



Arthritis Talks: Understanding Gout

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Presenters



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Webinar tips

- Use the **Q&A** section to ask the presenters your questions. Some of the questions will be chosen for the live question period at the end of the webinar.
- Click on the **Chat** box to connect with other participants and the Arthritis Society's chat moderator.
- If you have further issues, email arthritistalks@arthritis.ca

The screenshot shows the Arthritis Society Canada webinar interface. At the top center is the Arthritis Society Canada logo. Below the logo are two buttons: 'Q&A' and 'Chat'. At the bottom left is an 'Audio Settings' button. At the bottom right is a red 'Leave' button. A yellow callout box at the top right points to a red icon in the top right corner of the interface, with the text 'Click on the red icon to exit out of the Q&A or Chat'. A yellow callout box at the bottom left points to the 'Audio Settings' button, with the text 'Click here to access your audio settings'. A yellow callout box at the bottom right points to the 'Chat' button, with the text 'Click here to chat or to submit a question'. On the right side, a 'Q&A' window is open, displaying a 'Welcome to Q&A' message and a text input field labeled 'Type your question here...'.

Overview

[1]

What is a gout attack??



[2]

Why do some people develop gout?



[3]

Treatment Options



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Q

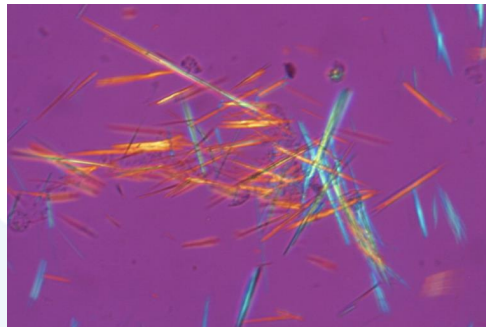
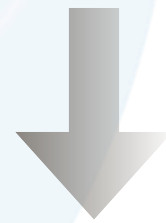
What is a gout attack?





High level of uric acid in bloodstream for years

Leads to the formation of:



Uric acid crystals
in the joint



Normal joint but filled
with uric acid crystals

**At risk of a
gout attack**



Normal joint but filled with uric acid crystals

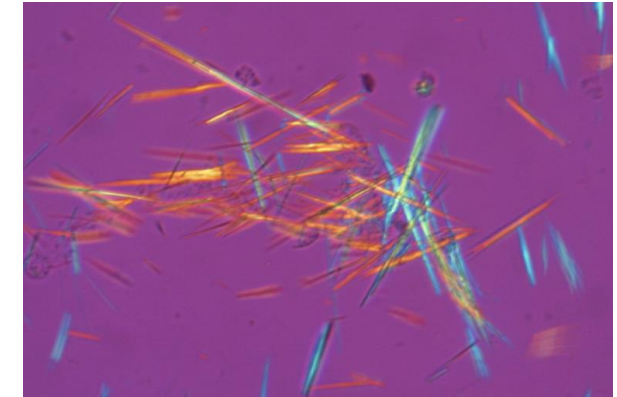


Swollen and painful joint



Normal joint but filled with uric acid crystals

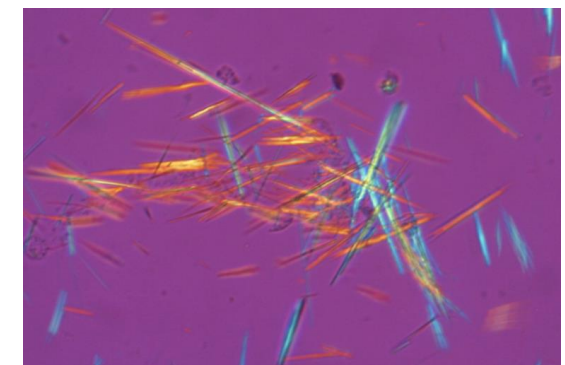
Uric acid crystals in the joint



Uric acid crystals in the joint where white blood cells try to "destroy" the crystals

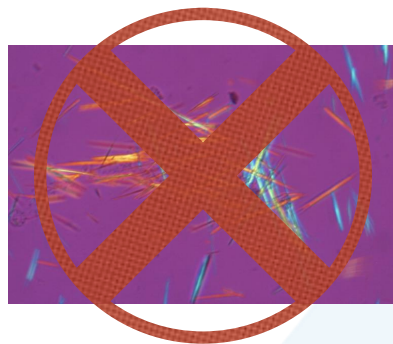


Uric acid crystals in the joint that are always present





Low uric acid levels in the bloodstream



~~Uric acid crystals
in the joint~~



~~Normal joint
but filled with uric
acid crystals~~

**No longer at
risk of a gout
attack**

Q

Why do some people develop gout?



