

INVESTMENT IN RESEARCH SAVES LIVES AND MONEY

Asthma

Asthma is a chronic lung disease that makes it difficult to move air in and out of the lungs. Asthma causes periods of wheezing, breathlessness, chest tightness, and coughing. When a person with asthma is exposed to certain “triggers,” such as dust or smoke, symptoms worsen and become what is called an asthma attack. During an asthma attack, the sides of the airways in the lungs swell and the airways shrink, meaning less air is able to move through them and making it harder to breathe.^{1,2} Symptoms of asthma can range from mild to severe. Symptoms may happen rarely or every day.³ Certain genetic, environmental, and occupational factors have been linked to developing asthma, such as tobacco smoke, air pollution, and viral lung infections. There is no cure for asthma, but with proper management, those affected can lead a normal, healthy life.²

COST

\$81 billion:

Annual national cost of asthma.⁴

\$3,266:

Annual asthma-related medical costs of a person with asthma.⁶

TODAY

More than **26 million** Americans have asthma.⁴

Asthma is the **third leading cause** of hospitalization among children under 15 years of age.⁴

Approximately **235 million people globally** have asthma.⁵

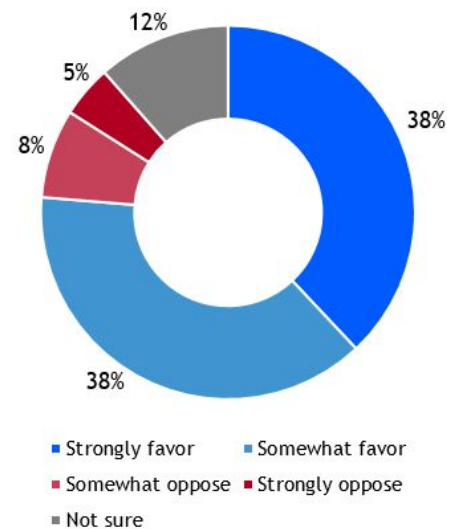
Do you favor or oppose doubling federal spending on medical research over the next five years?

Research Delivers Solutions

Many asthmatics use corticosteroids for inflammation relief to ease symptoms. A clinical trial analyzed the efficacy of an antibody called **dupilumab** to reduce the amount of oral corticosteroids (OCS) needed for treatment. After 24 weeks of testing, the researchers found that dupilumab treatment reduced OCS use, while simultaneously decreasing the rate of severe asthma symptoms. This study showed the positive effects of dupilumab treatment for patients who have severe and hard-to-control asthma.⁷

In another trial of 3,506 participants, researchers tested the efficacy of **immunotherapy treatment**, or allergy shots, and reduce responses to specific asthma triggers, such as dust mites, pollen, and animal dander. In these trials, allergen immunotherapy reduced the number and severity of asthma reactions to the specific triggers that cause asthma attacks. The immunotherapy also resulted in reduced use of asthma medications, showing promise as a cost-saving asthma treatment.⁸

A study of 74,342 patients analyzed the relationship between asthma and **cardiovascular disease risk**. Researchers used three major diagnoses related to cardiovascular disease to study whether there was a connection: high blood pressure, heart disease, and stroke. They found that asthmatics have an increased risk of developing cardiovascular disease compared to non-asthmatics regardless of the age at which the patients developed asthma.⁹



Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2020

Asthma

Then. Now. Imagine.

THEN

Diagnosing asthma was well established by the 1930s, but treatment was difficult and not readily available.¹⁰

NOW

With new research on asthma, diagnoses are now more specific to the individual.¹¹

