

**Cover illustration**

A polarized light micrograph of crystals of uric acid, which causes the inflammatory condition gout. (Courtesy of R. J. Green/SPL)

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INFLAMMATION

Inflammation is the body's immediate response to damage to its tissues and cells by pathogens, noxious stimuli such as chemicals, or physical injury. Acute inflammation is a short-term response that usually results in healing: leukocytes infiltrate the damaged region, removing the stimulus and repairing the tissue. Chronic inflammation, by contrast, is a prolonged, dysregulated and maladaptive response that involves active inflammation, tissue destruction and attempts at tissue repair. Such persistent inflammation is associated with many chronic human conditions and diseases, including allergy, atherosclerosis, cancer, arthritis and autoimmune diseases.

The processes by which acute inflammation is initiated and develops are well defined, but much less is known about the causes of chronic inflammation and the associated molecular and cellular pathways. This Insight highlights recent advances in our knowledge of the exogenous and endogenous inducers of chronic inflammation, as well as the inflammatory mediators and cells that are involved. We hope that these articles will contribute to a better understanding of inflammatory responses, and ultimately result in the design of more effective therapies for the numerous debilitating diseases with a chronic inflammatory component.

Ursula Weiss, Senior Editor

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