Formation of uric acid

Diet

+

Muscle
metabolism

+

Genetic



Renal excretion of uric acid

Kidney function

+

Some medications
limit the ability of
the kidneys to
properly filter uric
acid

+

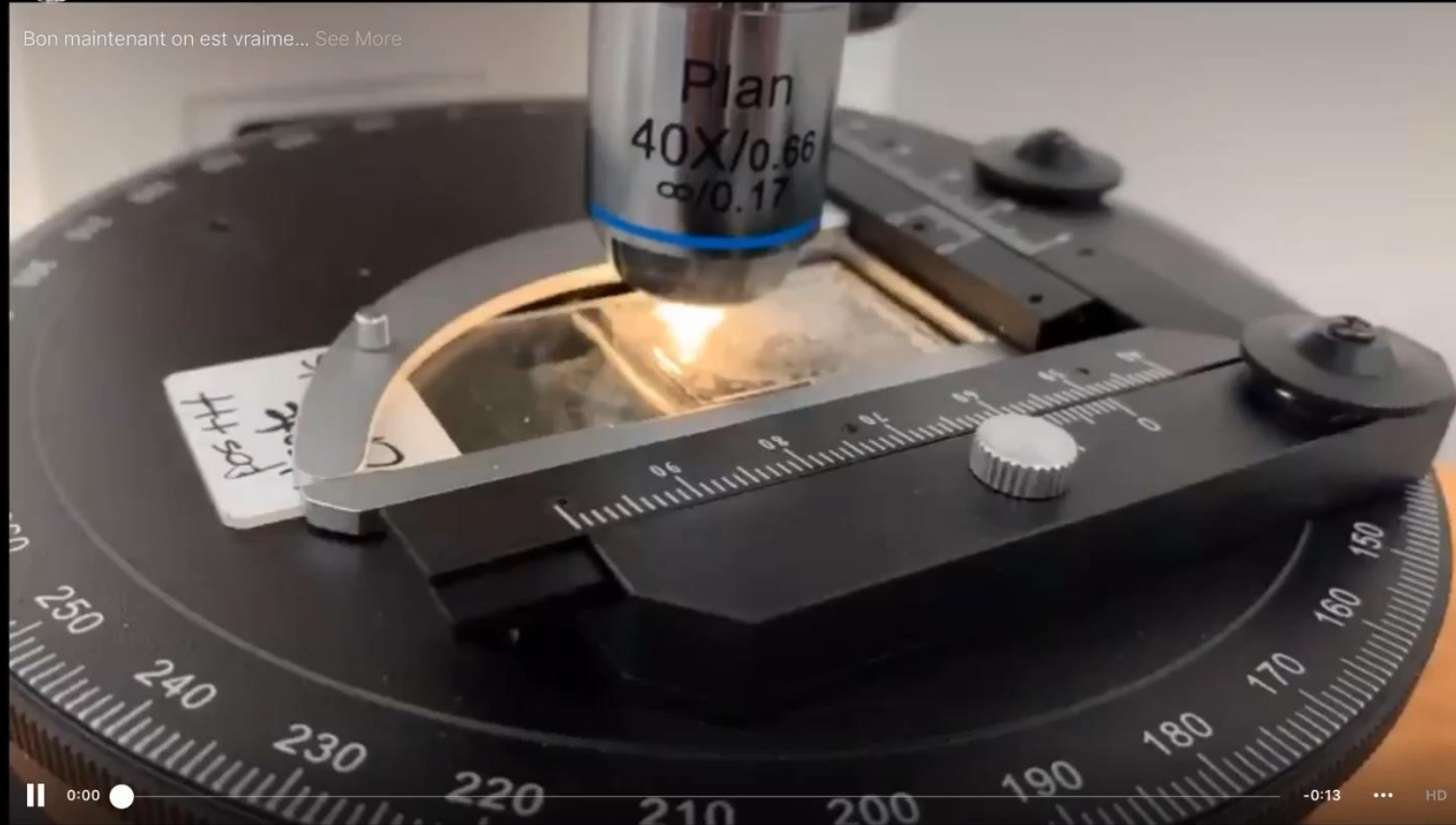
Genetic





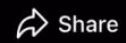
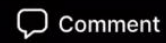
Jeanot Delino
about 3 months ago

