



C-Reactive Protein

Synonyms

CRP

Clinical Indication

C-reactive protein (CRP) is an acute-phase reactants. Elevations in CRP occur in association with acute and chronic inflammation due to a range of causes. CRP can be measured down to very low concentrations, however due to the non-specificity of CRP and the wide inter-individual variation, interpretation of CRP levels must be undertaken with care, usually in comparison with previous CRP values or other markers and clinical assessment.

CRP measurement may be useful in monitoring disease activity for a range of disorders including:

- Rheumatoid arthritis
- Polymyalgia rheumatic
- SLE
- Infection

It is important to note that not every inflammatory illness requires a CRP measurement and that CRP should be requested only if the clinical picture is unclear and the result will contribute to a decision on the patient's management.

Detection and management of infection: elevations of CRP are seen in most systemic microbial infections. Viral, mycobacterial and parasitic infection may only provide a modest stimulus. CRP may be useful in providing early evidence of infection following surgery.

Consider measuring CRP at baseline in patients with community-acquired pneumonia on admission to hospital, and repeat the test if clinical progress is uncertain after 48 to 72 hours.

Part of Profile / See Also

Request Form

Combined Pathology manual Blood form or ICE request

Availability / Frequency of Analysis

On request.

The minimum retesting interval is 24 hours.

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 orange top (lithium-heparin)



paediatric green top (lithium-heparin)

Plain serum samples may also be used.

Reference Range & Units

Adult: less than 5 mg/L

Interferences

Interpretation & Clinical

Decision Value (if applicable)

Critical Difference 42.5%

CRP has a short half-life (8 hours) and should peak and begin decreasing within 48 hours if no other inflammatory event occurs.

Minor (or no) elevation of CRP may be seen in SLE, systemic sclerosis, dermatomyositis, ulcerative colitis, leukaemia and paraproteinaemias.

References

Beckman kit insert.

NICE CG191 Pneumonia in adults: diagnosis and Pneumonia in adults: diagnosis and management (2014)

Test code

CRP

Lab Handling

Analysed from primary tube and stored at 4°C
Serum and plasma stable for 2 months at 2-8°C
Serum and plasma stable for 11 days at 15-25°C