

## Division of Laboratory Medicine

Immunology

# Immunoglobulins (IgG, IgA, IgM)

## General information

**IgG:** Marked polyclonal IgG elevation is seen in HIV, Sjögren's, and Sarcoidosis. Less marked elevation in chronic inflammatory and infective conditions.

**IgA:** raised in elderly, chronic infection, cirrhotic liver disease

**IgM:** raised primary biliary cirrhosis, acute infection, EBV, CMV, TB

**Specimen transport:** At room temperature

**Repeat frequency:** Not within six months - exempt for monitoring myeloma and immunodeficiency

**Special precautions:** None

## Laboratory information

**Normal reference range:** Age specific (5th - 95th centiles)

Age specific reference ranges for total serum IgG, IgA and IgM (as recommended by Pathology Harmony)

Age	IgG g/L	IgA g/L	IgM g/L
Cord	5.2 - 18.0	<0.02	0.02 - 0.2
0-2 weeks	5.0 - 17.0	0.01 - 0.08	0.05 - 0.2
2-6 weeks	3.9 - 13.0	0.02 - 0.15	0.08 - 0.4
6-12 weeks	2.1 - 7.7	0.05 - 0.4	0.15 - 0.7
3-6 months	2.4 - 8.8	0.10 - 0.5	0.2 - 1.0
6-9 months	3.0 - 9.0	0.15 - 0.7	0.4 - 1.6
9-12 months	3.0 - 10.9	0.20 - 0.7	0.6 - 2.1
1-2 years	3.1 - 13.8	0.3 - 1.2	0.5 - 2.2
2-3 years	3.7 - 15.8	0.3 - 1.3	0.5 - 2.2
3-6 years	4.9 - 16.1	0.4 - 2.0	0.5 - 2.0
6-9 years	5.4 - 16.1	0.5 - 2.4	0.5 - 1.8
9-12 years	5.4 - 16.1	0.7 - 2.5	0.5 - 1.8
12-15 years	5.4 - 16.1	0.8 - 2.8	0.5 - 1.9
15-45 years	6.0 - 16.0	0.8 - 2.8	0.5 - 1.9
Over 45	6.0 - 16.0	0.8 - 4.0	0.5 - 2.0

**Volume and sample type:** 4ml serum

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**Method:** Turbidimetry

**Turnaround time** (calendar days from sample receipt to authorised result): Median – 2

**Participation in EQA Scheme:** UK NEQAS Specific protein scheme & UK NEQAS for Monoclonal Protein identification

### Clinical information

**Indications for the test:**

- Recurrent infections
- Suspected myeloma, Waldenstrom's macroglobulinaemia, lymphoma, connective tissue disease.

**Factors affecting the test:** Age (e.g. Transient neonatal hypogammaglobulinaemia), primary/secondary immunodeficiency, acute infections, treatment with immunosuppressive drugs, intravenous or subcutaneous immunoglobulin preparations.

**(Last updated June 2022)**