Bon maintenant on est vraime... See More



Nadine Fortin Chamberlain and 27 others

6 Comments 189 Views

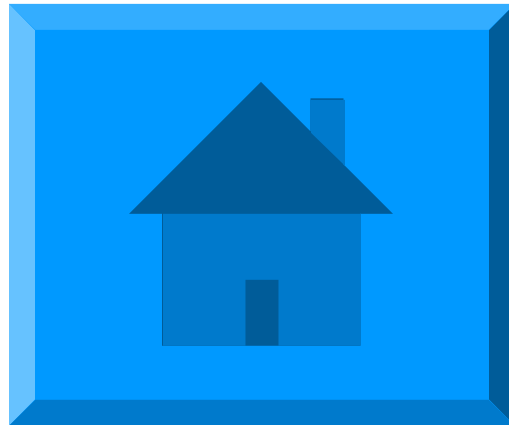


Q

What treatments are available for gout?



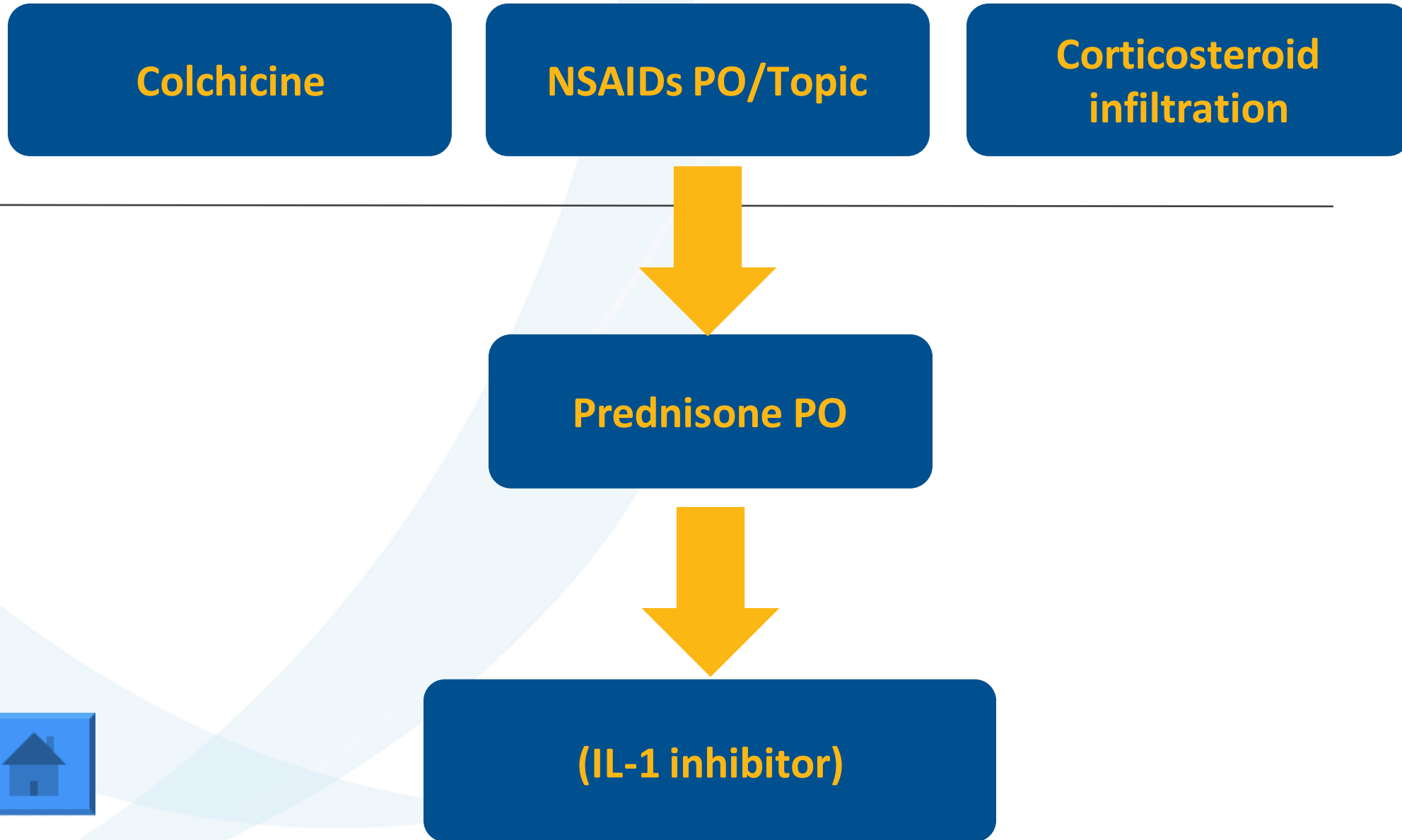
3-step guide to managing gout



- 1. Treatment of acute attack**
- 2. Hypouricemic treatment if indicated**
- 3. Prophylaxis attack if hypouricemic treatment is added**

