



ENCOURAGING PATIENTS TO "GO FOR 6"

RECOGNIZING THE SEVERITY OF GOUT AND IMPROVING
ACCESS TO EDUCATION AND TREATMENT



Gout Education Society



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INTRODUCTION

Extremely painful and destructive, gout is the most common form of inflammatory arthritis – affecting more than 8.3 million Americans today. These numbers are, unfortunately, still rising as a result of higher prevalence of comorbid conditions, including obesity, cardiovascular disease, renal disease and diabetes.

Yet, despite the growing incidence of gout and its severity, most Americans – including those who have been diagnosed with gout – know little or nothing about the alleged “disease of kings.” In fact, research supported by the Gout Education Society has found that more than **six in 10 Americans don’t know that gout is a form of arthritis, and seven in 10 don’t know it can potentially lead to deformities.** Far fewer associate gout with comorbid health risks – with just one in five understanding the link between gout and diabetes and renal health issues, and only one in 10 connecting gout with an increased risk for cardiovascular disease.

Awareness also remains low regarding the importance of regular serum uric acid (sUA) testing and the steps needed to keep levels to a healthy 6.0 mg/dL or below, as recommended by the American College of Rheumatology (ACR) and European League Against Rheumatism (EULAR). The recent Gout Education Society study found that **eight in 10 Americans don’t know**

the target uric acid level for gout.

An even more alarming **half of people with gout don’t believe it’s important to monitor their levels regularly.**

These low awareness levels could be contributing to lack of action for those who have gout. **Just 38 percent of gout patients have had their uric acid checked within the past six months**



– the timeframe recommended by ACR and EULAR – and **one in three say it’s been more than a year since they’ve had their levels checked.** Additionally, half of gout patients don’t believe it’s important to take daily uric acid–lowering medications, and four in 10 incorrectly believe they can stop taking medications in the absence of flares.

A NEED FOR CHANGE

These statistics represent an urgent need for change – yet providing education that reflects consistency in messaging is made more challenging by the fact that patients are continuing to see a wide range of medical professionals for the diagnosis, treatment and management of their gout and hyperuricemia. In fact, while gout is a disease most often associated with rheumatology, **the vast majority of people with gout – nearly eight in 10 – say they received their diagnosis from their primary care physician.** Approximately 10 percent of patients say they received their diagnosis from an emergency department physician or podiatrist, and just 5 percent from their rheumatologist.

The Gout Education Society has long been committed to educating the general public and professional community about gout and the related health care consequences of hyperuricemia, with an aim of improving care and reducing the overall burden of gout. The society’s

“Go for 6” campaign, introduced in May 2015, further promotes the need for consistent messaging around sUA testing and treatment. The Gout Education Society follows the ACR and EULAR guidelines for gout – recommending that sUA levels be checked every six months with treatment provided and

and hyperuricemia. These include those providing education and advocacy for comorbid conditions such as diabetes, renal health and cardiovascular health.

In an effort to elevate understanding of the severity of gout – and improve access to public education and treatment

ROUNDTABLE MISSION: To encourage all health care professionals and organizations touched by gout to raise public awareness and promote consistency in messaging about the importance of routine sUA testing and ongoing management of gout – thus improving overall patient care and outcomes.

adjusted until levels reach 6.0 mg/dL or below, depending on the severity of the disease and symptoms. Treatment should continue even after levels are achieved in order to prevent future flares and long-term damage.

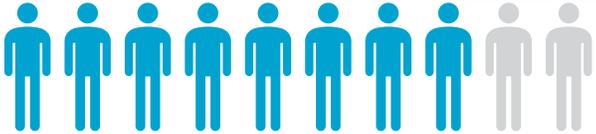
While this messaging is critical for health care professionals, it should also be adopted and promoted by other organizations that are impacted by gout

through all professional and health-based organizations touched by gout and hyperuricemia – the Gout Education Society hosted a roundtable discussion in Denver on Oct. 3, 2015. Recognizing the large role that primary care physicians (PCPs) are playing in diagnosing and treating gout, the roundtable was held in conjunction with the American Association of Family Physicians’ (AAFP) national conference.

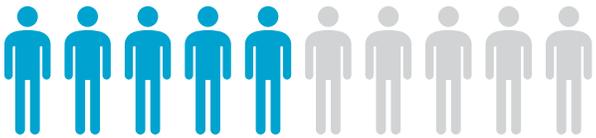


URIC ACID MISUNDERSTOOD¹

Low Patient Awareness



8 IN 10 AMERICANS don't know the target sUA level for gout.

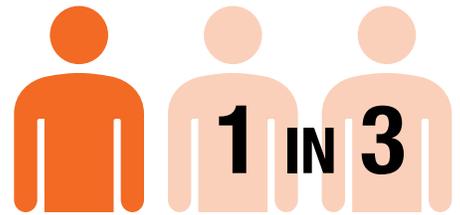


HALF of gout patients don't believe regular sUA monitoring is important

Lack of Action

JUST 38%

of gout patients had their sUA checked in the past 6 months.



waited more than a year.

50%

Half don't believe it's important to take daily sUA-lowering medications.

4 IN 10



incorrectly believe they can stop medications when not having flares.

The roundtable discussion brought together experts from multiple areas, with perspectives provided by rheumatologists; a family care physician and American Association of Family Physicians member; a diabetes nurse educator and American Association of Diabetes Educators representative; a representative from the National Kidney Foundation; and a representative from CreakyJoints, an arthritis resource and support community. The group discussion was moderated by N. Lawrence Edwards, MD, rheumatologist and Gout Education Society chairman and CEO.

The goal of the roundtable was twofold.

- Focus on sUA Measurement:** Participants reviewed the urgent need to raise public awareness about the importance of ongoing treatment and sUA testing as a standard panel to assess risk and monitor disease progression. Participants also discussed public education messages and resources that could help to make routine sUA testing top-of-mind.

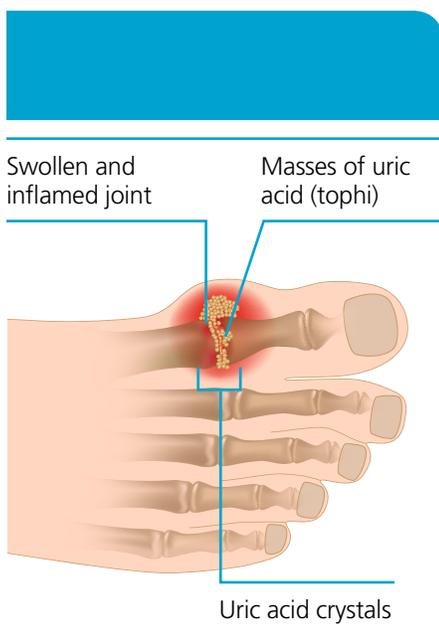
- Focus on the Overall Impact of Gout:** Participants reviewed the severity of gout and hyperuricemia, including the connection to comorbid health conditions. Participants were tasked with plotting the messages and delivery model with and through various medical professionals and organizations to promote a greater knowledge of the full and severe impact of gout and hyperuricemia.

