MEASURES: The Italian version of the Empowering Leadership Questionnaire was used to assess nurses' perceptions of managers' performance in leading by example, participative decision-making, coaching, informing and demonstrating concern/interacting with the team. RESULTS: A total of 298 nurses agreed to participate. The associated factors for an empowered leadership style across all subdimensions were sex (p=0.006) and the educational level in nursing (p=0.004). Participative decision-making, coaching, informing and demonstrating concern/interacting with the team subdimensions were associated with shift work. Participation in scientific associations (p=0.005) was also influential. CONCLUSIONS: Exploring the data according to the nursing specialisation appeared intriguing, since it could be a more indicative suggestion for future interventions to implement an empowering leadership style in clinical nursing practice and better inform health policymakers to achieve the right solution in their health organisations.

[Lien vers l'article](#)

Oncology Nurse-Patient relationships based on nurses' sampling characteristics. An exploratory study.

Vitale E, Lin GM, Bove S, Comes MC, Massafra R, Chang YC. *Work*. 2025 Oct 17:10519815251387905.

BackgroundEnsuring care for patients is the first duty of nurses and it represents one of the most important factors of human development and survival.ObjectiveTo explore nurse-patient interactions according to nurses' characteristics, such as: gender, work experience in oncology field and shift work.MethodsA cross-sectional study was carried out during September-October 2023 among Italian nurses who were employed in oncology settings. Gender, years of work experience in oncology field, shift work and the "Caring Nurse-Patient Interactions Scale" (CNPI) were administered. The CNPI investigated four specific sub dimensions in the nurse-patient relationship, like clinical, relational care, humanistic care and comforting care.ResultsA total of 306 Italian oncology nurses were enrolled. Significant differences were recorded in all four sub dimensions of the CNPI since males reported

higher levels than females in clinical (p = 0.006), relational (p = 0.010), humanistic (p = 0.047) and comforting care (p = 0.009) sub dimensions.ConclusionsFuture investigations on individual characteristics which probably influence nurses' caring attitudes will be considered, like personality traits, personal priorities, and commitment, beyond individual characteristics, as: conscience, spiritual beliefs, personal philosophy and altruism predisposition, a sense of duty.

Lien vers l'article

Working women's perceptions and expectations of digital health tools for personal health management: A qualitative study.

Sasayama K, Saso T, Egawa Y, Nishimura E, Ota E, Tachimori H, et al. *Digit Health*. 2025 Jan-Dec;11:20552076251379747.

AIM: This study examined the health challenges experienced by women in physically and mentally demanding occupations, including healthcare, shift work, night work and education. It explored their digital health technology use and expectations for future advancements to support their well-being. METHODS: In this qualitative study, semi-structured interviews were conducted with 17 full-time working women aged 20 to 64 years, employed in occupations including baking (manufacturing), long-distance truck driving (transportation), cabin crew (aviation), nursing and midwifery (healthcare), teaching (education) and local-level politics. Participants were recruited through purposive sampling. Data were collected via Zoom between June and August 2024. Content analysis identified key themes related to health issues, workplace barriers, use of digital health tools and desired features of future technologies. RESULTS: Participants reported physical and emotional symptoms associated with menstruation and hormonal changes, often worsened by inadequate workplace support. Despite widespread interest in digital health tools such as smartwatches and menstrual tracking apps, adoption was limited due to workplace restrictions, data security concerns, usability challenges and app fatigue. Desired features included simplicity, personalisation and seamless integration into daily routines. Participants emphasised that effective digital health technologies must be accompanied by organisational support and inclusive workplace policies. CONCLUSION: These findings highlight the urgent need for digital health solutions tailored to the realities of diverse working environments. By incorporating users' lived experiences, particularly from underrepresented occupational sectors, this study offers practical insights into the structural and functional requirements for successful adoption. Collaboration between developers, employers, and policymakers is essential to deliver equitable, secure, and effective digital health support for working women.

Lien vers l'article

Factors that influence the clinical supervision implementation for nurses: A scoping review.

Ryu H, Buus N, Naccarella L, Zarb L, Hamilton B. *J Adv Nurs*. 2025 Nov;81(11):7297-310.

AIMS: The aim of this review is to identify and map the evidence available on the factors that influence the implementation of clinical supervision for nurses. DESIGN: The scoping review was conducted and reported following the JBI methodology for scoping reviews. DATA SOURCES: Searches were conducted on MEDLINE, PsycINFO, and CINAHL databases on 28 March 2023. REVIEW METHODS: A total of 1398 studies were imported into Covidence for screening. Researchers screened the papers according to the inclusion criteria. Empirical studies in English focusing on the implementation of clinical supervision for nurses were included, without year restrictions. Data from 16 studies were extracted and organized according to the constructs within the Consolidated Framework for Implementation Research (CFIR) domains: intervention characteristics, outer setting, inner setting, characteristics of individuals, and process. RESULTS: When compared with the CFIR constructs, it was found that the influence of the outer setting on implementation was less explored in the literature. Most of the reviewed data highlighted recurring factors, particularly logistical challenges of nursing

work such as shift work and lack of control over work time. Organizational culture and managerial support were also identified as significant factors in the implementation. Another significant challenge in implementation was the variety in clinical supervision's design, purpose, and application, despite sharing the same label, leading to questions about whether studies are implementing the same practice. CONCLUSION: Policy documents should clearly define both the design and purpose of clinical supervision, beyond just its conceptual definition. Greater emphasis on equitable implementation of clinical supervision is necessary to prevent perpetuating existing inequalities. We conclude that implementation of such complex interventions is not linear, and the implementation strategies need to align with expected implementation challenges. IMPACT: The advantage of using the implementation framework lies not only in observing what exists as a form of evidence but also in identifying what is underdeveloped. Healthcare services and policy developers can utilize our review to recognize and address potential challenges in introducing, modifying, scaling up, or sustaining their clinical supervision implementation. PATIENT OR PUBLIC CONTRIBUTION: No patient or public contribution.

[Lien vers l'article](#)

Working conditions associated with return to work 2 years after breast cancer: insights from a cohort study.

Ruiz de Azua G, Licaj I, Pinto S, Havas J, Di Meglio A, Vaz-Luis I, et al. *Br J Cancer*. 2025 Oct 21.

BACKGROUND: Work-related determinants of return to work (RTW) after breast cancer (BC) have been poorly studied. METHODS: We analysed data from 2095 patients with primary BC enrolled in the French multi-center prospective cohort CANTO between 2012 and 2018. We investigated the association between administrative, physical and psychosocial working conditions and RTW two years after diagnosis using Poisson regression with robust variance. All models were adjusted for age, education, having a partner or children, and clinical variables at diagnosis. Analyses stratified by education (up to/higher than high school) and by chemotherapy were conducted. Multiple imputations were performed. RESULTS: Having no weekly rest period of 48 consecutive hours (RR = 1.36 95% CI:1.09-1.81), strenuous work postures (RR = 1.48 95% CI:1.19-1.87) and shift work (RR = 1.40 95% CI:1.11-1.75) as well as low independence of decision making (RR = 1.33 95% CI:1.04-1.81) were associated with increased non-RTW. Not perceiving her own job as boring (RR = 0.61 95% CI:0.39-0.86) was associated with decreased non-RTW. Administrative working conditions did not impact RTW. CONCLUSION: Working conditions emerged as potential levers to help women RTW. Our results underline the need for more targeted rehabilitation programs and personalized interventions to effectively help women in their RTW journey after BC.

[Lien vers l'article](#)

Analysis of the mediating effect of occupational burnout on the relationship between emotional labor and turnover intention among obstetric nurses.

Lv X, Ding Z, Wang T, Zhang M. *Front Public Health*. 2025;13:1631669.

OBJECTIVE: This study aimed to examine the mediating role of occupational burnout in the relationship between emotional labor and turnover intention among obstetric nurses in China. METHODS: A cross-sectional survey was conducted among 205 obstetric nurses from six tertiary hospitals in Fuyang City, China. Validated scales were used to assess emotional labor (Emotional Labor Scale, ELS), occupational burnout (Maslach Burnout Inventory, MBI), and turnover intention (Turnover Intention Scale, TIS). Data were analyzed using Pearson correlation, univariate analysis, multiple linear regression, and structural equation modeling (SEM) with Bootstrap mediation analysis. RESULTS: Significant associations were found between nurses' emotional labor and occupational burnout ($r = 0.292$, $P < 0.01$), occupational burnout and turnover intention ($r = 0.152$, $P < 0.01$), and emotional labor and

turnover intention (r = 0.291, P < 0.01). The SEM demonstrated good fit indices (χ(2)/df = 2.032, RMSEA = 0.071, CFI = 0.957). Occupational burnout substantially mediated the relationship, accounting for 54.2% of the total effect of emotional labor on turnover intention (indirect effect: 0.110, 95% CI [0.069, 0.169], P < 0.001). Additionally, monthly night shifts (β = 0.35, P < 0.001) and professional title (β = 0.28, P < 0.01) emerged as significant predictors of turnover intention. CONCLUSION: Occupational burnout serves as a critical mediator between emotional labor and turnover intention among obstetric nurses. These findings highlight the urgent need for healthcare organizations to implement targeted interventions, including workload optimization, adaptive emotional labor training, and comprehensive psychological support programs. Such strategies are essential for reducing nurse turnover, ensuring adequate staffing levels, and ultimately improving maternal and neonatal care quality in healthcare systems.

Lien vers l'article

Assessing the range of deployment for an intra-hospital medical emergency team.

Heinold F, Moerer O, Wieditz J, Harnisch LO, Struk T. *Intern Emerg Med*. 2025 Oct;20(7):2103-10.

Medical emergency teams (MET) play a crucial role in managing hospital emergencies. This single-center, retrospective cohort study at the University Medical Center Göttingen examines deployment patterns and operational challenges. Using the National Advisory Committee for Aeronautics (NACA) score, it assesses case severity, emergency care trends, and the influence of location and timing on patient outcomes. All MET calls handled by the Department of Anesthesiology from June 2019 to June 2023 were analyzed based on emergency documentation. 522 emergency protocols were analyzed. The most common reasons for MET activation were cardiovascular problems (32%), resuscitation (22%) and respiratory distress (15%). ROSC was achieved in 54.4% of CPR cases (62 out of 114 patients). On weekends, distribution of NACA scores shifted towards higher scores, OR = 1.831 (95% CI [1.298-2.583], p = 0.001). The severity of cases varied significantly between emergency locations (NACA score ≥ 5: public area: 1.3%, general ward: 56,8%, IMC: 65,2% and ICU: 86,8%, p < 0.001). There is a significant positive rank correlation of 0.566 (95%-CI [0.505-0.622], p < 0.001) between the NACA score and the duration of MET deployment. Severe emergencies (NACA 5-7) mainly occur on weekends and during late/night shifts, requiring specialized support. Higher NACA scores correlate with prolonged deployments, often exceeding 60 min. Optimizing alert systems and personnel planning is crucial for sustaining patient safety and care continuity.

Lien vers l'article

Prevalence and determinants of work-related stress among nurses in Ethiopia: a systematic review and meta-analysis.

Feleke MG, Ayalew TL, Ashager K, Beyene HA, Abate MW, Tibebu NS. *BMC Nurs*. 2025 Oct 29;24(1):1344.