1. Treatment of the acute attack

Alone or in combination



1. Treatment of the acute attack

Colchicine

- ▼ **Works best when taken within 48 hours of the onset of symptoms**
(Acts as an anti neutrophilic profile. If the attack has lasted more than 48 hours already full of neutrophils in the joint and it starts to be replaced by macrophages)
- ▼ **Can still be used if the attack has lasted more than 48 hours but less effective**
- ▼ **Loading ranging from no loading to 4 BID tablets on the first day followed by 1 x 0.6 mg tablet per day**
- ▼ **If you give colchicine only to treat the acute attack you can stop it 72 hours after the symptoms have disappeared**
- ▼ **No renal adjustment if used for less than 14 days**



1. Treatment of the acute attack

NSAIDs PO/Topic

- ▼ **Maximum dose of an agent of your choice:**

(In order from weakest to strongest)

Celecoxib 200 mg BID

Naproxen 500 mg BID

Indomethacin 50 mg TID

- ▼ **Use daily and stop after the symptoms have disappeared x 72 hours**

- ▼ **Topical NSAIDs**

Do not use as sole modality (not effective enough)

Magistral preparation of Diclofenac 10% (may increase to 20%) in PLO (or the base of your choice)

Local application TID

100 grams Ren x3



1. Treatment of the acute attack

Corticosteroid infiltration

- ▼ **Small joints (IP/MCP/MTP)**
- ▼ **Take 25 mg; avoid kenalog in small joints due to risk of amorphous deposit. Use depomedrol.**
- ▼ **If you infiltrate, make a habit of aspirating to get a specimen to send for crystal/gram research and cell culture/count**



1. Treatment of the acute attack

Prednisone PO

- ▼ **Can be used immediately in cases of oligo-polyarticular gout (NSAIDs/colchicine may not be effective enough)**
- ▼ **Stop after the symptoms have disappeared x 72hr**



1. Treatment of the acute attack

(IL-1 inhibitor)

*******OFF-LABEL*******

- ▼ **Be aware that this is an option**
- ▼ **The indication must be assessed by a rheumatologist**
- ▼ **We reserve this for our patients with significant tophaceous, polyarticular, hospitalized burden and as a last resort if the patient does not respond to a combination of traditional modalities**



2. Hypouricemic treatment if indicated

Indication for hypouricemic treatment?

Lifestyle

Modify patient's pharmacy

Hypouricemic

Alone or in combination

TREAT TO TARGET



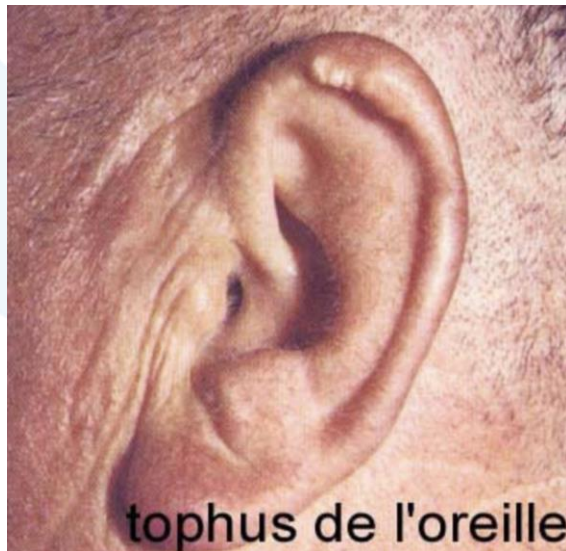
2. Hypouricemic treatment if indicated

Indication for hypouricemic treatment?

