RESEARCH DEPARTMENT OF CLINICAL, EDUCATIONAL AND HEALTH PSYCHOLOGY

DIVISION OF PSYCHOLOGY AND LANGUAGE SCIENCES

Management of Menopause transition in primary health care

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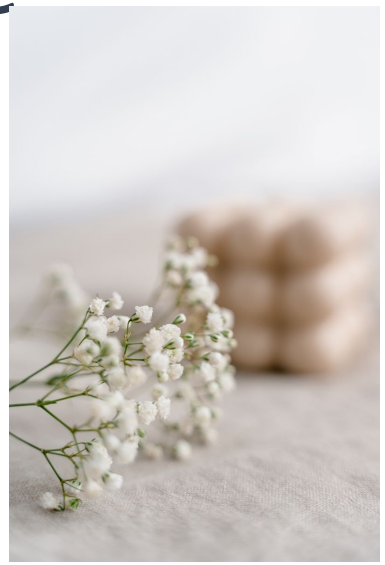


My Story

- Begun aged 40.
- ‘Black fog’ type moments, usually related to language and verbal memory.
- Discussions with GP. Possible dementia or brain tumour?
- Blood tests – significantly low levels of oestrogen and testosterone.
- Reversal of symptoms following hormone therapy.

- Includes difficulty encoding and recalling words, names, stories and numbers, maintaining train of thought, misplacing items, switching between tasks, concentrating, remembering appointments and events.

Study/year	n	*Attention/ working memory*	*Processing speed/motor*	*Executive function*	*Language*	*Visuospatial function*	*Visual memory*	*Verbal learning*	*Verbal memory*
SWAN (2010)	1985	DSB	SDMT					EBMT	EBMT
POAS (2013	403		DS Coding DS					BSRT	BSRT
KIWI (2006)	495	DS	Coding Copy TMT A	TMT B	COWA		CRP		RAVLT
ALSPAC (2019)	2411	DSB	DS Coding		COWA			WMS	WMS
RICAM (2009)	117	DS	DS Coding		COWA	HVOT		RAVLT	RAVLT
		LNS	Grooved pegboard		Category fluency				
WIHS (2014)	443	D2 LNS	SDMT	TMT B	COWA			HVLT-R	HVLT-R
			TMT A	Stroop	Category fluency				

Maki, P. M., & Weber, M. T. (2021). A research primer for studies of cognitive changes across the menopause transition. *Climacteric*, *24*(4), 382-388.

What is the menopause transition?

- Menopause refers to the permanent end of menstruation for 12 months and beyond, average age in UK is 51. Southeast Asian women tend to have an earlier age at menopause (46) and higher prevalence of early menopause.
- Menopause literature primarily focuses on four stages (known as the STRAW+ criteria): late reproductive stage (stage -3), early perimenopause stage (stage -2), late perimenopause stage (stage -1) and early post-menopause stage (stage +1)*

- The menopausal transition (MT), also described as the 'perimenopause', lasts 5-12 years. Is accompanied by multiple symptoms that vary in severity across individuals.

- Can include physical symptoms such as hot flushes and night sweats ('vasomotor symptoms'), cognitive decline and psychological difficulties including depression and anxiety. Combination of symptoms can impact upon daily functioning, interpersonal relationships and quality of life in general.

*Harlow, S. D., Gass, M., Hall, J. E., Lobo, R., Maki, P., Rebar, R. W., . . . de Villiers, T. J. (2012). Executive summary of the Stages of Reproductive A ging Workshop +10: addressing the unfinished agenda of staging reproductive aging. *Climacteric, 15*(2), 105-114. doi:10.3109/13697137.2011.650656

What is 'brain fog'?