BACKGROUND: Work-related stress is a growing global concern among nurses, affecting professional performance and health system outcomes. In Ethiopia, evidence is fragmented. This review aimed to estimate the pooled prevalence of work-related stress among nurses in Ethiopia and identify its associated factors. METHODS: We systematically searched PubMed, Embase, Scopus, Web of Science, and Google Scholar for observational studies published up to April 30, 2025. Eligible studies reporting the prevalence or determinants of work-related stress among nurses in Ethiopia. The review was conducted and reported following the PRISMA 2020 guidelines; the PRISMA 2020 Abstract Checklist is provided as Appendix 1. Two reviewers independently screened, extracted data, and assessed study quality using the JBI Critical Appraisal Checklist. A random-effects model was used to calculate pooled prevalence and adjusted odds ratios (AORs). Subgroup and sensitivity analyses were conducted. Heterogeneity was assessed using the I² statistic, and publication bias was evaluated using funnel plots

and Egger's test. RESULTS: Thirteen studies involving 3,702 nurses across multiple Ethiopian regions were included. The pooled prevalence of work-related stress was 47.84% (95% CI: 46.28–49.41%, I(2) = 93.4). Significant associated factors included shift work (AOR = 2.68), working in emergency units (AOR = 5.95), intensive care (AOR = 6.33), less than five years of experience (AOR = 4.41), and having children (AOR = 2.13). CONCLUSION: Nearly one in two nurses in Ethiopia experiences work-related stress. Occupational and personal factors contribute substantially to this burden. Interventions such as improved scheduling, support for high-risk units, and early-career mentoring are recommended. Future longitudinal and interventional studies are needed to inform workforce policy and improve nurse well-being. CLINICAL TRIAL NUMBER: Not applicable.

Lien vers l'article

Workplace Violence and Patient Management Time in the Emergency Department: An Observational Study.

Di Giorgio C, Cucchi I, Mendola M, Costa MC, Tonelli F, Turchet E, et al. *Med Lav*. 2025 Oct 24;116(5):17113.

BACKGROUND: Workplace violence is steadily rising, and the healthcare sector is one of the most impacted areas. Several studies have shown that patients' long management times are a key factor in workplace violence in this setting. OBJECTIVE: This study aims to analyze the prevalence and characteristics of aggressions against healthcare workers (HCWs) that occurred in 2023 in the Emergency Rooms (ER) of a large university hospital and to evaluate the potential relationship between the management time of a patient in the ER and the risk of violence incidents. METHODS: To evaluate the prevalence and characteristics of aggressive events against HCWs that occurred in 2023, data from the "incident reporting" form were analyzed. Then, using the 2023 report on daily ER accesses, the management time of a patient at the ER was calculated. Finally, the average management times of patients on days when there were no aggressions were compared with those on days when there was one or more assaults against HCWs to evaluate the potential relationship between the average length of stay of a patient at the ER and the risk of aggression. RESULTS: In 2023, 271 violent incidents were reported. Verbal aggressiveness was the most common (82.7%), and working the night shift was riskier (42.8%). In 36.2% of cases, patient management time was identified as a potential predictor of aggression. Other identified potential predictors included the patient and/or caregiver relationship with HCW (30.6%), the refusal to accept diagnostic-therapeutic protocols (27.3%), and the cultural background and temperamental traits of the patient or caregiver (18.8% and 11.8%, respectively). According to the logistic regression analysis, the likelihood of a violent incident during a 150-minute stay was less than 10%; it increased to 53% after 650 minutes. CONCLUSION: Workplace violence in healthcare settings results from a complex interaction of internal and external factors. Understanding how these elements interact and contribute to the development of incidents is essential for identifying key actions to reduce and mitigate violence.

Lien vers l'article

Protective mechanical ventilation controlled by the real-time mechanical power measurement.

Burša F, Frelich M, Sklienka P, Kučerová Z, Sagan J, Oczka D, et al. *J Clin Monit Comput*. 2025 Oct 11.

BACKGROUND: Despite the substantial advancements in mechanical ventilation (MV), mortality remains high. Mechanical power (MP), MV forces are associated with outcomes. Real-time monitoring of MP and the adjustment of MV according to MP may result in ventilation with lower MP. METHODS: Randomized controled trial conducted at the ECMO Centre Ostrava, Czech Republic, from March 2023 to March 2024 enrolled adult patients on MV (with or without extracorporeal membrane oxygenation, ECMO) with acute respiratory failure. A system for real-time MP monitoring (geometric method and simplified Becher´s formula) has been developed. In the intervention arm, the physician was able to

observe the MP in real time and adjust the MV parameters accordingly. In the control group, the MP was concealed. RESULTS: A total of 494 subjects were screened and 33 patients were randomized (further 7 ECMO patients). There was no significant difference between the control and intervention groups. Median MP(Geom) was 3.22 J/min (maximum 15.2 J/min) and MP(Becher) of 5.94 J/min (maximum 18.4 J/min). Only a weak (but significant, $p = 0.0001$) correlation between MP(Geom) and MP(Becher) was observed. A highly significant difference was observed in MP between day and night (6 a.m. - 6 p.m.) with higher MP at night. CONCLUSION: Although real-time MP measurement is feasible, there was no significant difference in MP between the control and intervention groups with low MP in both groups. Experience physicians was capable of safe MV, even if they do not know the exact MP value. The night shift was a high-risk period for developing lung damage due to elevated MP. TRIAL REGISTRATION: ClinicalTrials NCT06035146.

[Lien vers l'article](#)

A Qualitative Analysis of Shift Handoff Communication Practices Among Tele-ICU Clinicians.

Amba KT, Higo O, Vergara FH. *Prof Case Manag*. 2025 Oct 27.

PURPOSE OF STUDY: The research study aimed to explore the Tele-ICU clinician's perception about the experience with shift handoff communication (SHC) and to identify the Tele-ICU clinician's challenges during the SHC experience. PRIMARY PRACTICE SETTING: Tele-ICU center in the Midwest region of the United States. METHODOLOGY AND SAMPLE: A phenomenological interpretive study was conducted to explore lived experiences of Tele-ICU intensivists during SHC. RESULTS: Five themes emerged in the research. The following are the themes: variabilities in SHC, discrepancies in information delivered during SHC, preference for standardized SHC, positive and negative attitudes toward SHC, and presence of barriers with SHC. IMPLICATIONS FOR CASE MANAGEMENT PRACTICE: In the Tele-ICU environment, the intensive care unit (ICU) provider also serves as the care coordinator since care is delivered remotely. At the Tele-ICU center, there was no clear indication that case managers were involved during the night shift in coordinating care, which needed further investigation and understanding. Even in a Tele-ICU environment, concise and impactful communication between the members of the multidisciplinary health care team is crucial. Therefore, there is a need to delineate the role of ICU providers as care coordinators remotely in terms of SHC. Information on how equipped the Tele-ICU providers are in terms of coordinating care in transitioning patients out of the Tele-ICU is limited compared to traditional bedside care where a case manager is available as a member of the multidisciplinary team.

[Lien vers l'article](#)

Level of physical activity among nurses and its associated factors: A cross-sectional study.

Alrabbaie H, Almhdawi K, Goldstein R, Beauchamp M, Brooks D. *Work*. 2025 Oct 17:10519815251386437.

BackgroundPhysical activity is essential for preventing chronic disease and maintaining overall health. However, hospital nurses may face challenges maintaining adequate physical activity due to demanding work schedules and occupational stressors.ObjectiveTo examine the levels of physical activity among hospital nurses in Jordan and to identify demographic, occupational, and health-related factors associated with physical activity.MethodA cross-sectional survey was conducted among 750 nurses across Jordanian hospitals, with 597 respondents (80% response rate). Validated self-administered questionnaires were used to assess demographic, work characteristics, psychological well-being, sleep quality, musculoskeletal pain, and physical activity. Descriptive statistics summarized participant characteristics, and multiple linear regression was performed to identify independent associations with physical activity levels.ResultsThe mean age of participants was 32.1 years, and average work hours were 43.4 h per week. Approximately 31% of nurses report moderate physical

activity levels, while 40% reported high physical activity levels. Higher physical activity levels were independently associated with longer work hours (β = 46.1; 95% CI: 1.9 to 90.2), more frequent night shifts (β = 163.8; 95% CI: 11.8 to 315.7), and more musculoskeletal pain sites (β = 254.9; 95% CI: 171.3 to 338.7). Having a chronic disease was significantly associated with lower physical activity (β = -1384.1; 95% CI: -2443.5 to -324.1).ConclusionMost nurses met recommended physical activity levels, and their engagement in physical activity was influenced by work demands and health status. Workplace health promotion initiatives should consider these factors to effectively support and sustain physical activity among hospital nurses.

Lien vers l'article

Current status of career adaptability among Chinese cardiovascular specialist nurses: a latent profile analysis.

Du Y, Wu C, Gai Z, Gao L, He S, Guo S, et al. *BMC Nurs*. 2025 Oct 6;24(1):1237.

AIM: This study aimed to explore the career adaptability status of cardiovascular specialist nurses (CSNs) through latent profile analysis (LPA), identify distinct subgroups and their demographic features, and determine factors influencing different adaptability categories. BACKGROUND: CSNs play a vital role in treating and rehabilitating patients with cardiovascular conditions. However, the existing literature offers limited insights into the career adaptability of CSNs in China. METHODS: A multicenter, cross-sectional survey involving 659 Chinese CSNs was conducted. LPA was utilized to classify career adaptability profiles based on responses to the Career Adaptation Abilities Scale Short Form (CAAS-SF). Influencing factors were assessed using the Conditions of Work Effectiveness Questionnaire-II (CWEQ-II) and the General Self-Efficacy Scale (GSES). Differences among identified profiles were analyzed through ANOVA, chi-square tests, and multinomial logistic regression to explore relevant socio-demographic characteristics and influencing variables. RESULTS: A four-profile model provided the best fit, identifying groups labeled as "high adaptability" (Class 4, n = 68, 10.5%), "good adaptability" (Class 3, n = 285, 42.6%), "moderate adaptability" (Class 1, n = 269, 41.2%), and "low adaptability" (Class 2, n = 37, 5.7%). Regression analysis indicated that highest educational level, monthly frequency of night shifts, opportunity, resources, informal empowerment, and self-efficacy were influencing factors associated with profile membership. CSNs working 1~2 night shifts per month (OR = 2.226, 95% CI: 1.014, 4.887) or possessing a bachelor's degree (OR = 2.090, 95% CI: 1.440, 3.035) exhibited a greater likelihood of belonging to Class 3. Those reporting more opportunities (OR = 1.113, 95% CI: 1.001, 1.238; OR = 1.236, 95% CI: 1.028,1.485) tended toward membership in Classes 3 and 4. Furthermore, CSNs with greater resources (OR = 0.777, 95% CI: 0.620, 0.975; OR = 1.360, 95% CI: 1.116, 1.656) were significantly associated with membership in Classes 1 and 4. Additionally, higher informal empowerment (OR = 1.095, 95% CI: 1.001, 1.198) was associated with Class 3 membership. Enhanced self-efficacy (OR = 1.112, 95% CI: 1.069, 1.159; OR = 1.358, 95% CI: 1.268,1.455) increased the likelihood of classification into Classes 3 and 4. CONCLUSIONS: These findings provide evidence to assist nursing administrators in developing training programs to enhance CSNs' career adaptability. The variables identified as associated with profile membership may enable more tailored training strategies.

Lien vers l'article

Prevalence of workplace violence against nurses in Saudi Arabia: A systematic review and meta-analysis.

Abdelmalik M, Alenezi A, Abdallah M, Ibrahim I, Ahmed M, Mohammead MO, et al. *Int J Nurs Sci*. 2025 Sep;12(5):438-44.

