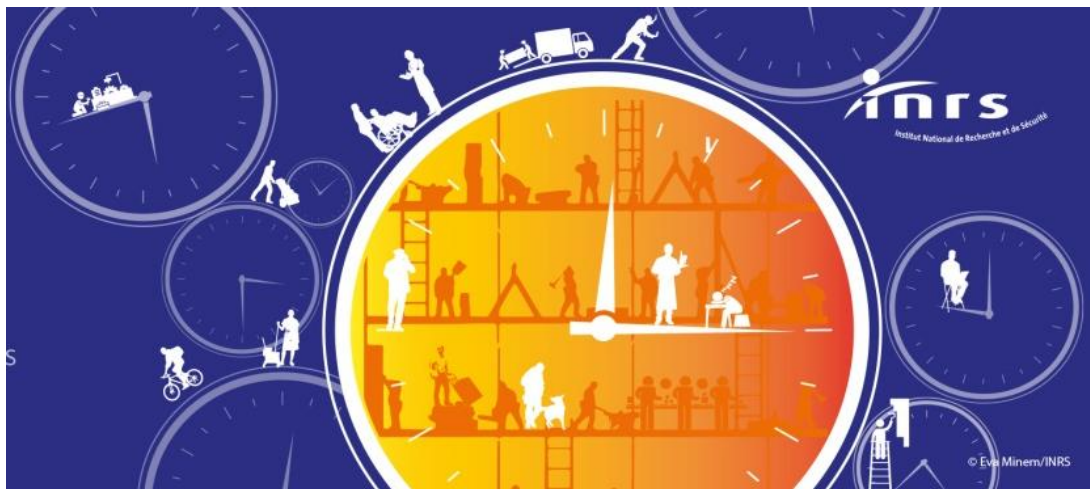


LES HORAIRES ATYPIQUES

Bulletin de veille scientifique : Janvier 2026



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.

Les bulletins de veille sont disponibles sur le [portail documentaire de l'INRS](#). L'abonnement permet de recevoir une alerte mail lors de la publication d'un nouveau bulletin (bouton « M'abonner » disponible après connexion à son compte).

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Horaires atypiques (HA)

Généralités et prévention

Aucun article dans ce bulletin.

Activités physiques

Aucun article dans ce bulletin.

Autres pathologies

Aucun article dans ce bulletin.

Cancers

Aucun article dans ce bulletin.

Risque routier, accidentologie

Aucun article dans ce bulletin.

RPS et QVT

Risk of unexpected newborn complications by day of the week and time of birth in US term singleton births.

Liu R, Li C, Liang T, Yin J, Zeng Q, Zhao S, et al. *J Perinatol*. 2025 Dec 22.

OBJECTIVE: To evaluate how the risk of unexpected newborn complications among term births varied by time of birth for 12.4 million full-term singleton births in the United States. **STUDY DESIGN:** A population-based nationwide study. Exposures included time of birth, divided into four shifts and 42 distributed 4-h intervals. Logistic regression estimated the variations in the risk of unexpected newborn complications. **RESULT:** The risk of unexpected newborn complications was higher during night shifts (OR 1.13, 95% CI: 1.12-1.14) and on weekends than on day shifts and weekdays. The risk of seizures and a 5-min Apgar score ≤ 3 increased steadily at the start of day shifts (07:00), while the risks of transfer, assisted ventilation ≥ 6 h, and neonatal death remained stable during day shifts. All outcomes increased during night shifts, peaking between 23:00 and 06:59. **CONCLUSION:** Unexpected newborn complications were more frequent during night shifts and weekends, particularly between 23:00 and 06:59.

[Lien vers l'article](#)

Australian paramedics' perceptions of reasonable overtime: a Delphi study.

Ferris MJ, Bowles KA, Lalor A, Wolkow AP. *BMC Health Serv Res*. 2025 Dec 29;25(1):1624.

BACKGROUND: Paramedics frequently incur reasonable overtime (RO) due to factors such as staffing, patient acuity and transport durations. Considering the risks associated with extended work hours,

understanding paramedics' opinions of reasonable and unreasonable overtime is vital for safe workforce management. The current study aimed to gain consensus on operational paramedics' perception of conditions that are reasonable and unreasonable for overtime. **METHODS:** The Delphi methodology comprised three iterative survey rounds completed by experienced paramedics working in metropolitan areas of Australia. In Round 1, participants gave a free-text definition of RO and voted on the degree to which a predetermined list of RO-related conditions were reasonable. Free-text responses underwent a content analysis to determine additional RO-related conditions based on the definitions of RO provided by participants. These conditions were then combined with the predetermined list of RO conditions and voted on by participants in Round 2 and 3. **RESULTS:** Out of 189 initial participants, 144 completed Round 2 (76.2% response rate) and 128 completed Round 3 (88.9% response rate). Consensus ($\geq 80\%$ agreement) was achieved for 50% ($n = 17$) of the RO-related conditions. Nearly all paramedics agreed that overtime was reasonable for time-critical emergencies where there is an expected detrimental effect to a patient without a paramedic's attendance (96%), whereas nearly all paramedics agreed that RO to 'clear the board/pending queue' was unreasonable (99%). **CONCLUSIONS:** Paramedics reached consensus on four reasonable and thirteen unreasonable conditions for RO, resulting in the creation of the first set of consensus-based considerations for RO from the perspective of operational paramedics in Australia. These findings provide important insights into how paramedics perceive RO. Future research examining the proposed considerations for RO is needed to determine their feasibility and acceptability by ambulance services and other paramedics, and their potential effectiveness in this industry for workforce planning. **SUPPLEMENTARY INFORMATION:** The online version contains supplementary material available at 10.1186/s12913-025-13736-z.

[Lien vers l'article](#)

Santé psychique

The Moderating Effect of Generation on the Association Between Long Working Hours and Mental Health: A Cross-Sectional Study of Korean Employees.

Jung S, An Y, Jeon SW, Kim J, Kim E, Yang JH, et al. *Healthcare (Basel)*. 2025 Nov 21;13(23).

Background/Objectives: Long working hours are a recognized risk factor for poor mental health, but their impact may vary across generations. Millennials and Generation Z (MZ generation) have received attention for their distinct values, work-life expectations, and communication styles compared with older cohorts. The present study assessed generational differences (MZ vs. non-MZ) in the association between weekly working hours and depressive and anxiety symptoms among Korean employees. **Methods:** We analyzed cross-sectional data from 11,372 employees (68.0% men; mean age = 36.7 years) who underwent mental health screenings between 2020 and 2022. Participants born on or after 1 January 1980, were classified as belonging to the MZ generation ($n = 7538$). Symptoms of depression and anxiety were assessed using the Center for Epidemiologic Studies Depression Scale (CES-D) and the Clinically Useful Anxiety Outcome Scale (CUXOS). Multiple linear regression models tested the interaction between mean-centered weekly working hours and generation, adjusting for sociodemographic covariates. **Results:** Longer working hours were significantly associated with greater depressive ($B = 0.080$, $p < 0.001$) and anxiety ($B = 0.119$, $p < 0.001$) symptom severity. Significant interactions between generation and working hours were observed for both depression ($B = 0.140$, $p < 0.001$) and anxiety ($B = 0.182$, $p < 0.001$). Generation-stratified models showed that the increase in symptom severity per additional work hour was approximately three-fold higher in the MZ generation than in the non-MZ generation. **Conclusions:** The mental health burden of long working hours is amplified in the MZ generation. Generation-sensitive workplace health strategies are needed to address this vulnerability.

[Lien vers l'article](#)

Troubles cognitifs et de la vigilance

Aucun article dans ce bulletin.

Travail posté et de nuit

Généralités et prévention

Association Between Types of Shift Work and Physical Health Symptoms, Including Musculoskeletal Symptoms and Sleep Disturbance: Evidence From the Seventh Korean Working Conditions Survey.

Jang JS, Kim SK, Hwang S, Jo H, Jeon HS. *J Occup Environ Med.* 2026 Jan 1;68(1):34-9.

OBJECTIVE: This study examined the associations between different types of shift work and health symptoms, including musculoskeletal symptoms and sleep disturbances, among South Korean workers. **METHODS:** Data from 43,011 participants in the Seventh Korean Working Conditions Survey were analyzed. Multivariate logistic regression was used to estimate adjusted odds ratios (aORs) with 95% confidence intervals (CIs) for each shift type. **RESULTS:** Rotating shift work was significantly associated with low back pain (aOR, 1.31; 95% CI, 1.13-1.52), upper extremity pain (aOR, 1.31; 95% CI, 1.14-1.51), and waking up exhausted (aOR, 1.41; 95% CI, 1.20-1.64). Fixed shift workers had increased risks of anxiety (aOR, 1.77; 95% CI, 1.33-2.34) and depression (aOR, 2.08; 95% CI, 1.50-2.86). **CONCLUSIONS:** Rotating and fixed shift types are associated with adverse health outcomes. These findings support the need for shift type-specific occupational health interventions and policy responses.

[Lien vers l'article](#)

Health Implications of Shift Work in Airline Pilots and Cabin Crew: A Narrative Review and Pilot Study Findings.

Stefańska O, Barbarska O, Minkiewicz-Zochniak A. *Nutrients.* 2025 Dec 13;17(24).

Background: Airline pilots and cabin crew are exposed to multiple occupational stressors, including circadian disruption, irregular meal timing, cabin environment and radiation, which collectively affect sleep, metabolism and overall health. This study aimed to evaluate the health implications of shift work in aviation by combining self-reported experiences with existing scientific evidence. **Methods:** A cross-sectional survey of 101 airline personnel was conducted to assess sleep patterns, fatigue, nutrition-related challenges and health symptoms. The survey findings were integrated with a literature review to contextualize observed health outcomes within known effects of circadian disruption and aviation-related stressors. **Results:** Sleep disturbances (71%) and fatigue (89%) were the most prevalent symptoms, while 60% of respondents reported weight fluctuations and 50% limited access to nutritious food during duty. Appetite alterations, reduced taste perception and frequent melatonin use indicated behavioral adaptation to circadian misalignment. Among female aircrew (63%), thyroid and reproductive concerns were reported, aligning with documented impacts of radiation exposure and endocrine disruption. The findings correspond with existing evidence linking aviation-related circadian stress to cardiometabolic, endocrine and gastrointestinal imbalance. **Conclusions:** Shift work and occupational exposures in aviation contribute to significant disturbances in sleep, metabolism and overall health among aircrew. Preventive strategies should integrate fatigue risk management, circadian-aligned scheduling, improved in-flight nutrition and comprehensive occupational health surveillance to safeguard crew well-being and operational safety.

[Lien vers l'article](#)

Effect of initiation and cessation of night shift work on health: A retrospective longitudinal study.

Shin S. *Arch Environ Occup Health.* 2025;80(10):275-81.

This study aimed to evaluate the changes of health outcomes in individuals who started and those who ceased working the night shift. Linear mixed models were used to determine whether the initiation and cessation groups differed from the control group in terms of annual changes in health outcomes.

When comparing the control and initiation groups, The Center of Epidemiological Studies Depression Scale showed significant increase compared to the control group, while the metabolic equivalent task scores showed significant decrease compared to the control group. The body mass index (BMI), total cholesterol, low-density lipoprotein cholesterol, and triglyceride levels showed significant increase compared to the control group, while the high-density lipoprotein cholesterol level showed significant decrease compared to the control group. This study identified depressive mood changes and decreased physical activity as the first manifestations of night shift work. An increase in BMI and worsening of lipid profiles were observed in the cessation group, relative to the control group.

[Lien vers l'article](#)

Exposome project for health and occupational research night shift cohort (EPHOR-NIGHT): a unique resource to advance research on night shift work and chronic disease.

Harding BN, Castaño-Vinyals G, Broberg K, Albin M, Laurell C, Garde AH, et al. *BMJ Open*. 2025 Dec 5;15(12):e106090.

PURPOSE: The EPHOR-NIGHT cohort was established to investigate how night shift work influences biological pathways and chronic disease risk using a comprehensive working-life exposome approach, focusing on cardiometabolic, mental health, cognitive and biological ageing outcomes. **PARTICIPANT:** The cohort includes 937 workers aged 20-65 years (88% female), primarily from the healthcare sector (96%) in Spain, Sweden, Denmark and the Netherlands. Participants were categorised as permanent day (39%), permanent night (35%) or rotating/other shift workers (26%). Data collection included questionnaires, daily ecological momentary assessments, wearable sensors tracking light, physical activity, heart rate and environmental exposures and biological samples (blood collected once and saliva collected during five points across the day), with harmonised protocols across countries. **FINDINGS TO DATE:** From the 937 participants contributing data to the cohort, 708 had complete information from questionnaires, sensors and blood and saliva, with subsets undergoing advanced biological analyses, including genomics, targeted and genome-wide DNA methylation, telomere length and mtDNA copy number, metabolomics, transcriptomics, proteomics, hormone profiling and inflammatory biomarkers and blood metals. Many reported prevalent chronic conditions, including anxiety (27%), depression (18%) and metabolic disturbances. Night shift and rotating shift workers had greater exposure to long shifts and more scheduled rest days compared with day workers. Sleep duration and quality were poorest among permanent night shift workers. **FUTURE PLANS:** A 2-year follow-up was completed in June 2025, including the collection of additional biomarker data, psychosocial work environment data and data related to female sexual and reproductive health. Findings from the EPHOR-NIGHT study aim to inform prevention strategies and occupational health policies. Data will be made available to support broader research efforts on shift work and health.

[Lien vers l'article](#)

Exploring Pathways Linking Work and Nonwork Factors to Sleep, Fatigue, and Health in Night Shift Nurses: A Structural Equation Modeling Analysis.

Jeon BM, Kim SH. *J Nurs Manag*. 2025;2025:6312917.

BACKGROUND: Night shift work disrupts sleep and physiological recovery, leading to adverse health outcomes among nurses. While both work and nonwork factors are known to influence sleep and fatigue, few studies have examined their simultaneous and multiple mediating effects on health in night shift nurses. **AIM:** This study tested a comprehensive model to investigate the relationships among work factors (emotional demands, night shift rotation intervals, and social support), nonwork factors (exercise and work-life interference), sleep disturbance, fatigue, and health in night shift nurses. **METHODS:** A cross-sectional study was conducted with 289 nurses working rotating night shifts at three hospitals in South Korea. Structural equation modeling (SEM) was employed to assess the

direct and indirect effects between variables. Data were collected using validated instruments for sleep disturbance, fatigue, emotional demands, social support, exercise, work-life interference, and health. RESULTS: Work-life interference had the most significant effect on health, both directly and indirectly through sleep disturbance and fatigue. Emotional demands negatively influenced health via sleep disturbance and fatigue. Exercise indirectly improved health by reducing fatigue, but showed no direct effects. Sleep disturbance was a significant predictor of both fatigue and health. Social support did not demonstrate significant direct or indirect effects on health. The final model explained 51.8% of the variance in health outcomes and exhibited strong model fit indices. CONCLUSION: Maintaining a work-life balance is critical for improving the health of night shift nurses, as work-life interference directly and indirectly exacerbates health risks through sleep disturbance and fatigue. IMPLICATIONS FOR NURSING MANAGEMENT: These findings highlight the importance of implementing strategies to manage work-life balance, address emotional demands, promote physical activity, and ensure recovery from shift work to support the health of night shift nurses.

[Lien vers l'article](#)

Activités physiques

Aucun article dans ce bulletin.

Autres pathologies

Eating duration and shift work are associated with diabetes: a cross-sectional study among US workers.

Ren X, Li J, Loerbroks A, Chen L. *Br J Nutr.* 2026 Jan 2:1-8.

Eating duration and shift work can both influence metabolic regulation, but their joint associations with diabetes are unknown. We aimed to examine the independent and joint associations of eating duration and shift work with diabetes in a cross-sectional study using a nationally representative sample of US workers. We included 14852 eligible participants from the National Health and Nutrition Examination Survey, 2005-2010 and 2017-2020. Eating duration was calculated based on first and last eating occasions from 24-h dietary recalls. Long eating duration (LED: ≥ 13 h) v. short eating duration (SED: < 13 h) was defined based on the median. Workers were classified as engaging in shift work (SW, n 5140) v. non-shift work (NSW, n 8945) based on self-report. Logistic regressions were used to examine the associations of LED and SW with diabetes, independently and jointly with stratification by age. LED was associated with higher odds of diabetes among workers aged < 45 years (OR, 1.51; 95 % CI, 1.05-2.19) but not among workers aged ≥ 45 years (OR, 0.98; 95 % CI, 0.79-1.20). SW was associated with higher odds of diabetes among both younger (OR, 1.28; 95 % CI, 0.88-1.85) and older workers (OR, 1.28; 95 % CI, 1.04-1.58). There was suggestive evidence that workers with both LED and SW had higher odds of diabetes compared with those with SED and NSW, but the association was stronger among younger (OR, 1.40; 95 % CI, 0.85-2.28) than older workers (OR, 1.28; 95 % CI, 0.99-1.66). LED and SW were independently associated with increased odds of diabetes with suggestive evidence on their joint associations, but associations varied by workers' age.

[Lien vers l'article](#)

Night shift work and its interaction with sleep duration and chronotype, and risk of cardiovascular-kidney-metabolic diseases in the UK Biobank.

Tran DT, Strohmaier S, Żebrowska M, Huang T, Papantoniou K, Redline S, et al. *Eur J Prev Cardiol.* 2025 Dec 18.

AIMS: Non-standard work schedules are becoming increasingly prevalent, with one in five workers participating in nightshifts. Whether working nightshifts is associated with cardiovascular-kidney-metabolic (CKM) outcomes, and whether chronotype or sleep duration moderate this association, remains unclear. **METHODS:** Our analysis is based on 96 365 UK Biobank participants (57% female, mean age 62 years), with information on employment history, tracking CKM incidence (cardiovascular diseases, chronic kidney diseases and/or type 2 diabetes) up to 2022. Cox proportional hazards models calculated hazard ratios (HR) adjusted for multiple potential confounders, and their 95% confidence intervals (CIs). **RESULTS:** With data on 5 967 incident cases, participants with over 20 years of night shift work had a significantly higher risk of CKM (HR=1.32 [95% CI, 1.20-1.45]) compared to day workers, after adjustment for confounders including sex, age, ethnicity, socioeconomic factors. Similarly, risk was higher than day workers among those working 8+ nightshifts per month (HR=1.32 [95% CI, 1.21-1.43]) and over 1200 lifetime nightshifts (HR=1.36 [95% CI, 1.25-1.48]); all $P_{trend} < 0.001$. The association between nightshift work and CKM risk was significantly modified by sleep duration, with higher risks among short sleepers (≤ 6 hours) ($P_{interaction} = 0.009, 0.031, \text{ and } 0.017$, respectively, for nightwork duration, intensity, and cumulative number of nights worked), but not by chronotype. **CONCLUSION:** Our findings reveal a dose-response relationship between night shift work and CKM disease, further amplified by short sleep. Future research should continue to adopt CKM conditions as a composite outcome and investigate further how sleep characteristics may modify the impact of night shift work.

[Lien vers l'article](#)

Lymphocytes and related inflammatory factors as predictors of metabolic syndrome risk in shift workers: A machine learning approach based on large-scale population data.

Bao Y, Wang R. *PLoS One.* 2025;20(12):e0339673.

