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et santé publique · Lausanne

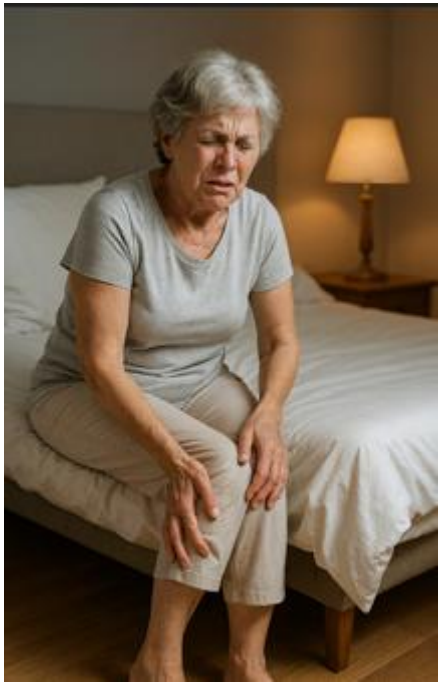
Crampes nocturnes chez les personnes âgées

Dre Eminence Mbadu, Cheffe de clinique adjointe

Jeudi d'Unisanté, 12 février 2026

Vignette clinique

- Mme L, 78 ans
- Crampes nocturnes aux membres inférieurs depuis plusieurs mois, durent qlqs minutes, réveillent la nuit, soulagées à la marche
- HTA traitée
- Status normal avec ppp et pas de déficit neurologique



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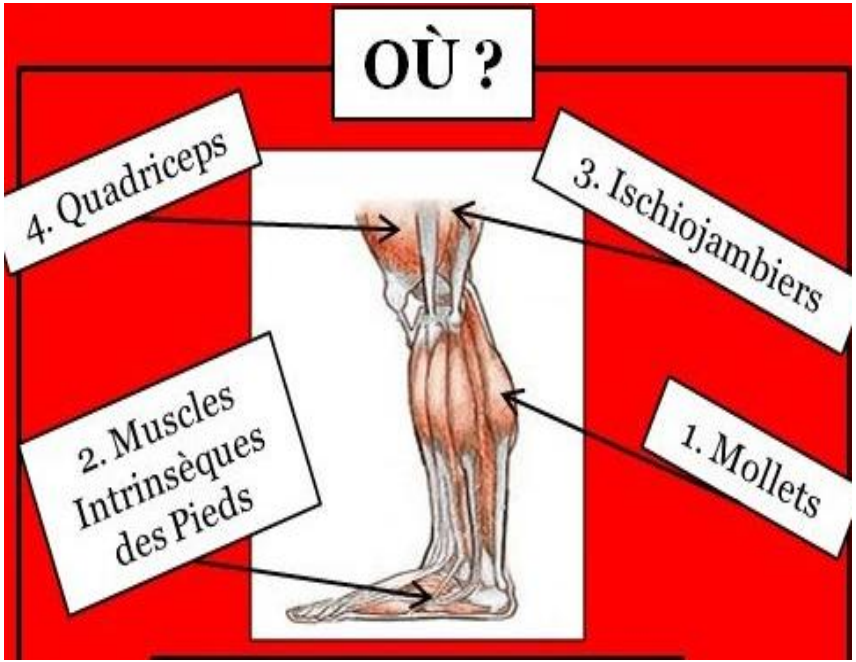
Contexte

Crampes nocturnes :

- Prévalence estimée : 50%-60%
- Motif fréquent de consultation en médecine de premier recours
- Cause idiopathique (70% des cas)
- Impact sur le sommeil et la qualité de vie



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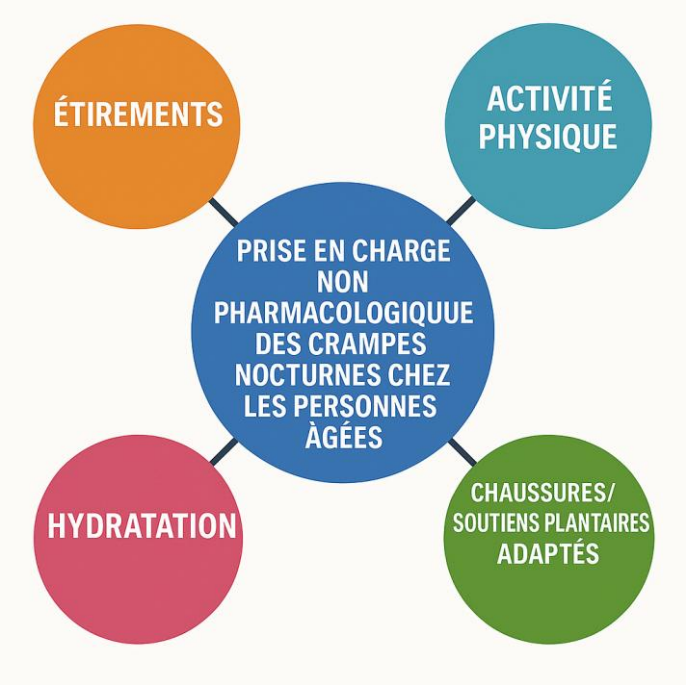
Contexte

Mécanismes et facteurs déclenchants:

- hyperexcitabilité neuromusculaire
- raccourcissement musculaire (posture prolongée vs âge)
- déshydratation et troubles électrolytiques
- médicaments
- comorbidités
- sédentarité ou immobilisation prolongée
- consommation OH et caféine