OBJECTIVES: Workplace violence is a serious issue in healthcare settings. Nurses are particularly vulnerable, and such violence significantly impacts their professional lives, leading to decreased

productivity and care quality. We aimed to estimate the pooled prevalence of workplace violence against nurses through systematic review and meta-analysis in Saudi Arabia. METHODS: Databases were searched for articles published in English from 2013 to 2023, including PubMed, Web of Science, Science Direct, Medline, Emerald, Wiley, and ProQuest. The quality of the included studies was rigorously assessed using the Joanna Briggs Institute (JBI) critical appraisal tools. Meta-analysis was conducted using Comprehensive Meta-Analysis software. Subgroup analysis, meta-regression, and publication bias tests were performed. RESULTS: The pooled prevalence of workplace violence among nurses in Saudi Arabia was 61.8 % (95 %CI: 45.8 %-75.6 %). Subgroup analysis showed the highest prevalence of workplace violence in studies conducted before 2020 at 69.7 % (95 %CI: 42.0 %-88.0 %) and 2020-2023 at 57.0% (95 %CI: 35.6 %-76.1 %); in the western region at 90.2 % (95 %CI: 70.2 %-97.3 %); among female nurses at 81.8 % (95 %CI: 66.9 %-90.9 %); with patient relatives as perpetrators at 70.8 % (95 %CI: 46.4 %-87.2 %); during afternoon shifts at 78.5 % (95 %CI: 64.4 %-88.1 %); for verbal abuse at 54.9 % (95 %CI: 31.3 %-76.6 %); and in the intensive care unit at 68.1 % (95 %CI: 28.1 %-92.1 %). Meta-regression analysis revealed that the night shift significantly contributed to heterogeneity. The funnel plot and Egger's regression test (P = 0.647) indicated no significant publication bias. CONCLUSIONS: This meta-analysis showed the estimate of workplace violence against nurses in Saudi Arabia is 61.8 %. Nursing managers and health policymakers should implement targeted interventions to prevent workplace violence, especially among female nurses, during afternoon shifts, in intensive care units, and in the western region of Saudi Arabia.

Lien vers l'article

Santé psychique

Sleep and Mental Health: the Impact of the COVID-19 Pandemic on Healthcare Professionals.

Vitti-Ruela BV, Dokkedal-Silva V, Galduróz JCF, Tufik S, Andersen ML. *Psychiatr Q*. 2025 Oct 20.

Important stressors were at play during the COVID-19 pandemic, representing a burden for healthcare professionals around the world. Some of these stressors were related to the available structure and experience these professionals had, while others were related to being in frontline positions. Evaluating which of these characteristics was associated with the worsening of mental and sleep health in these individuals remains fundamental even in the aftermath of the pandemic. This study sought to analyze the impacts of direct contact between healthcare professionals and COVID-19 patients by gauging the correlation between psychiatric symptoms, sleep impairment, general health and sleep health in different healthcare professions. The influence of the type of institution, the professionals' work shifts, and individual perception when comparing the health impacts before and after the pandemic was also investigated. Volunteers answered an online questionnaire applied using the Google Forms platform and disseminated on multiple digital networks. The questions were designed based on previously validated questionnaires about sleep, mental health and quality of life. The analysis was divided into seven blocks to better explore each topic. Among our findings, nurses were identified as one of the professionals with most impairments to sleep and mental health. We observed that age had a generally positive association with better sleep and mental health outcomes. There was an effect of working both in private and public institutions and in morning/night shifts, as well of years of experience on mental health and sleep. These data demonstrate how work and workplace characteristics exerted an effect on the health parameters of healthcare professionals during the pandemic. We hope that the evidence hereby exposed about this previous crisis is used in the future as a basis for the betterment of working conditions in this area. We expect that this study helps in the development of measures that mitigate deterioration of wellbeing of those operating in the frontlines in potential future large-scale emergencies.

Lien vers l'article

Circadian rhythm types and shift work demands shape sleep quality and depressive symptoms in shift-working nurses.

Zhao H, Li Q, Huang H, Lan F, Yang H, He Y, et al. *Front Public Health*. 2025;13:1667778.

OBJECTIVE: To examine the predictive, moderating, and combined effects of circadian rhythm types and shift work demands on sleep quality and depressive symptoms among shift-working nurses. METHODS: A cross-sectional study was conducted between May 1, 2024, and May 31, 2025. Shift-working nurses were recruited using convenience sampling at a tertiary hospital in Guangxi, China. Circadian rhythm types, sleep quality and depressive symptoms were assessed using the Circadian Type Inventory [CTI; including flexibility-rigidity (FR) and languidness-vigorousness (LV)], the Pittsburgh Sleep Quality Index (PSQI) and the Patient Health Questionnaire-9 (PHQ-9). Objective data on shift work demands over a four-week period were extracted from the hospital nursing management system, including number of night shifts, total shift hours, and shift workload exposure. Generalized linear modeling (GLM), nonlinear curve fitting, and Monte Carlo simulation were used for data analysis. RESULTS: A total of 288 shift nurses were included. The GLMs showed that depressive symptoms ($\beta = 0.245$), languidness ($\beta = 0.065$), shift work hours ($\beta = 0.093$), and body mass index ($\beta = -0.056$) were significant predictors of poorer sleep quality. Poorer sleep quality ($\beta = 0.314$), flexibility ($\beta = -0.129$), languidness ($\beta = 0.159$), and the interaction between sleep quality and flexibility ($\beta = 0.091$), between languidness and shift work hours ($\beta = 0.069$) significantly predicted depressive symptoms. Nonlinear analysis identified a potential threshold effect, with more than 24 shift work hours in 4 weeks linked to poorer sleep quality. Dynamic simulations demonstrated that the combined effects of circadian rhythm types and shift work demands corresponded to distinct dose-response patterns in sleep quality and depressive symptoms. CONCLUSION: Circadian rhythm types and shift work demands jointly shape sleep quality and depressive symptoms in shift nurses, with distinct dose-response patterns. These findings highlight the importance of circadian-informed shift scheduling to improve sleep and mental health among shift nurses.

Lien vers l'article

Characterizing potential subtypes and influencing factors of burnout in emergency department nurses by latent profile analysis.

Lan L, Chen X, Zhang H, Zhong L, Ye L. *Front Public Health*. 2025;13:1654398.

OBJECTIVE: This study aims to explore the heterogeneity of burnout among emergency department nurses, identify the factors influencing burnout in different subtypes of emergency nurses, and provide targeted strategies and measures to reduce burnout in emergency department nurses. METHODS: A cross-sectional survey was conducted from December 26, 2023, to January 18, 2024, involving 1,555 emergency nurses from 30 tertiary hospitals in China. The survey was distributed via an online questionnaire platform, which included general demographic information and the Maslach Burnout Inventory (MBI). The collected data were analyzed using latent profile analysis, Kruskal-Wallis H test, and multiple logistic regression. RESULTS: A total of 1,555 questionnaires were sent out in this survey, and finally 1,540 were included for data analysis. The average burnout score among emergency nurses was (4.77 ± 6.16). Occupational burnout could be categorized into three subtypes: low burnout-low professional efficacy (C1), low burnout-high professional efficacy (C2), and high burnout-low professional efficacy (C3). The proportions of these subtypes were 41%, 32.3%, and 26.7%, respectively. Significant differences in the latent categories of burnout were observed for age ($\chi(2) = 31.749$, $P < 0.001$), education level ($\chi(2) = 6.778$, $P = 0.034$), professional title ($\chi(2) = 21.928$, $P < 0.001$), years of work ($\chi(2) = 29.269$, $P < 0.001$), weekly working hours ($\chi(2) = 52.493$, $P < 0.001$), number of night shifts ($\chi(2) = 34.685$, $P < 0.001$), and monthly income ($\chi(2) = 18.994$, $P < 0.001$). CONCLUSION: Occupational burnout is prevalent among emergency nurses, with significant heterogeneity in burnout types. Burnout is associated with age, education level, professional title, number of night shifts, weekly

working hours, and monthly income. The heterogeneity of burnout subtypes and their influencing factors provides a basis for future personalized interventions.

Lien vers l'article

Analysis of factors affecting mental health of automobile manufacturing workers based on structural equation modeling.

Pang S, Chen F, Liang X, Cai D, Ye M. *Work*. 2025 Oct 28:10519815251388936.

BackgroundDue to the unique nature of their work, automotive manufacturing workers are prone to mental health issues. However, in China, few studies have explored the interactive mechanisms among factors affecting their mental health.ObjectiveThis study analyzes the mental health status of workers in the automotive manufacturing industry in Chongqing, China, aiming to provide assistance in improving their mental well-being.MethodsUsing the stratified cluster sampling method, 1296 survey subjects were randomly selected. Data were collected through a questionnaire survey and analyzed using structural equation modeling.ResultsThe prevalence of mental health problems was 20.91%. The results of univariate analysis showed that gender, age, marital status, average weekly working hours, and the need to work night shifts had varying degrees of effect on workers' mental health ($P < 0.05$). Structural equation modeling showed that occupational health literacy, work-related musculoskeletal disorders (WMSDs), and working time arrangement all had an effect on mental health, with total effects of -0.153, 0.269, and 0.204, respectively, with occupational health literacy having an indirect effect of -0.034 on mental health through WMSDs.ConclusionsThe detection rate of mental health problems among automobile manufacturing workers in Chongqing is high, and the level of occupational health literacy, the occurrence status of WMSDs, and the schedule of working hours are related to the occurrence of mental health problems, with WMSDs having the greatest impact on the mental health of manufacturing workers.

Lien vers l'article

The Beck Depression Inventory-II scores of adults with type 1 diabetes in Japan: Analysis using the Juntendo-Aso Type 1 Diabetes (JAT-1) Cohort.

Ikeda F, Sato J, Nakajima K, Koshibu M, Sato A, Aso K, et al. *J Diabetes Investig*. 2025 Nov;16(11):2111-7.

INTRODUCTION: Depressive tendencies associated with difficulty in the treatment of type 1 diabetes (T1D) could hinder appropriate intervention. Factors related to depressive tendencies in Japan remain unclear, though recent advances in medication may have affected them. MATERIALS AND METHODS: Three hundred and fifty-two Japanese patients with T1D registered in the Juntendo-Aso Type 1 Diabetes (JAT-1) Cohort Study were divided into two groups based on depressive tendencies assessed with the Beck Depression Inventory-II score. We compared background characteristics of the patients between the groups and also analyzed additional clinical factors and quality of life scores. RESULTS: The patients with a Beck Depression Inventory-II score $\geqq 14$ (35.5%) are classified as having depressive tendencies. Compared to the individuals without depressive characteristics, those with depressive tendencies had significantly higher proportions of females, welfare recipients, and shift workers; a higher proportion of individuals with microvascular complications; higher diastolic pressure; eating out or taking out food more frequently for dinner; lower protein intake; and higher scores in the total score of diabetes-related problem domains and Pittsburgh Sleep Quality Index. Multiple regression analysis revealed that diastolic blood pressure, welfare recipient status, total score of diabetes-related problem domains (PAID), and Pittsburgh Sleep Quality Index were significantly associated factors with BDI-II score, and the PAID score showed the strongest association. CONCLUSIONS: This study revealed that diabetes-specific psychological burden, evaluated with the PAID score, is strongly associated with

depressive tendencies. Routine use of the PAID could support the strategies to prevent depression in people with type 1 diabetes by identifying those at risk.

Lien vers l'article

Troubles cognitifs et de la vigilance

Circadian rhythm types and shift work demands shape sleep quality and depressive symptoms in shift-working nurses.

Zhao H, Li Q, Huang H, Lan F, Yang H, He Y, et al. *Front Public Health*. 2025;13:1667778.

