

## Tip 5 (August 2009)

### What tests should I do routinely before starting antihypertensive therapy?

Full blood count

Na<sup>+</sup> K<sup>+</sup> urea creatinine calcium albumin phosphorus

MDRD eGFR

T4, TSH

Urine microscopy and culture

Spot urine albumin/creatinine ratio

Fasting glucose

Fasting lipids

12-lead ECG

Renin and aldosterone – optional (*I do it routinely* even when serum K<sup>+</sup> is normal – see **Tip 11 March 2010**)

These tests will :

- pick up some of the secondary causes of hypertension (kidney disease, hyperparathyroidism, hyper and hypothyroidism, and may suggest further investigation for others (eg Conn's syndrome and variants suggested by hypokalaemia and hypernatraemia)
- detect target organ damage (abnormal ECG, microalbuminuria)
- detect coexisting metabolic risk factors which will be important in the holistic approach to therapy and also the choice of antihypertensive drugs
- help with selection of antihypertensive agents in general ( eg thiazides don't work well when GFR < 40ml/min and should also be avoided in the presence of pre-existing hyponatraemia, ACE-inbititors, ARB's and spironolactone used with caution in the presence of hyperkalaemia, beta blockers and no-DHP calcium channel blockers used with great caution in the presence of significant bradycardia or any degree of heart block)
- determine the need for further investigation as appropriate
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**For further information** Go to the Express Guidelines (for primary care) of the 2003 JNC-7 report:-

<http://www.nhlbi.nih.gov/guidelines/hypertension/express.pdf>