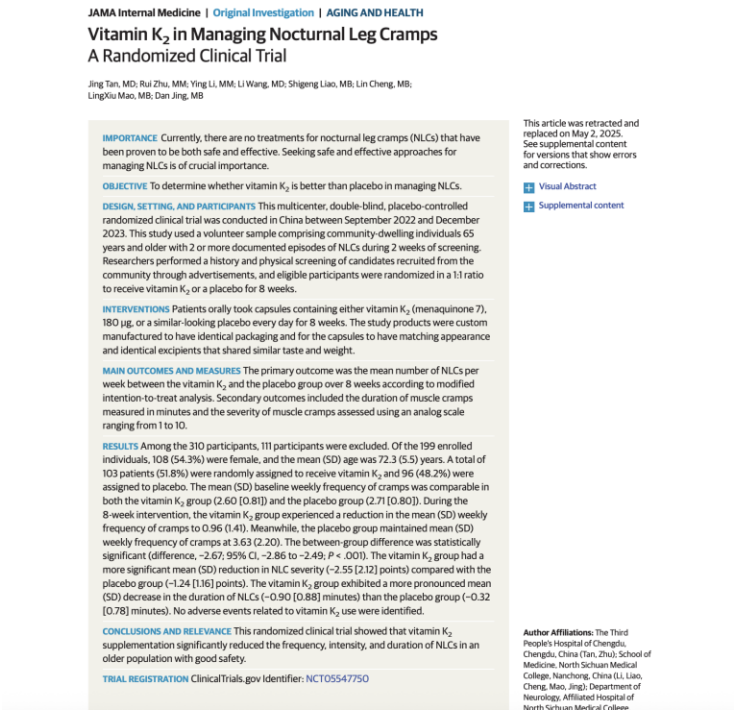
Traitement



Mesures pharmacologiques

- Mg+ : absence d'efficacité si pas de carence
- K, Ca, Na: non recommandés en l'absence de carence
- Quinine: aucune recommandation officielle en Suisse
- Gabapentine, diltiazem, myorelaxant, vitamine B12: non recommandé en Suisse

Étude



JAMA Internal Medicine | Original Investigation | AGING AND HEALTH

Vitamin K_2 in Managing Nocturnal Leg Cramps
A Randomized Clinical Trial

Jing Tan, MD; Rui Zhu, MM; Ying Li, MM; Li Wang, MD; Shigeng Liao, MB; Lin Cheng, MB; LingXiu Mao, MB; Dan Jing, MB

IMPORTANCE Currently, there are no treatments for nocturnal leg cramps (NLCs) that have been proven to be both safe and effective. Seeking safe and effective approaches for managing NLCs is of crucial importance.

OBJECTIVE To determine whether vitamin K_2 is better than placebo in managing NLCs.

DESIGN, SETTING, AND PARTICIPANTS This multicenter, double-blind, placebo-controlled randomized clinical trial was conducted in China between September 2022 and December 2023. This study used a volunteer sample comprising community-dwelling individuals 65 years and older with 2 or more documented episodes of NLCs during 2 weeks of screening. Researchers performed a history and physical screening of candidates recruited from the community through advertisements, and eligible participants were randomized in a 1:1 ratio to receive vitamin K_2 or a placebo for 8 weeks.

INTERVENTIONS Patients orally took capsules containing either vitamin K_2 (menaquinone 7), 180 µg, or a similar-looking placebo every day for 8 weeks. The study products were custom manufactured to have identical packaging and for the capsules to have matching appearance and identical excipients that shared similar taste and weight.

MAIN OUTCOMES AND MEASURES The primary outcome was the mean number of NLCs per week between the vitamin K_2 and the placebo group over 8 weeks according to modified intention-to-treat analysis. Secondary outcomes included the duration of muscle cramps measured in minutes and the severity of muscle cramps assessed using an analog scale ranging from 1 to 10.

RESULTS Among the 310 participants, 111 participants were excluded. Of the 199 enrolled individuals, 108 (54.3%) were female, and the mean (SD) age was 72.3 (5.5) years. A total of 103 patients (51.8%) were randomly assigned to receive vitamin K_2 and 96 (48.2%) were assigned to placebo. The mean (SD) baseline weekly frequency of cramps was comparable in both the vitamin K_2 group (2.60 [0.81]) and the placebo group (2.71 [0.80]). During the 8-week intervention, the vitamin K_2 group experienced a reduction in the mean (SD) weekly frequency of cramps to 0.96 (1.41). Meanwhile, the placebo group maintained mean (SD) weekly frequency of cramps at 3.63 (2.20). The between-group difference was statistically significant (difference, −2.67; 95% CI, −2.86 to −2.49; $P < .001$). The vitamin K_2 group had a more significant mean (SD) reduction in NLC severity (−2.55 [2.12] points) compared with the placebo group (−1.24 [1.16] points). The vitamin K_2 group exhibited a more pronounced mean (SD) decrease in the duration of NLCs (−0.90 [0.88] minutes) than the placebo group (−0.32 [0.78] minutes). No adverse events related to vitamin K_2 use were identified.

CONCLUSIONS AND RELEVANCE This randomized clinical trial showed that vitamin K_2 supplementation significantly reduced the frequency, intensity, and duration of NLCs in an older population with good safety.

TRIAL REGISTRATION ClinicalTrials.gov Identifier: NCT05547750

This article was retracted and replaced on May 2, 2025. See supplemental content for versions that show errors and corrections.