OBJECTIVE: To examine the predictive, moderating, and combined effects of circadian rhythm types and shift work demands on sleep quality and depressive symptoms among shift-working nurses. METHODS: A cross-sectional study was conducted between May 1, 2024, and May 31, 2025. Shift-working nurses were recruited using convenience sampling at a tertiary hospital in Guangxi, China. Circadian rhythm types, sleep quality and depressive symptoms were assessed using the Circadian Type Inventory [CTI; including flexibility-rigidity (FR) and languidness-vigorousness (LV)], the Pittsburgh Sleep Quality Index (PSQI) and the Patient Health Questionnaire-9 (PHQ-9). Objective data on shift work demands over a four-week period were extracted from the hospital nursing management system, including number of night shifts, total shift hours, and shift workload exposure. Generalized linear modeling (GLM), nonlinear curve fitting, and Monte Carlo simulation were used for data analysis. RESULTS: A total of 288 shift nurses were included. The GLMs showed that depressive symptoms ($\beta = 0.245$), languidness ($\beta = 0.065$), shift work hours ($\beta = 0.093$), and body mass index ($\beta = -0.056$) were significant predictors of poorer sleep quality. Poorer sleep quality ($\beta = 0.314$), flexibility ($\beta = -0.129$), languidness ($\beta = 0.159$), and the interaction between sleep quality and flexibility ($\beta = 0.091$), between languidness and shift work hours ($\beta = 0.069$) significantly predicted depressive symptoms. Nonlinear analysis identified a potential threshold effect, with more than 24 shift work hours in 4 weeks linked to poorer sleep quality. Dynamic simulations demonstrated that the combined effects of circadian rhythm types and shift work demands corresponded to distinct dose-response patterns in sleep quality and depressive symptoms. CONCLUSION: Circadian rhythm types and shift work demands jointly shape sleep quality and depressive symptoms in shift nurses, with distinct dose-response patterns. These findings highlight the importance of circadian-informed shift scheduling to improve sleep and mental health among shift nurses.

Lien vers l'article

Sleep and Mental Health: the Impact of the COVID-19 Pandemic on Healthcare Professionals.

Vitti-Ruela BV, Dokkedal-Silva V, Galduróz JCF, Tufik S, Andersen ML. *Psychiatr Q*. 2025 Oct 20.

Important stressors were at play during the COVID-19 pandemic, representing a burden for healthcare professionals around the world. Some of these stressors were related to the available structure and experience these professionals had, while others were related to being in frontline positions. Evaluating which of these characteristics was associated with the worsening of mental and sleep health in these individuals remains fundamental even in the aftermath of the pandemic. This study sought to analyze the impacts of direct contact between healthcare professionals and COVID-19 patients by gauging the correlation between psychiatric symptoms, sleep impairment, general health and sleep health in different healthcare professions. The influence of the type of institution, the professionals' work shifts, and individual perception when comparing the health impacts before and after the pandemic was also investigated. Volunteers answered an online questionnaire applied using the Google Forms platform and disseminated on multiple digital networks. The questions were designed based on previously validated questionnaires about sleep, mental health and quality of life. The

analysis was divided into seven blocks to better explore each topic. Among our findings, nurses were identified as one of the professionals with most impairments to sleep and mental health. We observed that age had a generally positive association with better sleep and mental health outcomes. There was an effect of working both in private and public institutions and in morning/night shifts, as well of years of experience on mental health and sleep. These data demonstrate how work and workplace characteristics exerted an effect on the health parameters of healthcare professionals during the pandemic. We hope that the evidence hereby exposed about this previous crisis is used in the future as a basis for the betterment of working conditions in this area. We expect that this study helps in the development of measures that mitigate deterioration of wellbeing of those operating in the frontlines in potential future large-scale emergencies.

Lien vers l'article

Chronobiologie
Animal

Chronic circadian disruption in female mice induces a long-term alteration of the preovulatory LH surge.

Simonneaux M, Simonneaux V. *J Neuroendocrinol*. 2025 Oct 19:e70101.

In female mammals, many aspects of the reproductive function require precise synchronization of neuroendocrine and behavioral events for optimal fertility. To this end, the circadian timing system entrained by light exposure, in addition to the cyclical variations of sex steroid hormones, sets the pace of the hypothalamic-pituitary-ovarian axis. This is best illustrated by the preovulatory LH surge triggered by a daily signal generated by the master circadian clock at the resting-active period transition combined with the positive feedback from estradiol produced by maturing ovarian follicles at the end of the follicular phase. This ensures that ovulation occurs when sexual arousal is maximal, optimizing the chances for reproductive success. Although increasing evidence reports the direct impact of circadian disruption on female reproductive function in animals and humans, the potential long-term consequences remain unknown. Using a light-based shift work model in which adult female mice experienced a 10-h phase advance and a 10-h phase delay each week for 4 weeks (rotating shift condition), we investigated the long-term effects of such circadian disruption by monitoring reproductive rhythms after light exposure was normalized. Our results report a significant alteration in the timing and amplitude of the LH surge on the day of proestrus for up to 3 weeks after pre-exposure to disrupted light-dark cycles, despite regular estrous cycles. This long-lasting dysregulation of LH secretion may be linked to a delayed resynchronization of the internal timing system after exposure to rotating shift condition since locomotor activity also takes approximately 2 weeks to recover a robust daily rhythm. Given the significance of temporal homeostasis to proper reproduction, these findings emphasize the importance of investigating the long-lasting negative impacts of shift work on women's reproductive health.

Lien vers l'article

Homme

Prolonged exposure to artificial light and carcinogenesis: A systematic review of oncostatic mechanisms associated with melatonin pathways.

Barboza G, Oliveira J, Ferreira A, Lopes R, Cupertino M. *Photochem Photobiol*. 2025 Oct 14.

Light pollution from widespread artificial illumination affects photosensitive organisms, including humans. Prolonged exposure to artificial light at night (ALAN), particularly blue light, is associated with melatonin suppression and circadian disruption, both implicated in carcinogenesis. This systematic review investigated the relationship between extended ALAN exposure and malignant neoplasms, identifying associated cancer types and biological mechanisms. A search was conducted in PubMed/Medline and Scopus using PRISMA guidelines. Original studies evaluating associations between ALAN, light pollution, or blue light and cancer in humans were included. Eighteen studies demonstrated a positive link between ALAN and breast cancer, with mechanisms involving interference in the cell cycle, DNA repair, oxidative stress, and activation of oncogenic pathways. Night-shift work correlated with increased breast cancer risk, reduced melatonin levels, and hormonal dysregulation. Exogenous melatonin showed oncostatic potential, reversing epigenetic changes induced by ALAN and reducing tumor burden. Melatonin suppression may promote tumor progression through circadian gene disruption and hormonal imbalance. While findings support a consistent link between ALAN exposure and oncogenesis-especially breast and prostate cancers-methodological variability and confounding factors, such as genetic predisposition and lifestyle, limit generalization.

Further studies are needed to clarify mechanisms and explore preventive strategies, including light pollution control and melatonin-based interventions.

Circadian rhythm types and shift work demands shape sleep quality and depressive symptoms in shift-working nurses.

Zhao H, Li Q, Huang H, Lan F, Yang H, He Y, et al. *Front Public Health*. 2025;13:1667778.

OBJECTIVE: To examine the predictive, moderating, and combined effects of circadian rhythm types and shift work demands on sleep quality and depressive symptoms among shift-working nurses. METHODS: A cross-sectional study was conducted between May 1, 2024, and May 31, 2025. Shift-working nurses were recruited using convenience sampling at a tertiary hospital in Guangxi, China. Circadian rhythm types, sleep quality and depressive symptoms were assessed using the Circadian Type Inventory [CTI; including flexibility-rigidity (FR) and languidness-vigorousness (LV)], the Pittsburgh Sleep Quality Index (PSQI) and the Patient Health Questionnaire-9 (PHQ-9). Objective data on shift work demands over a four-week period were extracted from the hospital nursing management system, including number of night shifts, total shift hours, and shift workload exposure. Generalized linear modeling (GLM), nonlinear curve fitting, and Monte Carlo simulation were used for data analysis. RESULTS: A total of 288 shift nurses were included. The GLMs showed that depressive symptoms ($\beta = 0.245$), languidness ($\beta = 0.065$), shift work hours ($\beta = 0.093$), and body mass index ($\beta = -0.056$) were significant predictors of poorer sleep quality. Poorer sleep quality ($\beta = 0.314$), flexibility ($\beta = -0.129$), languidness ($\beta = 0.159$), and the interaction between sleep quality and flexibility ($\beta = 0.091$), between languidness and shift work hours ($\beta = 0.069$) significantly predicted depressive symptoms. Nonlinear analysis identified a potential threshold effect, with more than 24 shift work hours in 4 weeks linked to poorer sleep quality. Dynamic simulations demonstrated that the combined effects of circadian rhythm types and shift work demands corresponded to distinct dose-response patterns in sleep quality and depressive symptoms. CONCLUSION: Circadian rhythm types and shift work demands jointly shape sleep quality and depressive symptoms in shift nurses, with distinct dose-response patterns. These findings highlight the importance of circadian-informed shift scheduling to improve sleep and mental health among shift nurses.

Elevated cardiometabolic risk markers in evening chronotype shift workers: a case-control study in male workers.

Wanigasinghe AS, Perera DS, Rathnayake KM. *Br J Nutr*. 2025 Oct 14:1-10.

Shift work-induced circadian disruption has been linked to various cardiometabolic diseases, including obesity, diabetes and CVD. Limited studies have explored the impact of different variables such as night work durations, intensities and chronotype on cardiometabolic risk. This study aimed to determine the impact of circadian disruption on cardiometabolic risk markers in shift workers. This case-control study was conducted with 104 male workers (shift workers; n 52, mean age; 43·3 (sd 10·2), and non-shift workers; n 52, mean age; 41·2 (sd 9·8)). Shift work details were determined via an interviewer-administered questionnaire. Cardiometabolic risk was evaluated through anthropometric (height, weight, waist circumference and body composition), biochemical (fasting glucose and lipid profile), clinical (blood pressure) and dietary assessment (24-h recalls from working and non-working days). The chronotype was determined via the Munich Chronotype Questionnaire (MCTQ). Shift workers had significantly higher mean body fat percentage (31·7, 22·7 % P = 0·031), systolic blood pressure (SBP) (138·6, 128·5 mmHg P = 0·009), pulse rate (78·7, 72·3 bpm P = 0·015), TAG (1·60, 1·30 mmol/l P = 0·021) and LDL-cholesterol (3·90, 3·40 mmol/l P = 0·012) than non-shift workers. Evening chronotype shift workers had significantly higher visceral fat levels (12·8, 8·90 P = 0·001), SBP (137·0,

127·6 mmHg P = 0·006), pulse rate (82·7, 73·3 bpm P = 0·005) and LDL-cholesterol (4·00, 3·40 mmol/l P = 0·039) than shift workers with a morning chronotype. In conclusion, shift workers exhibited higher metabolic risk markers than non-shift workers. Shift workers with evening chronotypes had higher cardiometabolic risk than morning chronotypes. Further research is warranted to elucidate the underlying mechanisms and inform targeted interventions for individuals engaged in shift work, considering chronotypes.

Lien vers l'article

Methods for Assessment of Sleep and Circadian Rhythms in Cardiovascular Research.

Williams R, Gloston G, Ward KC, Jain S, Hays K, Ensor A, et al. *Curr Hypertens Rep*. 2025 Oct 21;27(1):25.

Sleep is recognized in Life's Essential 8™ as an important behavioral factor for improving and maintaining cardiovascular health. While sleep duration is currently the focus in Life's Essential 8™, sleep health is multidimensional and encompasses regularity, satisfaction, next-day alertness, timing, efficiency, and duration. In addition to sleep, circadian factors have also been implicated in cardiovascular health. For example, shift work, which results in significant circadian misalignment, is associated with poor cardiovascular health. This review will describe methods for measuring, analyzing, and interpreting sleep and circadian rhythms in humans. Subjective and objective measurements of sleep are not always concordant and may reflect distinct constructs. Therefore, both subjective and objective sleep measurements are discussed. Assessment of the circadian system in humans typically relies on the measurement of circadian biomarkers (i.e., melatonin, core body temperature, and/or cortisol) during rigorous and burdensome research protocols. However, novel approaches are being developed to estimate circadian parameters with lower cost and participant burden. This review aims to inform cardiovascular scientists and clinicians of common practices in the assessment of sleep and circadian rhythms.

