

Evaluation of Hyperuricaemia

Suggested scheme for evaluation of Hyperuricaemia

Potentially correctable contributory factors

- Obesity
- Alcohol
- Hypertriglyceridaemia
- Drugs (especially thiazides, but also diuretics, low doses of salicylates, nicotinic acid, pyrazinamide, ethambutol, and cyclosporin)
- Low fluid intake

Consider

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High purine intake

Diet (meats, yeast products)

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Increased urate production

Primary

- Idiopathic
- Enzyme defects

Secondary

- Blood dyscrasias
- Infectious mononucleosis
- Malignancy
- Cytotoxic therapy
- Psoriasis
- Alcoholism
- Prolonged exercise

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Decreased renal excretion

Primary

- Syndrome-X (insulin resistance, dyslipidaemia [increased TG, low HDL-cho], obesity, hypertension, hyperuricaemia)
- Idiopathic

Secondary

- Renal failure. If renal failure is causing the hyperuricaemia, serum creatinine will be $> 400 \mu\text{mol/L}$, serum urate will be $< 0.65 \text{ mmol/L}$, and the ratio of urine urate to creatinine will be < 0.7 . If hyperuricaemia is causing the renal failure, then serum urate will be $> 0.7 \text{ mmol/L}$ and the ratio of urine urate to creatinine will be > 0.7 .
- Dehydration
- Diuretics
- Ketonaemia (starvation, diabetes mellitus)
- Hyperlactataemia (alcohol, toxoemia of pregnancy)
- Drugs
- Hyperparathyroidism

If the cause is obscure

Consider 24-hour urinary excretion rate before and after a 5-day low-purine diet:

	Normal diet (mmol/24hr)	Low-purine diet (mmol/24hr)
High purine intake	> 6.0	< 4.0
Increased urate production	> 6.0	> 4.5
Decreased renal excretion	< 6.0	< 4.0 (often < 2.0)