

# Splenomegaly

Splenomegaly is an enlargement of the spleen over its normal size. The size of the spleen can be variable: normal adult spleen is about 10-13 cm long and 6-8 cm wide.

## Classification

### Adult classification

1. **mild splenomegaly** – weight of the spleen is up to 500 g, examples: acute bacterial infection, chronic venous stasis, infectious mononucleosis
2. **moderate splenomegaly** – weight of the spleen is between 500 and 1000 g, examples: steatosis, amyloidosis, chronic bacterial infections, autoimmune hemolytic anemia
3. **severe splenomegaly** – weight of the spleen is over 1000 g, examples: hemolytic anemia, primary tumors of the spleen, chronic myeloid leukemia.

*Hypersplenism* is defined as an increased activity of the spleen which can lead to the splenomegaly. Complications of having splenomegaly is a ruptured spleen which is often an indication for splenectomy, in this case the spleen's function is taken over by the liver and the bone marrow.

## Causes

The main causes of the splenomegaly are<sup>[1]</sup> <sup>[2]</sup>:

- **infection** : in children it can be caused by any types of infectious illnesses (reaction to an antigenic stimulus)
  - bacterial infections
  - mainly EBV <sup>[1]</sup> and CMV infections
  - parasite infections, for example malaria <sup>[1]</sup>, leishmaniasis
- **cardiovascular diseases**<sup>[2]</sup>:
  - right-sided heart failure,
  - thrombosis of the portal vein system and *a. lienalis* (for example due to the pancreatic cancer)<sup>[2]</sup>,
  - endocarditis
  - **portal hypertension**<sup>[1]</sup> (in adulthood commonly due to the liver cirrhosis<sup>[2]</sup>);
- **hemolysis**<sup>[1]</sup> and **increased elimination of the erythrocytes**:
  - Intracorporeal hemolytic anemia: early thalassemia <sup>[1]</sup>, spherocytosis, sickle cell anemia<sup>[1]</sup>
  - Extracorporeal hemolytic anemia
- **Tumors**:
  - myeloproliferative disorders: **chronic myeloid leukemia**, **extramedullary hematopoiesis** due to the primary myelofibrosis,
  - lymphoproliferative disorders: **hairy cells leukemia**, splenic lymphoma
  - metastasis to the spleen
- **autoimmune diseases**<sup>[2]</sup>:
  - rheumatoid arthritis,
  - systemic lupus erythematosus
- **amyloidosis**
- **storage disorders**, mainly lysosomal<sup>[1]</sup>: mucopolysaccharidosis type I, II and VII; Gaucher disease, Niemann-Pick disease, generalized gangliosidosis, Wolman's disease



Splenomegaly in adult due to CLL

## Links

### Related Articles [ modify | edit source ]

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- Diagnostic imaging methods in the examination of the pancreas, liver and spleen
- Development of lymphatic vessels, nodes and spleen
- Spleen (specimen) • Secondary amyloidosis of spleen (specimen) • Spleen / Spleen - Ag • Spleen / Spleen - Pearls • Spleen (SFLT)

## References

1. MARCDANTE, Karen J – KLIEGMAN, Robert M – JENSON, Richard E. *Nelson essentials of pediatrics*. 6. edition. Philadelphia : Saunders/Elsevier, 2011. 831 pp. Chapter 206–207, 561. ISBN 978-1-4377-0643-7.
2. KOUBA, Michal. *Stáž v ÚHKT* [lecture for subject Interna předstátnicová stáž, specialization Všeobecné

