

Urea

Synonyms

BUN (blood urea nitrogen), UE (within U&E profile).
 As of 01/09/22 Primary Care will not have urea included as standard. A new 'Renal Profile' test will be provided for GPs which only includes sodium, potassium, creatinine and eGFR. Urea will be available separately if clinically required and urea will be reflexed in the lab if the eGFR is <30.

Clinical Indication

Urea as an index of renal function is of limited value and measurement of creatinine and calculation of estimated glomerular filtration rate (eGFR) is preferred. Urea may be useful in suspected pre-renal renal failure e.g. due to fluid depletion or cardiac failure, when [urea] tends to rise before [creatinine] or in monitoring effects of renal replacement treatment. Measurement of urea is also of value in predicting severity of pancreatitis and investigation of suspected urea cycle disorders.

Part of Profile / See Also

Urea and Electrolytes

Request Form

Combined Pathology manual Blood form or ICE request

Availability / Frequency of Analysis

On request.

Turnaround Time

Same day

Patient Preparation

None required.

Sample Requirements

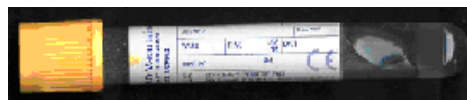
Specimen Type

Serum and plasma

Volume

2 ml

Acceptable Containers



Yellow top (SST) tube



Green top (lithium-heparin) tube



paediatric green top (lithium-heparin)

Plain serum samples may also be used.

Reference Range & Units

Age Range	Urea (mmol/L)
< 30 days	0.8 - 5.5

1 month to 12 years	1.0 - 5.5
13 to 16 years	2.5 - 6.5
Over 17 years	2.5 - 7.8

Reference: Pathology Harmony Group, Clinical Biochemistry Outcomes, January 2011 (www.pathologyharmony.co.uk)

Interferences

Interpretation & Clinical

Decision Value (if applicable)

Critical Difference 39%

The interpretation of measurements of urea is confounded by its being influenced by three factors: the rate of synthesis (reflecting protein turnover), the volume of distribution (effectively total body water) and the rate of excretion (determined by the rate of glomerular filtration and the (variable, according to urine flow rate) rate of tubular reabsorption). As a result, it may be difficult to ascribe a particular cause to an abnormal urea, particularly if the abnormality is only slight.

References

Beckman kit insert

Test code

UE or UREA

Lab Handling

Analysed from primary tube and stored at 4°C.
Serum and plasma stable for 7 days at 4°C.