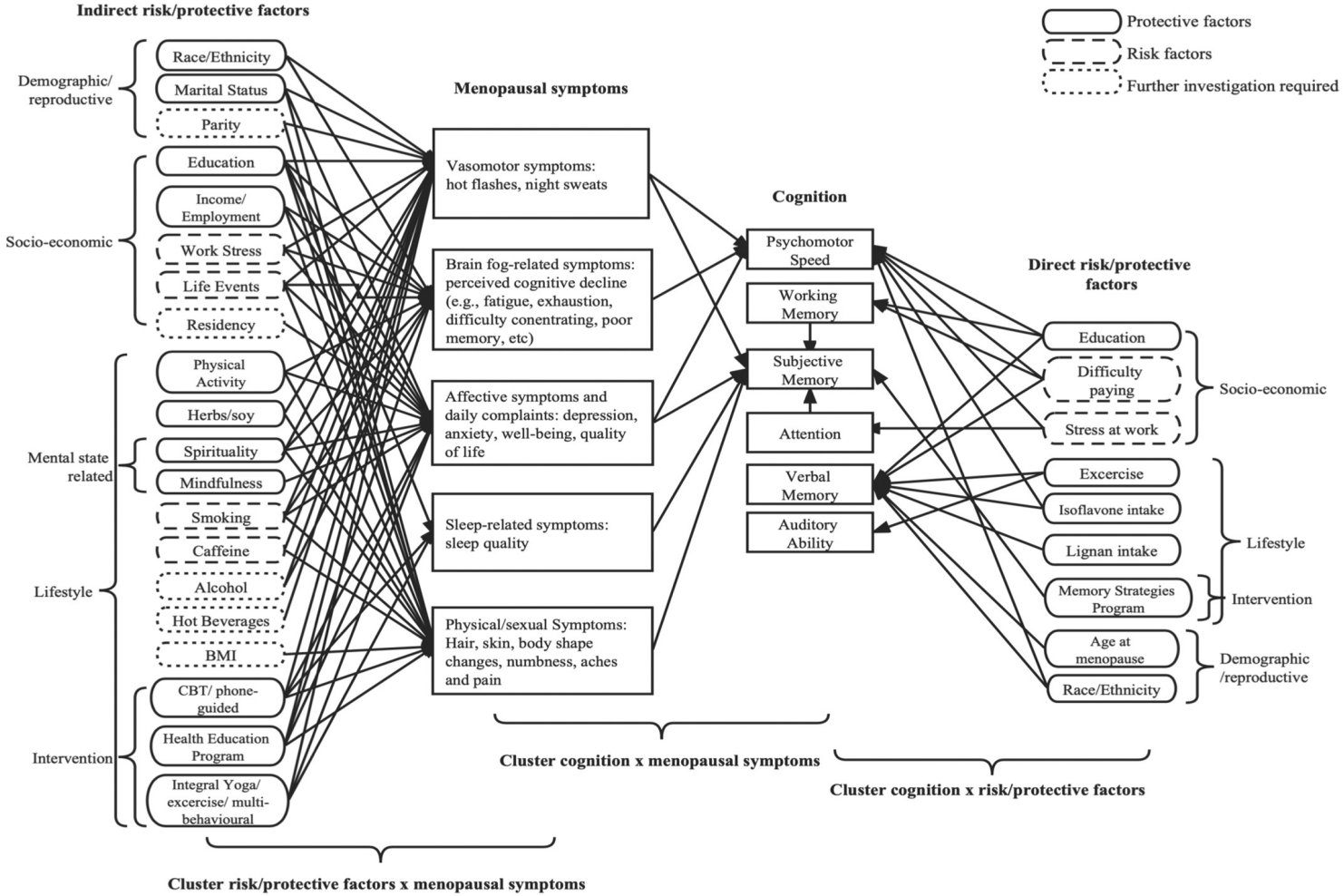
- Constellation of cognitive symptoms during MT, most frequently in memory and attention. Severity differs considerably across women.

- Some studies have shown correlation between subjective and objective performance in verbal memory, others have found objective cognitive measures within normal limits. For most women, difficulties are temporary but may last several years. 11-13% clinically significant.

- Oestrogen and progesterone receptors in brain are important for cognitive function. *Studies show that surgical menopause (removal of ovaries) can lead to decline in verbal memory, semantic memory and processing speed – reversed with HRT.

- Four large trials for HRT early post-menopause, showing neutral effects on cognition. Perhaps missed 'Critical window' for HRT (peri-menopausal).

