



## Are Women More Affected by Autoimmune Diseases than Men?

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Have you ever wondered why do women are more affected by Autoimmune diseases than men?

### For this let us first see, how our immunity works

Whenever our body encounters invasion by microorganisms like bacteria, fungi and parasites, there is a series of immune response activation which occurs. This activation is important to get rid of the microorganism but at the same time our body should be able to distinguish between, the cells of our own body i.e., "Self" and foreign things or "non-self".

Auto means "Self" and immunity means the immune response. i.e. when a body is unable to distinguish between self and foreign. Autoimmunity is developed.

### What could be the reasons for autoimmunity in women?

MHC gene variation: MHC stands for Major Histocompatibility Complex. It is crucial for adaptive immune response. There is a variation in MHC gene in females.

This edge over immune activity is sometimes at the cost of higher autoimmune response.

Autoimmune diseases are also linked to X chromosome. Females are more likely to develop diseases like hypothyroidism or Rheumatoid Arthritis. A recent study has indicated that the cause of higher incidence of autoimmune diseases in women is due to gene called kdm6a that is more expressed in women's immune cells.

Thus men and women not only differ in many aspects ranging from biological, hormonal, physiological, and psychological but also in the immune response.