Lien vers l'article

Associations Between Salivary Cortisol, DHEA-S, and Alpha-Amylase and Longitudinal Sleep Disruption in Shift-Working Healthcare Professionals: A Pilot Study.

Salahuddin MF, Sukararuji K, Sharifi M, Odia KAF, Manzar MD, Pandi-Perumal SR, et al. *Nat Sci Sleep*. 2025;17:2611-23.

BACKGROUND: Shift work is a well-established disruptor of sleep, yet the biological mechanisms driving sleep disturbances remain poorly understood. Salivary cortisol (HPA axis), α-amylase (sympathetic-adrenomedullary output), and DHEA-S (adrenal androgen with anti-glucocorticoid/resilience properties) are candidate indicators of stress-related sleep disruption. We therefore examined whether changes in these biomarkers were associated with 6-month sleep trajectories in health professionals. METHODS: In a prospective 6-month repeated-measures design, 52 healthcare professionals (daytime vs rotating shifts; mean age 31.4 ± 9.4 years; 57% female) completed validated sleep assessments, PROMIS Sleep Disturbance, PROMIS Sleep Impairment, the Sleep-Wake Disorder Index (SWDI), and the NIH 7-day Sleep Diary, at baseline and six-month follow-up. Salivary cortisol, Dehydroepiandrosterone Sulfate (DHEA-S), and alpha-amylase were collected on the morning of Day 7 of each diary period. Change scores (Δ = follow-up - baseline) were computed. Repeated-measures ANOVA, Pearson correlations, and multivariable regressions assessed group differences and biomarker-sleep associations. RESULTS: Compared with daytime workers, rotating shift workers reported significantly greater increases in sleep disturbance, impairment, and reduced sleep efficiency over time (all $p < 0.05$). Reductions in cortisol and alpha-amylase were significantly associated with worsening PROMIS Sleep Disturbance and SWDI scores (r = -0.65 and -0.53, respectively; $p < 0.05$). Multivariable regression showed that decreased cortisol (β = -41.845, p = 0.0064) and increased DHEA-S (β = 0.001, p = 0.0405) associated with worsening PROMIS Sleep

Impairment. A combined model including reduced cortisol, and increased DHEA-S associated with greater PROMIS Sleep Disturbance (adjusted R^2 = 0.698). CONCLUSION: In this pilot, changes in salivary cortisol and DHEA-S were associated with longitudinal changes in sleep. These results suggest potential utility for biomarker-informed risk stratification, warranting confirmation in larger, controlled studies.

Lien vers l'article

Take the reins: a study protocol of a randomized controlled trial testing the effects of time-restricted eating vs. nutrition control on cancer-related fatigue among survivors of hematological malignancies.

Kleckner AS, Clingan CL, Badros AZ, Manoogian ENC, Mustian KM, Panda S, et al. *BMC Nutr*. 2025 Oct 31;11(1):200.

BACKGROUND: Cancer-related fatigue is one of the most common and debilitating side effects of cancer and its treatments. Fatigue may stem from disruptions in circadian rhythms and dysregulation of glucose metabolism, which can be improved through time-restricted eating. Time-restricted eating is a daily eating pattern that entails consuming food within a defined, consistent window (e.g., 10 h) every day. When the eating window aligns with the daylight hours, it can entrain circadian processes and modulate physiological regulation of whole-body metabolism. It is hypothesized that time-restricted eating can relieve cancer-related fatigue in blood cancer survivors via regulating circadian rhythms and improving metabolism. METHODS: This trial is a phase II randomized controlled trial comparing the effects of time-restricted eating (10 h daytime feeding/14 h fasting at night) vs. a time-, attention, and expectancy-matched control nutrition counseling intervention (no time component) on cancer-related fatigue. A total of 96 blood cancer survivors will be recruited; eligible survivors will be 2 months to 2 years post-adjuvant chemotherapy, report moderate to severe fatigue, consume food within a window that is > 10 h, and not be employed in night-shift work. At baseline, 6 weeks, and 12 weeks (post-intervention), assessments include patient-reported fatigue, measures of circadian rest-activity rhythm, and glucose metabolism via continuous glucose monitoring. Participants will log their food intake using the myCircadianClock smartphone app at baseline and throughout the 12-week study. At 24 weeks (12 weeks post-intervention), questionnaires will probe maintenance of the dietary pattern and sustainability of any intervention effects on fatigue. DISCUSSION: Time-restricted eating is scalable and free-of-cost, lending itself to accessibility for the vast majority of cancer survivors. Data generated herein will be used to inform a larger, phase III multisite clinical trial testing the effects of time-restricted eating on cancer-related fatigue among survivors of hematological malignancies, and further optimize interventions that entrain circadian rhythms and improve glucose metabolism to alleviate cancer-related fatigue and other supportive care outcomes. TRIAL REGISTRATION: clinicaltrials.gov ID: NCT06482515. SUPPLEMENTARY INFORMATION: The online version contains supplementary material available at 10.1186/s40795-025-01185-0.

Lien vers l'article

The multifaceted impact of circadian disruption on cancer risk: a systematic review of insights and economic implications.

Clemente-Suarez VJ, Navarro-Jiménez E, Benitez-Agudelo JC, Beltrán-Velasco AI, Belinchón-deMiguel P, Ramos-Campo DJ, et al. *J Natl Cancer Cent*. 2025 Oct;5(5):524-36.

BACKGROUND: Circadian disruption has emerged as a significant risk factor for cancer, driven by mechanisms such as hormonal imbalances, impaired DNA repair, immune suppression, and metabolic dysregulation. Modern societal patterns-shift work, artificial light at night, and irregular sleep schedules-have exacerbated these risks. METHODS: We conducted a systematic review following

Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines, screening over 500 studies published between 2003 and 2023 from PubMed, Scopus, Embase, ScienceDirect, and Web of Science. Inclusion criteria focused on peer-reviewed epidemiological and mechanistic studies linking circadian disruption with cancer risk. The Newcastle-Ottawa Scale was used for methodological quality assessment. RESULTS: A total of 75 high-quality studies were included. Strong evidence supports associations between circadian disruption and breast, prostate, and colorectal cancers, with limited but emerging evidence for melanoma and bladder cancer. Mechanistic pathways involve melatonin suppression, dysregulation of CLOCK and BMAL1 genes, reduced natural killer cell activity, and chronic inflammation due to metabolic imbalance. Light-at-night (LAN) exposure and prolonged night shift work were consistently identified as major risk factors. Furthermore, economic analyses reveal a substantial burden due to increased healthcare costs and productivity losses, particularly in shift work-dominated sectors. CONCLUSIONS: Circadian misalignment is a critical, yet often overlooked, contributor to cancer incidence and associated economic burdens. Public health strategies-such as regulating shift schedules, reducing LAN exposure, and promoting chronotherapy-are essential to mitigate these risks. Further research should address sex-based differences, improve exposure measurement, and extend investigations to low- and middle-income countries.

Lien vers l'article

Bidirectional interactions between circadian rhythms and the gut microbiome.

Bautista J, Ojeda-Mosquera S, Altamirano-Colina A, Hidalgo-Tinoco C, Di Capua Delgado M, López-Cortés A. *Appl Microbiol Biotechnol*. 2025 Oct 10;109(1):218.

Circadian rhythms are endogenous, near-24-h cycles that synchronize physiological and behavioral functions with environmental cues such as light/dark cycles and food intake. While the central pacemaker in the suprachiasmatic nucleus orchestrates these rhythms, peripheral clocks distributed across organs, including the gastrointestinal tract, exhibit autonomous oscillations that are crucial for local homeostasis. Concurrently, the gut microbiota undergoes diurnal fluctuations in composition and metabolic activity that are tightly coupled to host circadian mechanisms. Recent discoveries reveal a bidirectional relationship: host clocks influence microbial dynamics through feeding behavior, immune signaling, and epithelial renewal, whereas microbial metabolites such as short-chain fatty acids (SCFAs) and bile acids modulate circadian gene expression in peripheral tissues. Disruptions in circadian alignment, whether due to genetic mutations, lifestyle factors like shift work and irregular eating, or environmental perturbations, lead to microbial dysbiosis, metabolic dysfunction, inflammation, and heightened disease susceptibility. Conversely, altered microbiota rhythms can feed back into host systems, impairing metabolic control, immune responses, and neuroendocrine signaling. This reciprocal regulation extends to disease contexts, where circadian-microbiota misalignment contributes to obesity, type 2 diabetes, inflammatory bowel disease, and even neuropsychiatric disorders. This review synthesizes current insights into the molecular and physiological cross-talk between host circadian clocks and the gut microbiota. We discuss how temporal dynamics at the cellular, systemic, and microbial levels are integrated and how their disruption underlies pathogenesis. We further explore the potential of chronobiotics and chrononutrition, including time-restricted feeding (TRF) and bioactive dietary compounds, as emerging strategies to restore circadian-microbial synchrony and improve metabolic health. Understanding this intricate dialogue between host and microbiome may pave the way for personalized, time-based interventions to enhance healthspan and prevent disease occurrence or progression. KEY POINTS: • Circadian rhythms and microbiota form a bidirectional regulatory feedback loop. • Disruption of circadian-microbial synchrony drives metabolic and inflammatory disease. • Chrononutrition offers novel strategies to restore health via circadian-microbiota alignment.

Lien vers l'article

Circadian nutrition and obesity: timing as a nutritional strategy.

BACKGROUND: The global prevalence of obesity and metabolic disorders has reached critical levels, with over 1 billion individuals affected as of 2024. Traditional dietary strategies focusing on caloric restriction and macronutrient composition have yielded modest success. Emerging evidence suggests that when food is consumed, termed circadian nutrition, is an influential, yet underutilized factor in metabolic regulation. OBJECTIVE: This narrative review examines how aligning meal timing with endogenous circadian rhythms modulates energy balance, hormonal regulation, and adiposity. It integrates recent mechanistic insights and synthesizes evidence from both animal and human studies to explore the metabolic impact of circadian-aligned eating patterns. METHODS: A comprehensive review of peer-reviewed literature (2013-2025) was conducted using PubMed, Scopus, and ScienceDirect, focusing on studies of circadian rhythms, nutrient timing, time-restricted eating (TRE), and metabolic outcomes. English-language human trials and mechanistic animal studies, relevant systematic reviews/meta-analyses were consulted. Key findings were synthesized across clinical trials, observational cohorts, and experimental models. KEY FINDINGS: Meal timing exerts significant effects on glucose metabolism, lipid regulation, and inflammatory pathways. Importantly, emerging evidence from animal models with isocaloric controls suggests that these benefits are not solely due to reduced caloric intake but also reflect independent effects of aligning food intake with circadian rhythms. Consuming a higher proportion of energy earlier in the day, with potentially more favorable distributions of carbohydrates, protein, and micronutrients, avoiding late-night eating, and practicing time-restricted feeding have been associated with improvements in insulin sensitivity, weight regulation, and cardiometabolic health. Disruptions in circadian rhythms, as seen in shift workers or individuals with irregular eating schedules, contribute to metabolic dysregulation and obesity risk. CONCLUSION: Circadian-aligned eating may offer a feasible adjunct to standard dietary strategies, but effect sizes remain uncertain given that much of the literature comprises small, short-term, heterogeneous trials. Larger, longer, and more diverse RCTs and pragmatic studies are needed to establish durability, clinical significance, and population-specific guidance.

[Lien vers l'article](#)

Association between vitamin D deficiency and depressive symptoms among shift workers: Insights from network pharmacology and bioinformatics studies.

