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**The  
Menopause  
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*Leading the Conversation*

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**White Blood Cell Count Could Predict Severity of COVID-19 Symptoms**

*A new study based on Women's Health Initiative data suggests that a readily available and inexpensive clinical marker of inflammation could be key in predicting debilitating COVID outcomes in postmenopausal women*

CLEVELAND, Ohio (Jan 29, 2025)—Thanks to advances in treatment options, a COVID-19 diagnosis is no longer as scary as it once was, at least for most people. A new study, however, suggests that it may now be easier to predict who is most likely to suffer with more serious disease symptoms based on leukocyte (white blood cell) count. Results of the study are published online today in *Menopause*, the journal of The Menopause Society.

Millions of people worldwide suffer from the ongoing effects of COVID-19—which is caused by the SARs-CoV-2 virus—even months after the initial diagnosis. Cognitive impairment and fatigue are the most common lingering symptoms, with cognitive impairment affecting 70% of patients. Older adults—especially women—are the most at risk.

Although healthcare professionals know a lot more about COVID-19 than they did at the start of the pandemic in 2020, there are still many lingering questions regarding its effect on the human body. Although it is primarily a respiratory disease, sustained effects on multiple organ systems have been documented. Previous studies have shown an excessive immune response to a COVID-19 infection.

Researchers in this latest study, based on secondary analysis of data from the Women's Health Initiative, sought to better understand preexisting risk factors that may make certain adults—especially older postmenopausal women—more vulnerable to more serious ongoing symptoms. Specifically, they examined whether leukocyte count (a widely available clinical marker of systemic inflammation) was associated with COVID disease outcomes.

Based on the results, the researchers concluded that leukocyte count is an independent predictor of COVID symptom severity in postmenopausal women. These results extend the evidence that low-grade inflammation is not only an outcome of COVID symptom severity but may also precede the acute COVID-19 infection. Additional research in this area is necessary, but the initial work is promising because leukocyte count represents an easily accessible, inexpensive clinical marker.

Study results are published in the article “Pre-pandemic leukocyte count is associated with severity of post-acute sequelae of SARS-CoV-2 infection among older women in the Women's Health Initiative.”

“As the authors highlight, post-acute sequelae of severe acute respiratory coronavirus 2 infection significantly affects quality of life, often leading to severe disability. This effect is particularly pronounced in women, who already experience higher rates of cognitive impairment after menopause. By understanding underlying factors, we can better address these challenges and work to mitigate the cascade

of symptoms that follow,” says Dr. Monica Christmas, associate medical director for The Menopause Society.

For more information about menopause and healthy aging, visit [www.menopause.org](http://www.menopause.org).

The Menopause Society (formerly The North American Menopause Society) is dedicated to empowering healthcare professionals and providing them with the tools and resources to improve the health of women during the menopause transition and beyond. As the leading authority on menopause since 1989, the nonprofit, multidisciplinary organization serves as the independent, evidence-based resource for healthcare professionals, researchers, the media, and the public and leads the conversation about improving women’s health and healthcare experiences. To learn more, visit [menopause.org](http://menopause.org).