Visual Abstract

Supplemental content

Author Affiliations: The Third People's Hospital of Chengdu, Chengdu, China (Tan, Zhu); School of Medicine, North Sichuan Medical College, Nanchong, China (Li, Liao, Cheng, Mao, Jing); Department of Neurology, Affiliated Hospital of North Sichuan Medical College

Objectifs

Est-ce que la supplémentation quotidienne par vitamine K2 réduit :

- la fréquence hebdomadaire des crampes
- la sévérité des symptômes
- la durée des épisodes

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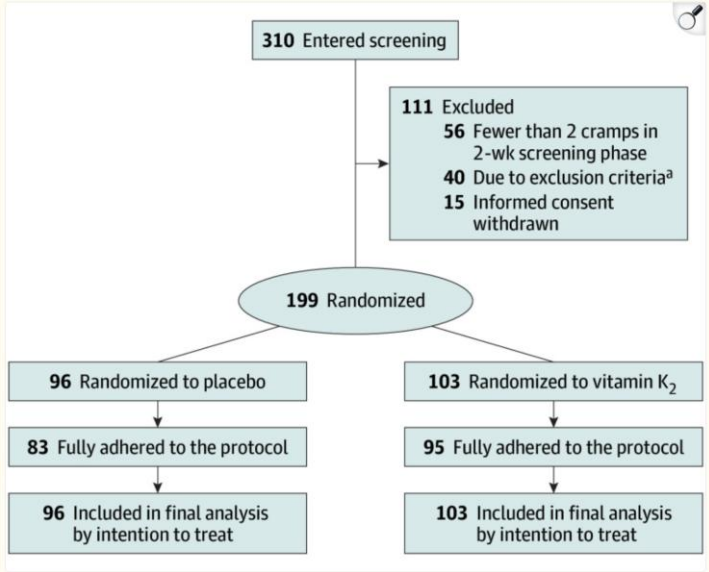
Méthodologie



[a]A total of 26 candidates were excluded due to cramps caused by Parkinson disease, hypothyroidism, liver cirrhosis, or lumbar spinal stenosis; 14 candidates were excluded due to their recent (within 2 months) intake of vitamin K antagonist or vitamin K_2 prior to enrollment.

- Etude randomisée, double aveugle, contrôlée par placebo, menée en Chine entre septembre 2022 et décembre 2023
- Durée de 8 semaines

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Méthodologie

Critères d'inclusion

- Âge ≥ 65 ans
- ≥ 2 crampes nocturnes par semaine depuis ≥1 mois
- Capable de tenir un journal des crampes
- Consentement éclairé signé

Critères d'exclusion

- Traitements récents pour crampes (ex. quinine, myorelaxants)
- Maladie neurologique/neuromusculaire
- Insuffisance hépatique ou rénale sévère
- Patients sous anticoagulants AVK, allergie connue à la Vit K2

Méthodologie

Table 1. Baseline Characteristics of All Randomized Participants.

Characteristic	Total (N = 199)	Vitamin K_2 (n = 103)	Placebo (n = 96)
Sex, No. (%)			
Female	108 (54.3)	52 (50.5)	56 (58.3)
Male	91 (45.7)	51 (49.5)	40 (41.7)
Age, mean (SD), y	72.3 (5.5)	72.8 (5.5)	71.8 (5.5)
Height, mean (SD), cm	158.5 (6.1)	158.4 (6.1)	158.5 (6.2)
Weight, mean (SD), kg	52.5 (5.6)	52.0 (5.4)	53.1 (5.8)
Hypertension, No. (%)	136 (68.3)	74 (71.8)	62 (64.6)
Diabetes, No. (%)	101 (50.8)	55 (53.4)	46 (47.9)
Serum creatinine, mean (SD), mg/dL	0.89 (0.37)	0.87 (0.21)	0.91 (0.49)

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SI conversion factor: To convert creatinine to µmol/L, multiply by 88.4.

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Résultats

Table 2. Study Outcomes.

Outcome	Mean (SD)		Between-group difference, mean (95% CI)	*P* value
	Vitamin K_2 (n = 103)	Placebo (n = 96)		
Primary outcome				
Frequency of NLCs per wk	0.96 (1.41)	3.63 (2.20)	−2.67 (−2.86 to −2.49)	<.001
Secondary outcomes				
Duration of NLCs, min	0.25 (0.47)	0.98 (0.98)	−0.73 (−0.80 to −0.65)	NA
Severity of NLCs[a]	1.12 (1.82)	2.08 (1.72)	−0.97 (−1.14 to −0.79)	NA

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Abbreviations: NA, not applicable; NLCs, nocturnal leg cramps.

[a] Determined using an analog scale ranging from 1 to 10.

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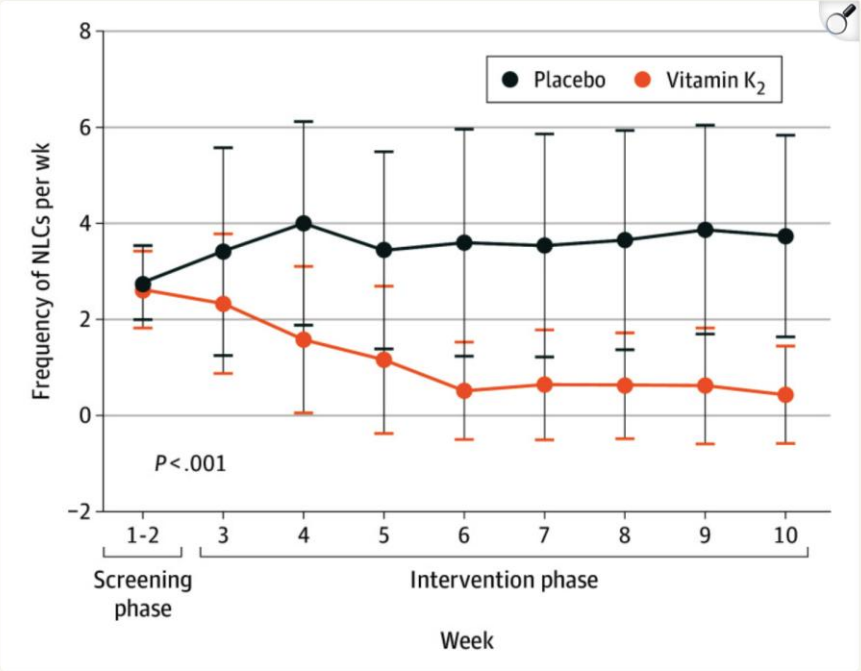
Résultats

Figure 2. Frequency of Nocturnal Leg Cramps (NLCs) per Week Between Treatment Groups During the Study.