Vitamin D deficiency is soaring among shift workers due to multiple issues, including poor UVB experience. The objective of this study was to identify precise mechanisms by which vitamin D deficiency might aggravate depressive symptoms among shift workers. Shift work is also associated with disrupting circadian rhythm, leading to depressive symptoms. Differential expressed genes (DEGs) in depression patients (GSE80655, GSE169459, GSE217811, GSE190518, GSE98793, GSE23848, GSE76826, GSE101521, and GSE54572) and in shift workers (GSE122541) with controls were examined in the GEO database. Genes associated with vitamin D deficiency were gathered from the GenCard database. Overlapping core targets were collected by uploading genes into the Bioinformatics and Evolutionary Genomics database. STRING database was used to screen the PPI (protein-protein interaction) network of cross-targets. Cytoscape was used to select core targets and to set up the pathway-gene network. GO (Gene Ontology) enrichment and KEGG (Kyoto Encyclopedia of Genes and Genomes) pathway investigations were executed by the database ShinyGO. A molecular docking examination was performed to explain the interaction between protein targets and calcitriol (active form of vitamin D), and binding affinity was confirmed by a 100-ns molecular dynamics simulation study. Our finding designated that the deficit of vitamin D might be involved in the pathology of

depression among shift workers mainly through activation of the inflammatory response via upregulation of TNF, IL-6, and IL-1β (pro-inflammatory markers).

Lien vers l'article

Conduites addictives
Aucun article dans ce bulletin.

Reproduction

Maternal sleep disorders during pregnancy and subsequent risk of allergic diseases in Japanese children: the TMM BirThree Cohort Study.

BACKGROUND: Associations have been suggested between prenatal exposure and allergic diseases in children as well as between respiratory allergies and maternal sleep disorders during pregnancy. PURPOSE: This study aimed to examine the association between maternal sleep disorders during pregnancy and allergic diseases, including respiratory, skin, and ocular allergies, in their children. METHODS: This study was based on the Tohoku Medical Megabank Project Birth and Three-Generation Cohort Study. Sleep disorders during pregnancy were defined as an Athens Insomnia Scale score of ≥6. Allergic diseases in children up to 5 years of age were assessed by maternal selfreport on "bronchial asthma," "atopic dermatitis," "food allergy," and "allergic conjunctivitis/allergic rhinitis/hay fever." Hazard ratios (HRs) with 95% confidence intervals (CIs) were calculated using a Cox proportional hazards model. RESULTS: A total of 11,123 mother-child pairs were included. The mean gestational age at registration was 19.6±7.6 weeks. During pregnancy, 4,115 women (37.0%) experienced sleep disorders. Additionally, 53.7% of the participants had a history of parity, 8.8% worked night shifts, and 0.4% used sleep medications. In the crude models, maternal sleep disorders during pregnancy were associated with all examined allergic diseases in children. After the adjustment for all confounders, the associations remained significant for atopic dermatitis and allergic conjunctivitis/ allergic rhinitis/hay fever (HR [95% CI], 1.09 [0.97-1.23] for bronchial asthma, 1.17 [1.05-1.31] for atopic dermatitis, 1.11 [0.98-1.26] for food allergy, and 1.25 [1.13-1.39] for allergic conjunctivitis/allergic rhinitis/hay fever). CONCLUSION: Maternal sleep disorders during pregnancy were associated with atopic dermatitis as well as allergic conjunctivitis/allergic rhinitis/hay fever in children.

Lien vers l'article

What are the factors that affect female healthcare workers on their return to work after maternity leave?

INTRODUCTION: The demographic of the paramedic workforce is changing on a worldwide scale, and a higher proportion of paramedics are women of childbearing age. In order to ensure retention in the workplace, it is crucial to understand the challenges faced by female paramedics when returning to work after maternity leave, thus guaranteeing that appropriate support can be provided. Due to a paucity of literature focusing on paramedics, this review has examined literature pertaining to other female healthcare professionals on their return to work and suggests that these factors affect women working in all healthcare disciplines, whether paramedic or otherwise. METHODS: A systematic search strategy using four electronic databases (CINAHL, British Nursing Database, PubMed and Academic Search Complete) was conducted in February 2025. The PRISMA systematic approach was used to conduct a review of the literature, and selected studies were identified using predefined inclusion and exclusion criteria. Papers were narratively synthesised to produce key themes for discussion. As this was secondary research, no ethical approval was required. RESULTS: A total of 746 records were initially found; after eliminating duplicates and giving consideration to titles and abstracts, 14 remained. Eight of the articles did not meet the inclusion criteria, leaving six, and a further three were found via snowballing and internet searches, giving a final total of nine articles for inclusion in the review. No literature that specifically related to female paramedics was found. Thematic analysis of the papers identified five main themes: work factors, health and well-being, childcare, identity and home support. CONCLUSION: The factors that affect female healthcare workers on their return to work after maternity leave are multiple, complex and varied. Women need good support from their workplace in order to have a successful transition back to work, and the availability of childcare for

shift workers was problematic. Further research is needed in this area to fully understand the issues facing female paramedics returning to work after maternity leave, as many papers identified were dated, and there is no contemporary UK data pertaining to female paramedics.

Lien vers l'article

Associations Between Lifestyle Factors and Primary Dysmenorrhea in the Japan Nurses' Health Study.

Obayashi S, Ideno Y, Kubota T, Takamatsu K, Hayashi K. *Womens Health Rep (New Rochelle)*. 2025;6(1):702-10.

BACKGROUND: Dysmenorrhea is chronic and cyclic pain during menstruation and is a common gynecological problem worldwide. Although there are several reported risk factors for dysmenorrhea, the findings of previous studies are inconsistent. This study aimed to identify lifestyle factors associated with dysmenorrhea. METHODS: The study population comprised 36,665 premenopausal female nurses aged 20-49 years who completed the Japan Nurses' Health Study (JNHS) baseline survey. Out of grades 0-4 of menstrual pain, dysmenorrhea was defined as grades 2-4. Multivariable modified Poisson regression analysis was used to examine the associations between dysmenorrhea and possible risk factors, namely age, current menstrual cycle, marital status, parity, current body mass index (BMI), smoking status, alcohol consumption, work shift, physical activity, sleep duration, and soybean isoflavone intake. RESULTS: There was a significant negative association between age and the prevalence ratio (PR) of dysmenorrhea ($p < 0.0001$). Older age and parity were significantly associated with decreased multivariable-adjusted PRs. The factors significantly associated with increased PRs were an irregular menstrual cycle, being underweight (BMI < 18.5 kg/m(2)), smoking, consuming alcohol, short sleep duration, and night shift work. Although the age-adjusted PRs of total isoflavone aglycone equivalents, tofu intake, and miso soup intake showed a significant linear trend toward decreased PRs, there was a significant decrease in multivariable-adjusted PRs only in the "almost every day" tofu-intake group. CONCLUSION: The JNHS baseline survey revealed that the factors associated with dysmenorrhea in Japanese women were age, parity, menstrual cycle, being underweight, and lifestyle factors, including soybean food intake.

Lien vers l'article

Chronic circadian disruption in female mice induces a long-term alteration of the preovulatory LH surge.

Simonneaux M, Simonneaux V. *J Neuroendocrinol*. 2025 Oct 19:e70101.

In female mammals, many aspects of the reproductive function require precise synchronization of neuroendocrine and behavioral events for optimal fertility. To this end, the circadian timing system entrained by light exposure, in addition to the cyclical variations of sex steroid hormones, sets the pace of the hypothalamic-pituitary-ovarian axis. This is best illustrated by the preovulatory LH surge triggered by a daily signal generated by the master circadian clock at the resting-active period transition combined with the positive feedback from estradiol produced by maturing ovarian follicles at the end of the follicular phase. This ensures that ovulation occurs when sexual arousal is maximal, optimizing the chances for reproductive success. Although increasing evidence reports the direct impact of circadian disruption on female reproductive function in animals and humans, the potential long-term consequences remain unknown. Using a light-based shift work model in which adult female mice experienced a 10-h phase advance and a 10-h phase delay each week for 4 weeks (rotating shift condition), we investigated the long-term effects of such circadian disruption by monitoring reproductive rhythms after light exposure was normalized. Our results report a significant alteration in the timing and amplitude of the LH surge on the day of proestrus for up to 3 weeks after pre-exposure to disrupted light-dark cycles, despite regular estrous cycles. This long-lasting dysregulation

of LH secretion may be linked to a delayed resynchronization of the internal timing system after exposure to rotating shift condition since locomotor activity also takes approximately 2 weeks to recover a robust daily rhythm. Given the significance of temporal homeostasis to proper reproduction, these findings emphasize the importance of investigating the long-lasting negative impacts of shift work on women's reproductive health.

Lien vers l'article

Association of Occupational and Lifestyle Factors with Mammography-Detected Breast Neoplasia.

Almilaibary A, H FEB. *Med J Islam Repub Iran*. 2025;39:72.

BACKGROUND: Breast cancer is the most common malignancy affecting women, with higher mortality and morbidity. The early identification and diagnosis are the cornerstone of successful treatment and reduction of morbidity and mortality. Mammography is the gold standard screening tool. This work is designed to investigate the potential association between breast cancer and environmental factors related to lifestyle. METHODS: A cross-sectional study was done by collecting data from medical records of patients diagnosed with early diagnosed and well-established diabetes mellitus attending our university hospital; 300 women were screened by mammography for breast cancer. Women with positive results were assigned as the study group (n=39), while women with negative results were assigned as the control group (n=261). All were evaluated by the standard clinical approaches, and a pre-prepared questionnaire was used to collect data about social, environmental, and lifestyle factors. The collected data were submitted to statistical analysis using the Statistical Package for Social Science for Windows, version 20 (IBM, Chicago, USA). RESULTS: There was significant increase (P<0.001) of body mass index, hormone replacement therapy, age at first and last deliveries age at last baby and wearing tight bra; while there was significant decrease (P<0.001) of menarche, number of living children, mean age of weaning, and breast feeding in the study than the control group. In addition, there was significant increase (P<0.001) of long duration or night shift work, exposure to dangers at work, passive smoking, and use of kohl, drugs, crowding index, old painting, non-cemented ground, TV at bed rooms, pesticide exposure in the study than the control group. With multiple regression analysis, the early menarche, use of hormone replacement therapy, older age at first or last delivery, number of living children, mean age at weaning, breast feeding, tight bra, exposure to dangers at work, passive smoking, use of cosmetics (kohl), persons at home and crowding index remains the significant (P<0.001) associates with detected breast cancer. CONCLUSION: This study used mammography as the gold-standard detection tool to identify neoplasia cases and analyze their association with environmental and occupational risk factors.

Lien vers l'article

Polyexposition

BTEX chrono-metabolism and leukemogenic effects of night shift work in workers of gasoline stations: the EXPOSOWORK prospective panel study in Bulgaria.

BACKGROUND: Exposures to benzene, toluene, ethylbenzene and xylenes (BTEX) have been associated with impairment of the hematopoietic system, often leading to leukemogenesis. A prospective panel study: i) characterized the effect of night shift work (NSW) (12-hr night shift vs. 12-hr day shift) on urinary BTEX and metabolites in gasoline station workers in Plovdiv, Bulgaria, ii) evaluated the NSW effect on chrono-based BTEX genotoxic effects (as measured by 8-OHdG, a nonspecific biomarker of genotoxicity) including the influence of the downstream urinary metabolome. METHODS: During a week's working period, workers (n=71) followed both day shift and night shift work schedules (12-h long each shift) collecting four urine samples per worker (pre and end of shift). Airborne BTEX exposures were evaluated over 12-h shift periods using wearable passive samplers. Urinary BTEX and the metabolome were measured using mass spectrometry. 8-OHdG was measured using an ELISA immunoassay. Associations were examined using mixed-effect regression models and corrected for false-discovery rates of 0.05. RESULTS: Median personal airborne benzene levels were 3.05 (IQR: 2.89), and 2.92 (IQR: 1.86) µg/m(3) for day and night work shifts, respectively, suggestive of a low-level BTEX study. Results supported a consistent trend of lower urinary BTEX levels in NSW than those observed in day shift, after adjusting for airborne BTEX and confounders. Metabolomic signatures revealed a few significant metabolites associated with NSW or 8-OHdG with 4-hydroxybenzeneacetic acid (level I) being associated with both NSW and 8-OHdG. The biological pathway with high metabolic pathway impact were glycine, serine and threonine metabolism. CONCLUSION: Larger NSW studies with longer and more frequent follow-up times are warranted to better delineate the possible influence of NSW chrono-modulated working activities in leukemogenic processes.

