

# Hypersensitivity reactions essay examples



**ASSIGN  
BUSTER**

Hypersensitivity, which is also known as hypersensitivity reaction, refers to excessive and undesirable reactions such as allergies and autoimmunity. The reactions produce discomfort, damaging, and to some extent fatal and are caused by the normal immune system. The hypersensitivity reactions are basically divided into four main types based on the mechanisms involved and the time that is taken for the reaction to manifest. These types are types I, II, III and IV (Ghaffar).

The type I hypersensitivity, also known as anaphylactic or immediate hypersensitivity and involve skin, eye, nasopharynx, and bronchopulmonary tissues. This reaction causes a number of symptoms ranging from minor inconveniences to serious symptoms that may cause death. The reaction takes place about 15 to 30 minutes after the body has been exposed to the antigen. The main mediators are IgE and IgG4 (Anand). Type II hypersensitivity, also referred to as cytotoxic hypersensitivity affect a number of tissues and organs. The antigens that result to this type of hypersensitivity are usually endogenous although chemicals such as haptens, which are exogenous, may also cause type II hypersensitivity. The time of reaction after exposure to the antigen ranges from minutes to hours. The mediators for the reaction are IgG, IgM classes and complement (Black). In the case of type III hypersensitivity, the reaction involves such organs as the skin, kidneys, lungs, blood vessels, joints as well as other organs. The type III is also referred to as immune complex hypersensitivity. This reaction has been identified as the pathogenic mechanism that is followed by many disease causing organisms. The reaction time since exposure is 3 to 10 hours and is mediated by IgG class and complement, and the antigen may be exogenous or endogenous. The other type is the type IV, which is also called

<https://assignbuster.com/hypersensitivity-reactions-essay-examples/>

cell-mediated, or the delayed type of hypersensitivity reaction. It may take weeks before manifesting with the lesion being characterized by erythema and induration. The reaction is mediated by the T-cells (Ghaffar).

## **Works Cited**

Anand, Miriam K. Immediate Hypersensitivity Reactions. 2012. 14 April 2013.

.

Black, C. A. " Delayed Type Hypersensitivity: Current Theories with a Historic Perspective." *Dermatol. Online J.* 5 . 1 (1999): 7.

Ghaffar, Abdul. Immunology - Chapter Seventeen Hypersensitivity Reactions. 2010. 14 April 2013. .