This consensus paper provides an overview of the content presented during the roundtable and captures resulting discussions and calls-to-action – including opportunities for medical professionals and professional, health-based and advocacy organizations to further deliver gout education and support regular sUA testing and management.



GOUT AND HYPERURICEMIA: REINFORCING THE NEED TO "GO FOR 6"

Gouty arthritis is a disease of urate burden where deposits of monosodium urate (MSU) crystals accumulate in and around joints when the serum and tissue levels exceed the solubility level of 6.8mg/dL. This is a progressive process that may take years. Aggregates of MSU crystals (tophi) are microscopic at first and can exist silently for years in the setting of sustained asymptomatic hyperuricemia (>6.8 mg/dL). As hyperuricemia and deposition continues, tophi can become macroscopic and visible during physical exams as lumps or nodules in the soft tissue as well as in and around the joints when assessed using ultrasound or radiographic imaging.



A **flare** of gout – typically first occurring in joints of the lower extremities – is a rapid onset of an acute inflammatory response to urate crystals. Initially gout flares will characteristically be intermittent with asymptomatic periods between flares. Untreated, the continued hyperuricemia can lead to increasingly recurrent flares and chronic inflammatory arthritis, which is often deforming. While not everyone with hyperuricemia will develop gouty flares, those with higher serum uric acid levels, particularly when

paired with other **risk factors**, are more likely to experience gouty arthritis and other health issues. It is estimated that only one in five people with a sUA level above 7 mg/dL will experience symptoms of gout. When levels are above 9 mg/dL, the chance is approximately 70 percent.²

CLINICAL STAGES OF GOUT

STAGE 1	Asymptomatic Hyperuricemia	sUA above 6.8 mg/dL; treatment not usually recommended, but lifestyle adjustments encouraged
STAGE 2	Acute Gout Flares	Acute gout flare occurs; further evaluation and treatment required
STAGE 3	Intercritical Gout	Flare has resolved, but treatment may be required to reduce future flares and possible damage
STAGE 4	Advanced Gout (Chronic Tophaceous Gout)	Patient has developed chronic arthritis; acute flares can continue; deformities can occur



ESTABLISHING A GOUT DIAGNOSIS

Aspiration of synovial fluid from an actively inflamed joint and the identification of MSU crystals through a polarizing microscope remains the gold standard for making an accurate diagnosis of gout. However, physicians and other health care providers more often rely on the clinical presentation to make a presumptive diagnosis since they may not be comfortable performing a joint aspiration. The patient's history and examination, when they align with the classic description of gout symptoms (sudden and severe episodes of pain, stiffness and swelling of the joint, inability to bear weight on the joint, warmth and erythema, etc.) will usually be correct,³ however it must be noted that a clinical diagnosis is only presumptive, and does not exclude an alternative diagnosis such as infection or pseudogout.

Other testing, including use of diagnostic ultrasound, is coming into more common use and may help to improve early diagnostic accuracy. MRIs and

dual energy CT scans can be useful, but are rarely used at the point of care. X-rays may also show tophi and erosive changes, but these occur late in the disease course.

Once a diagnosis of gouty arthritis has been made, the physician may recommend therapies for immediate flare treatment, along with urate-lowering medications and adjunctive lifestyle changes for long-term management. For patients currently experiencing gout flares, the treatment focus should be on eliminating the pain as quickly as possible. Typically, gout flares are treated with anti-inflammatory therapies – such as glucocorticosteroids, nonsteroidal anti-inflammatory drugs (NSAIDs) and/or occasionally colchicine – to help relieve pain and reduce inflammation. While quite beneficial, these anti-inflammatory therapies do not address the underlying problem of uric acid elevation and deposition. Symptoms and flares are likely to recur until the patient's hyperuricemia and urate deposition are resolved.



GO FOR 6: A BENCHMARK FOR GOUT AND HYPERURICEMIA

Regular sUA testing and management plays a critical role in reducing risk for future gout flares, long-term damage and serious comorbid health conditions.

TARGET SUA LEVEL: 6.0 MG/DL OR BELOW

Target Monitoring: Every six months (and every two-five weeks when treatment initially begins)

Treatment Notes: Urate-lowering therapies should continue even after sUA target level is achieved; changes in diet, medications or health could cause sUA to fluctuate

ADDRESSING AND MANAGING HYPERURICEMIA IN GOUT

Daily uric acid-lowering therapies are the cornerstone of preventing gout flares and progression of gouty arthritis. For patients who experience more than two flares, prolonged flares (e.g., one attack running into the next), or tophaceous gout, it is important to start a uric acid-lowering therapy. Otherwise, the frequency and duration of flares can increase over time, and tophi will grow in size and numbers.

The treat-to-target sUA level should be 6.0 mg/dL. This level may need to be even lower in those who have a large urate burden, such as those with tophi or erosions as identified through X-rays. It is up to the individual physician to determine the appropriate sUA level based on the patient’s individual case and history.

To ensure that medications are working properly to meet the treat-to-target sUA level, the patient’s sUA level needs to be monitored, while receiving urate-lowering therapy. If the patient’s sUA level is measured during a flare, it should be re-checked after the flare subsides, since levels may be up to 2-2.5 mg/dL lower than baseline during a flare. During the initial phase of urate lowering therapy, sUA monitoring should be conducted every two to five weeks, per ACR and EULAR guidelines for gout management. Over time, sUA levels can be checked every six months.

Unfortunately, the vast majority of patients with gout who are on urate-lowering therapy are not getting their sUA levels checked as recommended. This lack of action is largely a result of suboptimal gout care by health care providers, which also contributes to poor

patient compliance. Thus, it is imperative for health care providers to understand and educate their patients about the key role of sUA levels in gout, the “curable” nature of the disease, the need for a treat-to-target approach, as well as personalized risk factor and lifestyle approaches in order to prevent future flares, long-term joint damage, and many comorbid health conditions of gout.



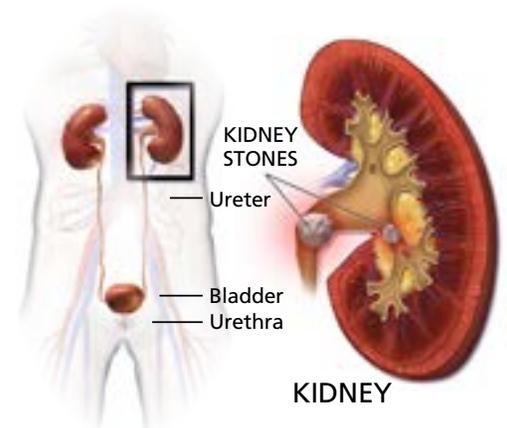


GOUT AND RENAL HEALTH

Those who have renal disease are more likely to suffer from gout and hyperuricemia. Conversely, research has shown that those who already have gout and hyperuricemia are significantly more likely to develop kidney stones and renal disease. In fact, approximately one in five patients with gout will develop kidney stones.⁴ Additionally, in 14 out of 15 clinical studies, uric acid was found to independently predict the development of chronic kidney disease or end stage renal disease (**TABLE 1**).

