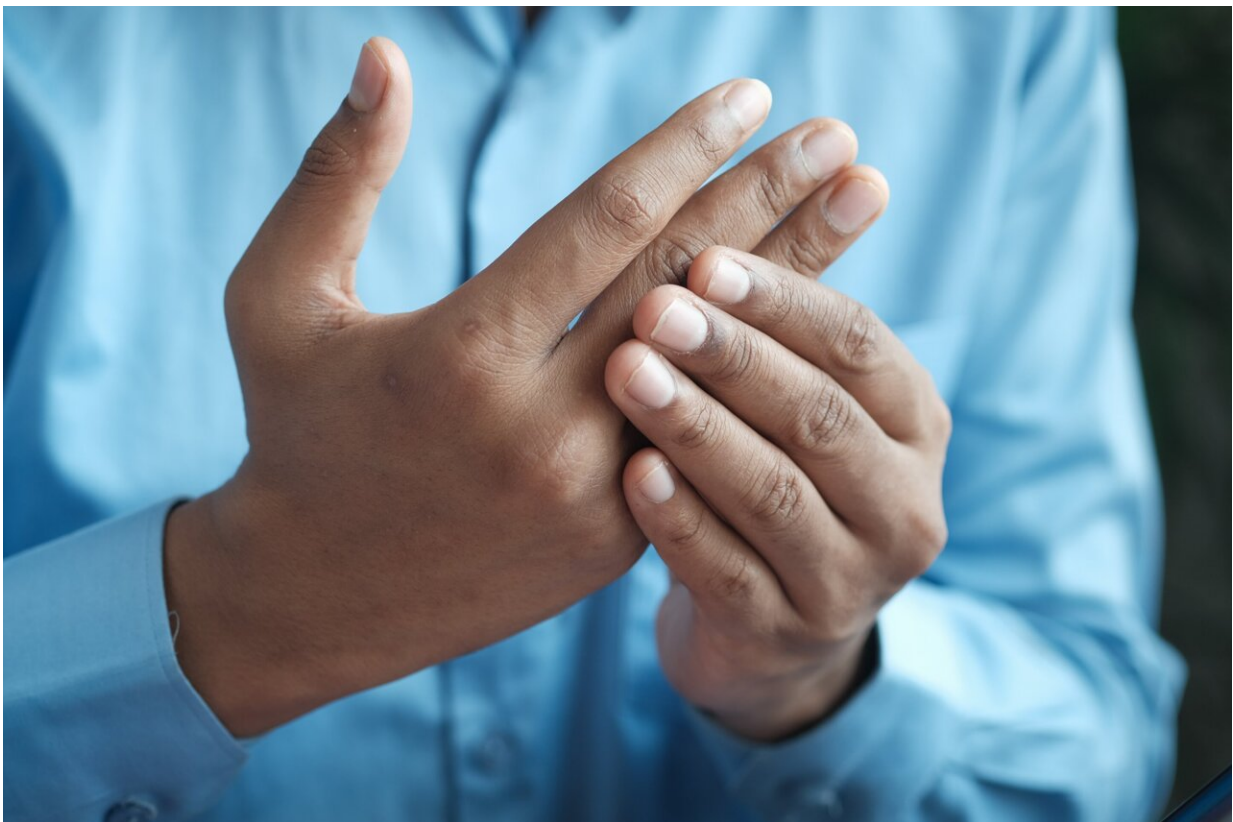


Hope for treating autoimmune diseases: Researchers explore diagnostic role of the systemic inflammation index

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A routine blood test that measures a patient's inflammation levels could improve the early diagnosis and management of a wide range of

debilitating autoimmune diseases.

The systemic inflammation index (SII) uses information from routine laboratory data to measure inflammation in the body and examining this index in a new way could provide vital answers says Strategic Professor of Clinical Pharmacology Arduino Mangoni from Flinders University's College of Medicine and Public Health.

The research, "[The diagnostic role of the systemic inflammation index in patients with immunological diseases: a systematic review and meta-analysis](#)" was published in *Clinical and Experimental Medicine*.

"The index, that measures [inflammatory cells](#) in the blood, could play a key role in [early diagnosis](#), patient management strategies and health initiatives to help with [autoimmune diseases](#)," says Professor Mangoni.

Autoimmune diseases, which include a range of more than 80 different illnesses from [inflammatory bowel disease](#) (Crohn's disease and [ulcerative colitis](#)), [rheumatoid arthritis](#) to type 1 diabetes and multiple sclerosis, occur when the immune system attacks the body.

The diseases affect around 5% of people in Australia and New Zealand and often have symptoms that are extremely distressing and debilitating and, if undetected, can lead to serious organ and body tissue damage.

In a new study by Professor Mangoni and Italian Professor Angelo Zinellu from the University of Sassari, the researchers carried out a [systematic review](#) and meta-analysis of multiple research articles on the potential use of the index in diagnosing the presence and severity of autoimmune diseases.

"A key element for the successful management of these diseases is being able to identify them at an early stage and then provide targeted

treatment," says Professor Mangoni.

"Currently available biomarkers of inflammation, measured in the blood, have limited diagnostic accuracy in several types of immunological diseases leading to harmful delays in the diagnosis and treatment of these conditions.

"This issue has prompted the search for new, more accurate biomarkers of immunological diseases to enhance diagnosis and overall management.

"Among these candidate biomarkers, those that are derived from routine blood tests measuring the number of specific cell types, such as neutrophils, lymphocytes, and monocytes, have been increasingly studied in immunological diseases.

"One of these hematological indices, the SII, has been shown to be particularly accurate in the diagnosis of other conditions characterized by excess inflammation and dysregulated immunity, such as coronavirus disease 2019 (COVID-19).

"Our study of all the evidence so far confirms that it is very likely that the SII is superior to currently available biomarkers and could be routinely used in [clinical practice](#) to optimally diagnose and manage patients with immunological diseases," he says.

More information: Arduino A. Mangoni et al, The diagnostic role of the systemic inflammation index in patients with immunological diseases: a systematic review and meta-analysis, *Clinical and Experimental Medicine* (2024). [DOI: 10.1007/s10238-024-01294-3](https://doi.org/10.1007/s10238-024-01294-3)

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