

Plasma Metanephrines

Synonyms

Adrenaline, noradrenaline, epinephrine, norepinephrine, metadrenalines

Clinical Indication

Investigation of suspected pheochromocytoma.

A pheochromocytoma is a tumour arising from adrenomedullary chromaffin cells that commonly produces one or more catecholamines: epinephrine, norepinephrine, and dopamine. Rarely, these tumours are biochemically silent. Pheochromocytoma should be suspected in patients who have one or more of the following: the classic triad of headache, sweating and tachycardia (whether or not they have hypertension); hyperadrenergic spells; young onset HTN; family history of pheochromocytoma; pressor response during anaesthetic; idiopathic dilated cardiomyopathy or Carney triad.

The Endocrine Society Clinical Practice Guideline recommends that initial biochemical testing for pheochromocytoma should include measurement of metanephrines. There is compelling evidence that metanephrine analysis has significantly more diagnostic sensitivity than measurement of catecholamines. 24 hour urinary metanephrines is the preferred first line test (to avoid possible false positive plasma metanephrine results). However it is acknowledged that there will be circumstances where plasma metanephrines will be more practical.

Part of Profile / See Also

Request Form

Combined Pathology manual Blood form or ICE request

Availability / Frequency of Analysis

Referred Test: Analysed by Biochemistry, King's College Hospital ([Synnovis – lab 9067](#)), if clinically indicated.

Turnaround Time

Up to 3 weeks

Patient Preparation

It is recommended to draw blood with the patient in a supine position. Please note that this will not be possible to achieve if the patient attends the phlebotomy department to have their blood taken and may necessitate a repeat.

Sample Requirements

Specimen Type

EDTA plasma

Volume

7ml

Container



Large purple top (EDTA) tube



Or Lemon top (EDTA)

Samples must be transported to the laboratory immediately.

Reference Range & Units

Plasma metadrenaline: 80 – 510 pmol/L
Plasma normetadrenaline: 120 – 1180 pmol/L
Plasma 3-methoxytyramine: <120 pmol/L

Interferences

Interpretation & Clinical

Decision Value (if applicable)

Interpretive comment will be provided by the referral laboratory.

References

Jacques W.M. et al Pheochromocytoma and Paraganglioma: An Endocrine Society Clinical Practice Guideline 2014 *The Journal of Clinical Endocrinology & Metabolism* **99:6** 1915-1942

<http://www.synnovis.co.uk/our-tests/plasma-free-metanephrines>

Test code

SAS

Lab Handling

Prepare two aliquots of EDTA plasma (at least 500ul) and store in the frozen referrals rack at -20C. Samples are sent frozen by Global courier. Must be frozen within one hour of collection.



9067

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