

# Type 2 Inflammation May Be Contributing to Your Atopic Dermatitis

What is type 2 inflammation and how could it be affecting your skin condition?

**Type 2 inflammation** is part of the body's normal immune response to **allergens** and infections. When a body encounters an allergy, it starts an immune system response involving T cells, which produce a protein called **cytokine** to help fight off infection.

But sometimes that immune response **can go into overdrive**, which results in excessive type 2 inflammation that can contribute to a host of inflammatory diseases, including **atopic dermatitis (AD)**, which is a type of eczema.

HealthyWomen reached out to **Dr. Liz Liotta**, a dermatologist and member of HealthyWomen's **Women's Health Advisory Council**, to learn more about type 2 inflammation, as well as how it's connected to atopic dermatitis.

## What diseases are associated with excessive type 2 inflammation?

In addition to AD, excessive type 2 inflammation is also **associated with**:

**Asthma**: Those who have asthma associated with type 2 inflammation are more likely to get respiratory viruses, or have a worse response to them.

**Seasonal rhinitis with nasal polyps**: A persistent runny nose that causes small, noncancerous growths in the nose and nasal passage, which can make it difficult to breathe and lead to more infections.

**Eosinophilic esophagitis (EOE)**: A buildup of white blood cells in the esophagus that can cause difficulty swallowing, food getting stuck in the throat, backflow of undigested food (regurgitation) and chest pain that can't be treated with antacids.

## How does excessive type 2 inflammation affect other medical conditions?

The presence of excessive type 2 inflammation can make medical conditions worse, more difficult to treat and, in some cases, more dangerous.

For example, people who have both excessive type 2 inflammation and AD are more likely to have **severely itchy skin** than those without. In addition, type 2 inflammation **can make asthma more dangerous** because it can cause inflammation of the airway, which can lead to life-threatening asthma attacks. And for people with EOE, **type 2 inflammation** can lead to a higher risk of **choking**, as well as **limitations on what foods they can eat**, which may lower their quality of life.

Many people who have type 2 inflammation have **more than one** of the diseases associated with it, **such as asthma and AD**. They are also often more susceptible to environmental triggers, like allergies, that can **make their diseases worse**. They may also have family members who have been similarly affected by these diseases.

People with excessive type 2 inflammation may need to meet with **multiple specialists** who can work together to create an effective treatment plan.



### How is type 2 inflammation diagnosed?

Type 2 inflammation can be difficult to diagnose and often relies on multiple factors, which include blood tests that can be used to track certain proteins present in those with type 2 inflammation.

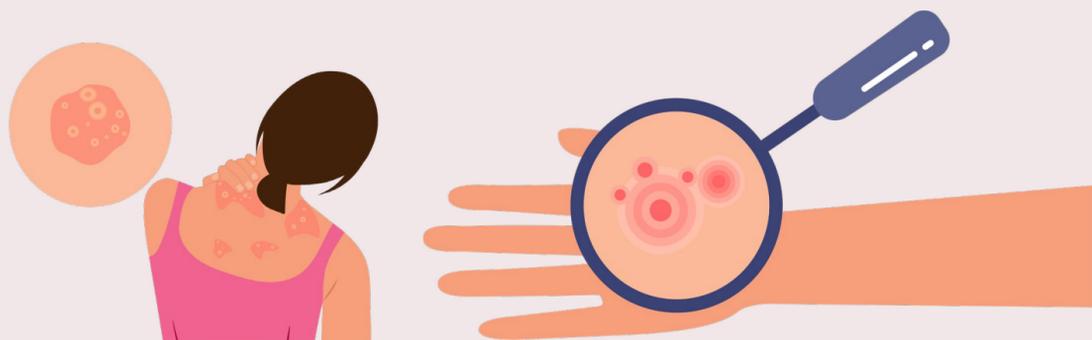
### Why is it important to know about type 2 inflammation?

For people with certain medical conditions, particularly if they have multiple conditions at once, the underlying presence of excessive type 2 inflammation can make the conditions much more extreme. Understanding the role of the inflammation may change the course of treatment.

For example, a person with nasal polyps, asthma and AD who is receiving treatment for each condition individually could be treated with medications that specifically target type 2 inflammation. Treating the underlying source of all the diseases could potentially lead to relief from all of them.

### How does type 2 inflammation affect AD?

Type 2 inflammation associated with AD can cause more **significant itching** than AD without type 2 inflammation. As a result of this significant itching, people with AD may scratch their skin more, leading to further irritation and rashes. The itching can also be so bad that it **interferes with one's ability to sleep well** and can have a negative impact on one's **mental health**.



### Do all people with AD have type 2 inflammation?

Not necessarily. AD is the most common type of eczema, but there are **seven types of eczema**, and not all are associated with overactive type 2 inflammation.

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