Needs one of the following criteria:

- ▼ IRC with GFR < 60
- ▼ 2 or more attacks in the last 12 months or an attack that affects more than one joint
- ▼ history of nephrolithiasis
- ▼ tophi

Search for tophi at E/P
(Hands/elbows/ears/knee/foot)



Search for tophi on the X-rays
TJRS joint affected + 2 feet
erosion=tophi

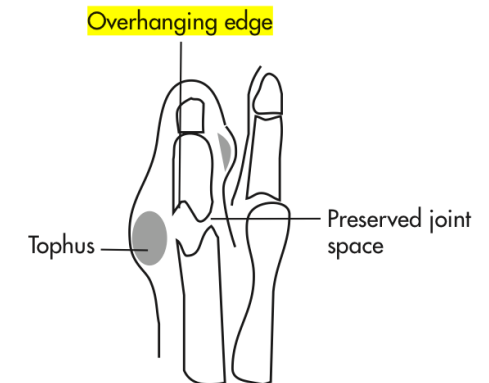


FIGURE 5-132



2. Hypouricemic treatment if indicated

Lifestyle

GENERAL HEALTH, DIET, AND LIFESTYLE MEASURES FOR GOUT PATIENTS#:

Evidence Grades for Recommendations:
Level A: Supported by multiple (ie, more than one) randomized clinical trials or meta-analyses
Level B: Derived from a single randomized trial, or nonrandomized studies.
Level C: Consensus opinion of experts, case studies, or standard-of-care.

- Weight loss for obese patients, to achieve BMI that promotes general health
- Healthy overall diet ^
- Exercise (Achieve physical fitness)
- Smoking cessation
- Stay well hydrated

Avoid	Limit	Encourage >
<ul style="list-style-type: none"> • Organ meats high in purine content (eg, sweetbreads, liver, kidney) <p>B</p>	<p>Serving Sizes of:</p> <ul style="list-style-type: none"> • Beef, Lamb, Pork • Seafood with high purine content (eg, sardines, shellfish) <p>B</p>	<ul style="list-style-type: none"> • Low-fat or non-fat dairy products <p>B</p>
<ul style="list-style-type: none"> • High fructose corn syrup-sweetened sodas, other beverages, or foods <p>C</p>	<ul style="list-style-type: none"> • Servings of naturally sweet fruit juices • Table sugar, and sweetened beverages and desserts • Table salt, including in sauces and gravies <p>C</p>	<ul style="list-style-type: none"> • Vegetables <p>C</p>
<ul style="list-style-type: none"> • Alcohol overuse (defined as more than 2 servings per day for a male and 1 serving per day for a female) in all gout patients • Any alcohol use in gout during periods of frequent gout attacks, or advanced gout under poor control <p>B C</p>	<ul style="list-style-type: none"> • Alcohol (particularly beer, but also wine and spirits) in all gout patients <p>B</p>	

This is important.

Recommend it to all your patients.

Realistically, if this is your only modality for lowering uric acid, expect a 60-80 reduction in uric acid levels and rarely more.



2. Hypouricemic treatment if indicated

What increases uric acid

- thiazide
- diuretic
- aspirin
- nicotinic acid
- cyclosporine
- tacrolimus
- ethambutol
- pyrazinamide

Modify patient's pharmacy

What reduces uric acid

- losartan
- BCC
- fenofibrate



Major impact on uric acid levels
Often avoids therapeutic escalation
It is often iatrogenic

2. Hypouricemic treatment if indicated

Hypouricemic

***** If there is an indication, there is no need to wait until the attack is over *****

Name	Mechanism	Indication	Dose	Possible Side Effects	Monitoring
Allopurinol	Xanthine Oxidase (IXO) inhibitor	Gout	50 – 800 mg daily If CLCR < 30 Start at 50 mg and increase by 50mg weekly	Rash Hepatitis Diarrhea	CBC, urate, create, every 2-5 weeks
Febuxostat	Xanthine Oxidase (IXO) inhibitor	Gout	40-120 mg daily Start: 40mg and increase by 40mg every two weeks	If ClCr < 30 recent studies = okay in IRC 4/5 Max does 40 mg daily	CBC, urate, create, ALT (7%) every 2-5 weeks Caution with AZA = toxic

2. Hypouricemic treatment if indicated

Hypouricemic

ALLOPURINOL

- ▼ Can go up to 800 mg/day even in KPI it is the starting dose that changes (and modifies the titration of allopurinol which we will see later)
- ▼ If you use a dose per day higher than 300 give BID instead of DIE
- ▼ Check compliance (>50% non-compliant)

DFG	DOSAGE INITIALE
>90	100-300 mg / day
60-90	100-200 mg / day
30-60	100
<30	50



2. Hypouricemic treatment if indicated

Hypouricemic

FEBUXOSTAT

- ▼ 40 mg febuxostat is equivalent to 300 mg allopurinol on uric acid levels
- ▼ If one has had a rash/allergy with allopurinol, one can sometimes also have a reaction with febuxostat. If reaction with allopurinol try small doses (40mg +/- under supervision depending on the type of reaction to allopurinol)*.

