

# IgG

## Under construction / Forgotten

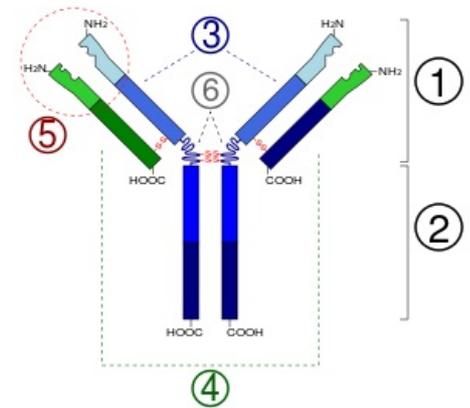
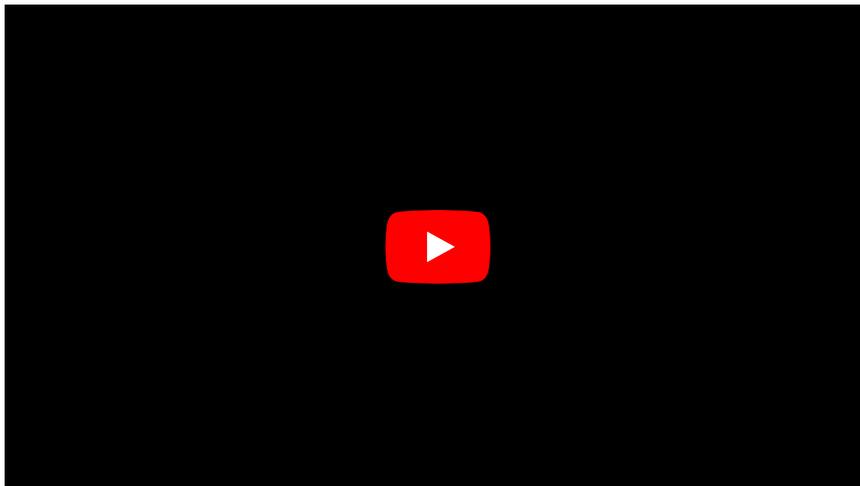
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**IgG** is the most important **class of antibodies**. It makes up  $\frac{3}{4}$  all antibodies in the serum, its concentration is **10 g / l**. It creates 4 subclasses (IgG1-4), which differ from each other in their opsonizing properties, binding to complement and the time for which they are active. It is also the only class of antibodies capable of crossing the placenta. Therefore, newborns have the same values as adults. The lowest level in a healthy individual is **between the 3rd and 6th month** of postnatal life (transient hypogammaglobulinemia). This leads to the susceptibility of newborns to infectious diseases.

### Warm AIHA:



Immunoglobulin basic unit

### Structure

The IgG molecule is composed of two light and two heavy chains. Light chains consist of 1 variable and 1 constant immunoglobulin domain. Heavy chains are composed of 1 variable and 3 constant domains. IgG antibodies occur in monomeric form.

### Importance

- **opsonization** - FcR receptors for IgG Fc fragments occur on neutrophils and macrophages,
- **complement activation in the classical way** - after IgG binding to antigen,
- **secondary immune response** - repeated encounter with antigen,
- **neutralization of toxins** - after IgG binding, the toxin is blocked and neutralized by forming an immunocomplex.

## Sources

### External links

- IgG (česká wikipedie)
- HOŘEJŠÍ, Václav - BARTŮŇKOVÁ, Jiřina. *Základy imunologie*. 3. edition. Praha : Triton, 2008. 280 pp. ISBN 80-7254-686-4.

