

## ALLOPURINOL – SAFE PRESCRIBING - DOSE UP

- ▶ PRESCRIBE EARLY BEFORE THE DEVELOPMENT OF TOPHI
- ▶ MONITOR SERUM URATE
- ▶ START AT A LOW DOSE AND GRADUALLY INCREASE UNTIL THE SERUM URATE TARGET IS ACHIEVED
- ▶ TELL PATIENTS TO REPORT ANY SIGNS OF RASH

Gout is a major cause of arthritis in New Zealand and causes significant disability; it is estimated to affect up to one third of Maori and Pacific men over 65 years of age. Allopurinol is considered to be the first-line urate-lowering medicine, unless there is a history of allergy or intolerance.

### PRESCRIBE EARLY, BEFORE THE DEVELOPMENT OF TOPHI

Urate-lowering medicines are recommended to be used before the onset of tophi or erosive disease occurs. Non-steroidal anti-inflammatory drugs (NSAIDs) will not stop joint damage or the frequency of attacks.

Long-term urate-lowering treatment is indicated for patients who have either early onset of gout and family history of gout, more than 1 acute attack per year, tophaceous gout, clinical or radiographic changes consistent with erosive gout, or recurrent nephrolithiasis.

The severity of acute attacks and the presence of comorbidities may influence when to begin treatment.

### MONITOR SERUM URATE

It has been suggested that patients with gout should think about their urate level in the same way that patients with diabetes relate to their HbA1c.

#### **Aim for target serum urate of less than 0.36mmol/L.**

This will reduce the risk of gout attacks occurring and prevent the development of tophi. Lower serum urate targets (less than 0.30mmol/L) may be required for patients with gouty tophi.

#### **Monitor serum urate monthly until the target has been reached, and then check 3 – 6 monthly together with renal function tests.**

Explain the importance of reaching target urate and the need for close monitoring in the initial stages to ensure the appropriate dose is prescribed. Liver function tests, serum creatinine and full blood count should also be monitored periodically when commencing allopurinol.

### START AT A LOW DOSE AND GRADUALLY INCREASE UNTIL THE SERUM URATE TARGET IS ACHIEVED

The optimal daily dose of allopurinol depends on patient tolerance and their target serum urate level.

'*Start low and go slow*'. The recommended starting dose is 100mg daily or lower (50mg daily) in stage 4 or worse chronic kidney disease. If allopurinol is well tolerated, the dose may be increased until the target serum urate is reached. The maximum recommended dose is 900mg daily; 300mg per day is not usually sufficient.

Sudden changes in serum urate levels are likely to precipitate gout attacks. To reduce the risk of an acute attack, increase the daily dose gradually (by 50-100mg) at monthly intervals and prescribe in combination with a prophylactic dose of colchicine\* (eg 0.5mg daily or twice daily), or low-dose NSAID (eg naproxen 250mg twice daily), for 3-6 months after achieving target serum urate.

\*please refer to the [SafeRx bulletin about colchicine](#) for more details

**Start at 50-100mg daily**  
**Increase monthly by 50-100mg daily**  
**until target serum urate is reached**  
**Maximum dose 900mg daily**

Ongoing adherence is important for symptom control.

**Allopurinol should be continued indefinitely unless a rash appears.**

For more information, Auckland Regional Clinical Pathways has provided decision support tools for gout prevention and acute gout which are available on:

[www.healthpointpathways.co.nz](http://www.healthpointpathways.co.nz)

➡ continued

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### TELL PATIENTS TO REPORT ANY SIGNS OF RASH

Hypersensitivity syndromes are rare but can be fatal. Patients should inform their doctor immediately if they develop any type of skin reaction while being treated with allopurinol.

Allopurinol hypersensitivity syndrome (AHS) is characterised by a rash, eosinophilia, leukocytosis, fever, hepatitis and renal failure. The risk of AHS is greatest during the first few months of therapy; prompt recognition and discontinuation of allopurinol will help to minimise morbidity and mortality.

There is an increased risk of AHS when allopurinol is given together with diuretics, particularly thiazide diuretics, especially if the patient has impaired renal function; consider alternative medicines if possible. There is also an increased risk of rash if allopurinol is given together with amoxicillin.

For those patients who do not tolerate allopurinol, alternative urate-lowering medicines (eg probenecid, febuxostat and benzbromarone) should be considered for gout prevention.

**Note: There are many precautions surrounding concomitant prescribing of allopurinol with azathioprine; refer to the patient's specialist team for appropriate management of gout or hyperuricaemia for these patients.**

### KEY REFERENCES

Khanna D, Fitzgerald DJ, Khanna PP et al. 2012 American College of Rheumatology Guidelines for Management of Gout. Part 1: Systematic Nonpharmacologic and Pharmacologic Therapeutic Approaches to Hyperuricemia. *Arthritis Care & Research* 2012;64(10):1431-46 <http://onlinelibrary.wiley.com/doi/10.1002/acr.21772/pdf> [Accessed 14-01-15]

New Zealand Formulary. Allopurinol [www.nzf.org.nz/nzf/5681.html](http://www.nzf.org.nz/nzf/5681.html) [Accessed 18-03-13]

Robinson PC, Dalbeth N. Advances in pharmacotherapy for the treatment of gout. *Expert Opinion in Pharmacotherapy*. 2014;16(4)

Auckland Regional Clinical Pathway for Gout Prevention. [www.healthpointpathways.co.nz/gout-prevention/](http://www.healthpointpathways.co.nz/gout-prevention/) [Accessed 22-03-13]

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[CLICK HERE FOR FURTHER INFORMATION ON ALLOPURINOL AND A FULL REFERENCE LIST](#)

For further information on other high-risk medicines visit our website at: [www.saferx.co.nz](http://www.saferx.co.nz)

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DISCLAIMER: This information is provided to assist primary care health professionals with the use of prescribed medicines. Users of this information must always consider current best practice and use their clinical judgement with each patient. This information is not a substitute for individual clinical decision making. Issued by the Quality Use of Medicines Team at Waitemata District Health Board, email: [feedback@saferx.co.nz](mailto:feedback@saferx.co.nz)