

MEDIA RELEASE

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For Immediate Publication

MENOPAUSAL ARTHRALGIA REVEALED AS TOP SYMPTOM IN SINGAPOREAN WOMEN: NUHS STUDIES

Researchers from the Integrated Women's Health Programme (IWHP) at NUH and NUS Medicine shed new light on menopausal symptoms among midlife Singaporean women

SINGAPORE — Crossing the threshold of 50, Mdm Amy Fang, like many midlife women, confronted a cascade of menopausal symptoms. Among them, arthralgia — muscular and joint pain — proved to be the most debilitating, causing a decade-long struggle that impacted her spine, nerves, and daily functioning. It led to severe deterioration, hindering her ability to perform basic tasks and leaving her grappling with excruciating discomfort.

"Menopausal arthralgia or joint pain is a condition that even clinicians globally are not well aware of," highlighted Professor Yong Eu Leong, Emeritus Consultant at the National University Hospital's Department of Obstetrics and Gynaecology. "Filling these gaps will help understand the burden of arthralgia and its associated factors among a healthy population of midlife women and may shed understanding on improving its management."

Mdm Fang's journey mirrors the plight of many women experiencing menopausal symptoms. Her story of enduring a decade-long battle with joint and nerve pains underscores the severity and life-altering impact of menopausal arthralgia. She is one of the many midlife women seen at NUH every year for menopausal symptoms. Patients with such symptoms have significantly increased over the years especially due to the ageing population and greater awareness.

Researchers from the Integrated Women's Health Programme (IWHP) at the National University Hospital (NUH) and the Yong Loo Lin School of Medicine, National University of Singapore (NUS Medicine), conducted two comprehensive studies last year funded by the Singapore National Medical Research Council.

The earlier study published in October 2023 revealed that 62.6 per cent of 1,054 Singaporean women reported at least one moderate to extremely severe symptom during their menopause¹. The findings were published in *Maturitas*, an international journal that focuses on midlife and post-productive health.

Arthralgia was ranked as the top menopausal symptom, significantly affecting a third (32.9 per cent) of the cohort.

¹ Logan S, Wong BWX, Tan JHI, Kramer MS, Yong EL. Menopausal symptoms in midlife Singaporean women: Prevalence rates and associated factors from the Integrated Women's Health Programme (IWHP). *Maturitas*. 2023 Dec; 178:107853. doi: 10.1016/j.maturitas.2023.107853. Epub 2023 Oct 6. PMID: 37806008.

This groundbreaking research, unique to Southeast Asia and focused on Chinese, Malay, and Indian ethnicities, highlighted arthralgia's prominence over other symptoms such as sleep problems (27.5 per cent), vaginal dryness (20.3 per cent), physical and mental exhaustion (19.6 per cent), and hot flushes (18.6 per cent).

A second study published in December 2023 affirms the significance of arthralgia as a condition that affects midlife women. The study found that a huge proportion (74.9 per cent) in the cohort of 1,120 midlife women suffered from some form of arthralgia, ranging from mild to very severe².

The majority of the women studied experienced arthralgia in the postmenopausal period, and it is associated with other menopausal symptoms of vaginal dryness, physical and mental exhaustion as well as poor muscle strength. The study was published in *Climacteric*, the official journal of the International Menopause Society.

Prof Yong added: "Our studies have revealed that arthralgia often correlates with other challenging symptoms during the postmenopausal phase, indicating a complex interplay within menopausal experiences. Arthralgia can be debilitating and may lead to a decline in the quality of life among healthy midlife women. Despite being one of the most frequent complaints, there is a paucity of studies examining the risk factors associated with this condition."

Diverging from western studies, the findings underscore the necessity of understanding and managing menopausal symptoms, particularly arthralgia, in midlife Singaporean women.

In response to these critical findings, the IWHP is gearing up for a follow-up study. Collaborating with physiotherapists from NUH, the team aims to develop targeted interventions, including exercise regimes to enhance muscle strength, along with exploring menopausal hormone therapy's potential in alleviating joint pains and improving overall well-being for premenopausal, perimenopausal, and postmenopausal women.

This forthcoming research endeavours to fill crucial gaps in managing menopausal symptoms among Singaporean women, ultimately enhancing their quality of life. For further information regarding IWHP and other midlife women health studies, please email: s_bmy@edu.sg.

