

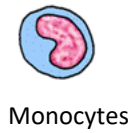
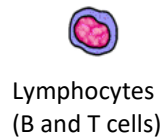
## GLOSSARY Nº1: Immune System



### Red Blood cells



### White blood cells (or Leukocytes)





### Platelets



They can be measured/monitored with various **BLOOD TESTS** (e.g complete blood count, leukogram)

		Immune system's component	What is it?	What type of Blood Tests can be done to measure/monitor it?
<b>White blood cells or Leukocytes</b> Immune cells that protect the body from infection and help us stay healthy	Lymphocytes	<b>B cells</b> 	A <b>type of white blood cells</b> also known as <b>B lymphocytes</b> . They produce <b>antibodies</b> , important in <b>the recognition and destruction of infectious agents</b> . They can differentiate in <b>memory cells, which are important in infection prevention and vaccination response</b> .	Complete blood count, Leukogram, Lymphocyte proliferation assays
		<b>T cells</b> 	A type of <b>white blood cells</b> also known as <b>T lymphocytes</b> . They fight and eliminate infected cells, by producing toxic substances and have a crucial role in fighting viral infections and cancer cells. They <b>stimulate other immune cells to act</b> . They can differentiate in <b>memory cells, which are important in infection prevention and vaccination response</b> .	Complete blood count, Leukogram, Lymphocyte proliferation assays
		<b>Basophils</b> 	A type of white blood cells that has an important role in <b>allergic reactions</b> , but also in blood clotting and in fighting parasitic infections.	Complete blood count, Leukogram
		<b>Eosinophils</b> 	A type of white blood cells that have relevant roles in <b>fighting parasitic, viral, and bacterial infections</b> .	Complete blood count, Leukogram
		<b>Monocytes</b> 	Type of white blood cells able to <b>recognise and phagocytose</b> (i.e. eat) infectious agents (e.g bacteria, virus).	Complete blood count, Leukogram, Phagocytosis
		<b>Neutrophils</b> 	The <b>most abundant type of white blood cells</b> present in the blood, they are for <b>recognising and phagocytosing</b> infection agents (e.g bacteria, virus). <b>They rapidly migrate to the infection site</b> .	Complete blood count, Leukogram, Oxidative burst

Immune system's component	What is it?	Examples	How can it be measured/monitored?
<p><b>Cytokines</b></p>	<p><b>Small secreted proteins</b> released by some <b>white blood cells</b>, which <b>stimulate or repress various immunological functions</b>.</p>	<p>INF-<math>\gamma</math>, TNF<math>\alpha</math>, GM-CSF IL-4, IL-10, IL-3</p>	<p>Cytokine panel</p>
<p><b>Complement system</b></p>	<p>A series of proteins that work together and communicate with immune cells to help fight off infections and destroy substances that are foreign to the body, such as viruses and bacteria.</p>	<p>C3, C3a, C3d, C1q, C2</p>	<p>Complement fixation assay, Total complement (CH50)</p>
<p><b>Antibodies or immunoglobulins</b></p> 	<p>Highly specialized proteins made by B cells in response to foreign substances/invasers. Immunoglobulins are divided into different classes.</p>	<p><b>IgA</b> - the antibody class which is most abundant in body secretions, like saliva, tears, breast milk and mucous secretion of gut, stomach and airways. They act by preventing attachment of viruses and bacteria to body surfaces;</p> <p><b>IgG</b> - the most common antibody class found in the body. IgG are important in fighting bacterial and viral infections, but also recruit immune cells and enhance the immune response;</p> <p><b>IgM</b> – the antibody class which are produced early during the process of immune response and fight bacterial and viral infections as well as stimulate other immunological cells/responses;</p> <p><b>IgE</b> – the antibody class most important during allergic and parasite reactions;</p> <p><b>IgD</b> - the antibody class that regulates the stimulation of B cells and, thus antibody production.</p>	<p>Immunoglobulin count/analysis</p>
<p><b>Platelets</b></p> 	<p>Blood components and are involved in blood clotting (stopping hemorrhages/bleeding).</p>	<p>Not applicable</p>	<p>Complete blood count</p>

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