*Georgakis, M. K., Beskou-Kontou, T., Theodoridis, I., Skalkidou, A., & Petridou, E. T. (2019). Surgical menopause in association with cognitive function and risk of dementia: a systematic review and meta-analysis. *Psychoneuroendocrinology*, *106*, 9-19.



Zhu, C., Thomas, N., Arunogiri, S., & Gurvich, C. (2022). Systematic review and narrative synthesis of cognition in perimenopause: The role of risk factors and menopausal symptoms. Maturitas, 164, 76-86. doi:https://doi.org/10.1016/j.maturitas.2022.06.010

Interaction of vasomotor symptoms, cognition and mental health

- Prevalence of anxiety symptoms is substantial, with estimates of as high as 51% women reporting tension/nervousness or irritability.
- Mood and cognitive problems are likely to be bi-directional, meaning that low mood or anxiety may impact on a person's cognition, and equally cognitive problems may increase anxiety and depression.
- Bi-directional relationship between physical and psychological symptoms (e.g. hot flushes and anxiety, sleep and depression).
- Symptoms in South-East Asian women tend to be less around vasomotor symptoms and more of changes to mood, anxiety and bone/joint pains.

Soares, C. N. (2020). Taking a fresh look at mood, hormones, and menopause. *Menopause*, *27*(3), 371-373.
Ragasudha, A., Minnu, S., & Kumar, R. S. (2021). Menopause Induced Depression, Anxiety, Quality of Life, Lack of Sleep in Women: An Overview. *Journal of Drug Delivery and Therapeutics*, *11*(6), 319-323.
Baber, R. J. (2014). East is east and West is west: perspectives on the menopause in Asia and The West. *Climacteric*, *17*(1), 23-28.

Contents lists available at ScienceDirect

Journal of Affective Disorders

journal homepage: www.elsevier.com/locate/jad

Review article

The risk of depression in the menopausal stages: A systematic review and meta-analysis

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ARTICLE INFO

Keywords:
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Depression
Midlife
meta-analysis
Systematic review

ABSTRACT

Introduction: For many women, menopause transition can be a period of emotional and physical changes, with different menopausal stages associated with varied risk for depressive symptoms and diagnosis. This review aimed to conduct a systematic review and meta-analyses to provide an estimate for the risk of developing a) clinical depression and b) depressive symptoms at different menopausal stages.

Methods: We searched Medline, PsycInfo, Embase and Web of Science from inception to July 2023. Seventeen prospective cohort studies with a total of 16061 women were included in the review, and risk of bias was assessed using the Quality in Prognosis Studies tool (QUIPS). Seven papers with a total of 9141 participants were included in meta-analyses, using random effects models and pooled odds ratios (OR) calculated for depressive symptoms and diagnoses.

