Immunoglobulin G subclasses

- **Immunoglobulin G subclasses G1-G4**

General:

The immunoglobulin G (IgG) does not represent a homogeneous immunoglobulin class, but consists of four structurally and functionally different subclasses. The serum levels of the subclasses are partly genetically determined; moreover its synthesis by antigen stimulation can be regulated by T-cells. IgG1 and IgG3 are directed against protein antigens of viruses and bacteria, polysaccharide antigens, e.g. against bacteria membranes which in turn cause IgG2-reaction. Increased IgG4-antibodies are found in chronic antigen stimulation (e.g. parasitosis) and hyposensitization with allergens. IgG1 and IgG3 activate the complement system via the classical way. Single increases of subclasses do not necessarily result in elevated total IgG.

IgG2 deficiency: upper respiratory tract infections and bronchopulmonary infection in childhood, otitis media (caused by pneumococci) frequently together with GIT infections, seen in autoimmune diseases like vasculitis and autoimmune cytopenia, ataxia teleangiectasia (IgG4 is also decreased), C3 deficiency.

IgG3 deficiency: pulmonal affections, diabetes mellitus type I, Friedreich's ataxia (spinocerebellar and corticospinal posterior column degeneration);

IgG4 deficiency: is often associated with IgG2 deficiency

Increase:

IgG1: in systemic LE (with decreased IgG2)

IgG2: cystic fibrosis with chronic Pseudomonas aeruginosa infection

IgG4: allergies, dermatitis, atopic eczema, asthma, and in hyposensitization.

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- **Immunoglobulin G1**

Material: 1 ml serum
TAT: 7-10 days*
Method: nephelometry
Units: mg/dl
Ref.- range: see report

- **Immunoglobulin G2**

Material: 1 ml serum
TAT: 7-10 days*
Method: turbidimetry
Units: mg/dl
Ref.- range: see report

- **Immunoglobulin G3**

Material: 1 ml serum
TAT: 7-10 days*
Method: turbidimetry
Units: mg/dl
Ref.- range: see report

- **Immunoglobulin G4**

Material: 1 ml serum
TAT: 7-10 days*
Method: turbidimetry
Units: mg/dl
Ref.- range: see report

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit http://www.fml-dubai.com/parameter-listings/

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