

Many of the most devastating human diseases result from an attack of various microbes (viruses, bacteria, fungi) on the human body. The flu epidemic of 1918 killed 22 million Americans and Europeans in just 18 months, and our ongoing war against the HIV virus is still waging. In order to fight against this onslaught, the human body developed a sophisticated system that is able to screen, identify, and destroy invading microorganisms before they cause severe damage to the human body. This system, called the Immune System, continuously monitors our blood stream for the presence of foreign cells or molecules. Once an infection is recorded, the system is able to launch a full-scale attack directed against the specific invader. Organisms with compromised immune systems, or those lacking immune systems, cannot survive for long. Infections that are able to escape or destroy the immune system's surveillance (such as HIV) are extremely dangerous.

You work for a company which creates posters and informational material for doctor's offices. Your team's new project is to prepare information on the immune system. This information will be sent to graphic designers later to polish the visuals, but you need to ensure that the content is accurate.

The immune system is composed of several types of cells whose coordinated, concerted effort is required for screening, identification, and eventual purging of microbial invasion. This is especially evident when the body launches the Specific Immune Response, comprised of both Humoral and Cell-Mediated Immunity. Create a network diagram (flow chart) showing the components of the Specific Immune Response that shows the interaction and relationships of the cells in both Humoral & Cell-Mediated Immunity.

Sometimes too much of a good thing is not so good. When our immune system detects a foreign molecule and mounts an immune response, it is sometimes unaware that the foreign molecule is actually completely harmless. Many cases of allergies are a result of an aggressive immune response against an organism or molecule that harbors no real threat to our body. What are the components of our immune system involved in allergic reactions, and how does treatment of allergies manage to control them? Create a one-page brochure designed to explain the causes of allergies and tips for allergy management to a non-scientific audience.

You may use either Word or PowerPoint to create your network diagram; create the brochure as a Word document. Your final product should be in two files: one with the network diagram, and one with the brochure. Use the Library, Internet, and other resources to research these topics. Be sure to cite all sources in APA format.