BACKGROUND: Metabolic syndrome (MetS) is characterized by chronic inflammation and can be worsened by circadian disruption, which is common among shift work. Machine learning can predict the risk of MetS in shift workers using inflammatory biomarkers. Most investigations have focused on the general population rather than shift workers, a distinct group that requires continuous health monitoring; therefore, we aimed to examine the relationship between inflammatory indicators and MetS using blood cell counts in this high-risk group of shift workers who require long-term health monitoring and to enhance the biological understanding of MetS by applying machine learning methods. **METHODS:** In this cross-sectional study, we analyzed data from shift workers included in the National Health and Nutrition Examination Survey between 2005-2010 and 2017-2018. Prediction models, including random forest (RF), extreme gradient boosting (XGBoost), light gradient boosting machine (LightGBM), and linear regression (LR), were developed and validated. We compared the model performance and conducted stratified analysis, smooth curve fitting, and threshold effect analysis to further explore the relationship between inflammation and MetS risk in shift workers. **RESULTS:** The analysis included 3,079 participants in total. Each machine learning model demonstrated good predictive performance in assessing MetS risk among shift workers. LightGBM achieved the area under the curve (AUC) of 0.944 in training dataset and 0.722 in testing dataset; XGBoost had an AUC of 0.818 in training dataset and 0.747 in testing dataset; and LR had an AUC of 0.763 in training dataset and 0.699 in testing dataset, RF had an AUC of 0.741 in training dataset and 0.729 in testing dataset. Furthermore, the analysis revealed that body mass index, age, neutrophil, lymphocyte, monocyte, and platelet counts, along with their derived inflammatory indices, were significant predictors. Multivariate

logistic regression adjusted for lifestyle and health factors showed that lymphocytes remained consistently associated with MetS in shift workers. Generalized additive model analysis revealed complex non-linear relationships between lymphocytes and platelets. Inflammatory factors strongly predicted MetS risk in shift workers, with their effects varying by concentration threshold, particularly for lymphocytes ($k = 2.2$, right side $p < 0.001$). **CONCLUSION:** Lymphocyte counts and related composite indices are significant predictors of MetS risk in shift workers. Consistent monitoring of these biomarkers may be useful for early odds-based stratification of MetS in this high-risk population, whereas any preventive implications would require confirmation in longitudinal and interventional studies.

[Lien vers l'article](#)

Circadian Disruption from Urban Night-Time Noise and Endocrine Health Risks in Shift Workers.

Badea DO. *Noise Health*. 2025 Nov-Dec 01;27(129):641-52.

OBJECTIVES: This review examines how nighttime noise and irregular schedules influence circadian and endocrine regulation. It introduces a conceptual multilevel model to explore how these exposures may accumulate over time and contribute to long-term health risks. **METHODS:** A scoping narrative review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses principles in PubMed, Scopus, Web of Science and Embase (1992-2024), including human studies on nighttime noise and shift work. Eligible studies involved adults and reported circadian, hormonal, metabolic or chronic disease outcomes. Twenty-five studies were synthesised using direction-based vote counting due to heterogeneity because meta-analysis was not feasible. The tally reflected the direction of effects rather than statistical significance. Risk-of-bias assessments informed interpretation, but not exclusion. Findings were integrated into a multilevel model integrating exposure, physiological mediation and cumulative effects. **RESULTS:** Nighttime noise and rotating night duties shifted melatonin timing and reduced sleep continuity. Studies reported increased fasting glucose, decreased insulin sensitivity and unfavourable lipid profiles in groups exposed to these work periods. Several investigations described an increase in cardiometabolic load amongst long-term night-duty workers. In the simulation scenarios, the model followed these findings and produced circadian and metabolic changes that increased across repeated exposure cycles. **CONCLUSIONS:** This review proposes and illustrates a dynamic framework for understanding how nighttime noise and shift work may contribute to circadian and metabolic disruption over time. Its exploratory nature reflects heterogeneous evidence and a scoping design. The findings should be interpreted without causal inference.

[Lien vers l'article](#)

Association Between Obesity and Serum Leptin Levels in Brazilian Female Shift Workers.

Andretta RT, da Silva JC, Garcez A, Kohl IS, Mendes KG, Basso T, et al. *Diseases*. 2025 Dec 15;13(12).

BACKGROUND: Leptin is a hormone that plays a crucial role in regulating energy homeostasis and it is associated with adiposity. Women engaged in work shifts are often exposed to circadian disruption and metabolic changes that may contribute to increased adiposity and hormonal imbalance. Thus, this study aimed to investigate the association between general and abdominal obesity and serum leptin levels among female shift workers. **METHODS:** This cross-sectional study included a sample of 302 female employees from a group of plastic manufacturing industries in southern Brazil. Serum leptin levels were measured, with values > 15.2 ng/mL classified as elevated. General obesity (body mass index ≥ 30 kg/m²) and abdominal obesity (waist circumference ≥ 88 cm) were assessed. Associations were examined using Poisson regression with robust variance. **RESULTS:** The mean age of participants was 35.4 ± 10.1 years. The mean serum leptin concentration in the sample was 33.6 ng/mL (95% Confidence Interval [CI]: 30.6-36.6), and the prevalence of altered serum leptin levels was 78.1% (95%

CI: 73.5-82.8). After adjustment for potential confounders, women with obesity showed a 63% higher probability of having elevated leptin levels (Prevalence Ratio [PR] = 1.63; 95% CI: 1.32-2.02; $p < 0.001$) compared with those without obesity. Additionally, significant associations were observed with work shift and physical activity. However, abdominal obesity was not statistically significant after adjustment. **CONCLUSIONS:** Obesity was independently associated with elevated serum leptin levels among female shift workers, suggesting that excess adiposity remains a key determinant of leptin dysregulation in this population.

[Lien vers l'article](#)

Association between shift work and levels of thyroid hormones and interleukin-37.

Ali IN, Baqer NN, Jawad HG. *Endocr Regul.* 2025 Jan 1;59(1):227-35.

Objective. Symptoms of thyroid defects involve sleep disorders, gain or loss of weight, tremors of hand, constipation, dry skin, bradycardia, diarrhea, irregular menses, and hot or cold tolerance. Workers in different professions face different situations that can lead to stress. This study aimed to examine the association between shift work (office or irregular) and thyroid function indicators, interleukin-37 (IL-37) levels, and development of chronic diseases (cardiovascular, diabetes). **Methods.** The current study comprised three groups: 1) office staff, 2) irregular staff (comprising different jobs), and 3) controls (not working subjects). Eighty-five subjects, aged 30-55 years, were included in the study. Body mass index (BMI) was calculated for each participant. Venous blood was collected and serum levels of triiodothyronine (T3), thyroxine (T4), thyroid-stimulating hormone (TSH), and thyroid peroxidase (TPO) were determined by electrochemiluminescence (ECL) analysis using an automatic immunochemical analyzer Cobas E 411 (Roche Diagnostics, Germany). Serum IL-37 levels were measured using ELISA kit. **Results.** Serum T3 ($p < 0.01$) and T4 ($p < 0.001$) levels were significantly decreased in both office and irregular shift work groups compared to the controls. The mean T3 levels were higher in subjects with irregular shift work (1.162 ± 0.11 ng/mL) compared to subjects with office shift work (1.14 ± 0.12 ng/mL). Significantly increased TSH and TPO serum levels ($p < 0.01$) were found in both the irregular shift work and office shift work groups compared to the control group. Similarly, IL37 levels were significantly increased in office shift work (294.8 ± 21.05 ng/mL) and irregular shift work subjects (278.0 ± 16.22 ng/mL) ($p < 0.001$) compared to controls (56.5 ± 0.28 ng/mL). Cardiac disease ($p < 0.01$), hypertension ($p < 0.001$), and diabetes ($p < 0.001$) showed significant differences between subjects with office shift work, irregular shift work, and the control group. **Conclusion.** Elevated levels of IL-37 and TSH in shift workers may serve as biomarkers of the impact of shift work and the workplace on the immunological and hormonal status of employees.

[Lien vers l'article](#)

Cancers

Nightshift work and risk of breast and prostate cancer: a systematic review and meta-analysis, 2012-2023.

Soler-Saña M, Puiggené-Vallverdú M, Godoy P. *An Sist Sanit Navar.* 2025 Dec 30;48(3).

BACKGROUND: The International Agency for Research on Cancer classifies night shift work as Group 2A, a probable human carcinogen. This study updates the evidence on the association between night shift work and the risk of breast and prostate cancer. **METHODS:** Searches were conducted in PubMed and Web of Science. Case-control and cohort studies were included if they assessed night work as a risk factor for breast or prostate cancer, had ≥ 100 participants, provided full text in English or Spanish, scored ≥ 6 on the Newcastle-Ottawa Scale, and reported relative risks or odds ratio with 95% confidence interval. Heterogeneity and study quality were evaluated. Data synthesis followed PRISMA

guidelines. RESULTS: Twenty-one studies including 586,890 participants were analysed. For breast cancer, significant associations were found only in cohort studies, both overall (RR=0.82; 95%CI: 0.67-0.99; I²=91%) and for <10 years of night work (RR=0.75; 95% CI: 0.68-0.82; I²=0%). Average study quality was acceptable (score 7), although heterogeneity was substantial. For prostate cancer, case-control studies reported an OR of 1.14 (95%CI: 1.02-1.27; I²=25%). For exposures =10 years, both RR (2.20; 95%CI: 1.35-3.59) and OR (1.16; 95%CI: 1.03-1.30) were significant. Overall quality was moderate (score 6) with low heterogeneity (25%). CONCLUSIONS: Weak associations between night shift work and prostate cancer are observed in case-control studies and among individuals with =10 years of exposure, but no consistent association was found for breast cancer. These findings remain inconclusive and highlight the need for further research.

[Lien vers l'article](#)

Risque routier, accidentologie

Aucun article dans ce bulletin.

RPS et QVT

Cross-Sectional Comparison of Physical Activity, Sedentary Behavior, and Sleep in Shift and Nonshift Workers Using Wrist and Thigh Accelerometers.

Fenwick MJ, Oftedal S, Kolbe-Alexander T, Dumuid D, Duncan MJ. *J Occup Environ Med.* 2026 Jan 1;68(1):e77-e84.

OBJECTIVE: Investigate differences in device-measured physical activity, sedentary behavior, and sleep between shift and nonshift workers, focusing on variations during work and leisure periods. METHODS: Full-time employed adult participants from Newcastle, Australia, wore thigh and wrist accelerometers for 14 days to assess activity and sleep. Activity was classified into sedentary, standing, light-intensity physical activity, and moderate to vigorous physical activity. Linear mixed models and compositional data analysis were used to assess behavioral time allocation. RESULTS: Forty-nine participants (shift = 33, nonshift = 16) completed the study. During work periods, shift workers were less sedentary (-79.40 minutes, P = 0.031) and engaged more in light-intensity physical activity (+39.95 minutes, P = 0.044), but were more sedentary during leisure (+93.59 minutes, P = 0.019). CONCLUSIONS: Distinct differences during work and leisure highlight the need for domain-specific analysis.

[Lien vers l'article](#)

Risk of unexpected newborn complications by day of the week and time of birth in US term singleton births.

Liu R, Li C, Liang T, Yin J, Zeng Q, Zhao S, et al. *J Perinatol.* 2025 Dec 22.

OBJECTIVE: To evaluate how the risk of unexpected newborn complications among term births varied by time of birth for 12.4 million full-term singleton births in the United States. STUDY DESIGN: A population-based nationwide study. Exposures included time of birth, divided into four shifts and 42 distributed 4-h intervals. Logistic regression estimated the variations in the risk of unexpected newborn complications. RESULT: The risk of unexpected newborn complications was higher during night shifts (OR 1.13, 95% CI: 1.12-1.14) and on weekends than on day shifts and weekdays. The risk of seizures and a 5-min Apgar score ≤3 increased steadily at the start of day shifts (07:00), while the risks of transfer, assisted ventilation ≥6 h, and neonatal death remained stable during day shifts. All outcomes increased during night shifts, peaking between 23:00 and 06:59. CONCLUSION: Unexpected

newborn complications were more frequent during night shifts and weekends, particularly between 23:00 and 06:59.

[Lien vers l'article](#)

An Investigation of Sleep Quality, Stress, and Healthy Eating Status Among Shift-Working Firefighters: A Descriptive Cross Sectional Study.

Schoinas ES, Anik S, Erkul C. *J Occup Environ Med.* 2025 Dec 15.

OBJECTIVE: The aim of this study was to assess perceived stress, sleep quality, and healthy eating attitudes among fire department personnel and to examine the relationships among these variables, working in various units of the department daily. **METHODS:** This descriptive cross-sectional study included 188 participants. Data were collected using a sociodemographic form, the Bergen Shift Work Sleep Questionnaire, the Perceived Stress Scale (Short Form), and the Attitude Scale for Healthy Nutrition (ASHN). **RESULTS:** The ASHN total score was 75.84 ± 10.03 , indicating generally positive nutrition attitudes. The Bergen score was 62.94 ± 19.15 , reflecting moderate sleep disturbance. The Perceived Stress Scale score was 11.50 ± 2.61 , showing moderate stress. Weak negative correlations were found between ASHN and the other scales, while Bergen and stress scores were positively correlated. **CONCLUSIONS:** Overall, shift-based, stressful firefighting work negatively affected sleep and stress.

[Lien vers l'article](#)

Latent profile analysis of rotation stress and associated factors among nurses undergoing standardised training in China: a cross-sectional study.

Peng Y, Yan W, Yuan L, Xie C, Feng H, Jiang H. *BMJ Open.* 2025 Dec 12;15(12):e102946.

OBJECTIVES: This study aimed to identify potential categories of rotation stress among nurses undergoing standardised training and to explore the relevant factors associated with each profile. **DESIGN:** Cross-sectional study. **SETTING:** Data were collected in November 2024 from three hospitals in Zunyi City, Guizhou Province, China. **PARTICIPANTS:** Nurses undergoing standardised training were recruited for this study. **METHODS:** Convenience sampling method was used to recruit standardised training nurses in November 2024 from three hospitals in Zunyi City, Guizhou Province. The survey instruments used included demographic characteristics questionnaire, the Nursing Job Rotation Stress Scale and the Maslach Burnout Inventory. Latent profile analysis method was used to analyse rotation stress characteristics of nurses during standardised training. Additionally, logistic regression was performed to identify the factors influencing different characteristics. **RESULTS:** A total of 493 nurses completed the questionnaires, of which 453 were valid, resulting in a validity rate of 91.88%. Rotation stress was classified into two profiles: 'Low Emotional Response-Stress Adaptation Group' (21.5%) and 'High Emotional Response-Stress Distress Group' (78.5%). Univariate analysis showed that highest degree ($\chi(2)=11.389$, $p=0.001$), monthly night shifts ($\chi(2)=33.913$, $p<0.001$), employment type ($\chi(2)=20.858$, $p<0.001$), new graduate ($\chi(2)=12.319$, $p<0.001$), pretraining work experience ($\chi(2)=35.754$, $p<0.001$) and training duration ($\chi(2)=15.357$, $p=0.002$) significantly influenced the two subgroups. Multivariable regression analysis revealed significant associations of monthly night shifts, pretraining work experience, training duration and burnout level ($p<0.05$). **CONCLUSIONS:** Nurses undergoing standardised training exhibit two distinct rotation stress profiles. Monthly night shifts, pretraining work experience, training duration and burnout are significant factors. Nursing managers should implement targeted interventions such as mindfulness, laughter therapy and emotional freedom techniques to mitigate stress and thereby enhance the quality of standardised training.

[Lien vers l'article](#)

Shift schedule change from 24/48 to 1/3/2/3 improves markers of stress and quality of life in career firefighters.

McAllister MJ, Martaindale MH, Womble A, Sutton N, Uriegas S. *J Occup Environ Med.* 2025 Dec 8.

OBJECTIVE: This study seeks to better understand the impact of schedule change on physiological and self-report measures of stress and quality of life among career firefighters. **METHODS:** This study examined the impact of a schedule change from 24/48 to a 24-hour on/72-hour off, 48-hour on/72-hour off (i.e., 1/3/2/3) shift rotation on markers of stress among career firefighters over a seven-month period. Physiological measures such as salivary biomarkers (cortisol, testosterone, testosterone-to-cortisol ratio, interleukin-6) and blood pressure as well as self-reported survey instruments for occupational stress and job satisfaction were assessed throughout the study. **RESULTS:** By the end of the study, participants demonstrated significantly lower salivary cortisol concentrations, improved quality of life, and better sleep quality. **CONCLUSIONS:** These findings suggest that transitioning to a 1/3/2/3 schedule may reduce physiological stress and improve quality of life among career firefighters.

[Lien vers l'article](#)

Impact of Workload and Shift Characteristics on Diagnostic Resource Utilization Among Emergency Medicine Residents.

Cakmak S, Bas RK, Hokenek NM, Sakul AA. *Int J Gen Med.* 2025;18:7615-26.

PURPOSE: This study aimed to investigate the impact of shift characteristics, resident workload, and physician attributes on diagnostic expenditures in low-acuity patients (green triage category) emergency department (ED) patients. **METHODS:** A retrospective cross-sectional analysis was conducted in a high-volume tertiary ED over one month, including 22,427 green-triage visits managed by 71 emergency medicine residents. Resident characteristics (age, gender, seniority, shift group, post-night shift status), patient demographics, and diagnostic expenditures (laboratory, imaging, electronic medication orders, total cost) were extracted from the hospital information system. Non-parametric tests were used for group comparisons given non-normal distribution patterns, and cost determinants were analyzed using a Gamma generalized linear model with a log-link function. **RESULTS:** Diagnostic expenditures demonstrated significant variability across physician and patient characteristics. Female residents were associated with higher laboratory (1.27 vs 0.87 USD; $p < 0.001$), imaging (1.35 vs 1.01 USD; $p < 0.001$), and medication-order costs ($p < 0.001$). Compared with junior residents, mid-level trainees generated the highest total expenditures, whereas senior residents exhibited a cost-attenuating effect ($\exp(\beta) = 0.74$). Unadjusted analyses indicated greater total spending during night shifts (2.8 USD vs 2.39-2.43 USD; $p = 0.011$); however, after adjustment for resident- and patient-level covariates, night-shift status was associated with lower expenditures ($\exp(\beta) = 0.76$). Post-night-shift status independently correlated with reduced laboratory and medication-order costs. Resident workload showed a strong inverse association with expenditures, with increasing daily patient volume linked to lower total diagnostic costs ($\rho = -0.226$; $p < 0.001$). Among patient factors, advancing age increased total cost by approximately 6% per year ($\exp(\beta) = 1.06$). Repeat ED utilization emerged as the most powerful cost determinant, with each additional prior visit associated with more than a threefold increase in diagnostic spending ($\exp(\beta) > 3$; $p < 0.001$). Female patients consistently incurred higher costs across all categories ($p < 0.001$). **CONCLUSION:** Diagnostic spending in low-acuity ED encounters is shaped by both clinical and operational dynamics. Resident workload, seniority level, and gender independently influence cost patterns, while patient age and repeat admissions are strong drivers of increased expenditures. These findings highlight several potentially modifiable determinants-particularly workload distribution and trainee supervision-that may support more cost-conscious diagnostic practices in busy emergency departments.

[Lien vers l'article](#)

Enabling continuous 24/7 vertical mobility in High-Rise buildings by integrating critical activity scheduling and night shift planning.

Ahmadnia M, Maghrebi M, Khodatars F. *Sci Rep.* 2025 Dec 29.

In high-rise construction projects, inefficient delivery of materials, equipment, and labor can impact the completion time of the project. So, improvement in vertical transportation could save time, facilitate the supply process and reduce costs. The methods introduced for efficiently planning lifts in the construction industry were focused on material transportation and the time of lift activity, which primarily used heuristics and simulations. One of the main challenges that has not been fully addressed in the literature is automatically prioritizing critical activities in the supply process. Other issues include taking into account the night shift and considering the deadline of critical activities. Mixed-Integer Linear Programming (MILP) formulation that integrates both integer and continuous variables can provide an opportunity to obtain an optimal solution. Accordingly, this paper introduces an MILP model that seeks the best allocation of materials and equipment to a given number of lift travel rounds. Also, when the demand exceeds lift capacity, the proposed method allows for efficient prioritization of activities and supplies maximum ordered material with the fewest possible delays. The proposed model, coupled with a novel iterative search algorithm, can achieve the minimum number of travel rounds and the optimum lift planning. Field data from a 22-story construction project is used to test the suggested method. The results demonstrate that the method could effectively minimize delivery times and detect infeasible and undersupplied demands.

[Lien vers l'article](#)

Santé psychique

The impact of night shift workload on nurses' depressive symptoms: a chain mediation analysis of sleep disturbances, social avoidance and fear of missing out.

Jiang M, Yang W, Ji Y, Cai X, Li Y, Guan A, et al. *Front Public Health.* 2025;13:1723567.