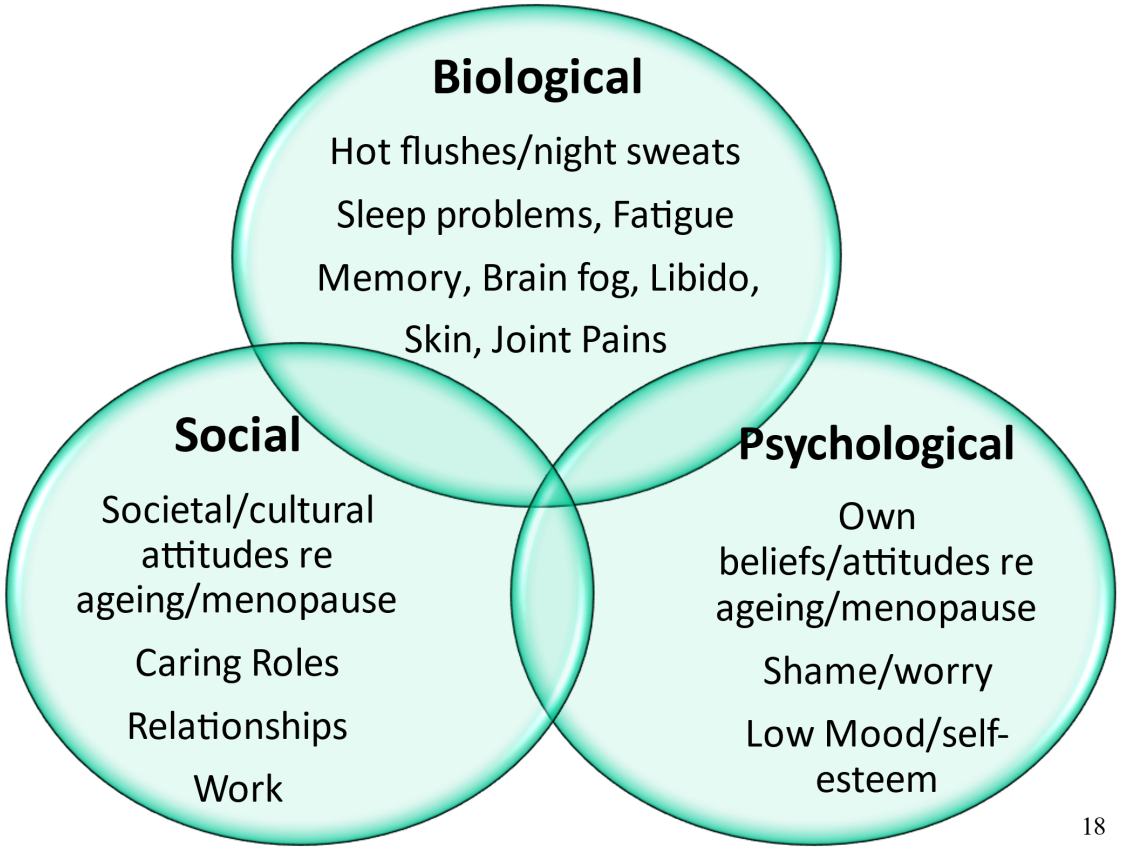
Results: Perimenopausal women were found to be at a significantly higher risk for depressive symptoms and diagnoses, compared to premenopausal women (OR = 1.40; 95 % CI: 1.21; 1.61, $p < .001$). We did not find a significantly increased risk for depressive symptoms or diagnoses in post-menopausal, compared to pre-menopausal women.

Limitations: Studies used different criteria to classify the menopausal stages and different measures for depression, which may have contributed to the heterogeneity seen in some models. We were unable to include a model that compared *peri* to post-menopause, due to a lack of longitudinal studies comparing the two stages.

Conclusions: The risk of depression in perimenopause, shown in an ethnically diverse sample; highlights the clinical need for screening and support in this potentially vulnerable group.

- Systematic review and meta-analyses to provide estimate for risk of a) clinical depression and b) depressive symptoms at different menopausal stages.
- Seventeen prospective cohort studies with a total of 16,061 women included. Seven papers with a total of 9141 participants included in meta-analyses.
- Results: Perimenopausal women were found to be at a significantly higher risk for depressive symptoms and diagnoses, compared to premenopausal women.
- No significantly increased risk for depressive symptoms or diagnoses in post-menopausal, compared to pre-menopausal women.
- Strengths: large, diverse sample including White, African American, Asian, Hispanic, Chinese & Japanese.
- Limitations: Different criteria used to classify menopausal stages and measures for depression. Could not compare peri to post-menopause (lack of data).
- Conclusions: Clinical need for screening/support for Depression in this potentially vulnerable group.

Why is Menopause/Mid Life Tricky?



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Review Article

The effectiveness of psychosocial interventions on non-physiological symptoms of menopause: A systematic review and meta-analysis

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ARTICLE INFO

Keywords:
Menopause
Cognitive behavior therapy
Systematic review
meta-analysis
Mindfulness-based interventions
Mood

ABSTRACT

Background: Menopause, a crucial transitioning stage for women, can significantly impact mood and [illegible] We aimed to evaluate the effectiveness of psychosocial interventions on non-physiological symptoms of menopause (depression, anxiety, cognition, and quality of life) through systematic review and meta-analysis.

Methods: Five databases were searched from inception to August 2023 for randomized controlled trials. Pre- and post-test means and standard deviations for groups were extracted and used to calculate effect sizes. The effectiveness of Cognitive Behavioral Therapy (CBT) and Mindfulness-Based Interventions (MBI) on depression and anxiety were examined by subgroup analysis.