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Conclusion

- La supplémentation de la vit K2 réduit les crampes chez les personnes âgées
- Diminution de la fréquence observée dès la première semaine
- Diminution de l’intensité et de la durée
- Bonne tolérance, sans événements indésirables apparents

Discussion

Points forts

- Etude randomisée, contrôlée, en double aveugle
- Résultats cliniquement significatifs
- Aucun effet indésirable rapporté lié à la vit K2
- Intérêt assez innovant

Points faibles

- Taille de l'échantillon
- Durée de suivi courte
- Données auto rapportées
- Mécanisme physiopathologique de la vit K2 peu exploré

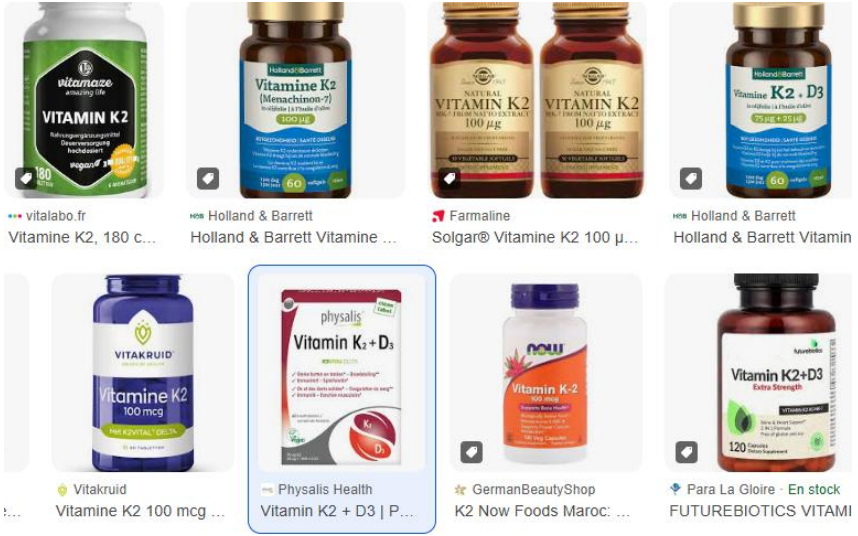
Perspectives

- La vit K2 représente une piste thérapeutique prometteuse

- Autres études dans une population adaptée, plus longue, pour son adoption.

Vitamine K2 en Suisse

- Complément alimentaire
- Associé ou non à la vit D
- Coût : 20-45 CHF



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Vignette clinique

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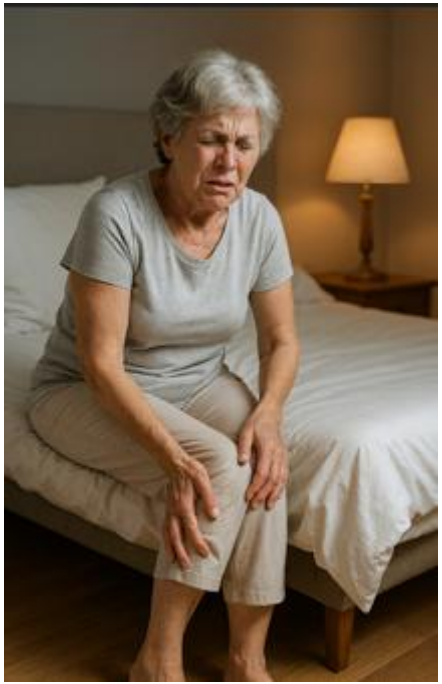

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Merci pour votre attention !

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Durée de sommeil et risque d'hypertension

Dr Ioannis Kokkinakis, médecin agréé, chargé de cours
Jeudi d'Unisanté, 12 février 2026

Ioannis.kokkinakis@unisante.ch

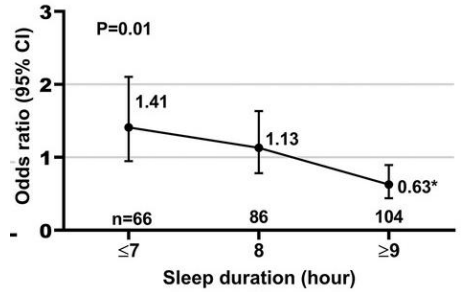
Vignette clinique

- Patiente de 50 ans, enseignante
- Autocontrôle de TA à domicile, valeurs TAS 140-150mHg
- Sommeil de 5-6 heures / nuit, fatigue, stress au travail
- Se pose la question si sa durée de sommeil est associée à l'HTA

Contexte

- Plusieurs études : lien hypertension ↔ sommeil

- Association entre la durée du sommeil nocturne et le risque d'hypertension ?