Lien vers l'article

Pathologies cardiovasculaires

Occupational Risk Factors for Cardiovascular Disease: A Comprehensive Review.

PURPOSE OF REVIEW: Cardiovascular disease (CVD) remains a leading cause of morbidity and mortality worldwide, with occupational factors emerging as significant yet modifiable risk factors. This comprehensive review evaluates the association between various occupational exposures-including job stress, long working hours, shift work, physical activity at work, and exposure to hazardous substances-and CVD risk. Using the GRADE framework, we assessed the strength of evidence for each risk factor. RECENT FINDINGS: Job stress, long working hours, night shift work, and carbon monoxide exposure demonstrated moderate evidence linking them to increased CVD risk, while occupational noise, air pollutants, and extreme temperatures had limited evidence. Physical activity at work and exposure to toxic metals showed inconclusive findings due to inconsistencies and indirectness in study populations. This review suggests that evaluating occupational exposures is essential for the early identification and management of individuals at elevated cardiovascular risk, and emphasizes that workplace interventions and health policies should prioritize reducing specific risk factors-such as job stress, long working hours, and hazardous exposures-to prevent CVD at both individual and population levels.

[Lien vers l'article](#)

Factors influencing heart rate variability in nurses following night shifts: a prospective observational clinical study.

BACKGROUND: Heart rate variability (HRV) has been established as a key indicator of autonomic nervous system activity, reflecting both sympathetic and parasympathetic modulation. This study was aimed at investigating the factors that influence HRV in nurses following night shifts. METHODS: A prospective, observational, single-center study was conducted in the office corridor of a tertiary hospital in southern China. Thirty-five female nurses (median age: 27.0 years) working ward shifts were enrolled; all the participants were free of severe cardiopulmonary diseases and mobility limitations. Nurses completed their routine night shifts, and electrocardiograms (ECGs) were recorded for six minutes during a standing break on the mornings of the first and second days after their shifts. The study sought to identify the factors that influenced the primary outcome, i.e., the HRV after night shifts. The study also assessed the factors that affected a secondary outcome, i.e., the HRV after a one-day recovery period. RESULTS: Age and the frequency of awakenings in the 24 h preceding a night shift were inversely associated with low-frequency (LF) power after the night shift. Additionally, age was an independent predictor of LF power on the first morning after the night shift. On the other hand, the total catch-up sleep duration within 24 h after a night shift was negatively correlated with the HRV the second morning following the night shift. CONCLUSIONS: Older nurses and those experiencing more frequent awakenings before their night shifts exhibited lower LF power on the first morning after night duty, indicating reduced autonomic activity under the measured conditions. A longer duration of catch-up sleep within 24 h after a night shift was associated with lower HRV values on the second morning, reflecting decreased autonomic activity. These findings highlight potential relationships between pre- and post-shift sleep adjustments and post-shift HRV. TRIAL REGISTRATION: This study was retrospectively registered with Clinicaltrials.gov. Registration Date: August 1, 2024. Clinicaltrials.gov ID: NCT06542510.

[Lien vers l'article](#)

Onset of workplace conflict, incident cardiovascular disease and changes in biomarkers.

Xu T, Nordin M, Fransson EI, Nordenstedt H, Magnusson Hanson LL. *Psychoneuroendocrinology*. 2025 Nov;181:107610.

AIMS: To assess the associations of onset of workplace conflict on incident cardiovascular disease (CVD) and changes in biomarkers. METHODS: The study included 2704 employees aged 18-65 years and free of workplace conflict at baseline (T(0)), from the Swedish Work, Lipids, Fibrinogen study (proportion of women: 17 %). Exposure to onset of workplace conflict was ascertained at T(1) using self-reports (mean interval between T(0) and T(1): 5 years). Participants were linked to nationwide registers to ascertain incident CVD. Changes in biomarkers, including body mass index, waist-hip ratio, high-density lipoprotein cholesterol, triglycerides, glucose and fibrinogen, were measured and calculated between T(0) and T(1). Cox regressions and linear regressions were applied for analyses on conflicts in relation to CVD and conflicts in relation to changes in biomarkers, respectively. Age, sex, educational level, marital status, pre-existing comorbidities, employment contract, and shift work were adjusted for in the main analyses. RESULTS: About 10 % experienced onset of workplace conflict between T(0) and T(1). Among 2682 participants who were free from CVD at T(0), 87 CVD events were recorded (mean follow-up from T(1): 7.8 years, incidence rate: 41.5/10,000 person-year). Onset of workplace conflict at T(1) was associated with 2.42 times (95 %CI 1.42, 4.12) higher risk of developing CVD during the follow-up period. Among 877 participants with information on changes in fibrinogen, onset of workplace conflict at T(1) was associated with fibrinogen increase from T(0) to T(1) (mean difference=0.14; 95 %CI 0.02, 0.25) and onset of high fibrinogen (OR=1.41; 95 %CI 1.04,1.90). These associations were largely robust for additional adjustments, restrictions and consideration of selection bias and were not likely to be affected by reverse causation. CONCLUSIONS: Onset of workplace conflict was related to higher risks of developing CVD and fibrinogen increase.

[Lien vers l'article](#)

Association between night shift work and cardiovascular disease: a systematic review and dose-response meta-analysis.

Xi J, Ma W, Tao Y, Zhang X, Liu L, Wang H. *Front Public Health*. 2025;13:1668848.

BACKGROUND: Shift work, particularly night shift work, has become increasingly prevalent on a global scale and is associated with multiple health issues including type 2 diabetes and cardiovascular diseases (CVD). This study aimed to assess the relationship between night shift work and the incidence and mortality of CVD. METHOD: Six electronic databases including PubMed, Embase, Cochrane Library, Web of Science, CINAHL, and Scopus were searched from inception until August 10, 2025. Cohort studies eligible for inclusion addressed the association between night shift work and outcomes of CVD. STATA 18.0 software was used for meta-analysis. The dose-response relationship was estimated using generalized least squares regression, and restricted cubic splines were used to analyze potential linear or nonlinear associations. The Newcastle-Ottawa Scale (NOS) was used to assess the quality of the studies. Quality assessment and data extraction were performed independently by two researchers. RESULTS: Twenty-three cohort studies were included. Overall, this meta-analysis revealed that night shift work significantly increased the risk of total CVD events (RR = 1.13, 95% CI = 1.10-1.16) and total CVD mortality (RR = 1.27, 95%CI = 1.18-1.36). Dose-response analysis indicated that each 5-year increment in shift work duration was associated with a 7% higher risk of CVD incidence (RR = 1.07, 95% CI: 1.04-1.09) and a 4% increased risk of CVD mortality (RR = 1.05, 95% CI: 1.03-1.06). Subgroup analyses identified elevated risks for incident coronary heart disease (CHD) (RR = 1.22, 95% CI = 1.16-1.28) and ischemic heart disease (IHD) (RR = 1.09, 95% CI = 1.05-1.14), but not stroke (RR = 1.06, 95% CI = 0.95-1.18), and night shift work was associated with an increased risk of mortality due to CHD (RR = 1.22, 95% CI = 1.10-1.36), IHD (RR = 1.39, 95% CI = 1.06-1.84), and stroke (RR = 1.49, 95% CI = 1.04-2.12). CONCLUSION: These findings indicate that night shift work is significantly associated

with increased CVD incidence and mortality risk, highlighting the need for targeted prevention strategies. SYSTEMATIC REVIEW REGISTRATION: https://www.crd.york.ac.uk/PROSPERO/view/CRD420251060086. CRD: 420251060086.

Lien vers l'article

Methods for Assessment of Sleep and Circadian Rhythms in Cardiovascular Research.

Williams R, Gloston G, Ward KC, Jain S, Hays K, Ensor A, et al. *Curr Hypertens Rep*. 2025 Oct 21;27(1):25.

Sleep is recognized in Life's Essential 8™ as an important behavioral factor for improving and maintaining cardiovascular health. While sleep duration is currently the focus in Life's Essential 8™, sleep health is multidimensional and encompasses regularity, satisfaction, next-day alertness, timing, efficiency, and duration. In addition to sleep, circadian factors have also been implicated in cardiovascular health. For example, shift work, which results in significant circadian misalignment, is associated with poor cardiovascular health. This review will describe methods for measuring, analyzing, and interpreting sleep and circadian rhythms in humans. Subjective and objective measurements of sleep are not always concordant and may reflect distinct constructs. Therefore, both subjective and objective sleep measurements are discussed. Assessment of the circadian system in humans typically relies on the measurement of circadian biomarkers (i.e., melatonin, core body temperature, and/or cortisol) during rigorous and burdensome research protocols. However, novel approaches are being developed to estimate circadian parameters with lower cost and participant burden. This review aims to inform cardiovascular scientists and clinicians of common practices in the assessment of sleep and circadian rhythms.

Lien vers l'article

The association between irregular working hours and cardiovascular diseases in a multi-ethnic population: the HELIUS study.

Wijntjens GWM, Dehghani A, Motazedi E, Franklin S, Maas JJJ, Galenkamp H, et al. *Occup Med (Lond)*. 2025 Oct 1;75(7):442-50.

BACKGROUND: Irregular working hours are a risk factor for cardiovascular diseases (CVD). AIMS: We studied ethnic disparities in the association between irregular working hours and CVD, as well as the mediating stress-related pathways. METHODS: Logistic regression was used to study the cross-sectional association between (a history of) irregular working hours and prevalent CVD (self-reported myocardial infarction, dotter/bypass operation or stroke) in 18 284 participants (18-71 years) in a population of Dutch, South-Asian Surinamese, African Surinamese, Ghanaian, Turkish and Moroccan origin from the HELIUS study. We considered three mediator models adjusting for behavioural, physiological and psychosocial stress. We tested for interaction between irregular working hours and ethnicity and stratified the analysis by ethnicity. RESULTS: The prevalence of CVD was 18% (717 out of 4041) and 14% (1963 out of 14 243) in individuals with versus without irregular working hours. Working irregular hours was associated with prevalent CVD (OR 1.27, 95% CI 1.15-1.40) after adjusting for sociodemographic confounders. There was a significant interaction between ethnicity and irregular working hours on CVD. Strongest associations with prevalent CVD were found for South-Asian Surinamese (OR 1.47, 95% CI 1.18-1.82), African Surinamese (OR 1.29, 95% CI 1.06-1.57) and Moroccans (OR 1.43, 95% CI 1.11-1.84). There were considerable ethnic differences in the mediating stress-related pathways that associate irregular working hours with prevalent CVD. CONCLUSIONS: Working irregular hours is associated with an increased prevalence of CVD in a multi-ethnic population. We show ethnic disparities in the associations between irregular working hours and CVD, as well as in the stress-related pathways that mediate these associations.

Lien vers l'article

Elevated cardiometabolic risk markers in evening chronotype shift workers: a case-control study in male workers.