DFG	INITIAL DOSAGE
>90	40 mg / day
60-90	40 mg / day
30-60	40 mg / day
<30	40 mg / day

Febuxostat + expensive
\$1 per month per mg
If 120 mg
\$120/month
\$1,440/year



*Risk of hypersensitivity to allopurinol especially in the Asian population (HLA B5801)

2. Hypouricemic treatment if indicated

TREAT TO TARGET

A uric acid target should be aimed at:

- ▼ If no tophi (on E/P or imaging): lower target 360
- ▼ If tophi (on E/P or imaging): lower target 300

If patient not tophaceous and compliant should reach it in less than 6 months

If patient tophaceous and compliant may take 6-12 months sometimes longer

Uric acid q4week

Allopurinol/febuxostat titration q4week



2. Hypouricemic treatment if indicated

TREAT TO TARGET

*******Adjustment q4 weeks according to uric acid to reach target*******

ALLOPURINOL

DFG	INITIAL DOSAGE	TITRATION	MAXIMUM DOSE
>90	100-300 mg / day	100 mg / adjustment	800 mg
60-90	100-200 mg / day	100 mg / adjustment	800 mg
30-60	100 mg / day	50-100 mg / adjustment	800 mg
<30	50 mg / day	50 mg / adjustment	800 mg



2. Hypouricemic treatment if indicated

TREAT TO TARGET

*****Adjustment q4 weeks according to uric acid to reach target*****

FEBUXOSTAT

DFG	INITIAL DOSAGE	TITRATION	MAXIMUM DOSE
>90	40 mg / day	40 mg / adjustment	120 mg
60-90	40 mg / day	40 mg / adjustment	120 mg
30-60	40 mg / day	40 mg / adjustment	120 mg
<30	40 mg / day	N/A	40 mg



TREAT TO TARGET

COLCHICINE

Prevents white blood cells from attacking the crystals.

PHASE 1

Elevated serum uric acid levels.

Normally, for several years. During this period, the uric acid exits the bloodstream and accumulates in the joints.

PHASE 3

Target level now achieved.

Serum uric acid levels are now much lower, allowing the uric acid deposits in the joints to slowly be excreted. Phase 3 often lasts as long as Phase 1.

PHASE 2

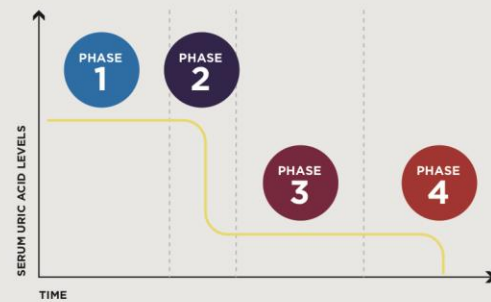
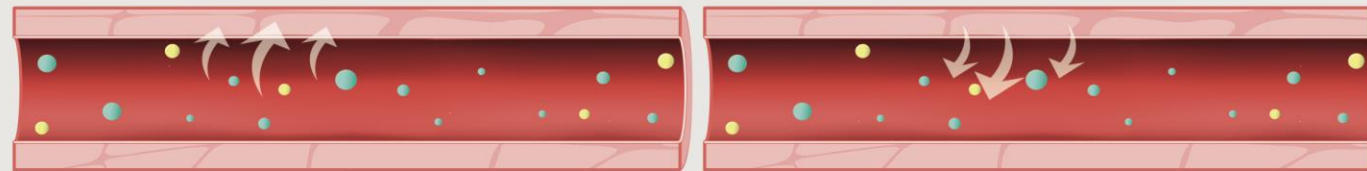
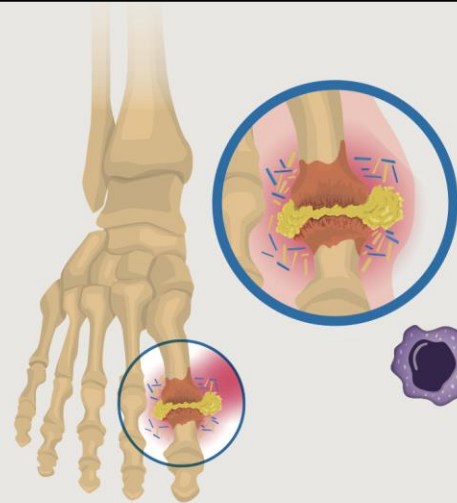
Decrease in serum uric acid levels through medication and lifestyle changes.