ESC European Society of Cardiology — The ESC

2024 ESC Guidelines

J of Clinical Hypertension, Volume: 24, Issue: 10, Pages: 1255-1262, First published: 09 August 2022, DOI: (10.1111/jch.14532)

«Indépendamment des apnées et d'autres troubles du sommeil, il a été démontré qu'un sommeil insuffisant était associé à l'hypertension nocturne et à un risque cardiovasculaire accru»

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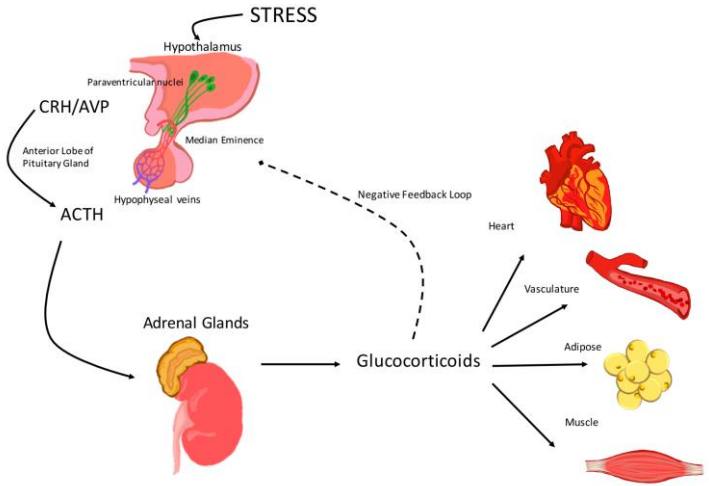
Hypothèses – mécanismes pathophysiologiques

Manque de sommeil → Perturbation hormonale → Elévation du cortisol → TA élevée



Int. J. Mol. Sci. 2017, *18*(10), 2150; https://doi.org/10.3390/ijms18102150

Lien de causalité ou association simple?

The Environment and Disease: Association or Causation?

by Sir Austin Bradford Hill CBE DSC FRCP(hon) FRS (*Professor Emeritus of Medical Statistics, University of London*)

Proceedings of the Royal Society of Medicine *Meeting January 14 1965*

Strength: Strong association hints at causality.

Consistency: Findings repeat across studies/populations.

Specificity: Association tied to a specific cause-effect combination.

Temporality: Cause comes before effect.

Dose-response gradient: Effect rises with greater exposure.

Plausibility: Reasonable mechanism established or theorised.

Coherence: No major conflict with existing knowledge.

Experiment: Testing cause through any intervention (RCT, FAFO, etc).

Analogy: Causal link seen in similar situations.

Alternative explanations: Chance, bias, confounding considered.

https://juliankingnz.substack.com/p/applying-bradford-hill-criteria-to

Étude

The Association Between Sleep Duration and the Risk of Hypertension: A Systematic Review and Meta-analysis of Cohort Studies

Jianghan Qi, M.Med[1], Meiling Yang, M.Med[2], Shanyuan Zhang, M.Med[1], Chenchen He, M.Med[1], Xiaodan Bao, MPH[3], Baochang He, M.D.[4], Yao Lin, M.D.[5], Jianfeng Chu, M.D.[1,6], and Keji Chen, M.D.[7]

[1]College of Integrative Medicine, Academy of Integrative Medicine, Fujian University of Traditional Chinese Medicine, Fuzhou, Fujian, China; [2]The Third Affiliated Hospital of Fujian University of Traditional Chinese Medicine, Fuzhou, China; [3]School of Health Management, Fujian Medical University, Fuzhou, Fujian, China; [4]Department of Epidemiology, The School of Public Health, Fujian Medical University, Fuzhou, Fujian, China; [5]Fujian-Macao Science and Technology Cooperation Base of Traditional Chinese Medicine-Oriented Chronic Disease Prevention and Treatment, Innovation and Transformation Center, Fujian University of Traditional Chinese Medicine, Fuzhou, Fujian, China; [6]Fujian Key Laboratory of Integrative Medicine On Geriatrics, Fuzhou, Fujian, China; [7]Xiyuan Hospital of China Academy of Chinese Medical Sciences, Beijing, China

ABSTRACT

BACKGROUND: Hypertension onset is linked to sleep, but the precise sleep duration affecting it remains unclear. Our goal is to pinpoint the sleep duration impacting hypertension incidence, offering valuable insights for prevention and management.

METHODS: We conducted a systematic search in PubMed, Embase, Web of Science, CNKI, Cqvip, and Wanfang Database, up to May 30, 2023, focusing on cohort studies examining the association between nighttime sleep duration and hypertension risk in adults aged 16 and above. Two authors independently performed data extraction, quality assessment, and synthesis based on predefined criteria. A random-effects model was used to estimate pooled effect sizes with 95% confidence intervals (CIs). Heterogeneity was quantified using the I^2 statistic, with potential sources explored through subgroup and sensitivity analyses to validate the robustness of the results.

RESULTS: Out of the 173,734 participants included in the meta-analysis, 41,528 eventually developed hypertension. The analysis revealed a correlation between short sleep duration and increased risk of hypertension: 1.07 (95% CI 1.00–1.14) for those sleeping ≤ 7 h, 1.04 (95% CI 1.02–1.07) for 6–7 h, and 1.17 (95% CI 1.06–1.28) for < 6 h. For women, with sleep duration 6–7 and < 6 h, the pooled risk of hypertension incidence was 1.07 (1.02–1.12) and 1.12 (1.06–1.19). In individuals under 60 years of age, an elevated risk of hypertension was observed with sleep durations of less than 6 h and between 6 and 7 h, with pooled risks of 1.24 (95% CI 1.10–1.39) and 1.05 (95% CI 1.00–1.11), respectively.

CONCLUSIONS: Hypertension is significantly correlated with sleep duration under 7 h, especially in women and those under 60, highlighting the importance of sleep management in hypertension prevention and treatment strategies.

TRIAL REGISTRATION: PROSPERO: CRD42022345513.