TABLE 1: ELEVATED URIC ACID PREDICTS CHRONIC KIDNEY DISEASE

Study	Population	F/U	Type	Indep?	Author, Year
Japan	6,403 adults	2 YRS	CKD	Yes	Iseki, 2001
Japan	48,177 adults	10 YRS	ESRD	Women	Iseki, 2004
Thailand	3,499 adults	12YRS	CKD	Yes	Domrong kitchaiporn, 2005
USA	5,808 adults	5 YRS	CKD	No	Chonchol, 2007
Austria	21,457 adults	7YRS	CKD	Yes	Obermayr, 2008
USA	13,338 adults	8.5YRS	CKD	Yes	Weiner, 2008
Austria	17,375 adults	7 YRS	CKD	Yes	Obermayr, 2008
USA	177,500 adults	25 YRS	ESRD	Yes	Hsu, 2009
USA	355 type 1 diabetes*	6 YRS	CKD	Yes	Ficociello, 2010
Italy	900 adults	5 YRS	CKD	Yes	Bellomo, 2010
Japan	7,078 adults	5YRS	CKD	Yes	Sonoda, 2011
Taiwan	94,422 adults	3.5 YRS	CKD	Men	Wang, 2011
Israel	2449 adults	26 YRS	ESRD	Yes	Ben-Dov, 2011
Korea	14,939 adults	10.2YRS	CKD	Yes	Mok, 2012
Italy	1,449 type 2 diabetics	5YRS	CKD	Yes	Zoppini, 2012

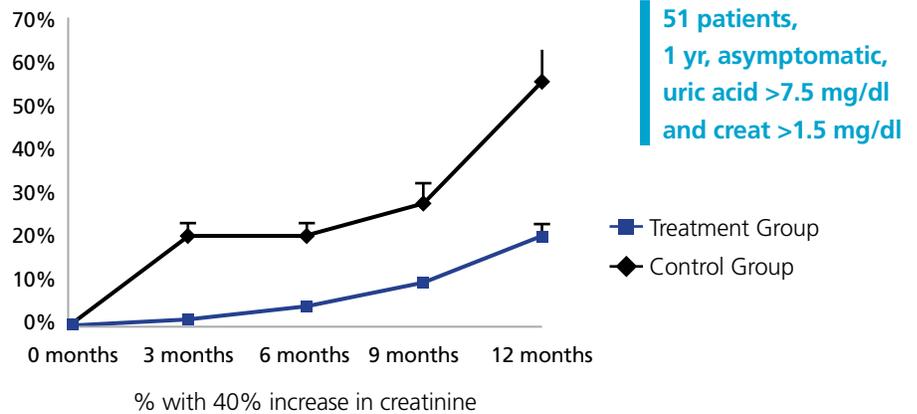


Over time, hyperuricemia can lead to tissue deposition of MSU crystals. Uric acid stones – a common cause of radiolucent kidney stones – can also develop. Untreated, these stones can block the urinary tract and result in infection. Hyperuricemia can also contribute to the development of chronic interstitial nephropathy. This condition – in which the spaces between the kidney tubules become inflamed – can either be acute or chronic, and can ultimately result in renal failure.

For a patient who has gout and/or renal health issues, it is important to maintain a healthy sUA level of 6.0 mg/dL or below. In pilot studies, lowering sUA levels has also been reported to be beneficial in slowing the progression of chronic kidney disease. In one study,⁵ lowering uric acid was shown to slow renal progression in individuals with asymptomatic hyperuricemia and chronic kidney disease (TABLE 2).

In addition to maintaining a healthy sUA level and monitoring it every six months, those who have gout or renal health issues should also have their effective glomerular filtration rate (eGFR) measured regularly to test kidney function. Additional **lifestyle changes** should also be recommended for patients living with gout/hyperuricemia and renal health issues. This includes taking medications as prescribed – with all physicians aware of what medications are being taken to treat both gout and renal issues so that interactions and potential health risks can be avoided. Subjects should avoid sugary beverages and purine-rich meats. Proper hydration – consuming at least 64 oz. of water – is also critical to help flush the kidneys and remove uric acid from the bloodstream.

TABLE 2: LOWERING URIC ACID SLOWS RENAL PROGRESSION IN HYPERURICEMIC INDIVIDUALS

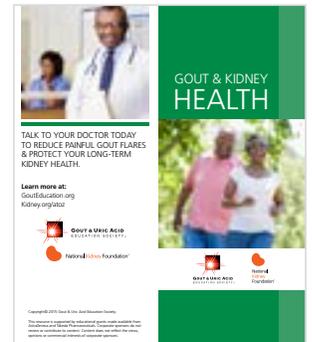


SPOTLIGHT ON THE NATIONAL KIDNEY FOUNDATION

During the roundtable, Tom Manley, Senior Program Director of Scientific Activities for the National Kidney Foundation (NKF), shared information about how the organization is currently helping to raise awareness about the connection between gout/hyperuricemia and various renal health issues – and strategies for further collaborating with the Gout Education Society and other organizations down the road.

The NKF is the leading organization in the United States dedicated to the awareness, prevention and treatment of kidney disease for hundreds of thousands of health care professionals, millions of patients and their families, and tens of millions of Americans at risk. In regard to gout and hyperuricemia, the NKF currently offers both professional and patient education.

The clinical paper, *Gout & Hyperuricemia in Chronic Kidney Disease*, provides an overview of recent research; epidemiology, pathogenesis and kidney manifestations of gout and hyperuricemia; and current thoughts on treatment options. For patients, the NKF offers content on its website and resources including a *Gout & Uric Acid Tracker* tool and a *Gout & Kidney Health* brochure – cobranded by the Gout Education Society as part of the society’s educational brochure series about gout and comorbid health conditions.





GOUT AND CARDIOVASCULAR HEALTH

Numerous studies have also found a strong correlation between **gout and cardiovascular health**. Those who suffer from gout are more likely to have unhealthy cholesterol and lipid levels and, conversely, those who have high lipid levels and high triglycerides are more likely to develop gout.

Hyperuricemia has been linked with an increased risk for **acute myocardial infarction** – with gout patients approximately twice as likely to develop a heart attack or stroke compared with those who do not have gout.⁶ Additionally, hyperuricemia has been found to increase a patient’s risk of experiencing coronary artery disease, cerebrovascular disease or cardiovascular mortality.



In 18 out of 19 clinical studies, elevated levels of uric acid were found to independently predict the development of hypertension (**TABLE 3**). An additional study⁷ of hypertensive adolescents found that lowering uric acid levels improved blood pressure levels. When uric acid levels were reduced to below 5.0 mg/dL, 86 percent of patients became normotensive (**TABLE 4**). While studies such as these suggest uric acid may have a contributory role in primary hypertension, especially in adolescents, large clinical trials are necessary before the use of uric acid–lowering drugs is routinely recommended in subjects with primary hypertension and hyperuricemia.

