



Allergies: When the Immune System Backfires

Video Transcript

Where it happens

[Andreas J. Bircher]: Evolution created the immune system as a complex network. It combines organs, cells, and soluble factors in order to deflect perils that threaten our physical well-being. Let us consider the organs that interact in the immune system.

A first important organ of the immune system is the bone marrow. In it, all immune cells are generated. The second organ is the thymus. Here, some types of immune cells, the T cells mature. Should they turn out to be autoreactive, this is the place where they are destroyed as they might turn against structures of the same organism.

The next constituent of the immune system entails the lymphatic vessels and the lymph nodes and especially the so-called Peyer's patches in the gut. These designate gut associated lymphoid tissue that ensures immune surveillance in the intestines and furthers immune response in the gut mucosa.

Tonsils function as a further storage or waiting area for immune cells. In the spleen, cells that need to be removed are coated with immunoglobulin, that is: antibodies. This process is carried out with cells that are no longer used and foreign agents that are captured.

The ensuing removal happens via the so-called vascular system. This system includes both blood and lymphatic vessels. It provides the traffic routes throughout the body and thus enables the transport. The vascular system also grants eviction of detrimental cells and agents with specialised cells in its lining.

As we see, our body provides us with an intricate structure of organs that support our immune defence.