Normally takes 6-12 months to achieve the target level.

PHASE 4

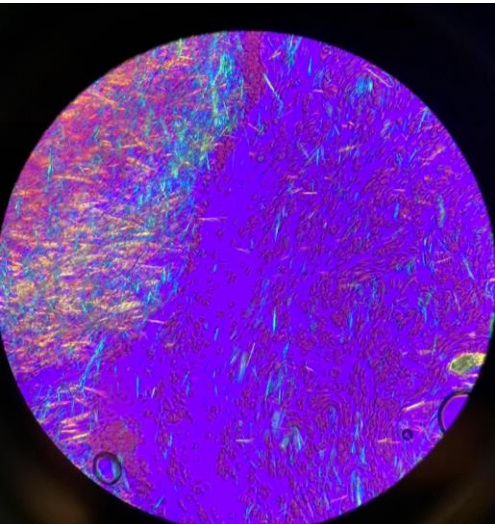
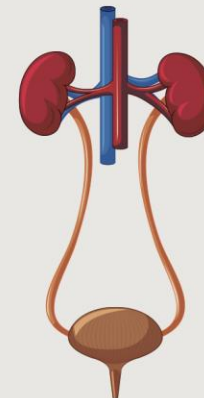
No more uric acid in the joints.

A second drop in serum uric acid levels is seen during this phase, because the uric acid excreted by the kidneys with the help of allopurinol is not replaced by the uric acid that was present in the joints. At this stage, we begin to decrease the dose of allopurinol.

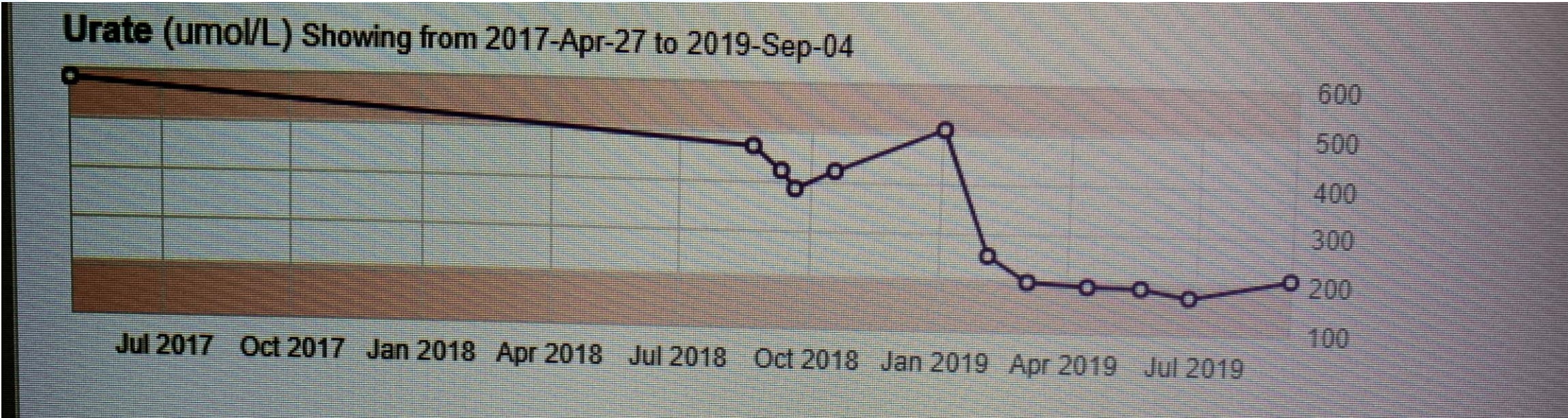


ALLOPURINOL

Helps the kidneys to filter uric acid from the blood.