BACKGROUND: Depression is highly prevalent among nursing staff and has become a globally recognized occupational health issue. Despite its significance, research exploring the complex mechanisms linking night shift work and depressive symptoms in nurses remains limited. **OBJECTIVE:** This study aims to investigate the association of sleep disturbances, social avoidance and distress (SAD), and fear of missing out (FOMO) with night shift work and depressive symptoms among nurses. **METHODS:** Between June and August 2025, clinical nurses from a Grade-A tertiary hospital in Haikou were recruited. Data were collected using a general-information questionnaire, the 10-item Center for Epidemiologic Studies Depression Scale, the Pittsburgh Sleep Quality Index Scale, the Social Avoidance and Distress Scale, and the Fear of Missing Out Scale. Analyses were performed with SPSS 25.0 and R Studio 4.4.1. Group comparisons were conducted using the Wilcoxon rank-sum or Kruskal-Wallis H tests. Spearman correlation analyses examined associations among variables. Mediation analysis was performed with the PROCESS 4.0 program. The significance of indirect effects was tested by bootstrapping and structural equation modelling. **RESULTS:** A total of 614 clinical nurses were ultimately enrolled, of whom 36 (5.9%) were male and 578 (94.1%) were female. The mean depression score was 9.38 ± 5.42 , corresponding to a positive screening rate of 50.81%. Mediation analyses showed that night shift workload positively predicted depressive symptoms ($\beta = 0.0416$, 95% CI: 0.0351-0.0481). Sleep disturbance, SAD, and FOMO each emerged as significant partial mediators. The indirect effects were 0.0381 (95% CI: 0.0307-0.0459), 0.0120 (95% CI: 0.0078-0.0168), and 0.0122 (95% CI: 0.0080-0.0170), accounting for 29, 9.13, and 9.28% of the total effect, respectively. The structural equation model indicated a good fit for the proposed mediation framework. **CONCLUSION:** Night shift workload positively predicts depressive symptoms among nurses, and sleep disturbance, SAD, and

FOMO partially mediate this relationship. Comprehensive, multi-target interventions should therefore be implemented to lower depression risk and safeguard the mental health of nurses working night shifts.

[Lien vers l'article](#)

Shift Work and Burnout Among Oncology and Hematology Nurses in Palestinian Hospitals.

Jawabreh B, Jaradat Y, Qtait M, Al Khatib S. *SAGE Open Nurs.* 2025 Jan-Dec;11:23779608251406676.

BACKGROUND: Burnout is a growing occupational health issue among nurses, particularly those working in emotionally demanding units such as oncology and hematology. In Palestine, limited resources, high workloads, and political instability further exacerbate this challenge. Shift work, a necessity in hospital settings, has been linked to disrupted sleep patterns, emotional exhaustion, and burnout. However, limited evidence exists on its specific impact among Palestinian oncology nurses. **OBJECTIVE:** To examine the association between shift work and burnout among oncology/hematology nurses in Palestinian hospitals, and to explore gender-specific differences. **METHODS:** This cross-sectional study included 214 registered nurses working in oncology/hematology units across public, private, and nongovernmental hospitals in the West Bank and Gaza. Data were collected using a validated Arabic version of the Maslach Burnout Inventory-Health Services Survey (MBI-HSS). Burnout was assessed across three dimensions: emotional exhaustion, depersonalization, and reduced personal accomplishment. Statistical analysis included t-tests, ANOVA, and multivariate linear regression. **RESULTS:** More than half of participants (57.2%) reported moderate levels of burnout. Emotional exhaustion was the most prevalent subscale (69.4%), followed by reduced personal accomplishment (53.3%) and depersonalization (45%). Shift workers demonstrated higher burnout scores, particularly among males. Younger age and fewer years of oncology experience were associated with greater burnout. Gender differences in subscale patterns were observed but not statistically significant. **CONCLUSION:** Shift work contributes to increased burnout among Palestinian oncology nurses. Age and experience play moderating roles. Policy reforms are needed to address scheduling practices and improve mental health support for nursing staff.

[Lien vers l'article](#)

Rotating Shift Work and Burnout Among Nurses in Hebron Hospitals, West Bank, Palestine: A Cross-Sectional Study.

Jaradat Y, Qtait M, Alqaissi N, Omer DA, Atawneh A, Sharkh AA, et al. *Public Health Chall.* 2025 Dec;4(4):e70172.

This study examines the relationship between rotating shift work and burnout among nurses in Hebron hospitals within the context of Palestine's unique political and social conditions. A cross-sectional survey was conducted from January to March 2025 among registered nurses using a structured questionnaire that captured socio-demographic and workplace characteristics. Burnout was assessed using the Maslach Burnout Inventory (MBI). The findings revealed that nurses working rotating shifts reported significantly higher levels of burnout, with female nurses experiencing greater emotional exhaustion and reduced personal accomplishment (PA). Unmarried nurses and those without children demonstrated elevated depersonalization (DP), low PA, and overall burnout. The highest burnout levels were observed at Hebron Alia Governmental Hospital. Additionally, nurses with less than 7 years of experience exhibited significantly higher DP and lower PA. These results underscore the urgent need for targeted interventions, including optimizing staffing, providing mental health support, and fostering a supportive work environment. Given the cross-sectional nature and reliance on self-reported data, the findings should be interpreted with caution. Further research is recommended to explore the long-term effects of shift work on patient care quality.

[Lien vers l'article](#)

Troubles cognitifs et de la vigilance

Association between caloric and macronutrient intake and the psychomotor performance of military police officers working shifts.

Silva de Almeida Brito A, Vilela Dos Santos Gonçalves J, Oliveira Gadelha G, Pedroza Vasconcelos S. *Nutrition*. 2026 Feb;142:112989.

INTRODUCTION: Psychomotor performance is critical for professionals with high cognitive demands, such as police officers. Nutritional factors have been suggested to influence attention and reaction time. This study aimed to assess the association between caloric and macronutrient intake and psychomotor performance in shift-working police officers. METHODS: This cross-sectional study included 22 military police officers from Rio Branco, Acre, Brazil. Dietary intake was assessed using 24-hour dietary recalls, and psychomotor performance was measured with the Psychomotor Vigilance Test (PVT). Spearman correlation coefficients were calculated between caloric and macronutrient intake and psychomotor performance variables: mean reaction time (MRT) and number of attention lapses (NL). RESULTS: During the day shift, significant positive correlations were found between caloric intake and NL ($r = 0.630$; $P = 0.004$) and MRT ($r = 0.565$; $P = 0.012$), as well as between protein intake and NL/MRT at shift start ($r = 0.543$; $P = 0.016$ / $r = 0.600$; $P = 0.007$) and shift end ($r = 0.529$; $P = 0.020$ / $r = 0.544$; $P = 0.016$). Although psychomotor performance declined during night shifts, no significant correlations were observed between performance and caloric or macronutrient intake during these shifts. CONCLUSIONS: Higher caloric and protein intake was associated with poorer psychomotor vigilance performance during day shifts. No significant associations were detected between performance parameters and intake of other macronutrients.

[Lien vers l'article](#)

Associations between parental shift work and children's sleep behavior in a sample of health care workers.

Dechantsreiter J, Schlarb A, Goerigk S, Neukamm AC, Poets CF, Quante M. *Sleep Med*. 2026 Jan;137:106895.

OBJECTIVES: To identify family- and work-related factors of shift-working parents associated with various aspects of children's sleep behavior. Additionally, the study aimed to explore further potential influences on the relationship between shift work and children's sleep. METHODS: Data were collected in working parents using a nationwide online survey. The survey relied on parent-reported information about their youngest child addressing the following domains: demographics, working patterns, children's and parents' sleep habits, duration and bedtime routines. Standardized instruments included the Children's Sleep Habits Questionnaire and Pittsburgh Sleep Quality Index-score. RESULTS: A total of 770 parents participated. 627 (82 %) were female; mean age 37.7 ± 1.2 years. Families had on average 1.8 children (mean child age 7.9 years; youngest child 5.7 years). In 503 (65 %) families at least one parent worked in shifts and in 160 (21 %) families both parents were shift-workers. Overall, no substantial differences were found in parent-reported child-sleep duration, or general sleep quality across shift work groups. Exploratory analyses suggested a moderating effect of job satisfaction and parental sleep quality on the association between child parasomnia and shift work. CONCLUSIONS: In this cross-sectional study, most aspects of children's sleep parameters did not differ between families with or without shift work, based on parent-reported measures. While a weak statistical association was observed between parasomnia scores, the effect size was limited. Future research should consider the role of work schedules in supporting family sleep health, especially in shift-working households.

[Lien vers l'article](#)

Cross-Sectional Comparison of Physical Activity, Sedentary Behavior, and Sleep in Shift and Nonshift Workers Using Wrist and Thigh Accelerometers.

Fenwick MJ, Oftedal S, Kolbe-Alexander T, Dumuid D, Duncan MJ. *J Occup Environ Med.* 2026 Jan 1;68(1):e77-e84.

OBJECTIVE: Investigate differences in device-measured physical activity, sedentary behavior, and sleep between shift and nonshift workers, focusing on variations during work and leisure periods. METHODS: Full-time employed adult participants from Newcastle, Australia, wore thigh and wrist accelerometers for 14 days to assess activity and sleep. Activity was classified into sedentary, standing, light-intensity physical activity, and moderate to vigorous physical activity. Linear mixed models and compositional data analysis were used to assess behavioral time allocation. RESULTS: Forty-nine participants (shift = 33, nonshift = 16) completed the study. During work periods, shift workers were less sedentary (-79.40 minutes, $P = 0.031$) and engaged more in light-intensity physical activity (+39.95 minutes, $P = 0.044$), but were more sedentary during leisure (+93.59 minutes, $P = 0.019$). CONCLUSIONS: Distinct differences during work and leisure highlight the need for domain-specific analysis.

[Lien vers l'article](#)

Targeting the cognitive failures of fatigue: a randomized, double-blind, crossover pilot trial of a rapid countermeasure in night-shift emergency physicians.

Lu SY, Wu PS, Huang FW, Chen YC, Chiu CH, Pan YC, et al. *Intern Emerg Med.* 2025 Dec 9.

The purpose is to investigate the effects of caffeinated chewing gum on the cognitive performance of emergency physicians (EPs) during a night shift. In this randomized, double-blind, placebo-controlled crossover exploratory pilot trial, 14 young male EPs (mean age: 29.9 ± 1.44) working an 8-h night shift received either caffeinated gum (200 mg) or a placebo mid-shift. A comprehensive cognitive battery assessing executive function, cognitive flexibility, and spatial memory was administered at three time points: pre-shift (baseline), mid-shift (10 min post-intervention), and end-of-shift. Performance changes between conditions were analyzed using the Wilcoxon signed-rank test, with effect sizes quantified via rank-biserial correlation. Caffeinated gum elicited immediate and large improvements in key executive functions. Compared to placebo, the caffeine condition was associated with significantly enhanced cognitive flexibility (reduced task-switching interference: $r = -0.784$, 95% CI [-1.000 to -0.354], $p = 0.009$; improved accuracy: $r = 0.673$, 95% CI [0.154-1.000], $p = 0.026$) and superior cognitive inhibition (improved Incongruent Stroop task performance: $r = -0.745$, 95% CI [-1.000 to -0.273], $p = 0.015$). These benefits were not sustained at the end-of-shift assessment, and no significant effects were observed for spatial memory or other cognitive domains at any time point. This exploratory trial found that 200 mg of caffeinated gum produced immediate, domain-specific gains in cognitive flexibility and response inhibition, functions closely linked to medical error risk. As the effects were transient, caffeinated gum may serve as a short-term "tactical safety tool" in high-risk scenarios, aligning with strategies in aviation and military operations, though larger studies are needed to confirm these findings and test for a direct impact on clinical performance.

[Lien vers l'article](#)

The mediating role of self-regulatory fatigue on the relationship between insomnia and sleep-related worry among shift nurses: a cross-sectional study.

Zeng Q, Zhang Y, Liang H, Li Y, Zhang X, Wang C, et al. *BMC Nurs.* 2025 Dec 30.

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A cross-sectional multifactorial analysis of chrononutrition, sleep quality and sleep patterns among healthcare shift workers.

Giltelin ENF, Teng N, Mohd Azmi NAS, Mohamed SN, Mulhim MH, Maluin SM, et al. *Acta Psychol (Amst)*. 2025 Nov;261:105900.

Healthcare shift workers are often linked to circadian misalignments, leading to irregular dietary behaviours, altered sleep patterns, and elevated health risks such as metabolic syndromes and psychological disorders. Despite growing recognition of these implications, limited studies have comprehensively explored how chrononutrition, sleep quality, and sleep patterns interrelate in this high-risk population. Hence, the current study aimed to examine these domains and their associations among rotating healthcare shift workers in Selangor, Malaysia. Using a cross-sectional design, all data were collected through a set of self-administered questionnaires, comprising sociodemographic data, the Malay version of the Chrononutrition Profile Questionnaire (CPQ-M), the Pittsburgh Sleep Quality Index (PSQI) and Munich Chronotype Questionnaire for Shift-Workers (MCTQ(Shift)), to assess chrononutrition behaviours, sleep quality, sleep patterns and social jetlag. The findings highlighted widespread disruptions in both chrononutrition and sleep, with 40.8 % skipping breakfast, 66.0 % reporting poor sleep quality, and 53.4 % showing signs of social jet lag. A significant association ($p < 0.05$) was observed between sleep quality and night eating behaviour, indicating that poorer sleep quality was linked to increased likelihood of night eating among shift workers. However, the majority still maintained a consistent pattern of both an eating window of 10 to 13 h between the first and last meal of the day, as well as stable night eating behaviours, with no consumption of meals or snacks within two hours before bedtime. This study is among the few to comprehensively examine chrononutrition behaviours and sleep health among healthcare shift workers. The findings underscore the need for tailored interventions, such as promoting structured meal timings, enhancing access to healthy breakfasts in workplace cafeterias, and conducting educational workshops aimed at improving nutrition and sleep hygiene among participants. These measures can help to mitigate the adverse effects of shift work and support overall health and well-being.

[Lien vers l'article](#)

Task-specific effects of sleep deprivation on cognitive function and EEG brain network in night-shift nurses.

Yuan J, Xu M, Qian L, Gao L, Sun Y. *Brain Res Bull*. 2025 Dec;233:111661.

BACKGROUND: Night-shift nurses experience chronic sleep deprivation, which impairs cognitive functions crucial for patient safety. However, the underlying reorganization of brain functional networks remains poorly understood. This study aimed to investigate the task-specific effects of sleep deprivation on brain network topology during sustained attention and working memory in night-shift female nurses. **METHODS:** In a within-subjects design, electroencephalography (EEG) data from 28 female nurses were recorded during a rested session (R-Session) and a sleep-deprived session (SD-Session) immediately following a night shift. Participants performed the psychomotor vigilance test (PVT) and 2-back tasks. Functional connectivity was estimated using the weighted phase lag index (wPLI), and brain network properties were quantified using graph theoretical analysis at both global and nodal levels. **RESULTS:** Our findings revealed a clear behavioral dissociation: sleep deprivation significantly impaired PVT performance but had no effect on 2-back task performance. This dissociation was mirrored by distinct patterns of neural reorganization. During the PVT, the brain network exhibited a compensatory enhancement of global topology, characterized by a significant increase in clustering coefficient, global efficiency, local efficiency, and small-worldness, alongside a decrease in characteristic path length, particularly in the theta and beta bands. In contrast, the 2-back task showed only a localized increase in the theta-band clustering coefficient. Nodal analysis further revealed a critical topographical distinction: PVT-related efficiency changes were strongly right-lateralized,

whereas 2-back changes were bilaterally distributed. **CONCLUSION:** In conclusion, these results demonstrate that sleep deprivation elicits task-specific neurocognitive adaptations. Sustained attention appears highly vulnerable, prompting a broad compensatory reorganization of the right-hemispheric attention network. Conversely, working memory function remains behaviorally stable, underpinned by a more specific network reorganization, primarily involving increased local connectivity. This study deepens our understanding of the neural mechanisms underlying cognitive vulnerability and resilience in nurses group.

[Lien vers l'article](#)

Shift work is associated with selective brain volume loss: a longitudinal study.

Welton T, Teo TWJ, Saffari SE, Chan LL, Tan EK. *Neuroimage*. 2025 Dec 15;324:121619.

INTRODUCTION: Global work patterns are changing, with more individuals engaged in shift work and remaining in the workforce later in life. Shift work is linked to disrupted sleep, impaired cognition, and greater risk of metabolic and neurodegenerative disease; effects that are amplified by aging. However, the neural correlates of shift work remain poorly characterized, leaving a critical gap in understanding how occupational schedules may shape the aging brain. **OBJECTIVES:** We aimed to determine the relationship between shift work on brain structure in healthy adults, and how brain structure changes over time in older-aged shift workers. **METHODS:** We analysed data from a population-based longitudinal cohort study. We included data for employed individuals with no serious medical conditions. Participants completed self-report questionnaires on health, sleep, cognition and employment, and brain MRI. We used linear regression to compare shift workers and non-shift workers on 153 structural brain parameters, controlling for age, sex, chronotype, intracranial volume, smoking history, MRI head motion, hypertensive status and socioeconomic status. **RESULTS:** We included $n = 14,198$ individuals (aged median 47 [IQR=7] years) comprising non-shift workers ($n = 12,076$) and shift workers ($n = 2122$). In shift workers, we detected a symmetrical pattern of volume loss in the right thalamus (Cohen's $d = -0.10$, adjusted $p = 0.026$) and left amygdala (Cohen's $d = -0.11$, adjusted $p = 0.010$). In subjects who ceased shift work after the baseline, we observed a halting of shift work-related volume loss within 2.4 years. Secondary analyses revealed microstructural degradation in the corticospinal tract, cerebral peduncle and right sagittal stratum, and negative correlation of volume loss with cognitive performance. **CONCLUSION:** Shift workers have selective volume loss of the thalamus and amygdala, which is halted within 2.4 years of stopping shift work. Monitoring, counselling and interventional measures, including adjustment of work schedules, could minimise brain volume loss in shift workers.

[Lien vers l'article](#)

An Investigation of Sleep Quality, Stress, and Healthy Eating Status Among Shift-Working Firefighters: A Descriptive Cross Sectional Study.

Schoinas ES, Anik S, Erkul C. *J Occup Environ Med*. 2025 Dec 15.

OBJECTIVE: The aim of this study was to assess perceived stress, sleep quality, and healthy eating attitudes among fire department personnel and to examine the relationships among these variables, working in various units of the department daily. **METHODS:** This descriptive cross-sectional study included 188 participants. Data were collected using a sociodemographic form, the Bergen Shift Work Sleep Questionnaire, the Perceived Stress Scale (Short Form), and the Attitude Scale for Healthy Nutrition (ASHN). **RESULTS:** The ASHN total score was 75.84 ± 10.03 , indicating generally positive nutrition attitudes. The Bergen score was 62.94 ± 19.15 , reflecting moderate sleep disturbance. The Perceived Stress Scale score was 11.50 ± 2.61 , showing moderate stress. Weak negative correlations were found between ASHN and the other scales, while Bergen and stress scores were positively

correlated. CONCLUSIONS: Overall, shift-based, stressful firefighting work negatively affected sleep and stress.

[Lien vers l'article](#)

Quick Returns: A Quasi-Experimental Field Study on the Effects on Sleep, Fatigue and Cognitive Performance.

Öster K, Söderström M, Tucker P, Axelsson J, Kecklund G, Dahlgren A. *J Sleep Res.* 2025 Dec 15:e70244.

As sleep restriction has negative effects on performance, ensuring sufficient sleep for shift workers is essential. Quick returns (< 11 h off between shifts) shorten sleep and are associated with increased fatigue and risk of accidents, but there is limited research on other aspects of cognitive performance and work performance. The aim of the present quasi-experimental field study was to investigate the effects of quick returns on objective and subjective measures of sleep, fatigue and cognitive performance. In total 36 newly graduated nurses were followed during two pre-scheduled work periods, with and without a quick return (evening-day-day vs. day-day-day). They kept diaries of sleep and work, wore actigraphy wristbands to record sleep and performed 3 × 3 min smartphone-based cognitive tests (simple reaction time, episodic memory and Stroop) several times daily. Quick returns were found to shorten sleep by 46 min on average, and participants felt less rested in the morning and sleepier throughout the day. Sleep fragmentation and sleep efficiency did not differ between conditions but participants reported poorer sleep quality. Although the nurses reported cognitive impairments after a quick return, the estimated effects on simple attention, episodic memory and Stroop were small and overlapped zero. There were also indications of lingering fatigue on the second day shift after a quick return, but estimates are uncertain. In sum, quick returns shorten sleep and decrease subjective alertness, which could contribute to increased fatigue-related risk at work, but people seem able to mobilise necessary resources to maintain performance on short cognitive tasks.