Nevertheless, it is recommended that patients with gout – and particularly those who already have cardiovascular health issues or risk factors – should also have routine tests to measure their cholesterol and blood pressure, in addition to maintaining a healthy sUA level.



TABLE 3: ELEVATED URIC ACID PREDICTS HYPERTENSION

Study	Population	F/U	Independent	Year	Author
Israeli Heart Study	10,000 males	5 YRS	Not Done	1972	Kahn
Kaiser Permanente	2,062 subjects	6 YRS	Yes	1990	Selby
Univ of Utah	1,482 adults	7 YRS	Yes	1991	Hunt
Olivetti Heart Study	619 males	12 YRS	Yes	1994	Jossa
CARDIA Study	5,115 adults	10 YRS	Yes	1999	Dyer
Osaka Health Survey	6,356 males	10 YRS	Yes	2001	Taniguchi
Hawaii-Los Angeles-Hiroshima	140 males	15 YRS	Yes	2001	Imazu
Osaka Factory Study	433 males	5 YRS	Yes	2003	Masuo
Osaka Health Survey	2,310 males	6 YRS	Yes	2003	Naganishi
Okinawa	4,489 adults	13YRS	Yes	2004	Nagahama
Bogalusa Heart	679 children	11 YRS	Yes	2005	Alper
Framingham	3,329 adults	4 YRS	Yes	2005	Sundstrom
Normative Aging Study	2,062 males	21 YRS	Yes	2006	Perlstein
ARIC	9,104 adults	9 YRS	Yes	2006	Mellen
Beaver Dam	2,520 adults	10 YRS	Yes	2006	Shankar
MRFIT	3,073 men	6 YRS	Yes	2007	Krishnan
Health Professional Followup	750 men	18 YRS	No	2007	Forman
Nurse Health Study	1,500 women	5 YRS	Yes	2009	Forman
China	7,220 adults	4 YRS	Yes	2009	Zhang

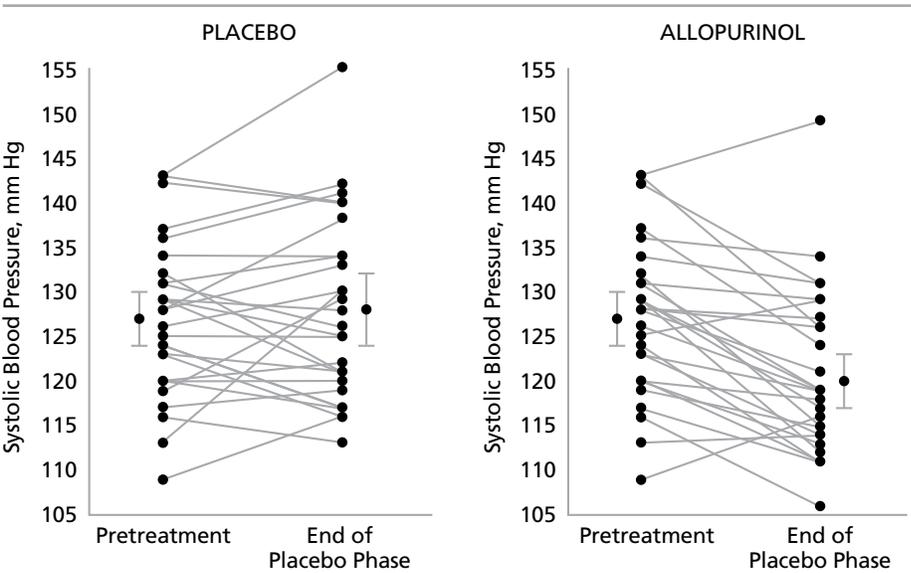
18 of 19 studies found uric acid to independently predict the development of hypertension

TABLE 4: LOWERING URIC ACID IMPROVES BLOOD PRESSURE IN ADOLESCENTS

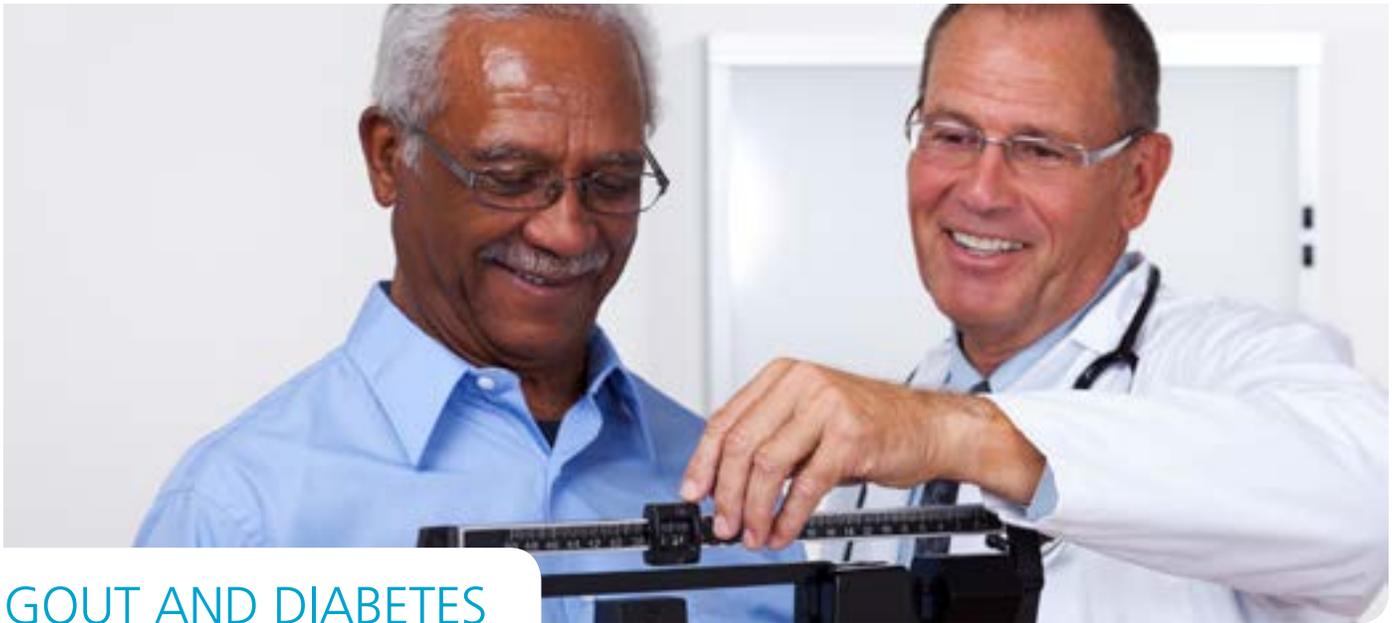
24-h Mean Systolic Blood Pressure

- Double-blind placebo controlled
- Cross-over
- 30 Hypertensive adolescents
- Baseline Uric Acid 6.9 mg/dl
- Allopurinol or placebo

In subjects whose uric acid was reduced to < 5 mg/dl, 86% (19/22) became normotensive versus 3% (1/30) controls



Feig et al, JAMA 2008 Aug 27;300(8):924-32



GOUT AND DIABETES

While more extensive research is needed, recent studies have shown that **gout and diabetes** are very much connected. Those who have gout and hyperuricemia are at an increased risk for type 2 diabetes. Likewise, subjects with metabolic syndrome also commonly have hyperuricemia. However, once a patient has been diagnosed with diabetes, serum uric acid falls because of the effects of glycosuria to enhance urate excretion. Nevertheless, subjects with type 2 diabetes are frequently hyperuricemic.