Jianghan Qi and Meiling Yang contributed equally to this work.Received September 9, 2024
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KEY WORDS: nighttime sleep duration; hypertension; meta-analysis; female

J Gen Intern Med
DOI: 10.1007/s11606-025-09398-6

INTRODUCTION

Hypertension is the pivotal risk factor associated with heart disease, stroke, chronic kidney disorders, and dementia.[1] The 66th World Health Assembly in 2013 proposed a global integrated monitoring framework and targets for the prevention and control of non-communicable diseases with the goal to reduce 25% of the overall incidence of hypertension (compared to 2010 levels) by 2025, which may be difficult to achieve due to the complex pathogeny of hypertension.[2,3]

The current crux of reducing the prevalence of hypertension is how to effectively manage known underlying risk factors of hypertension.[4] While global guidelines propose comprehensive lifestyle and diet programs targeting various risk factors such as obesity, smoking, dyslipidemia, and abnormal glucose metabolism, specific recommendations regarding sleep duration are missing in these guidelines, which is probably because the association between sleep duration and hypertension remains a subject of ongoing debate.[5–9]

When exploring the relationship between nighttime sleep duration and the risk of hypertension, findings from various meta-analyses remain inconsistent. For instance, Yan Wang's study suggests that long sleep duration reduces the risk of hypertension, whereas Luyao Wang's research[10] indicates that long sleep duration has no significant association with hypertension incidence. In contrast, Xiaofan Guo's study reports that prolonged sleep duration may increase the risk of hypertension.[11] Notably, Xiaofan Guo's meta-analysis found no significant association between long sleep duration and hypertension risk in females, while Yan Wang's research highlights that excessive sleep duration may also increase the risk of hypertension among females.[11,12]

The Association Between Sleep Duration and the Risk of Hypertension: A Systematic Review and Meta-analysis of Cohort Studies

Jianghan Qi, Meiling Yang, Shanyuan Zhang, Chenchen He, Xiaodan Bao, Baochang He, Yao Lin, Jianfeng Chu, and Keji Chen

J Gen Intern Med, 02.2025

DOI: 10.1007/s11606-025-09398-6

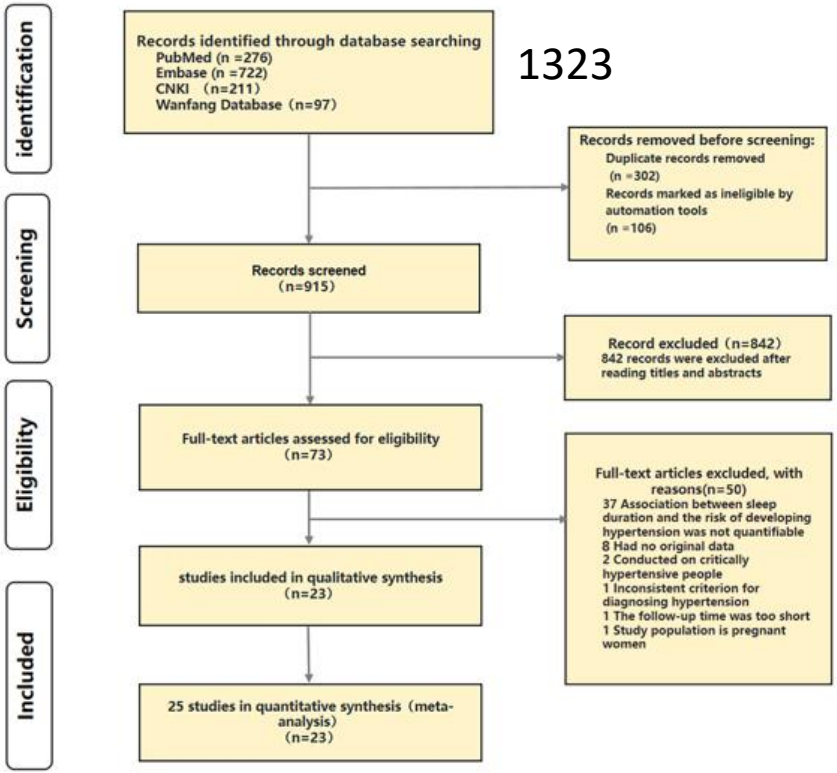
Objectifs de l’étude selon les auteurs

- Etudier la corrélation entre la durée du sommeil nocturne et le risque de l’hypertension
- Etablir une référence solide pour la révision des lignes directrices d’HTA afin d'y inclure la gestion du sommeil
- Meilleur contrôle de l'incidence de l’HTA

Méthodologie

- Revue systématique avec méta-analyse
- **Critères d'inclusion :**
  - Etudes de cohorte prospectives publiées chez l'adulte (tailles d'effet, RR, HR, IC)
  - Association entre la durée du sommeil nocturne (exposition) et l'hypertension (outcome)
- **Critère d'exclusion :**
  - Si pas TAS ≥ 140mmHg et/ou TAD ≥ 90mmHg comme critères de HTA
  - Sans données originales, les lettres, les commentaires, période de suivi < 1 an
- Etudes jusqu'au 30 mai 2022