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Barriers and Levers to the Implementation of Napping During Night Shift Work in Healthcare Workers: A Qualitative Study in a French University Hospital.

Mazouz M, Gouttefarde P, Bouchou Y, Roche F, Pelissier C, Berger M. *J Nurs Manag.* 2025;2025:5279651.

INTRODUCTION: Healthcare workers are exposed to health risks associated with shift work including cognitive impairments associated with decreased alertness, increased drowsiness, and disturbances in circadian rhythms. Although workplace napping has been shown to provide potential health benefits, its practical implementation within hospital settings remains limited. Thus, the aim of this study was to identify the barriers and levers to implementing a nap break at the workplace during night shift among nurses and care assistants. METHODS: This qualitative study uses both individual and collective semistructured interviews and aims to identify perceived barriers and levers in implementing a dedicated space and break for napping during night work in a French University Hospital. The study assessed the feasibility of napping during night shift work for healthcare workers working 12-h shifts and investigated perceptions of napping across different hierarchical levels, from management to prospective healthcare workers. RESULTS: Twenty individual or collective interviews were conducted with 30 participants. Results showed that napping at work faced various barriers depending on the hierarchical level. Healthcare managers and the executive board were concerned about the challenges related to workload, lack of space, and insufficient staffing. Meanwhile, healthcare workers expressed cultural concerns regarding the negative perception of napping. Our findings revealed differences in napping perception between managers and administration, as well as a lack of exchange between hierarchical strata. CONCLUSION: This study suggests that a shift in the perception of napping and improved communication within the hospital could facilitate its integration during night work.

Collaboration among all hierarchical levels and a strong commitment from leaders are needed to overcome these challenges.

[Lien vers l'article](#)

The Impact of a Blue-Blocking Filter Over One Eye on Health and Performance Outcomes and Its Implications for Night Workers.

Figueiro MG, Bullough JD, Rizvydeen M, Plitnick B, Li W, Rea MS. *Biol Res Nurs*. 2025 Dec 7:10998004251406550.

The higher risk for cancer documented among night-shift nurses compared to the day-shift nurses possibly results from lower melatonin levels associated with exposure to light at night in the work environment. Research demonstrates that eliminating spectral power <530 nm to both eyes prevents light-induced nocturnal melatonin suppression, and complete occlusion of one eye reduces melatonin suppression relative to that when both eyes are open. This study investigated whether filtering short wavelengths from one eye using a blue-blocking filter, rather than occluding one eye, would maintain high melatonin levels, alertness, and visual performance. This crossover, within-subjects study ran for six nights. Subjects experienced one of six light conditions involving combinations of binocular versus monocular and filtered versus unfiltered vision per night. Normalized melatonin concentration area under the curve (AUC(n)) served as the primary outcome and the numerical verification (NVT) and go/no-go (GNG) performance tasks, pupil area, and subjective sleepiness (Karolinska Sleepiness Scale [KSS]) served as secondary outcomes. Both filtered and unfiltered monocular light conditions resulted in significantly greater melatonin AUC(n) than the unfiltered binocular light condition. Performance at the NVT and at the GNG was not affected by filtering one eye compared to the unfiltered binocular light condition, nor did it affect KSS ratings. Melatonin AUC(n) positively correlated with pupil area for corresponding light conditions. In conclusion, filtering one eye can help preserve melatonin levels in night workers while maintaining alertness and visual performance, which could be a simple and effective solution for improving health in night-shift nurses.

[Lien vers l'article](#)

HA comme facteur de risque

Généralités et prévention

From lunch breaks to late nights: a qualitative study of how workplaces can support healthy diet, physical activity and sleep behaviours in young adults.

Orlando C, Bajorek Z, Oxenham A, Wilson S, van Sluijs EMF, Martin A, et al. *BMC Public Health*. 2025 Dec 17;25(1):4262.

BACKGROUND: Early adulthood (age 16-24) is an important time for development of healthy behaviours such as diet, physical activity and sleep, which promote wellbeing and maintenance of a healthy weight. This study explored the perspective of young adult employees and employers on the influence of work and the workplace on these behaviours, and what employers and policy makers could do to support healthy behaviours among young adults in the workplace. **METHODS:** Our research focused on four industries (food services, construction, early years education, and social care), comprising focus groups with young adult employees (aged 16-24) and with employers. Framework analysis of focus group transcripts compared findings and identified common themes across the different industries represented, with a focus on perceived challenges, solutions, and pathways to supporting healthy behaviours. **RESULTS:** 23 young adults and 28 employers took part in the research. Employers and young adults agreed that work and the workplace had a strong influence on health behaviours and health. Participants discussed both the negative influence of work, for example long working hours, poor working environments, but also the positive role of employers' support for health, incentives for healthy behaviours and good relationships with managers. While young people recognised the role of employers in supporting their health, they deem that individuals are ultimately responsible. Employers primarily emphasise their role in providing education and raising awareness about healthy lifestyles. **CONCLUSIONS:** Structural, environmental and relational factors are all important in ensuring that workplaces support young people's health.

[Lien vers l'article](#)

Editorial: Physical activity behavior, obesity, and stress as crucial sources of health issues in stressful occupations, volume II.

Kukić F, Heinrich KM. *Front Endocrinol (Lausanne)*. 2025;16:1742390.

[Lien vers l'article](#)

Protecting the health of healers: Knowledge-to-practice gap among healthcare professionals.

Bhadoria AS, Pandey P, Anirvan P, Kumar R. *J Family Med Prim Care*. 2025 Nov;14(11):4409-11.

Medical professionals are well educated regarding the causes and strategies to prevent lifestyle diseases. Paradoxically, many within this population suffer from these same conditions, underscoring a substantial knowledge-to-practice gap. Global research indicates that physicians, despite their expertise, encounter increasing incidences of lifestyle-related disorders, frequently attributed to occupational stress, prolonged working hours, inadequate sleep, and irregular food patterns.

[Lien vers l'article](#)

Activités physiques**Prevalence and risk factors of work-related musculoskeletal disorders among older hospital cleaners in Wenzhou, China.**

Zhou W, Chen Y. *Front Public Health*. 2025;13:1727574.

INTRODUCTION: Work-related musculoskeletal disorders (WMSDs) are highly prevalent among hospital cleaners globally, yet epidemiological data among older hospital cleaners in China remains limited in the context of workforce aging and delayed retirement policies. **METHODS:** This cross-sectional study was conducted among hospital cleaners in three tertiary public hospitals in Wenzhou, China. Data were collected using the Chinese version of the Standardized Nordic Musculoskeletal Questionnaire (C-NMQ). A total of 246 hospital cleaners aged ≥ 50 years and 80 cleaners aged < 50 years (as an age comparison group) were included. Chi-square tests and Cochran-Armitage trend tests were used to analyze age-related prevalence patterns. Multivariable logistic regression with backward stepwise selection was employed to identify independent risk factors. **RESULTS:** The 12-month prevalence of WMSDs among cleaners aged ≥ 50 years was 32.1%. The most commonly affected body regions were the shoulder, knee, and neck. Multivariable analysis revealed that working in uncomfortable postures (AOR = 2.87) and staff shortage (AOR = 2.71) were independent risk factors for WMSDs. Sensitivity analysis showed that working > 50 h per week significantly increased the risk of WMSDs. **DISCUSSION:** Older hospital cleaners experience a considerable burden of WMSDs. Working in uncomfortable postures, staff shortage, and long working hours are major risk factors. Comprehensive interventions targeting ergonomic improvements, organizational management optimization, and occupational health surveillance are recommended, with priority given to early screening and intervention, particularly for workers transitioning into older age groups. These findings provide evidence for occupational health protection in the context of the delayed retirement policy in China.

[Lien vers l'article](#)

Prevalence and preventive measures of spinal musculoskeletal disorders among dentists at the University Dental Hospital of Monastir: a cross-sectional study.

Merchaoui I, Chelly F, Machghoul S, Hayouni M, Kharras IE, Khelifa M, et al. *Pan Afr Med J*. 2025;52:40.

INTRODUCTION: Musculoskeletal disorders (MSDs), particularly those affecting the spine, are highly prevalent among dentists due to the prolonged static postures and repetitive movements inherent to dental practice. Understanding their prevalence and associated risk factors is crucial for implementing effective preventive strategies and ensuring the well-being and career longevity of dental professionals. **METHODS:** this is a cross-sectional study over 2 months, conducted among dentists of the university hospital of odontology in Monastir. The data collection was carried out by means of a self-questionnaire exploring the sociodemographic and professional data of the participants. The NORDIC style questionnaire and the KARASEK questionnaire were used to explore musculoskeletal health and psychosocial constraints, respectively. **RESULTS:** the final sample size of our study consisted of 260 eligible individuals, with a final participation rate of 64.23%. The typical profile of the participants was predominantly female 70.7% (n=118), right-handed 90.4% (n=151), with a mean age of 28.30 ± 6.7 years. Most were single 75.4% (n=127), non-smokers 73.7% (n=123) and engaged in physical activity 56.1% (n=93). A total of 83.8% (n=141) of participants were dental trainees. The majority of practitioners, 58.7% (n=98), were working in departments focused exclusively on medical dental practice. The median seniority was 12 months, while the average number of daily working hours was 5 ± 1.16 hours. The prevalence of MSDs of the spine, all sites combined, was 67.6% (n=113). According to the binary regression model, the determinants of cervical pain risk were: gender (OR: 0.42, 95% CI: 0.18-0.96; p=0.04); inter-patient breaks (OR: 0.24, 95% CI 0.1-0.58; p=0.002); and the concomitant presence of back pain and low back pain (OR: 3.8, 95% CI: 1.6-8.8; p=0.001) and (OR:

6.2, 95% CI 2.7-14.5; $p=10^{-3}$) respectively. As for back pain, the risk was reduced by a factor of 0.79 in the case of frequent rotation of practitioners working in the same chair (OR: 0.79, 95% CI 0.66-0.95; $p=0.01$) and increased by the presence of other MSD (OR: 1.43, 95% CI: 1.1-1.87; $p=0.007$); by the absence of break sessions (OR: 2.58, 95% CI 1.24-5.38; $p=0.01$) and by the concomitant presence of neck pain (OR: 3.34, 95% CI: 1.48-7.54; $p=0.004$). The risk of developing low back pain was increased by high daily hourly mass (OR: 4.9, 95% CI 2.2-11.1; $p=0.001$); in case of concomitant cervical pain (OR: 2.88, 95% CI: 1.3-6.2; $p=0.007$) and in case of a learner (OR: 1.6, 95% CI 1.1-2.3; $p=0.007$). It is reduced if enough breaks are taken (OR: 0.2, 95% CI 0.06-0.7; $p=0.01$). CONCLUSION: spinal MSDs were highly prevalent among dental professionals. Neck, back, and low back pain were significantly associated with occupational factors such as insufficient breaks, prolonged working hours, and lack of task rotation. These findings highlight the importance of ergonomic and organizational interventions in dental practice.

[Lien vers l'article](#)

Autres pathologies

Aucun article dans ce bulletin.

Cancers

Aucun article dans ce bulletin.

Risque routier, accidentologie

Aucun article dans ce bulletin.

RPS et QVT

Aucun article dans ce bulletin.

Santé psychique

Characteristics of mental disorders among physicians in 31 compensated cases in Japan.

Takahashi Y, Suzuki Y, Matsunari N, Yoshikawa T, Yamamoto K, Takahashi M. *Ind Health*. 2025 Dec 9.

Mental disorders occur frequently in physicians owing to overwork and poor psychosocial work environment. This study aimed to investigate the circumstances, characteristics, and background factors affecting mental disorders in physicians. Basic data such as sex, age at onset, alive or dead, occupation, name of disease, industrial accident recognition factors, load factors other than working hours, and overtime hours (for 31 cases of mental disorders and suicides for 11 years from 2010-2020) were obtained from the Japan Research Center for Overwork-Related Disorders database. The results showed 13 cases of suicide (41.9%) and 21 cases of mood disorders (67.7%). As for the factors recognized as industrial accidents, "extreme long working hours" related to overwork accounted for 6 cases (20.7%), and "quantity and quality of work" accounted for 27 cases (93.1%). Furthermore, clinical residents comprised 14 cases (45.2%) of the 31 mental disorder cases and 7 cases (53.8%) of the 13

suicide cases. Therefore, measures to prevent overwork and suicide in clinical residents are urgently needed in the context of mental disorder in physicians.

[Lien vers l'article](#)

Troubles cognitifs et de la vigilance

Effects of noise pollution in construction workers.

Jiang TL, Qu MY, Guo BS, Wang G, Wang K. *Medicine (Baltimore)*. 2025 Dec 5;104(49):e45683.

Construction workers are exposed to typical risk factors such as noise pollution, high stress, and insufficient sleep. However, it remains unclear whether these hazards have an impact on the fatigue state or cognitive abilities of occupational populations. This study investigates the occurrence and distribution characteristics of fatigue and cognitive status among construction workers and explores relevant influencing factors. We conducted facility construction occupational workers as the study population and collected 3 types of data, including occupational health records, questionnaire measurements, and computer program tests. Occupational fatigue and cognitive decline levels of construction workers were assessed after the work cycle. The study included 114 male construction workers meeting the screening criteria, with a mean age of 28.0 ± 7.2 years. 42.11% of the construction workers were engaged in high-noise exposure (85 A-weighted decibels over an 8-hour period). Questionnaire results showed that after one work cycle, 24 (21.05%) and 28 (24.56%) were in a state of high depression or anxiety, respectively, and 32 were diagnosed with a state of high stress. Occupational fatigue was observed in 70 (61.40%), and cognitive decline was determined in 34 (29.82%). A univariate analysis revealed that participants who smoked, drank alcohol, had high seniority, and high noise exposure was at high risk of developing occupational fatigue. Trial participants with high blood pressure, high blood cholesterol, short sleep duration, long working hours, and high noise exposure were more likely to experience cognitive decline. Further multivariate logistic regression analyses showed that high noise exposure had a significant effect on occupational fatigue (OR = 3.2, $P < 0.01$) and that high noise exposure and insufficient sleep (<6 hours) had a synergistic effect on cognitive decline. This study demonstrated that high noise exposure increased the health risks of fatigue and cognitive decline in construction workers, and there was synergistic effect between noise exposure and insufficient sleep.

[Lien vers l'article](#)

Relationship between occupational stress and sleep quality among emergency nurses.

Gao Y, Ma X, Wang Y, Zhang H, Zhong L, Yuan Z, et al. *Front Public Health*. 2025;13:1699441.

BACKGROUND: Emergency nurses face high occupational stress and long working hours, which may contribute to sleep disorders. However, the extent and nature of this association remain unclear. **OBJECTIVE:** This study assessed the relationship between occupational stress and sleep disorders among emergency nurses and identified their contributing factors. **STUDY DESIGN:** A stratified cluster sampling method was employed between 26 December 2023 and 18 January 2024, based on the seven geographical regions of China (Northeast, North, East, Central, South, Southwest, and Northwest China). Emergency nurses aged ≥ 18 years, with ≥ 1 year of emergency care experience, and no psychiatric disorder history were included. Nurses undergoing advanced training or those on sick leave, maternity leave, or breastfeeding leave for ≥ 1 month were excluded. Participants completed a structured questionnaire including demographic data, an occupational stress assessment using a five-point Likert scale from 1 to 5, and sleep disorder quality evaluation. Logistic regression analysis was conducted to identify factors associated with sleep disorders, whereas Spearman's correlation analysis evaluated the relationship between occupational stress and sleep disorders. **RESULTS:** A total of 1,551

questionnaires were collected. After excluding 11 invalid responses, 1,540 were analyzed. Binary logistic regression identified key risk factors for sleep disorders, including 11-15 years of work experience (OR = 1.692), weekly working hours of 49-58 h (OR = 1.784) or ≥ 59 h (OR = 2.268), night shift frequency, and overcommitment scores (OR = 1.098). A significant positive correlation was found between occupational stress and sleep disturbances ($p < 0.05$). CONCLUSION: These findings highlight the need for hospital administrators to implement targeted interventions, such as psychological support programs, shift rotation optimization, and stress management training. Future research should focus on longitudinal designs to establish causal pathways and evaluate the effectiveness of interventions aimed at improving sleep quality among emergency nurses.

[Lien vers l'article](#)

Travail posté et de nuit facteur de risque

Généralités et prévention

Roles of Psychiatry, Dietary, and Oncology Services in Occupational Medicine: A Comprehensive Review.

Jogie JA, Mohammed Z, Bobb T, Suite-Stewart Z, Ali S. *Cureus*. 2025 Nov;17(11):e98069.

Occupational medicine manages the interface between health and work. Many employees live with mental illness, cancer, or diet-related diseases in safety-critical roles. These burdens change attention, stamina, risk, and retention. Psychiatry stabilizes mood, sleep, cognition, and substance use. Dietetic services improve energy balance, hydration, and micronutrients. Oncology aligns staging, treatment, and survivorship with duty risk. Services are often siloed, delaying care and widening inequity. Teams need clear roles, shared tools, and models that fit shifts, heat, chemicals, and job design. This article aims to synthesize the roles of psychiatric, dietetic, and oncology services in occupational medicine; to describe feasible models across prevention, clinical management, assessment, and return to work; and to propose simple tools and metrics for routine use. We searched peer-reviewed studies, guidelines, and consensus statements about adult workers. We included interventions usable in routine practice, such as brief screens, counseling, task modification, medication management, and coordinated care. Findings were mapped to prevention, clinical management, work capacity assessment, and sustained return to work. We extracted setting, workforce, elements, and outcomes, including incidents, sickness absence, presenteeism, claims, and retention. Strength of evidence was summarized pragmatically. In psychiatry, depression, anxiety, PTSD, insomnia, ADHD, and substance use are common. Brief case finding supports safe staffing. CBT, trauma-informed support, motivational interviewing, and monitored medication reduce incidents and days lost. Symptoms should be translated into task limits; for example, avoid lone work during acute suicidality and night duty while insomnia persists. In dietetic services, nutritional risk drives cardiometabolic disease, anemia, dehydration, heat illness, and fatigue; shift work disrupts glycemic control. Actions include brief screens, energy and hydration plans for heat, and alignment of diabetes meals and medication to prevent hypoglycemia. Healthy canteens, cool water, and breaks lower fatigue and errors. In oncology, duties should be aligned with staging, treatment intent, and expected adverse effects, including those affecting infection risk, cytopenias, neuropathy, and lymphedema. During treatment, immunosuppression, anemia, and nausea restrict tasks; measures include vaccine review, substitution away from biohazards and heavy lifting, and compression for lymphedema. Shared tools improve coordination: a joint problem list linking symptoms to tasks; a one-page plan with limits, controls, and review dates; and simple metrics such as incidents, near misses, absence, work ability, and worker-reported outcomes. Implementation improves when confidentiality is protected, stigma is reduced, supervisors are trained, and reviews are fair. Integrated psychiatric, dietetic, and oncology input can make work safer and more inclusive. Begin with a joint task-risk review, match brief evidence-based actions to the job, and set clear fitness and re-evaluation points. Employers should provide healthy food, cool water, fatigue controls, and time for care. Clinics should use validated screens, simple nutrition checks, and work ability indices and record accommodations plainly. Research should test pragmatic bundles and report outcomes that matter to workers and supervisors, including incidents, stable return to work, and equity.

[Lien vers l'article](#)

Activités physiques

Aucun article dans ce bulletin.

Autres pathologies

Prevalence and correlates of night eating syndrome among Chinese nurses: focus on depression and sleep quality.

Fang S, Zhao R, Feng J, Wang H, Li D. *Front Public Health*. 2025;13:1687850.

