

Difference Between Hypersplenism and Splenomegaly

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Key Difference – Hypersplenism vs Splenomegaly

The [spleen](#) is an organ located in the left hypochondriac region of the [abdomen](#). When the [red blood cells](#) approach the end of their lifespan, they are sent to the spleen. Inside the spleen, the red cells (old and damaged ones) are disintegrated. Some of the products of this disintegration are recycled, and the others are excreted as metabolic waste. Accordingly, the spleen can be considered as the graveyard of the red cells. However, in some instances, the spleen becomes overactive and starts to destroy the young red cells which are nowhere near the end of their lifespan. This condition is known as the hypersplenism. When the spleen enlarges unduly, this is called the splenomegaly. The key difference between hypersplenism and splenomegaly is that **hypersplenism is a functional abnormality of the spleen, whereas splenomegaly is a structural abnormality.**

What is Splenomegaly?

As the name implies, splenomegaly is the abnormal enlargement of the spleen. An enlarged spleen is usually felt under the left costal margin. But if there is a massive splenomegaly, the spleen can be felt extending into the right iliac fossa.

Causes of Splenomegaly

Congestive Causes

- Portal [hypertension](#) in conditions such as [cirrhosis](#), hepatic vein occlusion, and portal vein [thrombosis](#)
- [Congestive cardiac failure](#)
- Constrictive pericarditis

Infective Causes

- [Endocarditis](#)
- [Septicemia](#)
- [Tuberculosis](#)

- Brucellosis
- [Hepatitis](#)
- [Malaria](#)
- Trypanosomiasis
- Leishmaniasis
- Histoplasmosis

Inflammatory Causes

- [Sarcoidosis](#)
- SLE
- Felty's syndrome

Hematological Disorders

- Megaloblastic anemia
- Hereditary spherocytosis
- Hemoglobinopathies
- Autoimmune hemolytic anemia
- Chronic myeloid leukemia
- Myelofibrosis
- [Lymphomas](#)

Lysosomal Storage Diseases

- Gaucher 's disease
- Niemann- Pick disease

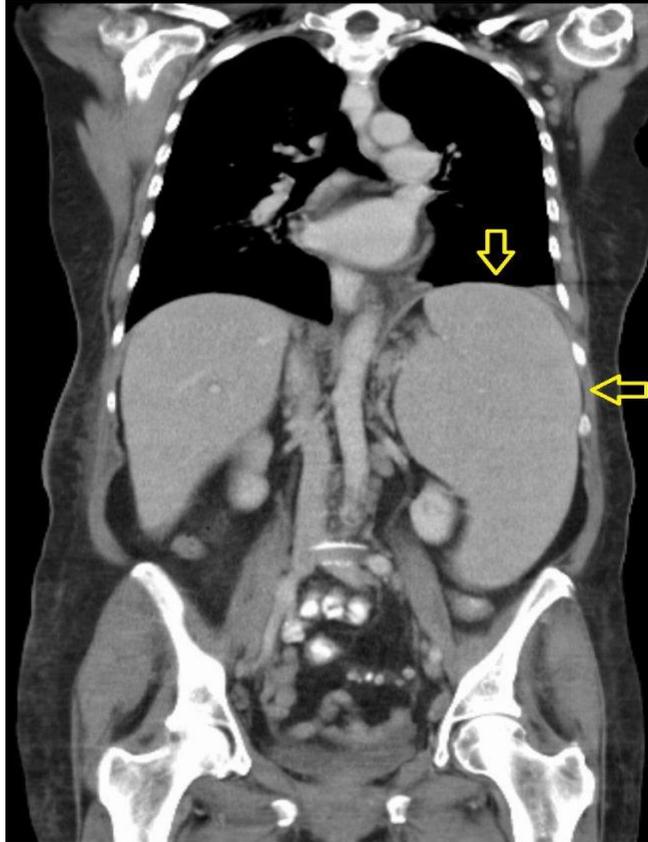


Figure 01: Splenomegaly

Investigations

The investigations we select vary depending on the suspected etiology.

- Ultrasound Scan or Computed Tomography (These help to identify any changes in the density of the spleen which is a characteristic feature of the lymphoproliferative diseases.)
- Biopsy of abdominal and superficial lymph nodes
- Chest X-Ray
- Full Blood Count

What is Tropical Splenomegaly Syndrome?

This condition is characterized by a massive splenomegaly of unknown etiology and it is mainly seen in the tropical countries.

Clinical Features

- Splenomegaly
- Hepatomegaly
- Portal hypertension
- Severe [anemia](#)
- Elevated IgM levels

What is Hypersplenism?

Under the normal circumstances, 5% of red blood cells and about 30% of platelets are pooled in the spleen. But when the spleen enlarges, which means when there is a splenomegaly, the proportion of the hemopoietic red cells in the spleen increases. Consequently, the number of red blood cells and platelets pooled in the spleen increases up to 40% and 90% respectively. Thus it is the enlargement of the spleen that results in its overactivity.

Hypersplenism, therefore, has main two unique features.

- Presence of an enlarged spleen
- Despite the normal bone marrow activity there is a reduction of one or more cell lines(cytopenia)

What are the similarities between Splenomegaly and Hypersplenism?

- Both splenomegaly and hypersplenism are abnormalities of the spleen.
- Any pathology resulting in splenomegaly gives rise to hypersplenism as well because it is the enlargement of the spleen that makes it overactive.

What is the difference between Splenomegaly and Hypersplenism?

Splenomegaly vs Hypersplenism

Splenomegaly is the undue enlargement of the spleen.

Hypersplenism is characterized by splenomegaly and reduction of at least one cell line.

Location

Splenomegaly is a structural abnormality.

Hypersplenism is a functional abnormality.

Summary – Splenomegaly and Hypersplenism

Both splenomegaly and hypersplenism are two abnormal conditions of the spleen. The difference between splenomegaly and hypersplenism depends on the nature of the abnormality; splenomegaly is a structural abnormality whereas hypersplenism is a functional abnormality. Splenomegaly can also result in hypersplenism.

Reference:

1. Walker Brian, Nicki R. Colledge, Stuart Ralston, and Ian Penman, eds. *Davidson's Principles and Practice of Medicine*. 22nd ed. N.p.: Elsevier Health Sciences, 2013. Print.
2. Hoffbrand, A. V., and P. A. H. Moss. *Essential haematology*. 6th ed. Oxford: Wiley-Blackwell, 2011. Print.

Image Courtesy:

1. "Splenomegalie bei CLL (labeled)" By Hellerhoff. Labeling by Mikael Häggström – File:Splenomegalie bei CLL.jpg, ([CC BY-SA 3.0](#)) via [Commons Wikimedia](#)

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