Figure S1. Study selection process for inclusion in the meta-analysis



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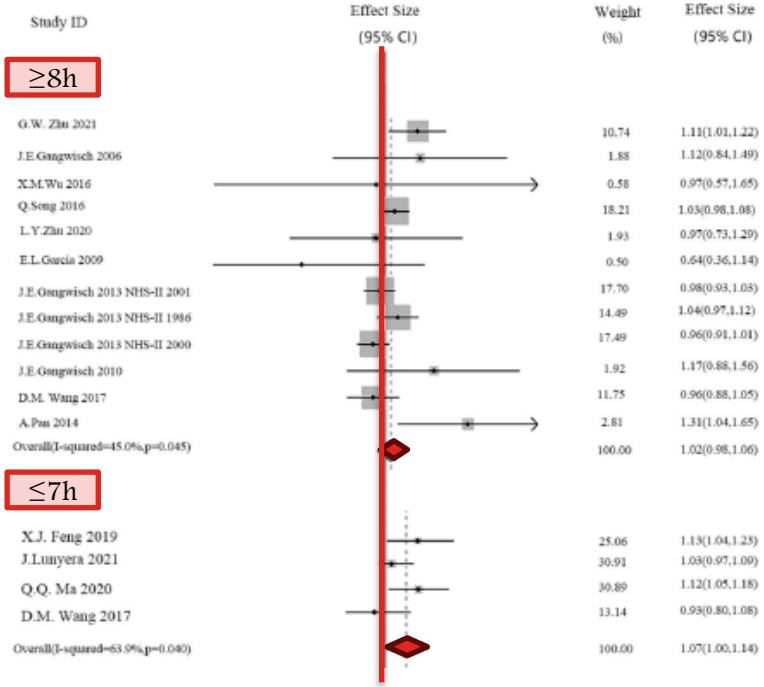
Outcomes



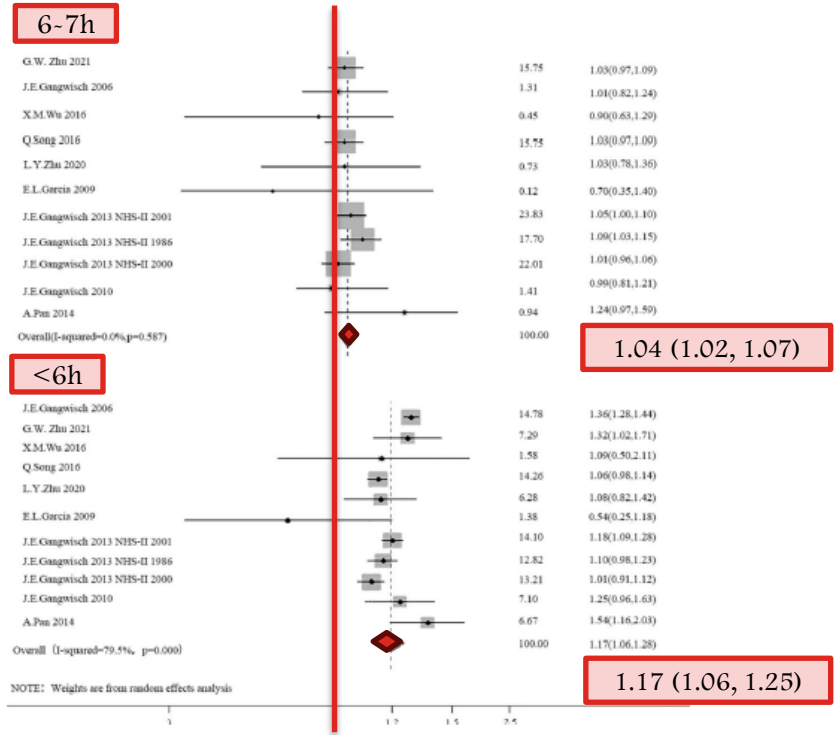


Figure 1 The relationship between different sleep durations and the risk of hypertension. *TST, total sleep duration.

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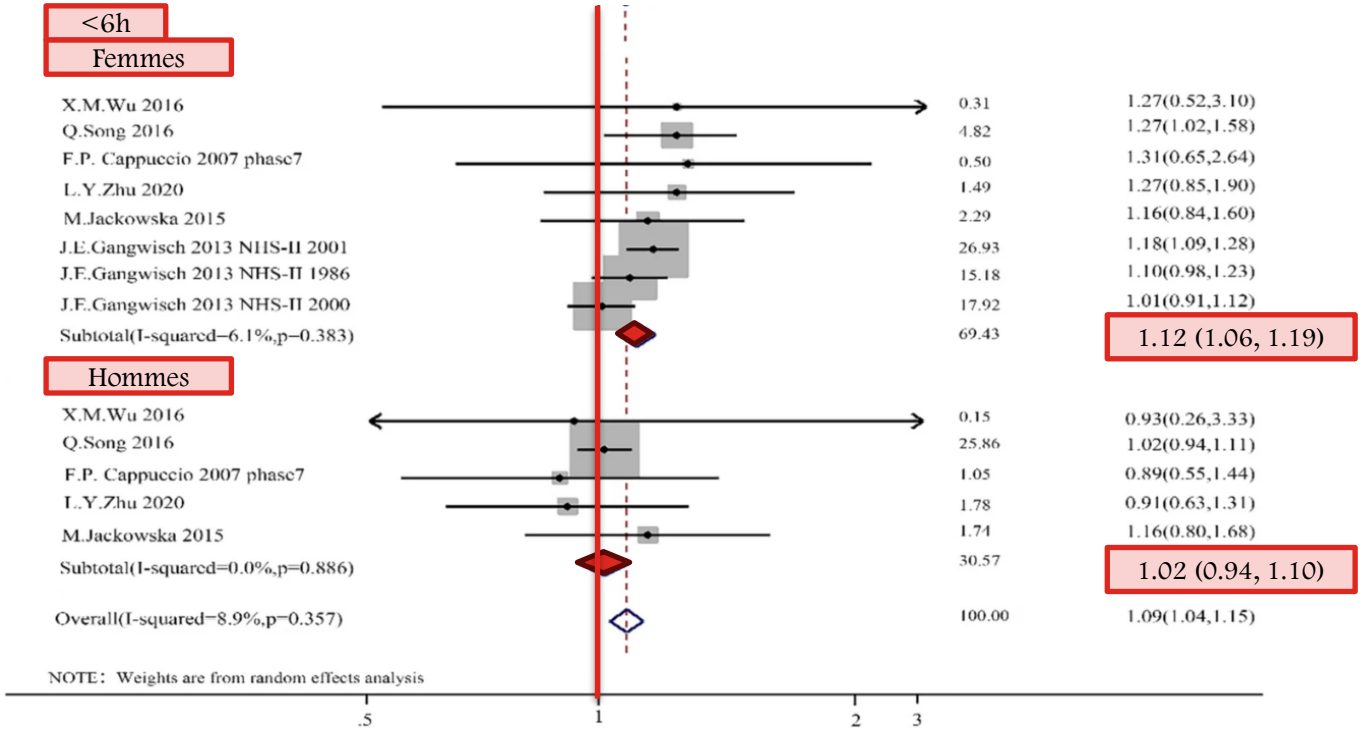
Outcomes



The relationship between sleep duration and risk of hypertension in people of different genders. *TST, total sleep duration.