BACKGROUND: Nurses are at a heightened risk for Night Eating Syndrome (NES) due to circadian rhythm disruptions from shift work, chronic stress, and irregular eating patterns. While the global prevalence of NES is rising, its status within the large and critical nursing workforce of China remains poorly understood. Specifically, there is a lack of data on the prevalence and unique work-related psychosocial factors associated with NES among Chinese nurses. **OBJECTIVE:** This study aimed to determine the prevalence of NES and identify its key influencing factors among clinical nurses in China. **METHODS:** A cross-sectional study design was adopted. Using convenience sampling, 311 nursing staff from three Class-A tertiary hospitals in Sichuan Province were recruited as study participants from June to July 2025. Univariate χ^2 test and Mann-Whitney U test, and multivariate logistic regression analysis to identify the associated factors influencing nurses' NES. **RESULTS:** Among 311 nurses, 14 were diagnosed with NES, yielding a prevalence rate of 4.5%. Statistically significant differences in NES prevalence were observed across departments, alcohol consumption status, night shift assignments, sleep quality, and self-reported depressive symptoms ($p < 0.05$). Multivariate logistic regression analysis further identified the following independent risk factors for NES: working in ICU departments (OR = 14.660, 95% CI: 1.565-137.287, $p = 0.019$), sleep disturbances (OR = 1.339, 95% CI: 1.057-1.696, $p = 0.016$), and depression (OR = 1.083, 95% CI: 1.008-1.164, $p = 0.030$). **CONCLUSION:** This study indicates that, after adjusting for covariates, NES among Chinese nurses is significantly associated with departmental exposure, impaired sleep quality, and worsened depressive symptoms. To address this, hospital administrators should prioritize optimizing night shift scheduling in high-risk departments while integrating sleep management protocols and depression interventions. By preventing NES, these measures can enhance nurses' physical and mental wellbeing and improve nursing care quality.

[Lien vers l'article](#)

Occupational Risk for Headache Disorders in Female Registered Nurses. A Retrospective Study.

D'Ettorre G, Tornese R, Baldassarre A. *Med Lav*. 2025 Dec 16;116(6):17715.

BACKGROUND: Prevention of headache disorders (HDs) among healthcare workers in hospital settings remains a challenge for organizations and employees worldwide. The goals of the present retrospective study were both to analyze the 1-year prevalence of any primary HDs among female registered nurses (RNs) employed in hospital settings and to investigate the relationship between occupational risk factors and HDs. **METHODS:** We analyzed the occupational medicine database of RNs employed in a large hospital. The sample included 975 female RNs; the diagnostic criteria were based on the International Classification of Headache Disorders, 3rd edition (beta version). **RESULTS:** One-year prevalence of any HD was 45.9%; tension-type headache (TTH) was the most commonly reported headache type (by 25.6% of participants), followed by migraine (17.5%). No association was found between the different headache types and work schedules; TTH was linked to age ≥ 40 years (OR=1.91; 95% CI=1.41-2.72), duration of service ≥ 15 years (OR=1.61; 95% CI=1.24-2.38), and number of night shifts > 5 per month (OR=1.71; 95% CI=1.09-2.68). A high level of WRS was a significant predictor of TTH. **CONCLUSIONS:** We found a link between TTH and modifiable risk factors at both the individual and organizational levels. These findings suggest interventions in occupational settings to minimize the occurrence of TTH among RNs. Policy-makers and employers should implement preventive measures to reduce the incidence of HDs among RNs by minimizing modifiable risk factors associated with increased occupational risk.

[Lien vers l'article](#)

Cancers

Aucun article dans ce bulletin.

Risque routier, accidentologie

Hospital unit working conditions and risk for employee injury.

Gecili E, Daraiseh N, Brokamp C, Macaluso M. *PLoS One*. 2025;20(12):e0339151.

BACKGROUND: Healthcare employees, particularly in pediatric hospitals, are at high risk of occupational injuries. However, few studies have examined hospital unit-level factors that contribute to these injuries. This study aimed to explore and quantify such risk factors in a large pediatric inpatient setting. **METHODS:** We conducted a secondary analysis of prospectively collected data for about 7,929 unit-days between 2014 and 2017. Data sources included an institutional injury surveillance system, incident reports collected from a sample of employees through active surveillance (voice recording), and hospital unit-based measures of patient density and employee workload. Potential determinants of injury among hospital employees included shift length distributions, staffing metrics, patient aggression, near-miss events, and prior injuries. Mixed-effects logistic regression models with unit-level random intercepts were used to evaluate the association between unit-level risk factors and the odds that employee injuries were reported on a unit on a given day. **RESULTS:** Shifts exceeding 13 hours on the previous day were associated with 3-4% higher odds of injury, while same-day shifts shorter than 8.5 hours were associated with a 1% reduction in injury odds. Patient aggression was identified as a significant predictor, greatly increasing the risk of injury, but the association was no longer statistically significant after adjusting for prior injuries. Prior week injuries remained a strong and consistent predictor of future injury occurrences. Near-misses detected in the past week were a significant predictor of injury reporting in unadjusted analyses, but the association was not statistically significant after adjusting for other factors. **CONCLUSIONS:** Unit-level risk factors-including work shift duration, patient aggression, and prior injury occurrences-play a significant role in employee injury risk. These findings support the importance of continuous monitoring and targeted interventions, such as shift scheduling limits and systematic near-miss reporting, to enhance occupational safety in pediatric hospital settings.

[Lien vers l'article](#)

RPS et QVT

Perceived Stress, Psychological Empowerment, and Social Support Among Nurses Working in Psychiatric Acute Units.

Alexos E, Koulierakis G, Gerogianni G, Polikandrioti M, Alikari V, Mantzorou M, et al. *Adv Exp Med Biol*. 2026;1490:257-67.

The objective of this study was to investigate the relationship between social support and psychological empowerment with perceived stress of nurses working in psychiatric acute units. The study sample consisted of 153 nurses working in psychiatric acute units, located in Athens. Participants completed: (a) A questionnaire about demographic characteristics, (b) the Perceived Stress Scale, (c) the Psychological empowerment scale, and (d) the Social Support Questionnaire Short Form (SSQ-6). The majority of the participants were females (62.7%), graduates of Technological Education (47%), married (60.78%), permanent employees (81.7%), working in psychiatric units for over than 21 years

(34.6%), with an average age of 45 years. Of the total sample, 64.7% considered the night shift as the most aggravating, with the main factors causing the greatest stress being (a) lack of staff, (b) dangerousness, and (c) workload. Women compared to men, and those who had been working for more years in a psychiatric ward compared to younger employees exhibited a statistically significant higher level of subjective stress ($p < 0.05$). Nurses who considered that night shifts were the most aggravating exhibited more stress, while female nurses exhibited higher levels of psychological empowerment compared to male nurses. Moreover, nurses who were scheduled to work more day shifts exhibited statistically significant high levels of psychological empowerment ($p < 0.001$), while psychological empowerment was positively correlated with social support ($p < 0.001$). When nurses perceived greater social support, they were more psychologically empowered. Additionally, married nurses reported high levels of social support ($p < 0.01$). However, older nurses and nurses who were scheduled to work more night shifts reported statistically significant low social support ($p < 0.001$). Thus, the implementation of strategies to reduce stress at work, family, and wider social environment is essential for nurses working in psychiatric acute units.

[Lien vers l'article](#)

Implementation of the Lifestyle Medicine Residency Curriculum in a Francophone Family Medicine Residency at Université Laval: Lessons Learned From Québec, Canada.

Rondeau F, Hoff Arcand L, Phaneuf S, Lord MN, Bordeleau J, Laberge C, et al. *Am J Lifestyle Med.* 2025 Nov;19(3 Suppl):21s-31s.

BACKGROUND: Lifestyle medicine (LM) is gaining recognition in medical education. Université Laval, a Francophone university, is the first university in Canada to implement the Lifestyle Medicine Residency Curriculum (LMRC) developed by the American College of Lifestyle Medicine. This study aimed to evaluate the feasibility of implementing LM training for family residents in Quebec City. **METHOD:** Eight mentors adapted the English LMRC to Quebec's healthcare and cultural context while maintaining its core content. In September 2022, 16 family medicine residents participated in the program. Mentors collaborated with program directors to develop French-language materials, contextualize content, and create an online LM platform. Feedback from residents and mentors was collected through surveys, focus groups, and informal discussions to guide continuous improvements. **RESULTS:** Fifteen of 16 enrolled residents completed the program. Average attendance at monthly sessions was 70 %, with absences mainly due to night shifts or regional rotation. Resident showed strong engagement, with 100% completing modules asynchronously. Key factors for successful implementation included faculty mentors' and residents' engagement, and French-language materials tailored to the Quebec healthcare system. Challenges included limited French LM resources and a lack of co-located interdisciplinary teams. Strategic solutions involved creating a centralized online platform, protected learning time, aligning the program with existing curricula, and partnerships with community programs. **CONCLUSION:** Implementing LMRC demonstrated the feasibility of integrating LM training into a Francophone family medicine residency. Lessons learned may inform broader adoption in diverse linguistic and cultural settings.

[Lien vers l'article](#)

Structural Empowerment of Nurses in the Hospital Setting: A Cross-Sectional Study.

Ribeiro M, Sanches D, Barros S, Gonçalves M, Castro S, Oliveira T, et al. *Nurs Rep.* 2025 Dec 11;15(12).

Background/Objectives: Structural empowerment involves access to opportunities, information, support, and resources within the work environment. These elements are crucial as they foster nurses' professional growth and autonomy. Given their significance, understanding hospital nurses' perceptions of structural empowerment is important. Therefore, the aim of this study is to explore hospital nurses' perceptions of their levels of structural empowerment. **Methods:** This cross-sectional

study included 684 nurses from a Portuguese hospital, conducted between November 2024 and January 2025. The questionnaire collected demographic data and employed the Conditions of Work Effectiveness Questionnaire II. Results: The mean total score for structural empowerment was 18.74 (SD = 3.46), with significant differences found between nurses and specialist nurses, for those with the specialist title ($p = 0.0477$) and within the professional category ($p = 0.0058$), as well as between nurses working day shifts and those working day and night shifts ($p < 0.0001$). Additional significant differences were observed between nurses from the Medicine department (median [Q1-Q3]: 19.25 [17.00-21.50]) and those from the Surgery department (18.17 [16.00-20.25], $p = 0.0104$), as well as between Generation Z nurses (19.58 [17.33-21.83]) and Generation Y nurses (18.29 [16.25-20.33], $p = 0.0018$). Conclusions: These results underscore the importance of consistently promoting structural empowerment across the nursing staff, addressing disparities between groups, and improving both professional development and quality of patient care.

[Lien vers l'article](#)

Physician retention in a context of workforce shortages: evidence from Portugal's National Health Service with European policy implications.

Osório R, Morais R, Correia T. *Eur J Public Health*. 2025 Dec 15.

BACKGROUND: Physician shortages threaten healthcare system sustainability across Europe. Retaining physicians is critical to maintaining service capacity and quality. Despite its importance, physician retention remains a pressing issue in Europe, including in Portugal, where the Portuguese National Health Service (NHS) continues to face significant retention challenges. **METHODS:** We conducted a quantitative, observational, cross-sectional study to identify determinants of physician retention in Portugal. A validated survey was developed using a Nominal Group Technique and Delphi Panel with stakeholders. The questionnaire measured job satisfaction with Likert scales. A stratified sampling strategy ensured representation across Portugal's five mainland health regions, yielding 1398 physicians. Data were collected via self-administered electronic questionnaires. Analyses included descriptive statistics, ANOVA, t-tests, and linear regression to assess predictors of retention. **RESULTS:** Physicians with longer seniority reported higher intention to remain, with those over 10 years showing the strongest intention (mean = 3.72; SD = 1.05; $p < .001$). Fixed schedules were linked to higher intended retention than shift work (mean = 3.42 vs. 3.18; $p = .015$). Job satisfaction was the strongest predictor ($\beta = .267$; $p < .001$), followed by age ($\beta = .222$; $p < .001$), satisfaction with work characteristics ($\beta = .125$; $p = .002$), and career development ($\beta = .097$; $p = .011$). Satisfaction with human resources and work-life balance was not significant. **CONCLUSIONS:** Physician retention is shaped by seniority, schedule stability, work environment, and career development. Policies fostering supportive environments, predictable schedules, and professional growth are needed to sustain the workforce, to European systems.

[Lien vers l'article](#)

Clinical Nurses' Workplace Spirituality and Moral Resilience: A Correlational Study.

Liang N, Ren J, Zhang Y, Wang Q, Zhang H, Guo H. *J Adv Nurs*. 2025 Dec 10.

AIM: To investigate the current status of workplace spirituality and moral resilience among clinical nurses and to explore the relationship between these two factors, thereby providing a reference for developing strategies to enhance nurses' moral resilience. **DESIGN:** A cross-sectional survey design. **METHODS:** From February to April 2025, a convenience sampling method was used to select 1680 nurses from ten hospitals in the Pingliang area of China. Data were collected using the general data questionnaire, Workplace Spirituality Scale(WSS). Furthermore, the relationship between workplace spirituality and moral resilience was analyzed. **RESULTS:** A total of 1657 valid questionnaires were ultimately recovered, yielding an effective response rate of 98.63%. The mean score for workplace

spirituality was 102.36 ± 21.65 , and the mean score for moral resilience was 41.76 ± 6.31 , both indicating a moderate level. A significant positive correlation was found between the two variables ($r = 0.231$, $p < 0.05$). Multivariate linear stepwise regression analysis revealed that monthly income, department, monthly night shifts, and workplace spirituality scores were significant predictors of moral resilience ($p < 0.05$). **CONCLUSION:** The moral resilience of clinical nurses is at a moderate level. Enhancing workplace spirituality can contribute to improving their moral resilience.

[Lien vers l'article](#)

Black cloud in digestive surgery: Myth or reality?

El Hawly Y, Aubert M, Bollon E, Le Huu Nho R, Chopinet S, Mege D. *J Visc Surg.* 2025 Dec 11.

AIM: Digestive surgery is known to be a surgical specialty with high workload, through training program for residents and lot of emergent procedures during night shift. The term "black cloud" referred to nurses, attending physicians and residents who seem to have a heavier workload during on-call shifts relative to their peers. The scientific literature is controversial about the reality of this concept. The aim was to determine if the "black cloud" concept really exists in digestive surgery. **METHODS:** All the emergent surgeries (under general and local anaesthesia) performed in one department of digestive surgery in a tertiary referral centre (Timone Hospital, Marseille, France) were prospectively included during 6 months. **RESULTS:** During the study period, 423 emergent digestive procedures were performed in one tertiary referral centre, by 9 surgeons and 8 residents. The mean number of interventions was similar between surgeons ($P=0.4$). Regarding the surgeon degree, the mean number of emergent procedures was similar between attending surgeons and senior residents (2.3 ± 1.5 vs 2.4 ± 1.6 , $P=0.49$). There was no significant difference between digestive surgery residents and those from urology and gynaecology training program in terms of mean number of emergent procedures (2.2 ± 1.5 vs 2.4 ± 1.6 , $P=0.4$). The emergent procedures performed during the day were significantly different between weekdays ($P=0.03$), with a lower number of procedures performed on Sunday: 0.9 ± 0.9 [range, 0-3]. **CONCLUSION:** We did not identify a real "black cloud" in our digestive surgery department. We only reported that there were less emergencies procedures during the day of Sunday.

[Lien vers l'article](#)

Santé psychique

Empathy and Burnout Among Nurses: a Cross-Sectional Study in a University Hospital in Central Greece.

Patsopoulou A, Tzenetidis V, Karathanasi K, Papathanasiou IV, Malliarou M, Sarafis P. *Adv Exp Med Biol.* 2026;1490:25-34.

BACKGROUND: Empathy cultivates deeper interpersonal relationships; however, frequent exposure can trigger the risk of burnout. This study aims to predict empathy, burnout, and syndrome among nursing staff in a university hospital in Central Greece. **MATERIAL AND METHODS:** This is a synchronic study on the nursing staff of the university general hospital in central Greece. The sample consisted of 210 nurses who took part in the study by completing a questionnaire that included demographic and social characteristics, the "Copenhagen Burnout Inventory" and the "Composite Empathy Scale." The Pearson correlation coefficient (r) and linear regression analysis with a statistical significance of 0.05 were used for the statistical analysis. Univariate and multiple logistic regression analyses were used to determine the potential predictive factors associated with burnout and empathy. **RESULTS:** The prevalence of burnout and empathy among nursing staff was 62.5%. A significant positive correlation between empathy with burnout was found in almost all dimensions. For burnout subscales, "Personal Burnout" was found to be at 44.1%, Operational Burnout "at 62.5%, and in" Burn related to patients

"the average was 58.3%. A higher level of burnout is associated with" Workplace Burnout "for nurses on shift work. There was a significant negative correlation between "Cognitive Personal Empathy" and the "Personal Burnout." Also, 92.9% of the nursing staff reported suffering from a disease. CONCLUSION: The nurses in the university hospital are "aged staff" with health problems, high levels of empathy, and burnout.

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Impact of different anesthesia subspecialties on anxiety levels and sleep quality among anesthesiologists: a cross-sectional study.

Song B, Wen Z, Guo YH, He HX, Peng K, Li J. *Front Public Health*. 2025;13:1733167.

BACKGROUND: Anesthesiologists face high risks of occupational burnout, anxiety, and sleep disorders. Significant subspecialization within the field suggests different specialties may constitute distinct stressors, but whether this leads to systematic variations in mental health outcomes remains unclear. **OBJECTIVE:** This study aimed to investigate the association between different anesthesia subspecialties and the levels of anxiety, depression, and sleep quality among anesthesiologists. **METHODS:** A multi-center cross-sectional study was conducted. Eighty-five anesthesiologists from four tertiary Grade A general hospitals completed the Generalized Anxiety Disorder-7 (GAD-7), Patient Health Questionnaire-9 (PHQ-9), and Pittsburgh Sleep Quality Index (PSQI) questionnaires. Retrospective work data were extracted from departmental systems. Statistical analyses included one-way ANOVA, Tukey's Honest Significant Difference (HSD) post-hoc tests, and multiple linear regression controlling for key covariates. **RESULTS:** Significant differences were found in GAD-7 ($F = 4.32, p < 0.01$), PHQ-9 ($F = 4.98, p < 0.001$), and PSQI ($F = 5.18, p < 0.001$) scores across subspecialties. Multiple linear regression, adjusting for weekly overtime, monthly night shifts, age, experience, and gender, confirmed that the primary subspecialty was independently associated with anxiety ($\beta = 0.35, p = 0.003$), depression ($\beta = 0.38, p = 0.001$), and poor sleep quality ($\beta = 0.41, p < 0.001$). **CONCLUSION:** The anesthesia subspecialties in which an anesthesiologist works is independently associated with the risk of anxiety, depression, and sleep disturbances. These findings suggest that targeted support strategies should be considered for anesthesiologists in high-stress subspecialties such as cardiothoracic and pediatric anesthesia.

[Lien vers l'article](#)

Prevalence and correlates of night eating syndrome among Chinese nurses: focus on depression and sleep quality.

Fang S, Zhao R, Feng J, Wang H, Li D. *Front Public Health*. 2025;13:1687850.

BACKGROUND: Nurses are at a heightened risk for Night Eating Syndrome (NES) due to circadian rhythm disruptions from shift work, chronic stress, and irregular eating patterns. While the global prevalence of NES is rising, its status within the large and critical nursing workforce of China remains poorly understood. Specifically, there is a lack of data on the prevalence and unique work-related psychosocial factors associated with NES among Chinese nurses. **OBJECTIVE:** This study aimed to determine the prevalence of NES and identify its key influencing factors among clinical nurses in China. **METHODS:** A cross-sectional study design was adopted. Using convenience sampling, 311 nursing staff from three Class-A tertiary hospitals in Sichuan Province were recruited as study participants from June to July 2025. Univariate χ^2 test and Mann-Whitney U test, and multivariate logistic regression analysis to identify the associated factors influencing nurses' NES. **RESULTS:** Among 311 nurses, 14 were diagnosed with NES, yielding a prevalence rate of 4.5%. Statistically significant differences in NES prevalence were observed across departments, alcohol consumption status, night shift assignments, sleep quality, and self-reported depressive symptoms ($p < 0.05$). Multivariate logistic regression analysis further identified the following independent risk factors for NES: working in ICU departments

(OR = 14.660, 95% CI: 1.565-137.287, $p = 0.019$), sleep disturbances (OR = 1.339, 95% CI: 1.057-1.696, $p = 0.016$), and depression (OR = 1.083, 95% CI: 1.008-1.164, $p = 0.030$). **CONCLUSION:** This study indicates that, after adjusting for covariates, NES among Chinese nurses is significantly associated with departmental exposure, impaired sleep quality, and worsened depressive symptoms. To address this, hospital administrators should prioritize optimizing night shift scheduling in high-risk departments while integrating sleep management protocols and depression interventions. By preventing NES, these measures can enhance nurses' physical and mental wellbeing and improve nursing care quality.