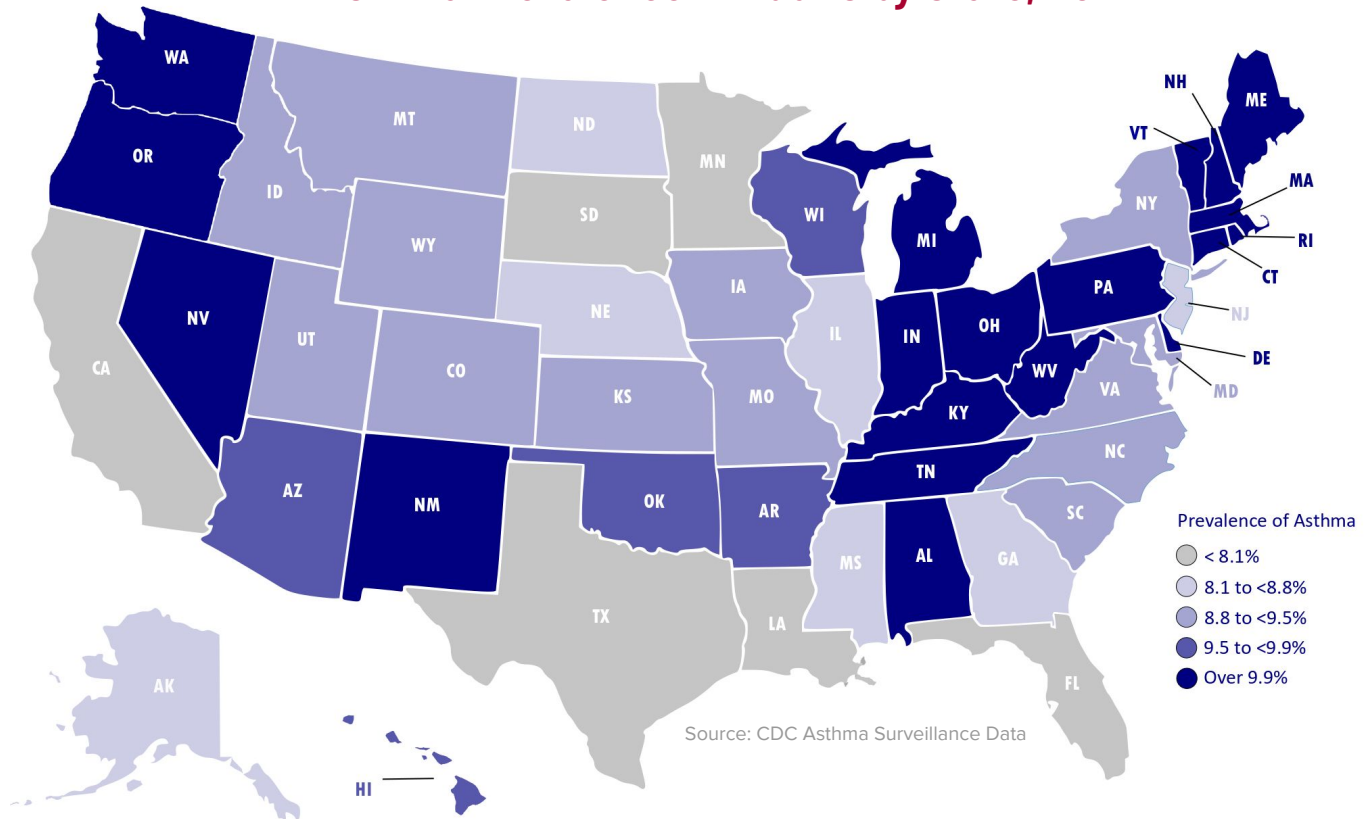
IMAGINE

A world with more personalized asthma treatment.

Communities at Risk

In the U.S., more than 8% of adults have asthma, most of whom are women, ethnic minorities, and people who are economically disadvantaged.¹² Black and Hispanic populations have high rates of poor asthma outcomes like hospitalizations and death, with Black populations dying from asthma-related issues more often than white populations. Research consistently shows that Black neighborhoods are positively associated with greater air pollution and higher asthma rates, creating this health disparity in overall asthma prevalence.¹³

Asthma Prevalence in Adults by State, 2017



1. "Asthma." CDC. 2019.

2. "Learn About Asthma." American Lung Association. 2020.

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13. Smiley, Kevin T. "Racial and Environmental Inequalities in Spatial Patterns in Asthma Prevalence in the US South." Southeastern Geographer. 2019;59(4):389-402.

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