The risk for developing diabetes in subjects with gout is particularly high among women, with studies finding that women with gout are 71 percent more likely to develop diabetes than women without gout.⁸

Studies have also shown that a relationship exists between insulin resistance and gout. While insulin resistance may be associated with increased serum uric acid due to the effect of insulin to enhance uric acid reabsorption by the renal tubule, uric acid may also have a role in causing insulin resistance. In 23 of 24 clinical studies, uric acid was found to independently predict the development of diabetes or insulin resistance (**TABLE 5**). In a recent three-month trial period, lowering uric acid was also found to improve insulin resistance in patients with asymptomatic hyperuricemia.⁹



Those who have gout and diabetes should have their uric acid and blood sugar levels monitored regularly. Collaboration among health professionals is also important, particularly for patients who are seeing more than one physician or specialist to treat symptoms of gout and diabetes. Though it is not recommended that treating hyperuricemia is a means for improving insulin resistance, it is suggested that large clinical trials should be performed to evaluate this possibility.

SPOTLIGHT ON THE AMERICAN ASSOCIATION OF DIABETES EDUCATORS

During the roundtable, Donna Tomky, MSN, ANP-BC, CDE, CDTC, FAADE – past president of the American Association of Diabetes Educators (AADE) – discussed the importance of collaboration among medical professionals and diabetes educators for improved treatment and patient outcomes.

The AADE is a multidisciplinary professional membership organization dedicated to empowering health professionals with the knowledge and skills to deliver exceptional diabetes education, management and support. The organization's vision is to provide optimal health and wellness for all people with diabetes and related chronic conditions, including gouty arthritis and hyperuricemia.



Studies¹⁰ have supported the value of diabetes educators and the importance of collaborating with medical professionals – revealing that incorporating diabetes education can 1) yield significant improvements in glycemic control in patients being treated for diabetes in the short-term; 2) improve patient and provider satisfaction, as well as rates of medical testing; and 3) decrease patient costs.

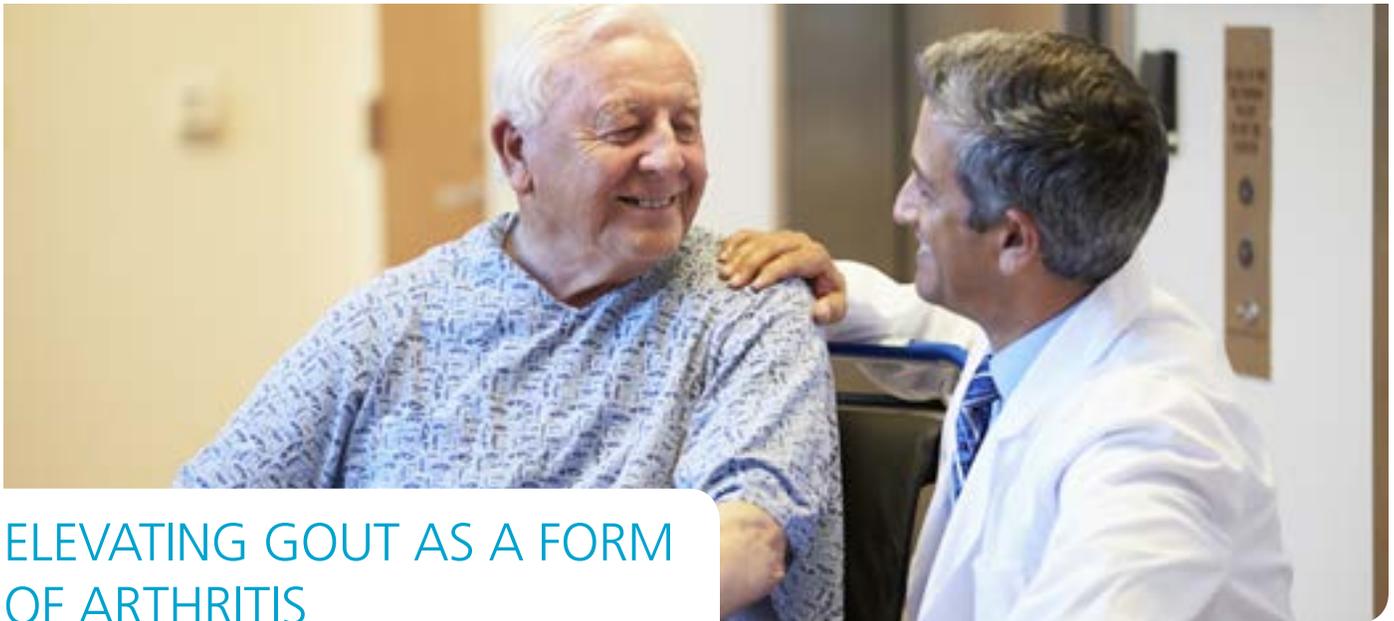
In regard to the treatment of gout, Tomky shared that there is a great need for diabetes educators to reinforce gout management by promoting the importance of taking daily uric acid-lowering medications, maintaining a healthy body weight and diet, and prioritizing uric acid monitoring, just like A1C goals.