Results: Thirty studies comprising 3501 women were included. From meta-analysis, mood symptoms significantly benefited from CBT (anxiety: d = −0.22, 95 % CI = -0.35, −0.10; depression: d = −0.33, 95 % CI = -0.45, −0.21) and MBI (anxiety: d = −0.56, 95 % CI = -0.74, −0.39; depression: d = −0.27, 95 % CI = -0.45, −0.09). Psychosocial interventions were also found to significantly improve cognition (d = −0.23, 95 % CI = -0.40, −0.06) and quality of life (d = −0.78, 95 % CI = -0.93, −0.63). Mean total therapy hours ('dose') was lower for CBT (11.3) than MBI (18.6), indicating reduced costs and burden for women.

Limitations: Data regarding menopausal status were not collected, limiting our ability to identify the optimal timing of interventions. Potential longer-term, effects of interventions were not investigated.

Conclusion: Our review highlighted the value of psychosocial interventions in improving non-physiological symptoms (particularly depression and anxiety) during menopause, noting the heterogeneity of findings and importance of implementing effective interventions.

Talking therapies could help women through menopause, study finds

CBT and MBI shown to help with quality of life and to lesser extent anxiety and depression

The UCL study found a clear link between the physical and [illegible] menopause. Photograph: Microgen Images/Getty Images/Scie[illegible]

Meditation could help relieve menopausal anxiety and depression – study

The research suggested alternatives to hormone replacement therapy for women with memory and mood [illegible]ssues.

[illegible]ane Kirby • Wednesday 28 February 2024 00:01 GMT

The effectiveness of psychosocial interventions on non-physiological symptoms of menopause: A systematic review and meta-analysis*.

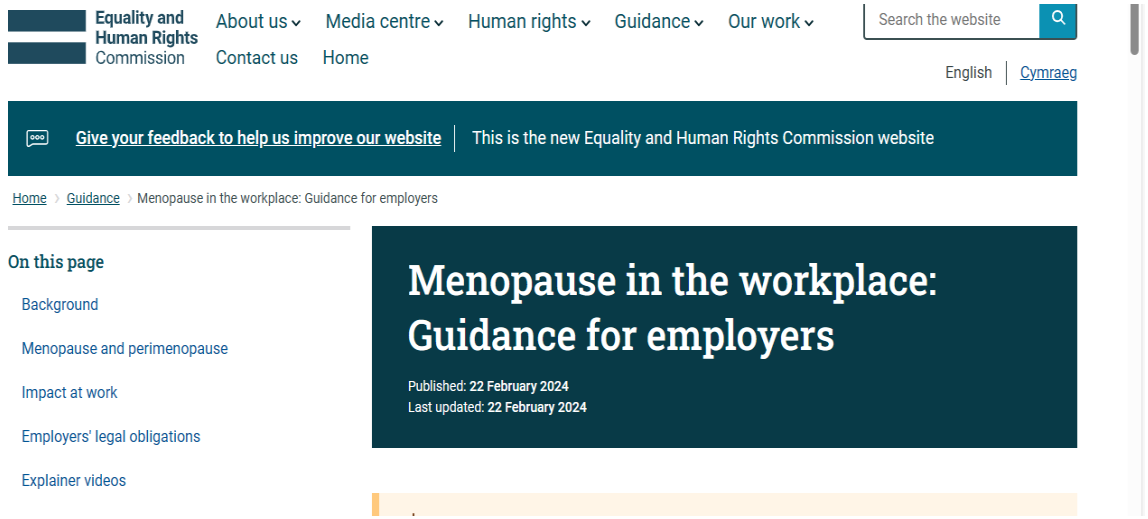
- Key study findings from 30 studies and 3501 women. Majority were Cognitive Behavioual Therapy (CBT) and Mindfulness Based Interventions (MBI), with some other interventions such as couples therapy and counselling.
    - After treatment there was:
        - Significant improvement in anxiety symptoms. CBT (small effect). MBI (medium effect)
        - Significant improvement in depression symptoms CBT. (small to medium effect). MBI (small effect)
        - Significant improvement in Quality of Life (medium to large effect)
- Strengths: Included studies from 14 different countries, size (30 studies and >3000 women).
- Limitations: Not possible to look at stage of menopause, limited by the follow-up time, inconclusive in terms of cognition – included only three studies using small subscale of menopause measure.
- Future research needs to consider implementation context (MBI interventions around 18 hours, CBT around 11 hours), impact on cognition.