[Lien vers l'article](#)

Troubles cognitifs et de la vigilance

Impact of different anesthesia subspecialties on anxiety levels and sleep quality among anesthesiologists: a cross-sectional study.

Song B, Wen Z, Guo YH, He HX, Peng K, Li J. *Front Public Health*. 2025;13:1733167.

BACKGROUND: Anesthesiologists face high risks of occupational burnout, anxiety, and sleep disorders. Significant subspecialization within the field suggests different specialties may constitute distinct stressors, but whether this leads to systematic variations in mental health outcomes remains unclear. **OBJECTIVE:** This study aimed to investigate the association between different anesthesia subspecialties and the levels of anxiety, depression, and sleep quality among anesthesiologists. **METHODS:** A multi-center cross-sectional study was conducted. Eighty-five anesthesiologists from four tertiary Grade A general hospitals completed the Generalized Anxiety Disorder-7 (GAD-7), Patient Health Questionnaire-9 (PHQ-9), and Pittsburgh Sleep Quality Index (PSQI) questionnaires. Retrospective work data were extracted from departmental systems. Statistical analyses included one-way ANOVA, Tukey's Honest Significant Difference (HSD) post-hoc tests, and multiple linear regression controlling for key covariates. **RESULTS:** Significant differences were found in GAD-7 ($F = 4.32$, $p < 0.01$), PHQ-9 ($F = 4.98$, $p < 0.001$), and PSQI ($F = 5.18$, $p < 0.001$) scores across subspecialties. Multiple linear regression, adjusting for weekly overtime, monthly night shifts, age, experience, and gender, confirmed that the primary subspecialty was independently associated with anxiety ($\beta = 0.35$, $p = 0.003$), depression ($\beta = 0.38$, $p = 0.001$), and poor sleep quality ($\beta = 0.41$, $p < 0.001$). **CONCLUSION:** The anesthesia subspecialties in which an anesthesiologist works is independently associated with the risk of anxiety, depression, and sleep disturbances. These findings suggest that targeted support strategies should be considered for anesthesiologists in high-stress subspecialties such as cardiothoracic and pediatric anesthesia.

[Lien vers l'article](#)

Age-Dependent Association Between Insomnia and Body Mass Index Among Young Women: Evidence from a Cross-Sectional Study.

Merklinger-Gruchała A, Goździalska A, Bień A, Grzesik-Gąsior J. *J Clin Med*. 2025 Dec 16;14(24).

Background/Objectives: Sleep disturbances, particularly insomnia, are increasingly recognized as important determinants of health. Previous studies have shown bidirectional associations between sleep quality and obesity. Limited evidence exists on the modifying role of age in the relationship between insomnia symptoms and body mass index (BMI) among women. This study aimed to evaluate the association between insomnia symptoms and BMI in women, with a specific focus on the potential effect of age. **Methods:** A cross-sectional study was conducted among 72 female nursing students aged 21-48 years. Data were collected via an online questionnaire including demographic, occupational, and anthropometric variables, as well as the Athens Insomnia Scale (AIS) to assess insomnia symptoms. BMI was calculated based on self-reported weight and height. Logistic and multiple linear regression

models were used to evaluate the relationship between AIS scores and BMI and age. Results: Overall, insomnia severity was not directly associated with BMI in the full sample ($p = 0.55$). However, a significant interaction between insomnia symptoms and age was observed ($p = 0.02$). Among women aged ≥ 37 years, higher AIS scores were positively associated with BMI ($\beta = 0.59$; $p = 0.06$), whereas this association was absent in younger participants. Conclusions: Insomnia symptoms showed a trend toward a positive association with higher BMI, primarily among older women, suggesting an age-dependent relationship between sleep disturbances and body weight. Screening for sleep problems and promoting sleep hygiene could serve as simple, low-cost preventive strategies for maintaining metabolic health in women.

[Lien vers l'article](#)

Relationship between occupational stress and sleep quality among emergency nurses.

Gao Y, Ma X, Wang Y, Zhang H, Zhong L, Yuan Z, et al. *Front Public Health*. 2025;13:1699441.

BACKGROUND: Emergency nurses face high occupational stress and long working hours, which may contribute to sleep disorders. However, the extent and nature of this association remain unclear. **OBJECTIVE:** This study assessed the relationship between occupational stress and sleep disorders among emergency nurses and identified their contributing factors. **STUDY DESIGN:** A stratified cluster sampling method was employed between 26 December 2023 and 18 January 2024, based on the seven geographical regions of China (Northeast, North, East, Central, South, Southwest, and Northwest China). Emergency nurses aged ≥ 18 years, with ≥ 1 year of emergency care experience, and no psychiatric disorder history were included. Nurses undergoing advanced training or those on sick leave, maternity leave, or breastfeeding leave for ≥ 1 month were excluded. Participants completed a structured questionnaire including demographic data, an occupational stress assessment using a five-point Likert scale from 1 to 5, and sleep disorder quality evaluation. Logistic regression analysis was conducted to identify factors associated with sleep disorders, whereas Spearman's correlation analysis evaluated the relationship between occupational stress and sleep disorders. **RESULTS:** A total of 1,551 questionnaires were collected. After excluding 11 invalid responses, 1,540 were analyzed. Binary logistic regression identified key risk factors for sleep disorders, including 11-15 years of work experience (OR = 1.692), weekly working hours of 49-58 h (OR = 1.784) or ≥ 59 h (OR = 2.268), night shift frequency, and overcommitment scores (OR = 1.098). A significant positive correlation was found between occupational stress and sleep disturbances ($p < 0.05$). **CONCLUSION:** These findings highlight the need for hospital administrators to implement targeted interventions, such as psychological support programs, shift rotation optimization, and stress management training. Future research should focus on longitudinal designs to establish causal pathways and evaluate the effectiveness of interventions aimed at improving sleep quality among emergency nurses.

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Chronobiologie

Homme

The Leucine-mTOR-Autophagy Axis in Granulosa Cells Mediates Circadian Disruption-Induced Anovulation.

He R, Mo J, Lin Z, Zhu K, Wang Y, Yu J, et al. *Int J Biol Sci.* 2026;22(1):201-19.

Background: Ovulation disorders represent the most common cause of infertility in women. Previous studies have reported that continuous light exposure can induce anovulation. However, the underlying mechanisms remain unclear. **Methods:** We assessed the phenotypes of ovulation disorders by using vaginal smears, hormone levels, and ovarian morphology. Metabolomics and RNA sequencing were employed to identify key metabolites and explore potential underlying mechanisms. Additionally, we investigated the effects of a leucine-rich diet on the phenotypes of ovulation disorders and autophagy. Serum levels of branched-chain amino acids (BCAAs) in patients with polycystic ovary syndrome (PCOS) were also measured. Causality was explored by using Mendelian randomization (MR) methods based on GWAS summary data. **Results:** Female SD rats subjected to continuous light exhibited disrupted estrous cycles and polycystic ovaries, as well as increased anti-Müllerian hormone (AMH) levels. Metabolic profiling revealed that leucine was a pivotal metabolite. Specifically, a high-leucine diet induced anovulation and polycystic morphology, along with reducing autophagy, in rats under normal light conditions; additionally, leucine restriction alleviated these effects in recovered rats. Moreover, the mTOR-ULK1-LC3-II/I autophagy pathway was influenced both *in vivo* and *in vitro* by leucine. In patients with PCOS, elevated serum BCAA levels (especially leucine) were observed to be correlated with increased AMH levels, higher luteinizing hormone (LH)-to-follicle-stimulating hormone (FSH) ratios, and higher antral follicle counts. MR analysis indicated that night shift work may increase the risk of PCOS through elevated serum leucine levels. **Conclusions:** These results suggest that the disruption of the leucine-mTOR-autophagy axis in granulosa cells (GCs) mediates continuous light-induced ovulation disorders. The potential therapeutic targeting of leucine-mTOR pathways for managing PCOS should be investigated.

[Lien vers l'article](#)

Cloning the damage: circadian rhythm, redox homeostasis and genome integrity in cancer.

Ganesh JM, Singh P, Murali R, Chandramoorthy HC, Perumalsamy LR, Gandhirajan RK. *Mol Cell Biochem.* 2025 Dec 9.

Circadian rhythms are inherent biological cycles that govern vital physiological processes, aligning with external signals such as light and food consumption. These rhythms, which originated over 2.5 billion years ago as a defense against oxidative stress, are essential for maintaining genomic stability by regulating DNA repair pathways, oxidative stress responses, and cell cycle regulation. Alterations in circadian rhythms are increasingly attributed to modern lifestyle practices, including irregular sleep schedules, prolonged exposure to artificial light, and shift work. These disturbances are closely linked to increased oxidative damage and genomic instability, both of which are essential for the development of cancer. There is growing evidence linking circadian misalignment to cancer, and the International Agency for Research on Cancer (IARC) has categorized shift employment that disturbs circadian rhythms as a potential carcinogen. Sleep deprivation intensifies this imbalance, resulting in heightened DNA damage and compromised repair processes. This disturbance is especially alarming in younger individuals, as chronic circadian misalignment may contribute to increasing prevalence of early-onset cancers, including hormone-related malignancies. This review examines the impact of oxidative stress-induced instability and the function of circadian rhythms in mitigating these effects. It underscores the critical influence of sleep deprivation on circadian misalignment and its associated cancer risk implications. Comprehending these relationships is essential for formulating preventive strategies and enhancing cancer treatments, thereby aligning therapeutic interventions with the

body's intrinsic biological clock. Mitigating lifestyle-induced circadian disturbances may be crucial in alleviating the increasing incidence of early-onset malignancies in younger adults.

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Circadian rhythm proteins as potential biomarkers in pituitary adenomas: an immunohistochemical analysis.

Uysal S, Karaca E, Saricoban CT, Sahin S, Comunoglu N, Tanriover N, et al. *Pituitary*. 2025 Dec 9;29(1):14.

PURPOSE: To investigate the protein expression levels of circadian clock genes in pituitary adenomas (PAs) using the immunohistochemical staining method. **METHODS:** Patients who had regular follow-up at the pituitary center, underwent transsphenoidal surgery (TSS) for PA between 8:00 AM and 2:00 PM, and had sufficient clinical data were enrolled. Patients with a known diagnosis of depression, those receiving psychiatric medication or melatonin agonists that may affect the protein expression of circadian clock genes, or those working night shifts during the preoperative period were excluded. Formalin-fixed paraffin-embedded tissue samples from patients with somatotroph, gonadotroph, lactotroph, and corticotroph adenomas were immunohistochemically stained for BMAL1, CLOCK, CRY1, CRY2, and PER2. Non-neoplastic adenohypophysis tissue adjacent to the adenoma in surgical specimens underwent the same staining procedure and served as the control group. Protein expression levels were then evaluated. **RESULTS:** A total of 86 PAs and 17 non-neoplastic adenohypophysis tissue samples were evaluated. Total BMAL1 scores tended to be higher in PAs than in control tissues (170.93 ± 59.81 vs. 142.06 ± 47.40 ; $p = 0.064$), whereas total CRY2 scores tended to be lower ($12.5 [0-59.25]$ vs. $35 [10-60]$; $p = 0.053$). Total CLOCK scores were lower in patients with recurrent disease compared to those without recurrence ($225 [165-270]$ vs. $250 [212.5-280]$; $p = 0.038$), and preoperative maximum tumor size was negatively correlated with total CRY2 scores ($r = -0.463$, $p < 0.001$). Among PA subtypes, CRY2 was the circadian clock gene showing the most prominent differences. **CONCLUSION:** Alterations in the protein expression levels of circadian clock genes may contribute to the development and behavior of PAs.

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The Impact of a Blue-Blocking Filter Over One Eye on Health and Performance Outcomes and Its Implications for Night Workers.

Figueiro MG, Bullough JD, Rizvydeen M, Plitnick B, Li W, Rea MS. *Biol Res Nurs*. 2025 Dec 7:10998004251406550.

The higher risk for cancer documented among night-shift nurses compared to the day-shift nurses possibly results from lower melatonin levels associated with exposure to light at night in the work environment. Research demonstrates that eliminating spectral power < 530 nm to both eyes prevents light-induced nocturnal melatonin suppression, and complete occlusion of one eye reduces melatonin suppression relative to that when both eyes are open. This study investigated whether filtering short wavelengths from one eye using a blue-blocking filter, rather than occluding one eye, would maintain high melatonin levels, alertness, and visual performance. This crossover, within-subjects study ran for six nights. Subjects experienced one of six light conditions involving combinations of binocular versus monocular and filtered versus unfiltered vision per night. Normalized melatonin concentration area under the curve (AUC(n)) served as the primary outcome and the numerical verification (NVT) and go/no-go (GNG) performance tasks, pupil area, and subjective sleepiness (Karolinska Sleepiness Scale [KSS]) served as secondary outcomes. Both filtered and unfiltered monocular light conditions resulted in significantly greater melatonin AUC(n) than the unfiltered binocular light condition. Performance at the NVT and at the GNG was not affected by filtering one eye compared to the unfiltered binocular light condition, nor did it affect KSS ratings. Melatonin AUC(n) positively correlated with pupil area for

corresponding light conditions. In conclusion, filtering one eye can help preserve melatonin levels in night workers while maintaining alertness and visual performance, which could be a simple and effective solution for improving health in night-shift nurses.

[Lien vers l'article](#)

Investigation of intake pattern of SGLT2 inhibitors among shift workers with diabetes: a crossover study.

Torii-Goto A, Shiomi K, Murase M, Yoshioka H, Ito J, Yoshikawa M. *J Pharm Health Care Sci.* 2025 Dec 18;11(1):108.

BACKGROUND: Shift workers experience regular changes in their waking hours due to fluctuating work schedules. The timing of their medication intake differs depending on whether they are working a day or night shift. Sodium-glucose co-transporter 2 (SGLT2) inhibitors are prescribed once a day and are often taken before or after breakfast. However, studies on the optimal dosing times for the effective treatment of shift workers are lacking. In this study, we investigated whether the effects were different by the pattern of SGLT2 inhibitor intake for shift workers with diabetes. **METHODS:** Seven shift workers with diabetes who were taking an SGLT2 inhibitor were analyzed. All participants took the medication upon waking for 14 days, followed by administration at a fixed time for another 14 days. Glucose levels were measured over 14 days when the drug was administered either upon waking or at a fixed time of day. The time in range (TIR), which indicates the percentage of time during which the glucose level is within the range of 70-180 mg/dL, was used as the main evaluation index. **RESULTS:** The mean HbA1c of the participants was 7.1%. The TIR was 88.5% in the administration upon waking group and 84.9% in the administration at a fixed time group. No significant difference in TIR values was observed between the two administration groups. **CONCLUSION:** A TIR of 70% or higher is recommended to prevent the onset of diabetic complications. Consistent intake of SGLT2 inhibitors, regardless of whether it is during the day or night shift, may help stabilize blood glucose levels in shift workers throughout the day and night, thereby preventing the development of complications.

[Lien vers l'article](#)

The association between chronotype and metabolic syndrome in middle-aged Japanese civil servants: A longitudinal study from Aichi Workers' Cohort.

Endale BT, Song Z, Takada M, Paththamesthri SE, Matsunaga M, Kitajima T, et al. *Chronobiol Int.* 2025 Dec 29:1-12.

Chronotype, which reflects an individual's preference for activity and sleep timing, has been associated with various chronic conditions, particularly the evening chronotype. Metabolic syndrome (MetS) is a cluster of metabolic abnormalities that collectively increase the risk of developing type 2 diabetes mellitus and cardiovascular diseases. Previous studies on chronotype and MetS have been inconsistent, and none has explored the longitudinal association between MetS and its components. Therefore, this study investigated these associations in middle-aged Japanese civil servants. We analyzed 2231 non-rotating, non-night shift workers (aged 29-69, 71.6% male) from the Aichi Workers' Cohort Study who participated in surveys in 2018 (baseline) and 2022 and were free of MetS at baseline. Participants were classified into morning, evening, or intermediate chronotypes using the shortened Morningness - Eveningness Questionnaire. MetS was defined according to the harmonized criteria for Japanese, based on waist circumference (≥ 85 cm for men and ≥ 90 cm for women), triglycerides, HDL cholesterol, blood pressure, and blood sugar levels. Over 4 y, 232 participants (10.4%) developed MetS, with a cumulative incidence rate of 9.9% in morning, 17.6% in evening, and 9.5% in intermediate types. Logistic regression analysis adjusted for sex, age, educational background, occupation, leisure-time physical activity, alcohol intake, sleep duration, smoking status, snoring, night-time awakening, sleep medication use, working hours, breakfast eating habit, and medication

use for diabetes, hypertension, and dislipdemia, revealed that the evening type individuals had a significantly higher risk of MetS (OR: 2.30, 95% CI: 1.48-3.57) compared to intermediate types. In conclusion, evening chronotype was independently associated with a higher risk of developing MetS in middle-aged Japanese civil servants.

[Lien vers l'article](#)

Circadian regulation of metabolic homeostasis in physiology and disease.

Saito K, Yamauchi T, Hiraike Y. *J Biochem.* 2025 Dec 30.

A growing body of evidence indicates that circadian dysregulation-caused by lifestyle factors such as short sleep, irregular sleep patterns, and shift work-constitutes an independent risk factor for insulin resistance, obesity, and diabetes. Mammalian circadian rhythms are orchestrated by a conserved transcription-translation feedback loop driven by core transcription factors, which also regulate metabolism-related genes in a tissue-specific manner. Moreover, feeding behavior and physical activity influence the circadian clock, highlighting a reciprocal relationship between the clock and metabolism. In this review, we discuss circadian regulation of key metabolic organs-including pancreatic β cells, skeletal muscle, liver, and adipose tissue-with a focus on molecular metabolisms, and we also highlight relevant human studies to explore the therapeutic potential of targeting the circadian clock. Further investigation into the interplay between the circadian clock and metabolism holds promise for uncovering novel mechanisms and identifying innovative strategies to restore or enhance metabolic homeostasis.

[Lien vers l'article](#)

Relationships between light exposure and aspects of cognitive function in everyday life.

Didikoglu A, Woelders T, Bickerstaff L, Mohammadian N, Johnson S, van Tongeren M, et al. *Commun Psychol.* 2025 Dec 16.

Light exposure can modulate cognitive function, yet its effects outside of controlled laboratory settings remain insufficiently explored. To examine the relationship between real-world light exposure and cognitive performance, we assessed personal light exposure and measured subjective sleepiness, vigilance, working memory, and visual search performance over 7 days of daily life, in a convenience sample of UK adults ($n = 58$) without significant circadian challenge (shiftwork or jet-lag). A subset of participants ($n = 41$) attended an in-lab session comprising a battery of pupillometric and psychophysical tests aimed to quantify melanopsin-driven visual responses. We find significant associations between recent light exposure and subjective sleepiness. Recent light exposure was also associated with reaction times for both psychomotor vigilance and working memory tasks. In addition, higher daytime light exposure and an exposure pattern with reduced fragmentation were linked to improved cognitive performance across visual search, psychomotor vigilance, and working memory tasks. Higher daytime light exposure and earlier estimated bedtimes were associated with stronger relationships between recent light exposure and subjective sleepiness. These results provide real world support for the notion that intra- and inter-individual differences in light exposure meaningfully influence aspects of cognition, with beneficial effects of short-term bright light and of habitual light exposure patterns characterized by brighter daytimes, earlier rest phase, and greater intra- and inter-daily stability.

[Lien vers l'article](#)

A bistable stochastic model quantifies performance degradation during sleep deprivation.

Raison S, Sanz-Leon P, Schmidt C, Muto V, Postnova S. *Sleep*. 2025 Dec 11;48(12).

