# To treat or not to treat (to target) in gout

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Gout is the most common inflammatory arthritis worldwide, caused by high levels of uric acid in the blood. Deposits of uric acid crystals cause episodes of painful attacks in the joints and can accumulate in the skin as nodules. In the U.S. alone, an estimated 8.3 million adults (3.9 percent of the population) are afflicted with this condition.

Because high uric acid levels in the blood cause gout, treatment is aimed at lowering these levels to eliminate crystallization, which alleviates symptoms. Unfortunately, despite understanding the biology of gout, the management of this disease is suboptimal, with the majority of patients not having good control of their condition.

Despite the American College of Rheumatology's treatment guidelines published in 2012 advocating lowering uric acid levels to below 6mg/dL and monitoring uric acid levels to ensure that the patient is on the right dose of medication (known as "treat-to-target"), the American College of Physicians (ACP) believes there is insufficient evidence to provide clear guidance to primary care physicians regarding the appropriate target for lowering uric acid and whether levels should be checked once treatment is started.

In an editorial in this week's *Annals of Internal Medicine*, Tuhina Neogi, MD, PhD, professor of medicine at Boston University School of Medicine (BUSM), states that given the known biology of the disease, in the absence of clinical trial data, it would be reasonable to at least suggest lowering uric acid to below the level at which it crystalizes in the blood (6.8mg/dL), since it is this crystallization that leads to symptoms

in gout.

"Further, not checking uric acid levels once starting treatment makes it impossible to know if patient symptoms are due to inadequate medication dosage, lack of adherence or some other reason," explained Neogi, who co-authored the editorial.

The ACP suggests that a "treat-to-avoid-symptoms" approach may be reasonable, though there are no randomized trials to support this approach according to Neogi. She points out that the concern with the "treat-to-avoid-symptoms" approach is that it would encourage just treating flares of gout with anti-inflammatory therapies which would not treat the underlying high uric acid levels that is causing gout in the first place. "That would be akin to treating patients with heart disease only when they experience angina, by using medication to alleviate those symptoms without treating the underlying disease process itself," she adds.

Provided by Boston University Medical Center