

PF-PTD-159

Homocysteine

Synonyms	
Clinical Indication	 Possible homocystinuria (rare autosomal recessive disorder which manifests as developmental delay, Marfanoid appearance, osteoporosis, ocular abnormalities, thromboembolic disease and severe premature atherosclerosis) Risk stratification in patients in whom premature vascular disease, CVA and thrombosis is apparent Thrombotic tendency Increased levels of homocysteine may reflect deficiency of folate or vitamin B12. Plasma homocysteine is a sensitive functional indicator of vitamin B12 and folate status.
Part of Profile / See Also	Please note that for paediatric requests, homocysteine can be included in the plasma amino acid analysis if required. Please state on the request form.
Request Form	Combined Pathology manual Blood form or ICE request
Availability / Frequency of Analysis	Referred test: Analysed by King's College Hospital, (Synnovis 9093) if specific criteria met.
Turnaround Time	2 weeks
Patient Preparation	Patient should be fasting as homocysteine levels may increase after food.
Sample Requirements	
Specimen Type	EDTA (lithium heparin Plasma and serum can also be used provided they are
	separated from the cells within one hour of collection).
Volume	2 ml
Container	Image: A state of the state
Reference Range & Units	Ranges are age/sex related: 0-1 yr: <6.5 μmol/L
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	2-15 yr: <10 μmol/L 15-65 yr (female): <13 μmol/L 15-65 yr (male): <15 μmol/L >65 yr: <16 μmol/L
	In pregnancy, trimester specific homocysteine reference cut-offs apply:
	First trimester: <7 μmol/L Second trimester: <7 μmol/L Third trimester: <10 μmol/L
Interferences	Some drugs used in the treatment of hypercholesterolaemia can cause raised
	homocysteine levels. Metformin has also been associated with increased
	homocysteine level. Smoking may elevate homocysteine levels.
Interpretation & Clinical	Raised homocysteine may indicate a genetic disorder of sulphur amino acid
Decision Value (if applicable)	metabolism and/or B12/folate deficiency.
	Raised homocysteine is reported to be a risk factor for premature cardiovascular and cerebrovascular disease and/or clotting tendency however interventions to lower homocysteine have not been show to prevent cardiovascular disease or venous thromboembolism (with the possible exception of stroke).
References	https://www.synnovis.co.uk/our-tests/homocysteine
	Up to Date – Overview of Homocysteine. Searched Sept 2018
Test code	HCYS
Lab Handling	Centrifuge and aliquot sample within 1 hour of collection and store in the referrals rack at 4°C. If there will be a delay in sending the sample to the referral laboratory (i.e. on a Friday/Bank Holiday) it should be stored in the frozen referral rack at -20°C. Please ensure the sample type is written on the aliquot. For manual request entry: Please make sure you use the code HCYS. PHCY is only to be used for paediatric requests.



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