

The Connection Between Seasonal Allergies and Mental Health

Studies suggest that allergens could play a role in mood disorders like depression and anxiety. Here's what to know and how to get help if you need it.



By Christina Caron

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Seasonal allergies can be miserable. The sneezing, congestion and itchy, watery eyes can feel like a terrible cold that won't go away, especially now that pollen seasons are getting longer and more intense.

Not only are the physical symptoms draining, but a growing body of research also shows an association between allergic rhinitis — commonly known as hay fever — and mood disorders like anxiety and depression.

The relationship between allergens and mood disorders “really is underrecognized, not only in the general population but even among health care practitioners,” said Dr. David A. Gudis, chief of the division of rhinology and anterior skull base surgery at NewYork-Presbyterian/Columbia University Irving Medical Center.

But given that millions of Americans suffer from seasonal allergies, it's an important link for both doctors and patients to understand, he added, in order to speak openly about any mental health concerns and to ensure the best possible treatments.

Why would allergies contribute to mood disorders?

Allergies often make us feel crummy. They affect our sleep, energy levels, sense of smell, mental sharpness and productivity — which, in turn, can affect our mental well-being, Dr. Gudis said.

“Anytime you don't feel well, that's a psychological stressor,” he added.

But because allergic rhinitis is a chronic inflammatory disease, experts believe that inflammation is also to blame.

If someone is allergic to tree pollen, for example, and that pollen reaches the membranes lining the nose, it prompts the immune system to release a cocktail of substances that can create inflammation in the body's airways and brain.

“Among these substances are proteins called cytokines, which the body produces to fight certain infections,” said Dr. Todd Gould, a professor of psychiatry at the University of Maryland School of Medicine. “These cytokines activate areas of the brain that regulate depression and anxiety.”

It isn't possible to see direct evidence of this in a human study, so researchers have turned to rodents to try to get a better idea of the mechanisms at play. In a study of mice and rats, Dr. Gould and his collaborators repeatedly exposed the rodents' noses to allergens and later dissected their brains. Not only did the rodents show signs of anxiety, but researchers also found an increase in the production of cytokines in their brains, as well as higher levels of a stress hormone.

What else has the research found so far?

While there is no evidence that seasonal allergies alone can cause mood disorders, experts around the world have repeatedly found a connection between the two.

Studies in the United States, for example, have suggested that allergy sufferers are around one and a half times as likely to have major depression, a link that is particularly strong among women. Observational studies have found that allergic rhinitis is associated with a high risk of anxiety. And researchers in Taiwan have reported that allergic rhinitis was

associated with a higher risk of psychiatric disorders in adults.

In addition, a small number of studies have suggested there may be a link between high pollen counts and suicide risk, although this potential connection is still poorly understood.

“We should keep in mind that suicide risk involves many different risk factors,” said Christopher Lowry, an associate professor of integrative physiology at the University of Colorado, Boulder, who has examined the connection between mental illness and allergies. Future studies are needed to better understand the specific role that allergens might play in influencing someone’s behavior, he added.

When should you see a doctor?

If your allergy symptoms are bringing you down, it can sometimes be difficult to know whether you’re depressed or you’re feeling “ugh, I feel so tired because my body is sick,” said Dr. Philip R. Muskin, a professor of psychiatry at the Columbia University Irving Medical Center.

Speak with your allergist or your primary care provider right away if you aren’t feeling like yourself, he said. Be as specific as you can about your symptoms and their duration. Are you sleeping less, for example, or have you lost interest in things you used to enjoy? How long have you felt this way?

You should also talk with your doctor about the allergy medications you’re currently taking. It is important to treat your allergy symptoms so you can find relief, Dr. Gudis said. But you should also know that certain allergy medications can affect your mood.

The antihistamines used in NyQuil or Benadryl, for example, can be sedating and can make people feel “out of it,” Dr. Muskin said. And oral corticosteroids like prednisone, which are commonly used to treat severe allergies, can cause irritability and can increase the risk of developing symptoms of anxiety or depression. Nasal decongestants like the ones found in Sudafed and Sudafed PE can cause anxiety, nervousness and insomnia.

Patients should also be aware of the risks associated with the allergy and asthma drug Singulair. In 2020, the Food and Drug Administration added a prominent warning to the drug’s packaging about the potential risk for serious changes in behavior and mood, as well as suicide, and determined that it should not be the first-choice treatment for mild allergic rhinitis.

Christina Caron is a reporter for the Well section, covering mental health and the intersection of culture and health care. Previously, she was a parenting reporter, general assignment reporter and copy editor at The Times. More about Christina Caron