² B. W. X. Wong, Y. H. Chan, S. Logan, M. S. Kramer & E. L. Yong (2023) Arthralgia in midlife Singaporean women: the Integrated Women's Health Program (IWHP), *Climacteric*, DOI: 10.1080/13697137.2023.2287626

Chinese Glossary

National University Health System (NUHS)	国立大学医学组织 (国大医学组织)
National University Hospital (NUH)	国立大学医院 (国大医院)
Yong Loo Lin School of Medicine, National University of Singapore (NUS Medicine)	新加坡国立大学杨潞龄医学院 (国大杨潞龄医学院)
Professor Yong Eu Leong, Emeritus Consultant, Department of Obstetrics and Gynaecology, National University Hospital	杨有亮教授 荣誉顾问医生, 妇产科, 国立大学医院
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Ms Cammy Tsai Principal Physiotherapist, Department of Rehabilitation, NUH	蔡家齐女士 首席物理治疗师, 国大医院
Integrated Women's Health Programme (IWHP)	女性综合健康计划

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About the National University Health System (NUHS)

The National University Health System (NUHS) aims to transform how illness is prevented and managed by discovering causes of disease, development of more effective treatments through collaborative multidisciplinary research and clinical trials, and creation of better technologies and care delivery systems in partnership with others who share the same values and vision.

Institutions in the NUHS Group include the National University Hospital, Ng Teng Fong General Hospital, Jurong Community Hospital and Alexandra Hospital; three National Specialty Centres - National University Cancer Institute, Singapore (NCIS), National University Heart Centre, Singapore (NUHCS) and National University Centre for Oral Health, Singapore (NUCOHS); the National University Polyclinics (NUP); Jurong Medical Centre; and three NUS health sciences schools – NUS Yong Loo Lin School of Medicine (including the Alice Lee Centre for Nursing Studies), NUS Faculty of Dentistry and NUS Saw Swee Hock School of Public Health.

With member institutions under a common governance structure, NUHS creates synergies for the advancement of health by integrating patient care, health science education and biomedical research.

As a Regional Health System, NUHS works closely with health and social care partners across Singapore to develop and implement programmes that contribute to a healthy and engaged population in the Western part of Singapore.

For more information, please visit www.nuhs.edu.sg.

About the National University Hospital (NUH)

The National University Hospital (NUH) is Singapore's leading university hospital. While the hospital at Kent Ridge first received its patients on 24 June 1985, our legacy started from 1905, the date of the founding of what is today the NUS Yong Loo Lin School of Medicine. NUH is the principal teaching hospital of the medical school.

Our unique identity as a university hospital is a key attraction for healthcare professionals who aspire to do more than practise tertiary medical care. We offer an environment where research and teaching are an integral part of medicine, and continue to shape medicine and transform care for the community we care for.

We are an academic medical centre with over 1,200-beds, serving more than one million patients a year with over 50 medical, surgical and dental specialities. NUH is the only public and not-for-profit hospital in Singapore to provide trusted care for adults, women and children under one roof, including the only paediatric kidney and liver transplant programme in the country.

The NUH is a key member of the National University Health System (NUHS), one of three public healthcare clusters in Singapore.

About the NUS Yong Loo Lin School of Medicine (NUS Medicine)

The NUS Yong Loo Lin School of Medicine is Singapore's first and largest medical school. Our enduring mission centres on nurturing highly competent, values-driven and inspired healthcare professionals to transform the practice of medicine and improve health around the world.

Through a dynamic and future-oriented five-year curriculum that is inter-disciplinary and inter-professional in nature, our students undergo a holistic learning experience that exposes them to multiple facets of healthcare and prepares them to become visionary leaders and compassionate doctors and nurses of tomorrow. Since the School's founding in 1905, more than 12,000 graduates have passed through our doors.

In our pursuit of health for all, our strategic research programmes focus on innovative, cutting-edge biomedical research with collaborators around the world to deliver high impact solutions to benefit human lives.

The School is the oldest institution of higher learning in the National University of Singapore and a founding institutional member of the National University Health System. It is one of Asia's leading medical schools and ranks among the best in the world (Times Higher Education World University Rankings 2024 by subject and the Quacquarelli Symonds (QS) World University Rankings by subject 2023).

For more information about NUS Medicine, please visit <https://medicine.nus.edu.sg/>.