Shift work-induced circadian disruption has been linked to various cardiometabolic diseases, including obesity, diabetes and CVD. Limited studies have explored the impact of different variables such as night work durations, intensities and chronotype on cardiometabolic risk. This study aimed to determine the impact of circadian disruption on cardiometabolic risk markers in shift workers. This case-control study was conducted with 104 male workers (shift workers; n 52, mean age; 43·3 (sd 10·2), and non-shift workers; n 52, mean age; 41·2 (sd 9·8)). Shift work details were determined via an interviewer-administered questionnaire. Cardiometabolic risk was evaluated through anthropometric (height, weight, waist circumference and body composition), biochemical (fasting glucose and lipid profile), clinical (blood pressure) and dietary assessment (24-h recalls from working and non-working days). The chronotype was determined via the Munich Chronotype Questionnaire (MCTQ). Shift workers had significantly higher mean body fat percentage (31·7, 22·7 % P = 0·031), systolic blood pressure (SBP) (138·6, 128·5 mmHg P = 0·009), pulse rate (78·7, 72·3 bpm P = 0·015), TAG (1·60, 1·30 mmol/l P = 0·021) and LDL-cholesterol (3·90, 3·40 mmol/l P = 0·012) than non-shift workers. Evening chronotype shift workers had significantly higher visceral fat levels (12·8, 8·90 P = 0·001), SBP (137·0, 127·6 mmHg P = 0·006), pulse rate (82·7, 73·3 bpm P = 0·005) and LDL-cholesterol (4·00, 3·40 mmol/l P = 0·039) than shift workers with a morning chronotype. In conclusion, shift workers exhibited higher metabolic risk markers than non-shift workers. Shift workers with evening chronotypes had higher cardiometabolic risk than morning chronotypes. Further research is warranted to elucidate the underlying mechanisms and inform targeted interventions for individuals engaged in shift work, considering chronotypes.

[Lien vers l'article](#)

Cross-sectional study on the relationship between physiologic and mental health status and hypertension risk among oil workers in Xinjiang.

BACKGROUND: Hypertension is a major global risk factor for cardiovascular disease. According to the 2023 Global Hypertension Report, its prevalence among adults aged 30-79 years is 33%, closely mirrored in China at 31.6% (2023 Cardiovascular Health and Diseases in China Report). The etiology of hypertension is multifactorial, involving psychological stress (impacting neuroendocrine and inflammatory pathways) and abnormal lipid metabolism. However, the association between mental health and biomarkers in occupational groups, particularly oil workers, remains unclear. PURPOSE: This study using a cross-sectional design to deeply analyze the associations between mental health, physiologic health and hypertension, and to explore the influencing factors of hypertension. It aims to provide a scientific basis for the prevention and treatment of hypertension among oil workers, and also to offer theoretical support for further formulating effective measures to improve the physical and mental health levels of oil workers. MATERIALS AND METHODS: A cluster sampling method was used to recruit 6,083 active oil workers from the Occupational Health Examination Department of Karamay Central Hospital in Xinjiang, China, from September 2018 to September 2019. Physiologic health status was randomly assessed in 20% of the participants to analyze the dose-response relationship between mental health, physiologic health, and hypertension. Based on the restricted cubic spline model, we explored the dose-response relationship between biochemical indicators and hypertension under different levels of mental health. RESULTS: The results showed that the prevalence of hypertension among the study population was 18.4%, with significant differences observed across various demographic factors (gender, age, education, marital status, monthly income, work experience, job type, professional title, shift work, cigarette smoking, and alcohol consumption;

P < 0.05). There was also a statistical difference in the prevalence of hypertension among different mental health states (P < 0.05), with a higher prevalence (25.5%) among those with poor mental health. Triglycerides [TG] (OR: 2.11; 95% CI: 1.82-2.45), lactate dehydrogenase [LDH] (OR: 1.02; 95% CI: 1.01-1.02) and low-density lipoprotein-cholesterol [LDL-C] (OR: 1.95; 95% CI: 1.65-2.30) emerged as risk factors for hypertension. After adjusting for confounding factors, TG, LDH, and LDL-C remained significant risk factors, with TG abnormalities conferring a 1.71-fold higher risk of hypertension (OR: 1.71; 95% CI: 1.43-2.05), LDH abnormalities conferring a 1.01-fold higher risk (OR: 1.01; 95% CI: 1.01-1.02), and LDL abnormalities conferring a 1.32-fold higher risk (OR: 1.32; 95% CI: 1.06-1.64). In the group with poor mental health, before adjusting for confounders, elevated levels of TG (OR: 3.08; 95% CI: 1.92-4.96), LDH (OR: 1.02; 95% CI: 1.01-1.03), and LDL-C (OR: 2.26; 95%CI: 1.46-3.51) all increased the risk of hypertension. After adjustment, TG (OR: 4.17; 95% CI: 1.86-9.31) and LDH (OR: 1.02; 95% CI: 1.01-1.04) remained significant risk factors. A linear dose-response relationship was noted between TG and LDH levels, and hypertension risk (TG: P for trend < 0.001, P for non-linearity = 0.056; LDH: P for trend = 0.008, P for non-linearity = 0.114). CONCLUSION: In conclusion, a dose-response relationship existed between mental health, TG and LDH levels, and hypertension risk. Attention should be paid to the mental health of oil workers and effective measures should be taken to alleviate mental health issues. Regular monitoring of blood lipid levels is crucial to reduce the risk of hypertension.

Lien vers l'article

A Systematic Review of Literature on the Association Among Sleep, Cortisol Level and Cardiovascular Health Within the Healthcare Shift Worker Population.

Sukor ANA, Juliana N, Abdul Hamid N, Teng N, Ithnin M, Azmani S, et al. *Biomedicines*. 2025 Oct 17;13(10).

Shift workers are commonly associated with circadian misalignment due to irregular working hours, which often leads to poor sleep quality and is associated with HPA axis misalignment and changes in cardiovascular outcome. Background: This systematic review aimed to investigate the association between cortisol production and cardiovascular health with sleep quality in healthcare shift workers. Methods: A comprehensive search of PubMed, Web of Science, and Scopus was conducted for studies published between 2010 and 2025, according to PRISMA guidelines. Fourteen studies met the inclusion criteria. Results: Among the included studies, eight studies focused on the relationship between sleep quality and cortisol regulation, five studies investigated the link between sleep quality and cardiovascular health, and one study examined sleep quality, cortisol regulation, and cardiovascular outcome. A significant relationship between cortisol and sleep quality was observed, as lower cortisol levels upon awakening were associated with low sleep quality. Several studies reported that sleep disturbances were associated with adverse cardiovascular outcomes, including reduced heart rate variability (HRV) and increased risk of metabolic syndrome. Conclusions: This review highlights existing literature on the critical role of sleep quality as a key factor in cortisol level and cardiovascular health in shift workers, along with the factors influencing circadian rhythm.

Lien vers l'article

Cross-Sectional Analysis of Sleep Quality and Vascular Health in Shift- and Day-Working Nurses.

Saharov G, Salti B, Bareya M, Keren-Politansky A, Nadir Y, Shochat T. *Clocks Sleep*. 2025 Oct 11;7(4).

Sleep disturbances and shift work are associated with increased cardiovascular risk, possibly through disruptions in endothelial and hemostatic function. While prior studies link acute sleep deprivation to vascular dysfunction, the impact of chronic sleep quality and circadian misalignment on endothelial health in healthy individuals, particularly shift workers, remains underexplored. The aim of this study was to examine the association between objectively measured sleep quality and

endothelial/hemostatic function in healthy female hospital nurses, comparing shift and day workers, and considering time-of-day variation. In this repeated-measures study, 100 female nurses (51 shift, 49 day workers) aged 25-50 wore actigraphy devices for 7-14 days to assess total sleep time (TST), sleep efficiency (SEF), and wake after sleep onset (WASO). Endothelial function was measured using EndoPAT (Reactive Hyperemia Index-RHI). Hemostatic markers included plasminogen activator inhibitor-1 (PAI-1), von Willebrand factor (VWF), heparanase and heparanase procoagulant activity assessed by ELISA, and chromogenic assays in morning and evening. TST was not associated with any vascular outcomes. Poor sleep quality (low SEF, high WASO) was significantly associated with reduced RHI and elevated PAI-1 level, heparanase level, and heparanase procoagulant activity levels. Regression models revealed significant main effects of SEF and WASO on endothelial and coagulation markers, with some interactions depending on shift type and time of measurement. No significant associations were found for VWF. Impaired sleep quality, but not sleep duration, is associated with endothelial dysfunction and procoagulant activation, particularly among shift-working nurses. These findings suggest that sleep quality may play a critical role in vascular health and support the use of sleep-based interventions to reduce cardiovascular risk in shift-working populations.

Lien vers l'article

The positive association between evening or night work schedules and coronary heart disease or angina among U.S. adults: A cross-sectional study.

Ding J, Jia Y, Ji R, Zhang H, Wang Z, Song X, et al. *Am J Prev Cardiol*. 2025 Dec;24:101270.

BACKGROUND: Currently, there is a scarcity of research exploring the connection between work schedules and coronary heart disease (CHD) or angina. Previous studies on the associations between work schedules and CHD or angina have been primarily limited to specific occupations, particular genders, small sample sizes, or narrow regional focus. This study aims to evaluate the potential association between work schedules and CHD or angina among adults in the United States. METHODS: In this cross-sectional study, we selected 13,147 adults aged ≥ 20 years from the National Health and Nutrition Examination Survey 2005-2010 and 2017-2020 cycles. We computed adjusted odds ratio (OR) and 95 % confidence interval (CI) utilizing multivariate logistic regression models. Meticulous subgroup analyses were conducted to ensure the reliability and consistency of our findings. Propensity score assessments were implemented to enhance the comparability between daytime workers and evening or night workers, thereby facilitating a more accurate estimation. RESULTS: Among the participants, 216 were diagnosed with CHD, while 125 were diagnosed with angina. Evening or night workers exhibited a prevalence of CHD that was 1.87 times higher than that of daytime workers (OR: 1.87, 95 % CI: 1.19-2.95, P = 0.007). Furthermore, evening or night workers exhibited a prevalence of angina that was 1.81 times higher than that of daytime workers (OR: 1.81, 95 % CI: 1.05-3.12, P = 0.033). Our findings demonstrated robustness and reliability through subgroup analyses and propensity score assessments. CONCLUSIONS: In conclusion, evening or night work schedules were associated with increased CHD and angina risk. Further research should explore biological mechanisms for prevention in this population.

Lien vers l'article

SHIFT-48: Schedule and Health Improvements for Firefighters Transitioning to 48/96.

Conner MJ, Burnham RA, Jesko A, Wohlgemuth KJ, Miller PE, Boles M, et al. *J Occup Environ Med*. 2025 Oct 17.

OBJECTIVE: Examine the effects of transitioning from a 24/48 to a 48/96 shift schedule on health and performance in firefighters assigned to a single, suburban station. METHODS: A longitudinal analysis was conducted over three time points in 11 male firefighters. Measures included VO2peak, peak power, blood pressure, resting heart rate, lipid profiles, and psychological assessments. Linear mixed-

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effects models analyzed changes across timepoints. RESULTS: Transitioning to the 48/96 schedule was associated with improvements in peak power (+27.1 W, p = 0.042), resting blood pressure (SBP -5.5 mmHg, p = 0.05, DBP -5.8 mmHg, p = 0.04), heart rate (-13.2 bpm. p = 0.03), sleep quality (ISI -2.6, p = 0.03), and alcohol use (AUDIT -1.8, p = 0.02); VO2peak did not reveal a significant time effect (p > 0.05). CONCLUSIONS: Extended inter-shift recovery in a 48/96 schedule may promote cardiovascular recovery and readiness without negative health effects in similar departments.

Lien vers l'article