TABLE 5: ELEVATED URIC ACID PREDICTS DIABETES

Study	Population	F/U	Type	Indep?	Author, Year
Israel	10,000 men	5 YRS	Yes	1.35	Medalie 1975 and Herman 1976
USA	5,209 adults	26 YRS	Men	2.3 (men), 2.1 (women)	Brand, 1985
Nauru	266 adults	6 YRS	Women	Not given	Balkau, 1985
Sweden	766 men	13.5 YRS	Yes	5.8 (2.2 - 16.0)	Ohlson, 1988
Britain	7,735 men	12.8 YRS	Yes	1.5 (0.9-2.5)	Perry, 1995
Kinmen	654 high risk	3 YRS	Yes	1.7 (1.2-2.6)	Chou, 1998
Mauritius	2,605 adults	5 YRS	Yes	1.37 (1.20-1.57)	Boyko, 2000
Japan	6,356 men	9 YRS	No	1.24 (0.9-1.7)	Taniguchi, 2001
Germany	6,166 adults	3-14 YRS	Women	1.6 (1.34-1.91)	Meisinger, 2002
USA	9,020 adults	11 YRS	Yes	1.3 (1.2-1.4)	Carnethon, 2003
Japan	2,310 men	6 YRS	Yes	1.78 (1.11-2.85)	Nakanishi, 2003
China	641 adults	7 YRS	Women	1.44 (1.13-2.25)	Lin, 2004
USA	60 adults with MI	6 MOS	Yes	5.47 (1.6-17.7)	Nakagawa, 2005
Finland	522 adults	4.1 YRS	Yes	1.87 (1.07-3.26)	Niskanen, 2006
Netherlands	4,536 adults	10 YRS	Yes	1.68 (1.22-1.30)	Dehgan, 2008
Mauritius	4,259 adults	5 YRS	Men	1.37 (1.11-1.68)	Nan, 2008
China	2,609 adults	9 YRS	Yes	1.4 (1.02-1.92)	Chien, 2008
USA	9,689 adults	5.7 YRS	Yes	1.6 (1.3-1.9)	Sui, 2008
USA	566 adults	13 YRS	Yes	1.75 (1.1-2.9)	Kramer, 2009
USA	9,175 adults	26-28 YRS	Yes	1.71 (1.24-2.36)	Bhole, 2010
Korea	4,779 men	3 YRS	Yes	1.41 (1.08-1.84)	Ryu, 2011
Japan	12,643 adults	5 YRS	Women		Yamada, 2011
China	924 adults	3.5 YRS	Yes	2.45 (men),and 1.39 (women)	Wang, 2011
Italy	758 hypertensive adults	3 YRS	Yes	2.78 (1.35-5.70)	Viazzi, 2011

23 of 24 studies found uric acid to independently predict the development of diabetes or insulin resistance



ELEVATING GOUT AS A FORM OF ARTHRITIS

While gout is the most common form of inflammatory arthritis – four times more common than rheumatoid arthritis – it is widely misunderstood, with six in 10 Americans not recognizing gout as a form of arthritis. The Gout Education Society has long been committed to providing public education about gout as a form of arthritis, and supports other professional and health-based organizations in their individual efforts.

During the roundtable, Laurie Ferguson, PhD, Vice President of Education for CreakyJoints, shared the organization’s current plans to further elevate gout and hyperuricemia as a serious and potentially debilitating form of arthritis.

Part of the nonprofit Global Healthy Living Foundation, CreakyJoints is an arthritis resource and support community for patients and families. In regard to gout diagnosis, treatment and management, CreakyJoints promotes recommendations as outlined by ACR and EULAR, and supported by the Gout Education Society.

While gout has not been as large of a focus for CreakyJoints in the past, the organization is planning to expand its efforts in the near future. Over the past year, CreakyJoints added a gout patient to its list of bloggers. The Global Healthy Living Foundation is also building an educational segment about gout on its website, along with patient education resources, and is including gout in its PCORI-funded [national arthritis patient registry](#).





SPOTLIGHT ON GOUT IN THE PRIMARY CARE SETTING

Primary care physicians have historically served as the chief point of contact for patient care. This relationship extends beyond general health concerns to include primary or secondary management of chronic or serious health issues. While patients with gout may see multiple health professionals throughout the course of the disease, research from the Gout Education Society has shown that approximately eight in 10 gout patients receive their initial diagnosis and care from their PCP. Even when patients are referred to a rheumatologist or other specialist for the management of gout and other comorbid health issues, the primary care physician can and should continue to remain a central point of contact to ensure consistency in messaging and optimal patient outcomes.

Despite the growing incidence of gout – which, in turn, is translating into a growing number of gout patients for PCPs – there is room for improvement when it comes to promoting a greater

professional understanding of gout and hyperuricemia. As an example, one *Rheumatology* study revealed that only half of PCPs provide optimal medication therapy for acute gout flares, and less than one in five provide optimal treatment for uric acid lowering in chronic and advanced gout.¹¹

During the roundtable discussion, family physician and former president of the Nebraska Academy of Family Physicians, David J. Hoelting, MD, shared his perspective on gout diagnosis and treatment in the primary care setting. While Dr. Hoelting himself sees a large number of gout patients and follows the ACR guidelines for gout management, he believes that from the family physician perspective overall, gout does not get the attention it deserves and is downplayed in regard to its severity. This perspective is, unfortunately, shared by many patients who are not taking appropriate steps to treat their gout to avoid long-term health complications.

In addition to stronger promotion and utilization of the ACR guidelines for gout management among primary care physicians, Dr. Hoelting believes that there is a great need for unbiased literature and educational materials about gout and hyperuricemia. He applauded professional and patient-focused organizations that are making these resources available to educate both professionals and patients, and encouraged an increase in gout education during professional conferences targeting physicians and representatives from the primary care setting. Dr. Hoelting also stressed the importance of physicians taking individual and proactive steps to promote improved doctor-patient communication and reduce communication barriers in practice. In-language materials and full- or part-time interpreters hired by the practice can help to bridge communication gaps.



CONSENSUS FROM GROUP DISCUSSION

Following individual presentations, roundtable participants discussed challenges and strategies for elevating the severity of gout and the importance of an accurate diagnosis, prompt treatment and ongoing disease management. Routine sUA monitoring and the promotion of healthy levels to reduce future risks served as a focal point of discussion.

ELEVATING AWARENESS AND PROMOTING sUA MANAGEMENT AMONG PATIENTS

Roundtable participants agreed that the most significant barrier to providing optimal patient care is the tremendous lack of understanding among those who have or who are at risk for gout. While few Americans overall understand the severity of gout and its long-term consequences, more alarming is the fact that gout is so widely misunderstood by those who have already been diagnosed with the disease. Recall that half of people with gout don't believe it's important to monitor their sUA levels regularly; less than four in 10 gout patients have had their uric acid checked within the recommended six-month timeframe; and more than half of gout sufferers don't understand the need to take daily uric acid-lowering medications, particularly in the absence of flares.