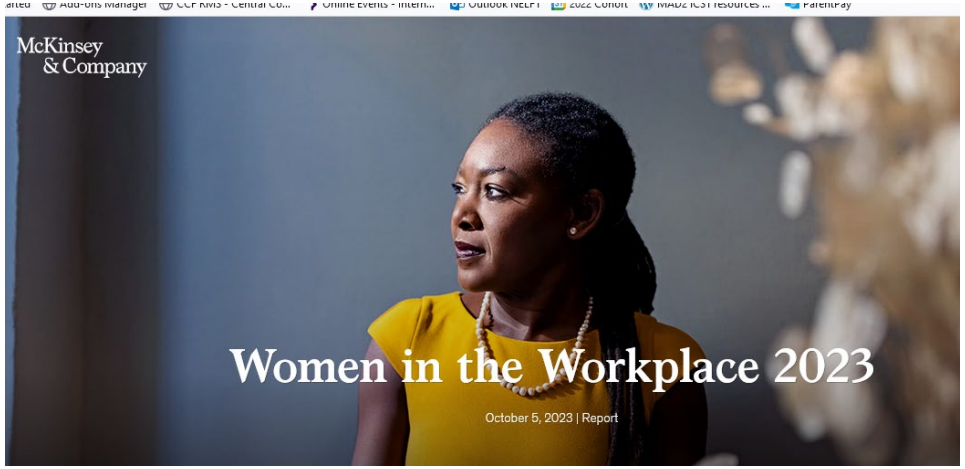
*Spector, A., Li, Z., He, L., Badawy, Y., & Desai, R. (2024). The effectiveness of psychosocial interventions on non-physiological symptoms of menopause: A systematic review and meta-analysis. *Journal of Affective Disorders*.

Menopause in the workplace

- 1 in 10 women will quit their job, 1 in 4 will reduce hours during MT *(Fawcett Society, 2022)*
- Government recruited the first ever 'Menopause Tsar' in 2023, with aim to get the over 50's back to work.
- 67% of women say menopause has had a mostly negative effect on them at work (McKinsey & Co survey, *Oct 2023)*
- Equality and Human Rights commission (February 2024):

"If menopause symptoms have a long term and substantial impact on a woman's ability to carry out normal day-to-day activities, these symptoms could be considered a disability... employer will be under a legal obligation to make reasonable adjustments"

