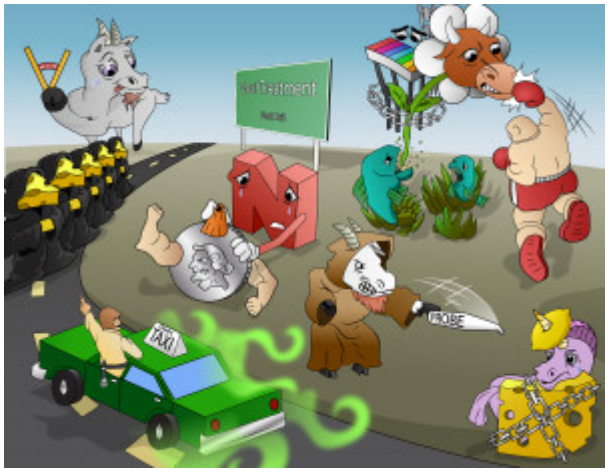
Gout Treatment

Gout is an acute inflammatory monoarthritis related to uric acid content, which is painful, debilitating, and deforming. Its treatment can be broken into two groups, drugs which are given for acute attacks, and drugs which are given for chronic maintenance and prevention. Chronic drugs include inhibitors of xanthine oxidase, such as allopurinol and febuxostat, along with inhibitors of uric acid reabsorption in the proximal tubule of the kidney, such as probenecid. Acute treatment includes NSAIDs, glucocorticoids, and colchicine.



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Acute (Acute-angle)

NSAIDs
N-sad
NSAIDs such as naproxen and indomethacin are used to treat acute gouty attacks.

Glucocorticoids
Glue-quarter-on-steroids
Glucocorticoid administration has been found to be just as effective as NSAIDs in acute gout attacks. This class of drug can be used if NSAIDs are contraindicated, and they are effective when given orally, but also lead to improvement when injected into the joint.

Colchicine
Cult-of-cheese
Colchicine is a helpful medication for acute gouty attacks. It can be used in patients when NSAIDs are not well tolerated. Colchicine is an anti-inflammatory drug that is indicated for the treatment of pericarditis or gout. This drug has use acutely and prophylactically. Colchicine can cause GI upset.

Impairs Leukocyte Chemotaxis
Impaired Luke in Chemical-taxi
Colchicine works to inhibit microtubule polymerization by binding to tubulin. As tubulin is important for mitotic function, it works as a "mitotic poison." This inhibits cytoskeletal recruitment, impairing leukocyte chemotaxis and degranulation.

Chronic Gout (Crone Goat)

Inhibit Xanthine Oxidase
Inhibit-chains on Xylophone Ox-daisy
In chronic treatment and prevention of gout, uric acid levels must be controlled. Inhibition of xanthine oxidase decreases the conversion of xanthine to uric acid. Drugs which have activity against xanthine oxidase include allopurinol and febuxostat.

Allopurinol
Aloe-piranha
Allopurinol is a drug that decreases uric acid formation from xanthine and hypoxanthine by inhibiting xanthine oxidase. It is used in chronic gout and hyperuricemia.

Febuxostat
Fat-boxer
Febuxostat is a drug that decreases uric acid formation from xanthine and hypoxanthine by inhibiting xanthine oxidase. It is used in chronic gout and hyperuricemia.

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Inhibit Reabsorption of Uric Acid

Inhibit-chains on Sponge Unicorn with Acidic-lemon

Uricosurics, such as Probenecid, are a class of drug which increase the excretion of uric acid in the urine, reducing blood plasma uric acid levels. This works by inhibiting uric acid reabsorption in the proximal tubule of the kidney.

Probenecid

Probe

Probenecid works by interfering with the kidney's organic anion transporter, which reclaims uric acid from the urine and returns it to the plasma. When probenecid is present, the organic anion transporter binds preferentially to it (instead of to uric acid), preventing reabsorption of the uric acid. Hence, the urine retains more uric acid, which lowers uric acid concentration in the plasma. It is used in chronic gout and hyperuricemia.

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