Sleep deprivation impairs sustained attention, as measured on the psychomotor vigilance task. This is manifested in a general slowing of reaction times and an increase in periods of unresponsiveness, increasing the risk of accidents. However, the mechanisms are not fully understood. This study combines experiments and modeling to better explain and quantify the changes of sustained attention under sleep deprivation. A total of 317 male participants (age 22.1 \pm 2.7 y) underwent 40 h of sleep deprivation under a constant routine protocol. A 10-minute psychomotor vigilance task was performed at 2-h intervals, and saliva melatonin was sampled every hour to monitor circadian phase. We report a bimodal distribution of reaction speed in the data. An approximately normal primary peak characterizes typical performance (reaction time \lesssim 0.5 s), while periods of unresponsiveness correspond to reaction times \gtrsim 1.5 s and are reflected in a secondary peak which emerges after \sim 20 h of wakefulness. We developed a minimal, stochastic model that accurately reproduces the data, attributing the bimodality of the distribution to bistability in vigilance state. We find general response slowing to be subject to an ultradian oscillation (\sim 3 cycles per day), while periods of unresponsiveness are disproportionately affected during the wake maintenance zone. Our results attribute periods of unresponsiveness to the coexistence of two vigilance states in the sleep-deprived brain, enabling new approaches in understanding vulnerability to sleep loss. Statement of Significance Sleep deprivation is prevalent in modern society, leading to an increased risk of accidents due to lapses in attention. In many scenarios, like shiftwork, simply getting more sleep is not an option, so a better understanding of mechanisms is needed. Our study, for the first time, shows a bimodality of response rates during sleep deprivation. We explain this by the co-existence of two vigilance states in the brain. The first state corresponds to typical reaction times in all individuals, while the second state is linked to unresponsiveness with reaction times \gtrsim 1.5 s and is observed in \sim 60% of individuals. Our model enables new approaches to predict and prevent accidents and new insights into the physiology of sustained attention.

[Lien vers l'article](#)

A cross-sectional multifactorial analysis of chrononutrition, sleep quality and sleep patterns among healthcare shift workers.

Giltelin ENF, Teng N, Mohd Azmi NAS, Mohamed SN, Mulhim MH, Maluin SM, et al. *Acta Psychol (Amst)*. 2025 Nov;261:105900.

Healthcare shift workers are often linked to circadian misalignments, leading to irregular dietary behaviours, altered sleep patterns, and elevated health risks such as metabolic syndromes and psychological disorders. Despite growing recognition of these implications, limited studies have comprehensively explored how chrononutrition, sleep quality, and sleep patterns interrelate in this high-risk population. Hence, the current study aimed to examine these domains and their associations among rotating healthcare shift workers in Selangor, Malaysia. Using a cross-sectional design, all data were collected through a set of self-administered questionnaires, comprising sociodemographic data, the Malay version of the Chrononutrition Profile Questionnaire (CPQ-M), the Pittsburgh Sleep Quality Index (PSQI) and Munich Chronotype Questionnaire for Shift-Workers (MCTQ(Shift)), to assess chrononutrition behaviours, sleep quality, sleep patterns and social jetlag. The findings highlighted widespread disruptions in both chrononutrition and sleep, with 40.8 % skipping breakfast, 66.0 % reporting poor sleep quality, and 53.4 % showing signs of social jet lag. A significant association ($p < 0.05$) was observed between sleep quality and night eating behaviour, indicating that poorer sleep quality was linked to increased likelihood of night eating among shift workers. However, the majority still maintained a consistent pattern of both an eating window of 10 to 13 h between the first and last meal of the day, as well as stable night eating behaviours, with no consumption of meals or snacks

within two hours before bedtime. This study is among the few to comprehensively examine chrononutrition behaviours and sleep health among healthcare shift workers. The findings underscore the need for tailored interventions, such as promoting structured meal timings, enhancing access to healthy breakfasts in workplace cafeterias, and conducting educational workshops aimed at improving nutrition and sleep hygiene among participants. These measures can help to mitigate the adverse effects of shift work and support overall health and well-being.

[Lien vers l'article](#)

Circadian clocks and adaptive immune function: from mechanisms to therapeutic applications.

Szredzka A, Chwastowicz A, Pergoń J, Matryba P. *Front Immunol.* 2025;16:1697854.

The circadian clock exerts profound regulatory control over adaptive immunity, particularly affecting T and B lymphocyte development, trafficking, activation, and effector function. These immune cells possess autonomous molecular clocks governed by core genes such as *Bmal1*, *Clock*, *Per1/2*, and *Cry1/2*, which influence transcriptional programs related to receptor expression, cytokine signaling, and metabolism. Circadian regulation shapes the daily oscillation of lymphocyte recirculation through lymphoid organs, modulates antigen responsiveness, and fine-tunes subset differentiation—most notably skewing CD4(+) T cell fate toward Th1, Th2, Th17, or Treg lineages depending on time-of-day-linked signaling cascades such as mTOR/Akt and ROR γ t/Nfil3 pathways. Similarly, rhythmic glucocorticoid and catecholamine signaling synchronize peripheral lymphocyte clocks with systemic cues, integrating hormonal and environmental information. Clinically, circadian disruption—whether through genetic mutations, shift work, or chronic stress—has been linked to aberrant lymphocyte function, increased autoimmunity, impaired vaccine responses, and reduced immunosurveillance in cancer. Recent findings demonstrate that time-of-day-dependent administration of vaccines and immunotherapies, including checkpoint inhibitors, can significantly influence clinical efficacy and immune outcomes. Understanding the temporal orchestration of adaptive immunity thus holds translational potential for optimizing therapeutic strategies, including chronotherapy and vaccination scheduling.

[Lien vers l'article](#)

Circadian Disruption from Urban Night-Time Noise and Endocrine Health Risks in Shift Workers.

Badea DO. *Noise Health.* 2025 Nov-Dec 01;27(129):641-52.

OBJECTIVES: This review examines how nighttime noise and irregular schedules influence circadian and endocrine regulation. It introduces a conceptual multilevel model to explore how these exposures may accumulate over time and contribute to long-term health risks. **METHODS:** A scoping narrative review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses principles in PubMed, Scopus, Web of Science and Embase (1992-2024), including human studies on nighttime noise and shift work. Eligible studies involved adults and reported circadian, hormonal, metabolic or chronic disease outcomes. Twenty-five studies were synthesised using direction-based vote counting due to heterogeneity because meta-analysis was not feasible. The tally reflected the direction of effects rather than statistical significance. Risk-of-bias assessments informed interpretation, but not exclusion. Findings were integrated into a multilevel model integrating exposure, physiological mediation and cumulative effects. **RESULTS:** Nighttime noise and rotating night duties shifted melatonin timing and reduced sleep continuity. Studies reported increased fasting glucose, decreased insulin sensitivity and unfavourable lipid profiles in groups exposed to these work periods. Several investigations described an increase in cardiometabolic load amongst long-term night-duty workers. In the simulation scenarios, the model followed these findings and produced circadian and metabolic changes that increased across repeated exposure cycles. **CONCLUSIONS:** This review proposes and illustrates a dynamic framework for understanding how nighttime noise and shift work

may contribute to circadian and metabolic disruption over time. Its exploratory nature reflects heterogeneous evidence and a scoping design. The findings should be interpreted without causal inference.

[Lien vers l'article](#)

Association Between Obesity and Serum Leptin Levels in Brazilian Female Shift Workers.

Andretta RT, da Silva JC, Garcez A, Kohl IS, Mendes KG, Basso T, et al. *Diseases*. 2025 Dec 15;13(12).

BACKGROUND: Leptin is a hormone that plays a crucial role in regulating energy homeostasis and it is associated with adiposity. Women engaged in work shifts are often exposed to circadian disruption and metabolic changes that may contribute to increased adiposity and hormonal imbalance. Thus, this study aimed to investigate the association between general and abdominal obesity and serum leptin levels among female shift workers. **METHODS:** This cross-sectional study included a sample of 302 female employees from a group of plastic manufacturing industries in southern Brazil. Serum leptin levels were measured, with values > 15.2 ng/mL classified as elevated. General obesity (body mass index ≥ 30 kg/m²) and abdominal obesity (waist circumference ≥ 88 cm) were assessed. Associations were examined using Poisson regression with robust variance. **RESULTS:** The mean age of participants was 35.4 ± 10.1 years. The mean serum leptin concentration in the sample was 33.6 ng/mL (95% Confidence Interval [CI]: 30.6-36.6), and the prevalence of altered serum leptin levels was 78.1% (95% CI: 73.5-82.8). After adjustment for potential confounders, women with obesity showed a 63% higher probability of having elevated leptin levels (Prevalence Ratio [PR] = 1.63; 95% CI: 1.32-2.02; $p < 0.001$) compared with those without obesity. Additionally, significant associations were observed with work shift and physical activity. However, abdominal obesity was not statistically significant after adjustment. **CONCLUSIONS:** Obesity was independently associated with elevated serum leptin levels among female shift workers, suggesting that excess adiposity remains a key determinant of leptin dysregulation in this population.

[Lien vers l'article](#)

Association between shift work and levels of thyroid hormones and interleukin-37.

Ali IN, Baqer NN, Jawad HG. *Endocr Regul*. 2025 Jan 1;59(1):227-35.

Objective. Symptoms of thyroid defects involve sleep disorders, gain or loss of weight, tremors of hand, constipation, dry skin, bradycardia, diarrhea, irregular menses, and hot or cold tolerance. Workers in different professions face different situations that can lead to stress. This study aimed to examine the association between shift work (office or irregular) and thyroid function indicators, interleukin-37 (IL-37) levels, and development of chronic diseases (cardiovascular, diabetes). **Methods.** The current study comprised three groups: 1) office staff, 2) irregular staff (comprising different jobs), and 3) controls (not working subjects). Eighty-five subjects, aged 30-55 years, were included in the study. Body mass index (BMI) was calculated for each participant. Venous blood was collected and serum levels of triiodothyronine (T3), thyroxine (T4), thyroid-stimulating hormone (TSH), and thyroid peroxidase (TPO) were determined by electrochemiluminescence (ECL) analysis using an automatic immunochemical analyzer Cobas E 411 (Roche Diagnostics, Germany). Serum IL-37 levels were measured using ELISA kit. **Results.** Serum T3 ($p < 0.01$) and T4 ($p < 0.001$) levels were significantly decreased in both office and irregular shift work groups compared to the controls. The mean T3 levels were higher in subjects with irregular shift work (1.162 ± 0.11 ng/mL) compared to subjects with office shift work (1.14 ± 0.12 ng/mL). Significantly increased TSH and TPO serum levels ($p < 0.01$) were found in both the irregular shift work and office shift work groups compared to the control group. Similarly, IL37 levels were significantly increased in office shift work (294.8 ± 21.05 ng/mL) and irregular shift work subjects (278.0 ± 16.22 ng/mL) ($p < 0.001$) compared to controls (56.5 ± 0.28 ng/mL). Cardiac disease ($p < 0.01$), hypertension ($p < 0.001$), and diabetes ($p < 0.001$) showed significant differences between subjects with office shift

work, irregular shift work, and the control group. Conclusion. Elevated levels of IL-37 and TSH in shift workers may serve as biomarkers of the impact of shift work and the workplace on the immunological and hormonal status of employees.

[Lien vers l'article](#)

Animal

Impact of social isolation on circadian rhythmicity and clock genes expression in the prefrontal cortex and hippocampus of mice exposed to simulated rotating shiftwork/jetlag.

Mishra M, Gupta R, Singaravel M. *Physiol Behav.* 2026 Feb;304:115179.

Circadian rhythms regulate fundamental physiological and behavioral functions, yet are increasingly disrupted by contemporary environmental stressors such as rotating shift work and social isolation. Although each disruptor independently compromises circadian homeostasis, their interactive effects remain insufficiently characterized. Given the role of social cues as non-photic zeitgebers, we investigated whether social isolation exacerbates behavioral and molecular circadian disruption induced by repeated light-dark phase shifts, and whether social interaction confers resilience. Male AKR mice were assigned to six experimental groups defined by housing condition (grouped or isolated) and lighting regimen, comprising a stable 12-hour light-dark cycle, successive delays, or successive advances, with 8-hour phase shifts imposed every fourth day across six cycles. Locomotor activity was assessed using wheel-running, and transcript levels of *Per1*, *Cry1*, *Bmal1*, and *Clock* were quantified in the prefrontal cortex and hippocampus by RT-qPCR. Both phase delay and advance protocols disrupted behavioral rhythms and dampened circadian amplitude, with successive advances producing more pronounced desynchronization than delays. These effects were significantly amplified by social isolation, which led to marked rhythm fragmentation, phase misalignment, and delayed re-entrainment. At the molecular level, isolated mice displayed downregulation of *Per1* and *Cry1*, and upregulation of *Bmal1*, most prominently in the hippocampus. Notably, group housing preserved circadian stability across behavioral and transcriptional domains, implicating social cues as modulators of internal synchrony. These findings demonstrate that social isolation potentiates the circadian desynchrony elicited by rotating shift paradigms and identify social interaction as a non-photic signal capable of partially restoring rhythm coherence and clock gene expression.

[Lien vers l'article](#)

Conduites addictives

Work Hard... Drink Hard? Occupational, Sociodemographic and Health Determinants of High-Risk Alcohol Consumption Among Australian Workers.

Di Censo G, Thompson K, Bowden J. *Drug Alcohol Rev.* 2026 Jan;45(1):e70092.

INTRODUCTION: Although occupational stressors are acknowledged as contributors to high-risk alcohol consumption, their impact relative to sociodemographic and health factors is not well understood. This study investigated how occupational stressors compare with sociodemographic and health factors in influencing three high-risk drinking patterns among Australian workers. **METHODS:** This analysis included 26,255 employed individuals (48.2% female) drawn from 23 waves (2001-2023) of the Household Income and Labour Dynamics in Australia survey. The study conducted multivariate regressions on three types of high-risk drinking: (i) high-risk drinking across the week; (ii) single-occasion high-risk drinking; and (iii) any high-risk drinking. **RESULTS:** Working more than full-time hours was associated with higher odds of high-risk drinking across the week (OR 1.12, 95% CI [1.05, 1.19]). Shift workers were associated with single-occasion high-risk drinking (OR 1.09, 95% CI [1.02, 1.16]). Desiring to work more hours was associated with single-occasion high-risk drinking (OR 1.16, 95% CI [1.09, 1.24]). Workers aged 18-29 years had a twofold increased odds of any high-risk drinking (OR 1.99, 95% CI [1.77, 2.23]), while women had decreased odds (OR 0.11, 95% CI [0.10, 0.13]). Smoking was the modifiable risk factor most strongly associated with any high-risk drinking (OR 2.80, 95% CI [2.60, 3.02]). **DISCUSSION AND CONCLUSIONS:** This analysis found that occupational factors were associated with high-risk drinking; however, their impact was less substantial than sociodemographic and health factors. Interventions targeting risk factors among high-prevalence groups and health promotion campaigns highlighting the health risks associated with high-risk alcohol consumption are warranted.

[Lien vers l'article](#)

Associations of long working hours with the use of combustible cigarettes, electronic cigarettes, and heated tobacco products among young adults: a population-based study of South Korea.

Baek SU, Yoon JH. *Postgrad Med J.* 2025 Dec 31.

BACKGROUND: While the non-conventional tobacco products have recently gained popularity among young adults, the link between occupational exposures and tobacco use behaviors has been scarcely explored. We investigated the association of long working hours with tobacco product use in young adults. **METHODS:** A nationwide sample of 10 451 young workers in South Korea aged 19-34 years was analyzed. Weekly working hours and the consumption of combustible cigarettes, electronic cigarettes, and heated tobacco products were assessed. Logistic regressions were employed to determine the relation between working hours and tobacco products use, with odds ratios (ORs) and 95% confidence intervals (CIs). **RESULTS:** Among the participants, 20.9%, 55.8%, 12.7%, 5.9%, and 4.6% reported working <35, 35-40, 41-48, 49-54, and ≥ 55 h/week, respectively. Compared to working 35-40 h/week, working 49-54 h/week (OR: 1.48; 95% CI: 1.21-1.82) and ≥ 55 h/week (OR: 1.41; 95% CI: 1.13-1.77) were associated with using combustible cigarettes. Similarly, working 49-54 h/week (OR: 1.39; 95% CI: 1.05-1.81) and ≥ 55 h/week (OR: 1.43; 95% CI: 1.06-1.90) were linked to using electronic cigarettes. Additionally, working ≥ 55 h/week was associated with using heated tobacco products (OR: 2.07; 95% CI: 1.43-1.93) compared to working 35-40 h/week. Furthermore, compared to working 35-40 h/week, working ≥ 55 h/week was linked to the use of multiple tobacco products (OR: 2.00; 95% CI: 1.28-3.13). **CONCLUSION:** Long working hours is linked to the use of various forms of tobacco products among young adults.

[Lien vers l'article](#)

Reproduction

Sleep quality, perceived stress and associated factors in women undergoing IVF treatment: short-term longitudinal study.

Yanik F, Tokat MA. *J Reprod Infant Psychol*. 2026 Jan;44(1):46-61.

BACKGROUND: Despite limited studies in the literature, it is hypothesised that lifestyle factors are modifiable habits that have an impact on couples' fertility health. However, the relationship between sleep quality and infertility is an area that needs to be clarified. **OBJECTIVE:** To determine sleep quality and associated factors in women receiving in vitro fertilisation treatment and to evaluate the changes in sleep over the treatment cycle. **METHODS:** This is a longitudinal descriptive study conducted on 158 women in two infertility centres in Izmir, Turkey. Data were collected using the Personal Introduction Form, Pittsburgh Sleep Quality Index, Visual Analogue Stress Scale, and Physical Symptoms List. Data were collected during three different treatment periods: beginning of the in vitro fertilisation trial, oocyte pick-up day and the postembryo transfer period. **RESULTS:** The sleep quality score of women progressively decreased as treatment progressed ($p < .001$). A strong positive correlation was determined between stress and sleep quality ($p < .001$). Additionally, advanced age, low education level, shift work, prolonged treatment and economic distress were associated with poorer sleep quality ($p < .001$). In addition, breast fullness, abdominal distension, and pain ($p < .001$) observed until the oocyte pick-up day, as well as nausea and fatigue during the postembryo transfer period ($p < .001$), were identified as physical symptoms affecting sleep quality. **CONCLUSION:** This article provides information on sleep quality during in vitro fertilisation and guides healthcare professionals to encourage and improve women's sleep quality.

[Lien vers l'article](#)

The impact of acute shift work during pregnancy on the physiological and psychological health of hospital nurses.

Ruan W, Cai C, Matenchuk BA, Osachoff L, Khurana R, Davenport MH. *J Appl Physiol (1985)*. 2026 Jan 1;140(1):20-6.

Night-shift work is prevalent among healthcare workers and disrupt circadian rhythms, potentially influencing blood pressure (BP) regulation. Pregnancy itself causes significant BP fluctuations, and night shifts may exacerbate these changes, increasing the risk of hypertension disorders. However, studies on the impact of shift work on BP patterns in pregnancy in a free-living environment is currently lacking. We recruited 25 pregnant nurses in their second trimester, comprising 13 on day shifts (DS) and 12 on night shifts (NS), from eight urban hospitals in Edmonton, Alberta, Canada. Resting BP [systolic BP (SBP), diastolic BP (DBP), mean arterial pressure (MAP), and pulse pressure (PP)] was assessed before and after shift work. Data were analyzed to compare pre- and postshift measurements between DS and NS workers using a linear mixed-effects model, with statistical significance set at $P < 0.05$. NS workers showed significantly higher post-shift DBP and MAP compared with DS workers ($P < 0.001$). In contrast, NS workers exhibited a significant postshift decrease in pulse pressure (PP) than the DS group ($P < 0.001$), indicating distinct acute hemodynamic responses to NS work. NS work in pregnant nurses is associated with acute elevations in DBP and MAP, along with a significant reduction in PP following the shift. These findings suggest that NS may trigger distinct hemodynamic stress responses during pregnancy, potentially increasing short-term cardiovascular load. **NEW & NOTEWORTHY** Night shift work in pregnant nurses is associated with acute elevations in diastolic and mean arterial pressure, along with a significant reduction in pulse pressure following the shift. These findings suggest that night shifts may trigger distinct hemodynamic stress responses during pregnancy, potentially increasing short-term cardiovascular load.