EARLY AND ONGOING PATIENT EDUCATION

What can be done to better inform gout patients and consumers overall about the target sUA level for treating gout and the need for routine testing and ongoing disease management? Participants agreed that early and ongoing patient education is critical. Patients should be made aware that even when gout flares are not frequent and there is no pain, uric acid will continue to accumulate between flares. When uric acid levels are not treated, the patient will be at **greater risk for future flares** that are more frequent and painful, along with **long-term bone, joint and tissue damage** that can lead to deformities or loss of normal use of a joint. Patients



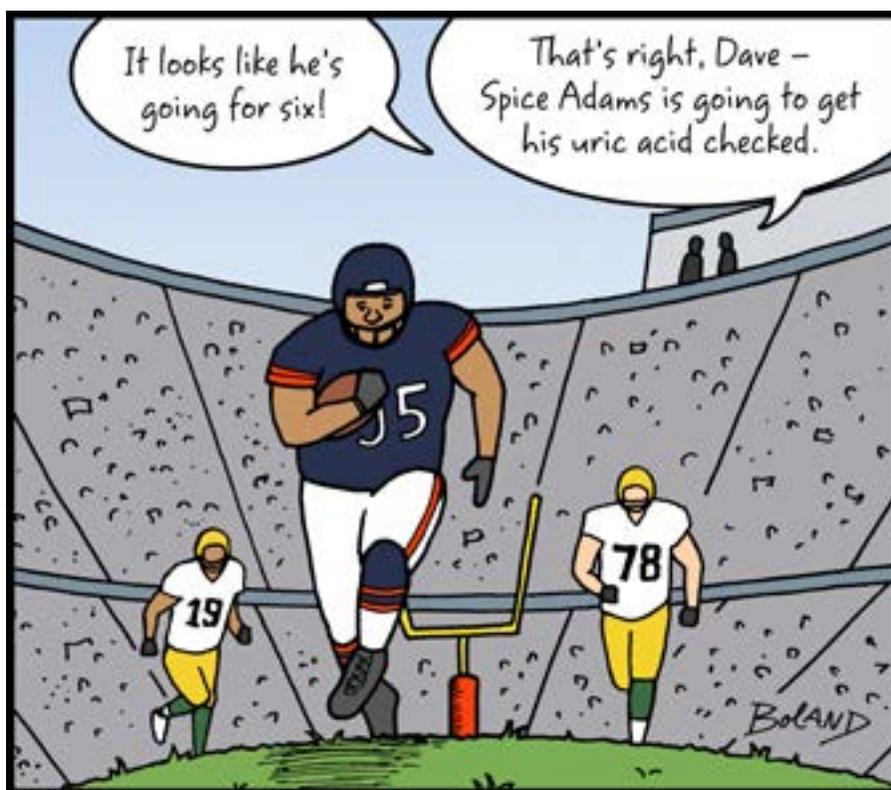
should also be informed about the risk factors for gout, including **comorbid health conditions**. For those who suffer from obesity, cardiovascular health issues, renal health issues and diabetes, routine monitoring and ongoing management is especially critical.

Once patients truly understand the risks of untreated gout and hyperuricemia, they will be more primed to adhere to a treatment regimen. Patients who have one or more risk factors for gout – especially when symptoms are present – should be encouraged to have their

uric acid levels tested. Once gout has been diagnosed, sUA levels should be monitored every six months. To help encourage compliance and pave the way for patients to become their own health advocates, physicians can send **reminders via mail, email or text**. Medical professionals can also routinely work with pharmacies to **check the status of medication refills** – and follow up with patients who may not be taking their daily uric acid-lowering medications as prescribed.

ADDRESSING POOR HEALTH LITERACY

Participants addressed the issue of poor health literacy among patients and agreed that there is an ongoing need for **unbranded and non-biased patient education resources** from reputable organizations. To promote health literacy, medical professionals should **explain all treatment options** to patients in office – why they are being recommended and the importance of sticking to the treatment regimen – as well as provide a **printout of instructions** and other helpful information/resources for the patient to take home. When language or education barriers are present, it can be helpful to involve another family member in the discussion, or take advantage of an **interpreter or translator**. Between appointments, medical professionals can provide **access to additional education and resources** through their professional websites, social media pages and electronic newsletters. Correspondence can also include links to tools and information available from reputable sources, such as the Gout Education Society, CreakyJoints, National Kidney Foundation, etc.



Anthony “Spice” Adams – football legend and gout sufferer – monitors his uric acid every six months, checking that it’s 6 mg/dL or lower.

Supported by the Gout Education Society. Illustrated by Bol's Eye Comics.

REACHING CONSUMERS THROUGH NATIONAL CAMPAIGNS

During the roundtable, participants discussed ways that the Gout Education Society and other national organizations can enhance efforts to elevate the severity of gout and need for ongoing treatment. Participants agreed that the majority of patients seek out health care information online, so maintaining a **strong web and social presence** is critical. Participants also agreed that many patients find solace or power in hearing from others suffering from the same condition, so there is great benefit to providing **patient testimonials**.

While gout is on the rise, participants agreed that it is not given the national presence and media attention that it deserves. Participants agreed that **public education campaigns** – such as the “Go for 6” campaign from the Gout Education Society – are instrumental in promoting consistency in messaging, along with treatment compliance. While gout is a serious disease, participants also discussed the benefits of using humor to capture the attention of both patients and physicians. Several organizations, including the Gout Education Society, CreakyJoints and the Global Healthy Living Foundation, are already incorporating humor in their campaigns.



ENGAGING PROFESSIONALS AND PROMOTING CONSISTENCY IN MESSAGING

While roundtable participants agreed that most medical professionals have at least a good working knowledge of gout, they also acknowledged an urgent need for professional education to reinforce the severity of gout – and why it should be a priority – and promote consistency in messaging.

Outside of the rheumatology field, gout is not widely discussed during professional conferences or in medical publications. This lack of information made available to current and future health professionals can ultimately lead to misdiagnosis or poor management of gout. Additionally, while routine sUA testing is recommended for those who have gout, it is not something that is part of the routine metabolic panel. This can also contribute to gout falling off the radar for many medical professionals – or may create a false impression that gout

is not as serious, or that monitoring sUA levels is not as important, as monitoring other healthy benchmarks.

When providing education to professionals, participants agreed that following the [ACR Guidelines for the Management of Gout](#) is instrumental. Many patients see multiple health care professionals, making uniform messaging and treatment recommendations important. When all health professionals follow the same guidelines for disease management, there is less likely to be confusion on behalf of the patient – and there is a greater chance for an improved patient outcome and treatment compliance.

Beyond the ACR guidelines, participants agreed that providing continued access to **online and print professional education resources** is important. Like consumers, health care professionals seek out non-biased and unbranded materials that are made available from

nonprofit, professional and health-based organizations. This includes both professional education and resources that can be shared with patients.

While providing consistent information about the consequences of gout and hyperuricemia is needed, there is also an urgent need to actually “sell in” physicians and reinforce that gout is a disease that should be taken seriously and treated aggressively.

Clinical research should be made available regularly and through medical publications. Participants also agreed that gout should be of greater focus at more **professional conferences**, including those that attract the fields touched most by gout – primary care, emergency care, podiatry, pharmacology and rheumatology.



ENHANCING THE ROLE OF PROFESSIONAL, ADVOCACY AND HEALTH-BASED ORGANIZATIONS

As incidence of gout – and related comorbid health issues – continues to climb, there is an opportunity for more professional, nonprofit and health-based organizations to play a greater role in providing education about the dangers of untreated gout and hyperuricemia. Participants also agreed that there is an opportunity for the Gout Education Society – which has been focused on gout and hyperuricemia for the past decade – to collaborate with these organizations to further promote consistency in education and messaging.