TREAT TO TARGET



TREAT TO TARGET



3. Prophylaxis attack if hypouricemic treatment is added

- ▼ Adding in (an) anti-inflammatory treatments along with UA-lowering medication is vital in the first few months because there is an apparent paradox with treatment – it can trigger another gout crisis. When UA levels first start to be lowered, it attracts neutrophils to the joints where they cause short-term inflammation by attacking remaining crystals. Anti-inflammatory treatments such as NSAIDs can prevent this. Patients with erosion or tophi usually need to take these for a longer duration.
- ▼ If you start allopurinol/febuxostat YOU MUST start a medication to prevent the attack

This is used for the first 6 months of treatment or target achievement x 8 weeks (whichever comes first)

Colchicine

NSAIDS PO

Prednisone



3. Prophylaxis attack if hypouricemic treatment is added

Colchicine

This is used during the first 6 months of hypouricemic treatment or if target is reached x 8 weeks (whichever comes first)

DFG	INITIAL DOSAGE
>90	0.6 mg / day
60-90	0.6 mg / day
30-60	0.6 mg / day
<30	0.6 mg / 2 day
HD	0.6 mg 2x/week



3. Prophylaxis attack if hypouricemic treatment is added

NSAIDS PO

If there is a recurrence of gout despite prophylaxis with colchicine, a NSAIDS PO can be added for the first 6 months of a hypouricemic treatment or until targets are reached x 8 weeks

Or

If there is intolerance to colchicine, and an attempt has been made to use colchicine at a lower dose, an NSAID can be used instead of colchicine

Again, to be taken during the first 6 months of a hypouricemic treatment or until targets are reached x 8 weeks



3. Prophylaxis attack if hypouricemic treatment is added

Prednisone

- ▼ **Last resort in gout attack prophylaxis**
- ▼ **If necessary, use the lowest effective dose**



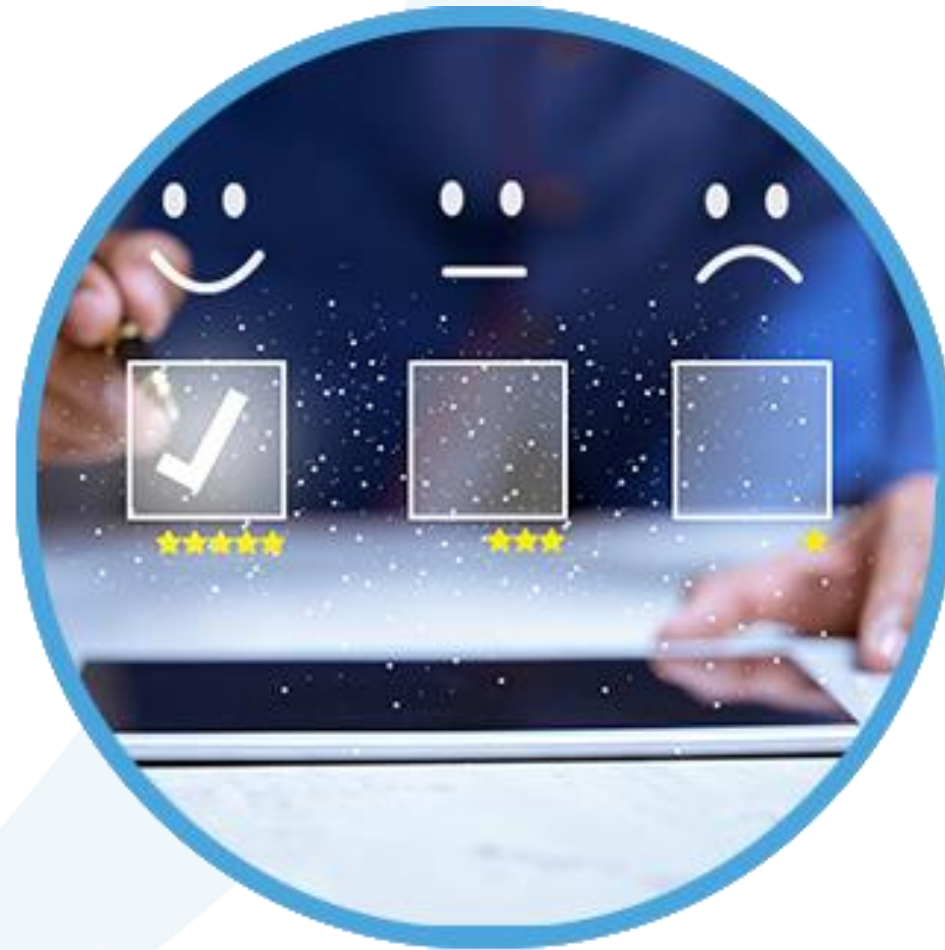
Any final thoughts or recommendations?



Questions



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