[Lien vers l'article](#)

The Leucine-mTOR-Autophagy Axis in Granulosa Cells Mediates Circadian Disruption-Induced Anovulation.

He R, Mo J, Lin Z, Zhu K, Wang Y, Yu J, et al. *Int J Biol Sci.* 2026;22(1):201-19.

Background: Ovulation disorders represent the most common cause of infertility in women. Previous studies have reported that continuous light exposure can induce anovulation. However, the underlying mechanisms remain unclear. Methods: We assessed the phenotypes of ovulation disorders by using vaginal smears, hormone levels, and ovarian morphology. Metabolomics and RNA sequencing were employed to identify key metabolites and explore potential underlying mechanisms. Additionally, we investigated the effects of a leucine-rich diet on the phenotypes of ovulation disorders and autophagy. Serum levels of branched-chain amino acids (BCAAs) in patients with polycystic ovary syndrome (PCOS) were also measured. Causality was explored by using Mendelian randomization (MR) methods based on GWAS summary data. Results: Female SD rats subjected to continuous light exhibited disrupted estrous cycles and polycystic ovaries, as well as increased anti-Müllerian hormone (AMH) levels. Metabolic profiling revealed that leucine was a pivotal metabolite. Specifically, a high-leucine diet induced anovulation and polycystic morphology, along with reducing autophagy, in rats under normal light conditions; additionally, leucine restriction alleviated these effects in recovered rats. Moreover, the mTOR-ULK1-LC3-II/I autophagy pathway was influenced both in vivo and in vitro by leucine. In patients with PCOS, elevated serum BCAA levels (especially leucine) were observed to be correlated with increased AMH levels, higher luteinizing hormone (LH)-to-follicle-stimulating hormone (FSH) ratios, and higher antral follicle counts. MR analysis indicated that night shift work may increase the risk of PCOS through elevated serum leucine levels. Conclusions: These results suggest that the disruption of the leucine-mTOR-autophagy axis in granulosa cells (GCs) mediates continuous light-induced ovulation disorders. The potential therapeutic targeting of leucine-mTOR pathways for managing PCOS should be investigated.

[Lien vers l'article](#)

Associations between parental shift work and children's sleep behavior in a sample of health care workers.

Dechantsreiter J, Schlarb A, Goerigk S, Neukamm AC, Poets CF, Quante M. *Sleep Med.* 2026 Jan;137:106895.

OBJECTIVES: To identify family- and work-related factors of shift-working parents associated with various aspects of children's sleep behavior. Additionally, the study aimed to explore further potential influences on the relationship between shift work and children's sleep. METHODS: Data were collected in working parents using a nationwide online survey. The survey relied on parent-reported information about their youngest child addressing the following domains: demographics, working patterns, children's and parents' sleep habits, duration and bedtime routines. Standardized instruments included the Children's Sleep Habits Questionnaire and Pittsburgh Sleep Quality Index-score. RESULTS: A total of 770 parents participated. 627 (82 %) were female; mean age 37.7 ± 1.2 years. Families had on average 1.8 children (mean child age 7.9 years; youngest child 5.7 years). In 503 (65 %) families at least one parent worked in shifts and in 160 (21 %) families both parents were shift-workers. Overall, no substantial differences were found in parent-reported child-sleep duration, or general sleep quality across shift work groups. Exploratory analyses suggested a moderating effect of job satisfaction and parental sleep quality on the association between child parasomnia and shift work. CONCLUSIONS: In this cross-sectional study, most aspects of children's sleep parameters did not differ between families with or without shift work, based on parent-reported measures. While a weak statistical association was observed between parasomnia scores, the effect size was limited. Future research should consider the role of work schedules in supporting family sleep health, especially in shift-working households.

[Lien vers l'article](#)

Impact of night shift work on women's fertility, pregnancy and menopause.

Lee CY, Moawad K, Pien GW. *Front Sleep*. 2025;4:1545258.

A growing body of literature examines how shift work affects different aspects of women's reproductive cycles, ranging from fertility to pregnancy to menopause. This review summarizes what is known about how shift work affects women's reproductive cycles, with a particular emphasis on fertility, fecundity and the impact of shift work on maternal and fetal outcomes. While the overall impact of night shift work is complex and remains incompletely understood, evidence suggests that shift work adversely impacts reproductive health and pregnancy outcomes.

[Lien vers l'article](#)

Sexual function and sexual quality of life Among female healthcare workers in a shift work system.

Kocabaş Şenkul T, Şahin E. *Work*. 2025 Dec 16:10519815251401871.

Background Shift work is a major occupational health issue, disrupting circadian rhythms and increasing risks for physical, psychological, and social problems. Its impact on sexual function and sexual quality of life among female healthcare workers remains underexplored. Objective This study examined the impact of shift work on sexual function and sexual quality of life among female healthcare workers and highlighted its occupational health implications within a prevention, assessment, and rehabilitation framework. Methods A descriptive cross-sectional study was conducted with 390 female healthcare workers in Turkey employed in rotating shifts. Data were collected using a Participant Information Form, the Female Sexual Function Index (FSFI), and the Sexual Quality of Life Questionnaire-Female (SQOL-F). Analyses included descriptive statistics, independent t-tests, one-way ANOVA and Multivariable linear regression. Results Longer professional experience, working in high-stress units (intensive care/emergency), ≥ 4 monthly night shifts, and >45 weekly working hours were significantly associated with poorer FSFI and SQOL-F scores ($p < 0.05$). Conversely, ≥ 32 h of rest after shifts was linked to higher scores. In multivariable analysis, FSFI and FGSIS scores were lower among participants who reported that shift/on-call work affects sexual desire ($p < 0.001$). Conclusions Shift work negatively affects sexual function and sexual quality of life among female healthcare workers. These outcomes should be recognized as critical occupational health issues. Adequate rest periods, reduced night-shift frequency, and psychosocial support programs are essential preventive and rehabilitative strategies. Worker-centered institutional policies that balance service continuity with employee health may enhance both well-being and healthcare system sustainability.

[Lien vers l'article](#)

The role of support on breastfeeding exclusivity and duration among African migrant mothers in the United States.

Addy T, Nabors L, King K, Vidourek R, Hixon DP, Sanyaolu O. *Int Breastfeed J*. 2025 Dec 8;20(1):90.

BACKGROUND: The population of African migrant women in the United States (U.S.) is steadily increasing, yet limited research exists on their breastfeeding experiences, support systems, and sources of breastfeeding information. Migration often results in the loss of culturally embedded support networks that are vital to breastfeeding practices. Additionally, the information available in the U.S. may lack cultural sensitivity. The purpose of this study was to explore breastfeeding practices of African migrant women in the U.S and assess how information sources and support networks impact breastfeeding duration and exclusivity. METHODS: Thirty African migrant mothers from seven African countries, residing in thirteen U.S. states, participated in qualitative interviews between May and August 2024. Using an inductive coding approach, three authors analyzed the data, compared interpretations, and reached consensus to identify key themes. RESULTS: Fifty-seven (57%) of the

mothers in this study breastfed exclusively for six months and 50% reported breastfeeding durations of 12 months or more. Longer breastfeeding duration and breastfeeding exclusivity among African migrant women are facilitated by cultural traditions, awareness of breastfeeding benefits, and the availability of supportive relationships and environments. However, participants also reported significant barriers, including limited practical support (such as help with childcare and household responsibilities), unfavorable return-to-work policies, long working hours, not knowing how to properly use breast pumps and difficulties navigating the healthcare system as impacting their breastfeeding practices. Mothers recommended the need to provide engaging education before and after childbirth, support for navigating resources, spouse involvement, emotional and practical assistance, and unique suggestions such as family visas to strengthen postpartum breastfeeding support. CONCLUSIONS: Insights from this study will aid health professionals in providing culturally sensitive communications and targeted interventions to better support the breastfeeding goals of African migrant mothers in the U.S. Making healthcare supports and information available in an engaging, easy to digest format, so the information is easy to follow, remains an area for improving health communication with African Migrant women.

[Lien vers l'article](#)

Polyexposition

The impact of high temperature, noise, benzene compounds, and shift work on renal function abnormalities in oil workers: a cohort study in China.

Li Z, Si Z, Zhang S, Wang N, Zhang H, Li X, et al. *J Health Popul Nutr.* 2025 Dec 29;44(1):427.

BACKGROUND: Renal dysfunction poses a significant global health burden, with occupational hazards in the petroleum industry potentially contributing to its development. This cohort study aimed to evaluate the impact of four occupational hazards-high temperature, noise, benzene compounds, and shift work-on renal dysfunction in a cohort of oil workers. **METHODS:** A prospective cohort study was conducted using data from the "Beijing-Tianjin-Hebei Occupational Population Health Effects Cohort." A total of 2,292 petroleum workers without baseline renal dysfunction were followed from 2017 to 2021. Renal dysfunction was defined as an estimated glomerular filtration rate (eGFR) < 90 mL/min/1.73 m². Occupational exposures were assessed using national standards and weighted shift index (WSI) for shift work. Cox regression models, restricted cubic spline analysis, and interaction assessments were employed to analyze associations. **RESULTS:** Over four years, 24.52% of workers developed renal dysfunction. Multivariate Cox regression revealed significant risks for workers exposed to high temperature (P = 0.003, HR = 1.33, 95% CI:1.10-1.61), noise (P = 0.001, HR = 1.43, 1.18-1.72), benzene compounds (P = 0.001, HR = 1.70, 1.42-2.05), and high-intensity shift work (WSI > 1022.75; P = 0.001, HR = 1.96, 1.60-2.40). Additive interactions were observed between high-intensity shift work and high temperature (RERI = 1.89), noise (RERI = 1.40), and benzene compounds (RERI = 3.07). Moderate shift work intensity showed a protective effect. **CONCLUSIONS:** Exposure to noise, benzene compounds, and high-intensity shift work independently increased renal dysfunction risk among petroleum workers. An association was also observed for high-temperature exposure, and interactions between these hazards amplified risks, highlighting the need for targeted interventions to mitigate occupational exposures.

[Lien vers l'article](#)

Pathologies cardiovasculaires

The impact of acute shift work during pregnancy on the physiological and psychological health of hospital nurses.

Ruan W, Cai C, Matenchuk BA, Osachoff L, Khurana R, Davenport MH. *J Appl Physiol* (1985). 2026 Jan 1;140(1):20-6.

Night-shift work is prevalent among healthcare workers and disrupt circadian rhythms, potentially influencing blood pressure (BP) regulation. Pregnancy itself causes significant BP fluctuations, and night shifts may exacerbate these changes, increasing the risk of hypertension disorders. However, studies on the impact of shift work on BP patterns in pregnancy in a free-living environment is currently lacking. We recruited 25 pregnant nurses in their second trimester, comprising 13 on day shifts (DS) and 12 on night shifts (NS), from eight urban hospitals in Edmonton, Alberta, Canada. Resting BP [systolic BP (SBP), diastolic BP (DBP), mean arterial pressure (MAP), and pulse pressure (PP)] was assessed before and after shift work. Data were analyzed to compare pre- and postshift measurements between DS and NS workers using a linear mixed-effects model, with statistical significance set at $P < 0.05$. NS workers showed significantly higher post-shift DBP and MAP compared with DS workers ($P < 0.001$). In contrast, NS workers exhibited a significant postshift decrease in pulse pressure (PP) than the DS group ($P < 0.001$), indicating distinct acute hemodynamic responses to NS work. NS work in pregnant nurses is associated with acute elevations in DBP and MAP, along with a significant reduction in PP following the shift. These findings suggest that NS may trigger distinct hemodynamic stress responses during pregnancy, potentially increasing short-term cardiovascular load.

NEW & NOTEWORTHY Night shift work in pregnant nurses is associated with acute elevations in diastolic and mean arterial pressure, along with a significant reduction in pulse pressure following the shift. These findings suggest that night shifts may trigger distinct hemodynamic stress responses during pregnancy, potentially increasing short-term cardiovascular load.

[Lien vers l'article](#)

Young stroke: An update on epidemiology, emerging risk factors, and future research directions.

Rasing A, Hilken NA, Leeuw FE. *Int J Stroke*. 2026 Jan;21(1):6-13.

The incidence of ischemic stroke among young adults (aged 18-49 years) has risen over recent decades, particularly in high-income countries, contrasting with the decline seen in older populations. This trend represents a growing public health concern, as stroke at young age often leads to long-term psychosocial consequences and loss of productive life years. The increasing incidence may partly reflect a higher prevalence of traditional vascular risk factors, as well as the identification of non-traditional risk and trigger factors such as air pollution, sleep apnea, long working hours, vigorous exercise, and illicit drug use. Diagnostic evaluation in this young population is typically more extensive than in older patients, given the broad spectrum of potential underlying causes. A structured, multidisciplinary approach integrating vascular, hematologic, and cardiac assessment is essential for accurate etiological classification. Although functional outcomes are generally favorable, many young stroke survivors experience persistent psychosocial sequelae, including cognitive impairment, depression, anxiety, and fatigue, which significantly affect quality of life. Recurrence risk varies according to stroke etiology, with the lowest rates observed in patients with a cryptogenic stroke. These findings highlight the importance of more tailored secondary prevention strategies, as antiplatelet therapy is not without risks. Further research is needed to identify novel risk and trigger factors, refine prognostic tools, optimize secondary prevention, and develop interventions addressing the psychosocial recovery of young stroke survivors.

[Lien vers l'article](#)

Night shift work and its interaction with sleep duration and chronotype, and risk of cardiovascular-kidney-metabolic diseases in the UK Biobank.

Tran DT, Strohmaier S, Żebrowska M, Huang T, Papantoniou K, Redline S, et al. *Eur J Prev Cardiol.* 2025 Dec 18.

AIMS: Non-standard work schedules are becoming increasingly prevalent, with one in five workers participating in nightshifts. Whether working nightshifts is associated with cardiovascular-kidney-metabolic (CKM) outcomes, and whether chronotype or sleep duration moderate this association, remains unclear. **METHODS:** Our analysis is based on 96 365 UK Biobank participants (57% female, mean age 62 years), with information on employment history, tracking CKM incidence (cardiovascular diseases, chronic kidney diseases and/or type 2 diabetes) up to 2022. Cox proportional hazards models calculated hazard ratios (HR) adjusted for multiple potential confounders, and their 95% confidence intervals (CIs). **RESULTS:** With data on 5 967 incident cases, participants with over 20 years of night shift work had a significantly higher risk of CKM (HR=1.32 [95% CI, 1.20-1.45]) compared to day workers, after adjustment for confounders including sex, age, ethnicity, socioeconomic factors. Similarly, risk was higher than day workers among those working 8+ nightshifts per month (HR=1.32 [95% CI, 1.21-1.43]) and over 1200 lifetime nightshifts (HR=1.36 [95% CI, 1.25-1.48]); all $P_{trend} < 0.001$. The association between nightshift work and CKM risk was significantly modified by sleep duration, with higher risks among short sleepers (≤ 6 hours) ($P_{interaction} = 0.009, 0.031, \text{ and } 0.017$, respectively, for nightwork duration, intensity, and cumulative number of nights worked), but not by chronotype. **CONCLUSION:** Our findings reveal a dose-response relationship between night shift work and CKM disease, further amplified by short sleep. Future research should continue to adopt CKM conditions as a composite outcome and investigate further how sleep characteristics may modify the impact of night shift work.

[Lien vers l'article](#)

Analytical study examining hypertension and arrhythmia among shift workers in healthcare.

Sutaria R, Tandon A, Raman E, Saoji A, J R. *Bioinformatics.* 2025;21(8):2901-4.

The prevalence of hypertension and arrhythmia among 140 healthcare shift workers aged 25-60 years is of interest. Data on blood pressure, ECG findings, work schedules and lifestyle factors were collected and analyzed. Night shift workers showed a significantly higher prevalence of both conditions compared to day workers. Duration and frequency of night shifts were positively correlated with cardiovascular risk. Thus, we show occupational scheduling as a modifiable risk factor in healthcare-associated cardiovascular disease.

[Lien vers l'article](#)

Cardiovascular risk factors across job roles and work shifts in a Brazilian Military Police cohort: a cross-sectional study.

Palmieri DF, Ferreira LB, de Almeida IL, Fiusa VC, Bazán Gonzales FJ, de Oliveira Bicalho Santos JP, et al. *Front Public Health.* 2025;13:1716547.

BACKGROUND: Police officers are recognized as a high-risk group for cardiovascular disease (CVD), but it remains unclear how specific occupational factors, such as job roles and demanding shift schedules, modulate this risk. This study aimed to assess the prevalence and clustering of cardiovascular risk factors in a cohort of Brazilian military police officers and to investigate their associations with job type and work schedule. **METHODS:** A cross-sectional analysis involving 436 male military police officers in Brazil was performed. Prevalence of cardiovascular risk factors and overall cardiovascular health scores were determined based on six key metrics: elevated blood pressure, dyslipidemia, dysglycemia,

obesity, smoking status, and physical activity levels. Health profiles and risk factor prevalence were compared across administrative versus operational roles and different work shifts using Pearson's chi-squared tests for categorical data and non-parametric tests for non-normally distributed continuous data. RESULTS: The population (median age 46.0 years) exhibited a high burden of risk factors, with over 80% being overweight or obese and 95% presenting with elevated blood pressure or hypertension. Consequently, nearly 90% of the officers were classified as having moderate or high cardiovascular risk, while only 3% met ideal health metrics. This high-risk profile was uniformly distributed across the force, with no statistically significant differences observed between job types or work schedules. CONCLUSION: This cohort of military police officers exhibits a severe and systemic burden of cardiovascular risk factors, pervasive throughout the force regardless of specific job roles or shift schedules. Given this widespread risk profile, the findings strongly recommend systemic, force-wide institutional health promotion initiatives, rather than programs targeted only at specific diseases, roles, or shifts.

[Lien vers l'article](#)

Prehypertension and its associated factors among government employees in Tilottama Municipality of Rupandehi District, Nepal.

Bhandari S, Pokharel PK, Maharjan A, Rajbanshi M, Kunwar K, Subedi J, et al. *PLoS One*. 2025;20(12):e0338625.

Government employees are vital workforce of the nation comprising individuals in the working age group. These employees have to face an increased workload, limited decision-making scope, lack of support from fellow workers, regular night shifts, limited physical mobility which puts them at increased risk for hypertension. Detecting prehypertension is essential to prevent related complications and reduce risks of future health issues such as an increased risk of developing high blood pressure (hypertension), heart disease, stroke, kidney damage, and other cardiovascular problems. This study aimed to assess the prevalence of prehypertension and its associated factors among the government employees of Tilottama Municipality, Nepal. A cross-sectional study was conducted among 333 government employees from 15 June 2023 to 10 November 2023. A systematic random sampling technique was used to select participants. A structured questionnaire was adapted from the WHO STEPs Survey. Data were cleaned and then exported to IBM SPSS Statistics 20.0 for analysis. Demographic characteristics of respondents were described using descriptive statistics. Multivariate logistic regression was conducted to determine the association between individual characteristics and prehypertension. Statistical significance was set at p-value < 0.05. The mean (\pm SD) age of the 333 participants was 36.9(\pm 8.89) years. Most of them were females (54.1%). This study found that 29.4% of participants were prehypertensive, and 14.1% were hypertensive. Participant's age, sex, working department, family history of hypertension, presence of diabetes, BMI, waist-hip ratio, ever-alcohol consumption and duration of service were found to be significantly associated with prehypertension in bivariate analysis. Meanwhile, working department (Adjusted Odds Ratio AOR: 3.2, CI: 1.4-7.0), family history of hypertension (AOR: 1.9, CI: 1.1-3.4), and BMI (AOR: 1.7, CI: 1.0-3.1) were found to be significantly associated with prehypertension. This study concluded that a significant proportion of government employees had prehypertension and hypertension. Targeted health promotion programs should be implemented in non-health departments. Regular hypertension screening program and healthy workplace settings such as healthier food choices, physical activity, stress management techniques, and smoke-free zones should be promoted in each institution, with a focus on hypertension prevention and control for employees.

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