Arthritis-focused organizations can play a larger role by placing a greater emphasis on gout. While gout is the most common form of inflammatory arthritis, it is often overshadowed by rheumatoid arthritis or arthritis pain in general. Representatives from CreakyJoints and the Global Healthy Living Foundation who attended the roundtable say that



their respective organizations are already beginning to place a greater priority on gout. A representative from the U.S. Pain Foundation – an organization focused on chronic pain management – was also in attendance and discussed the organization's plans to include gout patient testimonials in the near future.

With gout so closely connected to renal health, cardiovascular health and diabetes, there is also a need for

specialty professional and health-based organizations to provide consistency in messaging in regard to the severity of gout and how gout should be treated in conjunction with each health issue. Groups including the National Kidney Foundation and Dialysis Patient Citizens are currently in discussions with the Gout Education Society and are making strides in the development of gout and renal health education. Participants agreed that more can be done from a diabetes and cardiovascular health education standpoint.

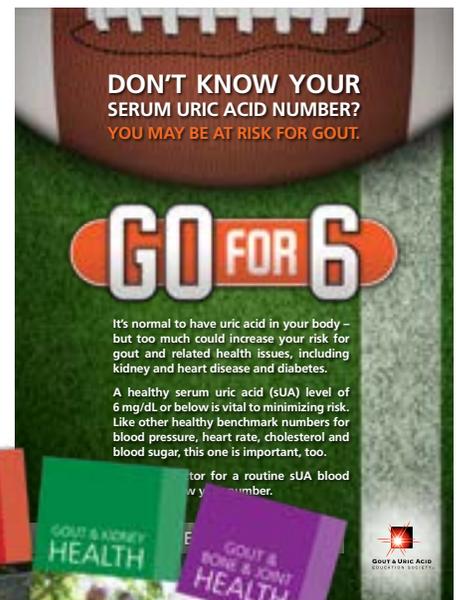
Professional organizations can also make an impact by including gout and hyperuricemia in education featured on their websites and during professional conferences. Individual physicians can play a role by submitting abstracts to share research results related to gout, hyperuricemia and comorbid health conditions.

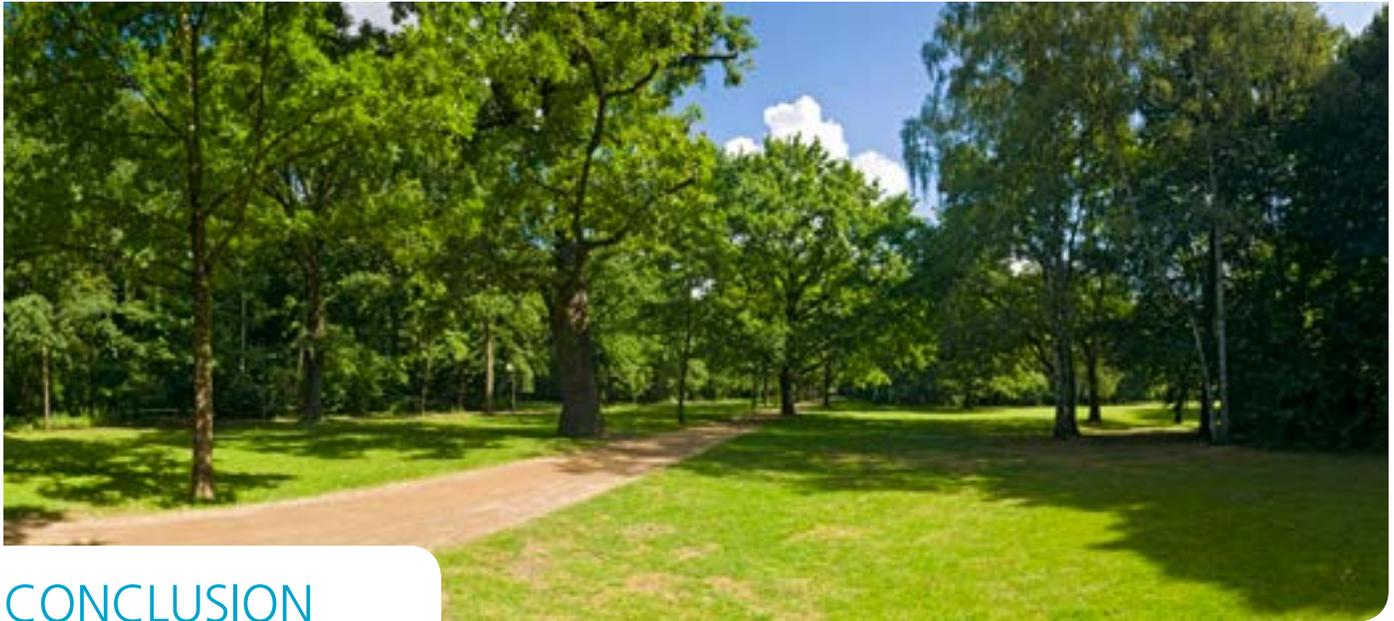


RESOURCES FROM THE GOUT EDUCATION SOCIETY

The Gout Education Society is a nonprofit organization of health care professionals dedicated to educating the public and general health care community about gout and the related consequences of hyperuricemia, with the aim of improving the quality of care and minimizing the burden of gout. The society's "Go for 6" campaign reinforces the importance of regular sUA testing every six months with a goal of achieving sUA levels of 6.0 mg/dL or below. Through the campaign, the Gout Education Society offers complimentary public and professional education at GoutEducation.org.

Resources available to medical professionals include information and clinical papers about gout diagnosis and treatment, as well as a wide range of patient education materials, including posters, brochures, videos and fact sheets. All resources have been reviewed by the Gout Education Society Board of Directors and adhere to the latest ACR "Guidelines for the Management of Gout."





CONCLUSION

As gout incidence continues to climb, more focus is needed on providing consistent messaging and education in regard to gout diagnosis and treatment. This includes consistent recommendations for sUA testing and management by medical professionals across all fields of practice, as well as by professional, health-based and advocacy organizations touched by gout and hyperuricemia. All patients who have symptoms of gout or other risk factors – including comorbid health conditions such as diabetes or cardiovascular or renal health issues – should have their sUA levels tested. Once gout has been diagnosed, levels should be monitored every six months with treatment provided and adjusted until a recommended 6.0 mg/dL or below is reached. Treatment should be ongoing, and patients should be urged to stay on medications even in the absence of flares.

This roundtable discussion, which brought together both medical experts and patient advocacy organizations, was an initial step in what will hopefully result in many great strides toward elevating public and professional awareness about the consequences of gout and hyperuricemia, and the need for routine care.

With ongoing support from the medical professional community – as well as from other advocacy, professional and health-based organizations – the Gout Education Society remains committed to providing unbiased and informative resources to both educate and promote improved management of gout and hyperuricemia.



ADDITIONAL INFORMATION AND RESOURCES ARE AVAILABLE AT GOUTEDUCATION.ORG.

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ROUNDTABLE CONSENSUS PAPER



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