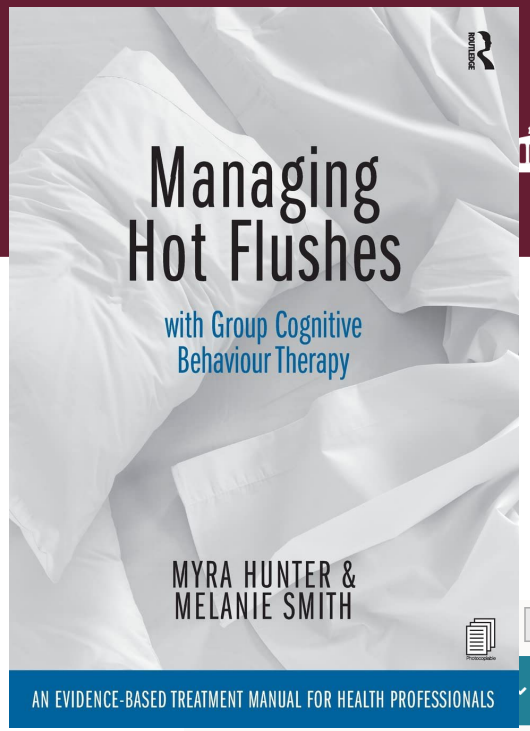


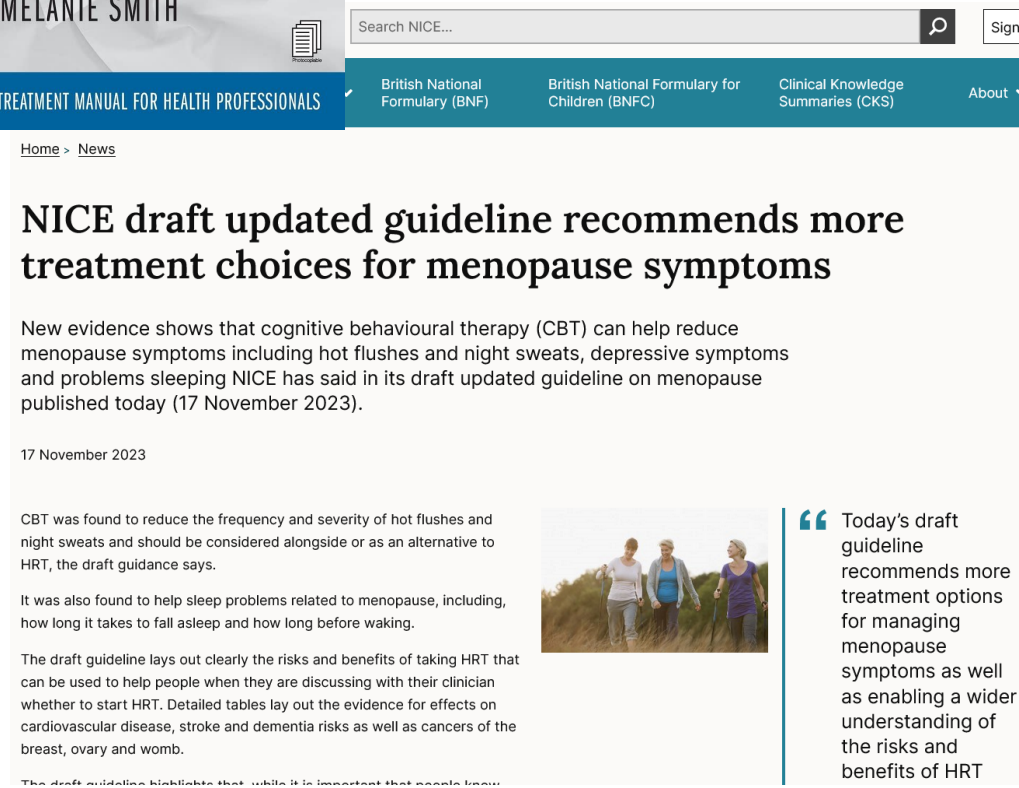


What can be done?

- First UK NICE guidelines 2015, currently being revised (2024 guidelines to be produced in July 2024). Revisions recommend Cognitive Behaviour Therapy (CBT) for mood, sleep and vasomotor symptoms.

- In the absence of cognitive interventions, services could consider:
- 1) Education about link with menopause, the brain and psychological difficulties.
- 2) Peer support.
- 3) Supportive environments and compensatory strategies.





Avoid distractions	**Eliminate visual clutter, turn phone and email alerts off when engaging in tasks.**
Optimising scheduling	Avoid back-to-back appointments, schedule cognitively demanding tasks at your optimal time of day (e.g. first thing).
Visual association	Create visual images to remember words or names. For example, remembering the name Cara by visualising her driving a car.
Use of compensatory memory aids	Diaries, mobile phones, setting timers

Menopause Mind Lab

Menopause Mind Lab at University College London

Welcome to the newly formed Menopause Mind Lab at UCL. We are a team of researchers and clinicians dedicated to understand more about the impact of menopause and peri-menopause on both cognition and wellbeing. We are interested in the impact of multiple psychological, social and cultural factors as well as the biological changes experienced during this transition. We aim to develop and evaluate interventions to improve cognition, mood and overall quality of life.

The Team

Our Projects

Events and Contact

www.ucl.ac.uk/pals/menopause-mind-lab