Outcomes

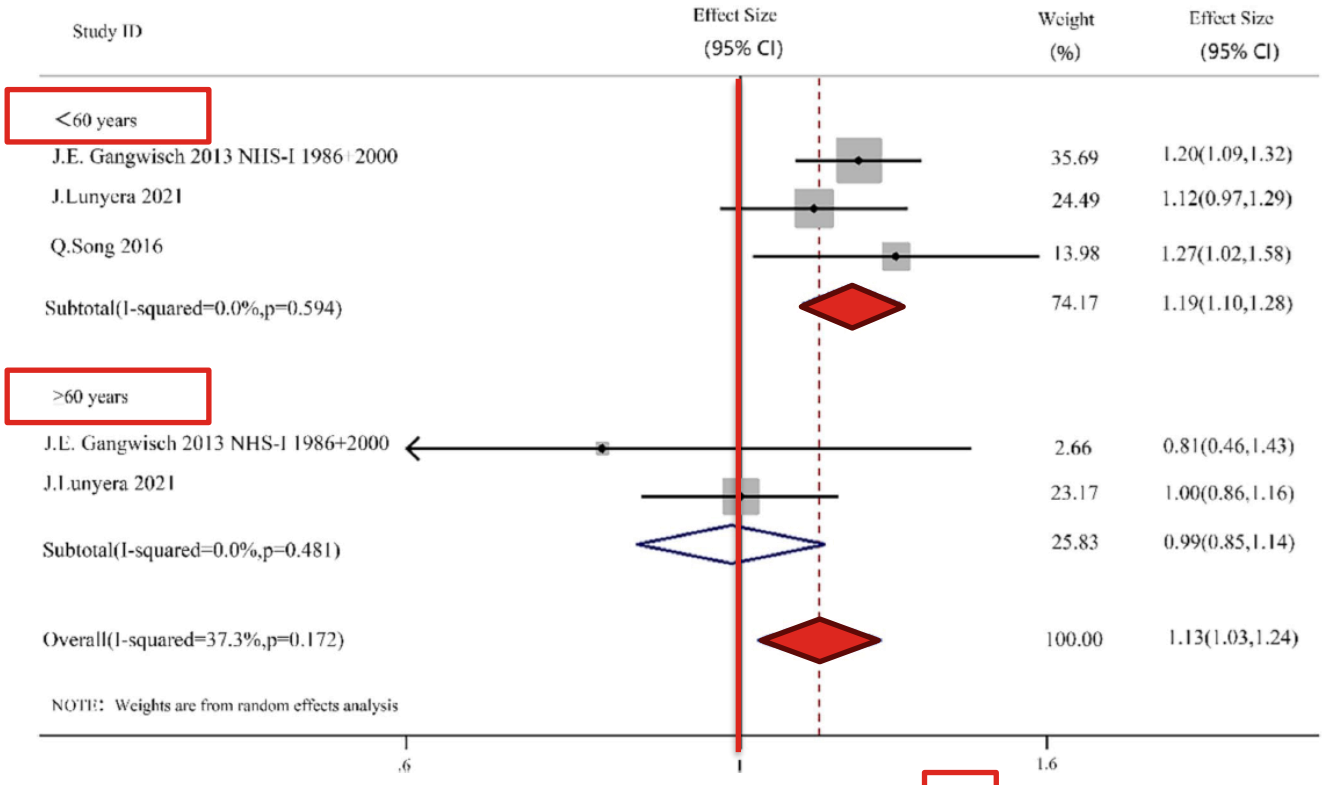


Figure 4 Relationship between sleep time less than 6 h and hypertension in women of different ages.

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Outcomes

- Sommeil < 7h/nuit → risque augmenté de HTA
- Particulièrement marquée si < 6h →RR : 1,17 (IC 95 % : 1,06-1,28)

- Plus à risque :
  - Femmes → RR de 1,12 (IC 95 % 1,06-1,19)
  - < 60 ans → RR 1,24 (IC 95 % : 1,10-1,39)

- À l'inverse, dormir plus de 8 heures ne semble pas modifier le risque d'hypertension.

Points forts et limitations

Points forts :

- Large échantillon et puissance statistique élevée
- Avancée méthodologique par rapport aux études précédentes
- Intérêt clinique et scientifique

Points faibles :

- Absence de mesures objectives de la qualité du sommeil
- Potentiellement des facteurs confondants non mesurés
- Portée limitée de l'analyse du sommeil (Focus durée sommeil nocturne. Qualité?)

Conclusions des auteurs

- Un sommeil de < 7 heures est associé à un risque accru d'hypertension

- Particulièrement chez les femmes et chez les adultes de moins de 60 ans

Perspectives

- Cette étude souligne l'importance d'un sommeil suffisant comme facteur de prévention cardiovasculaire
- → Particulièrement pour les adultes actifs

- Implications pratiques pour la médecine de premiers recours ?

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Merci pour votre attention

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