

Asthma and Genetics

“When I first started having problems breathing, I was fourteen. I didn’t have the classic symptoms of asthma like wheezing, so my doctors wouldn’t diagnose me with asthma. So, for two-and-a-half years, I went every month or two to the specialists to try a new medication while still going to the emergency room frequently. Finally, a doctor asked about my family health history. I hadn’t been asked this before. My dad has mild exercise-induced asthma, and one of his sisters, probably his mother, my mom, and several cousins all had asthma. My doctor then determined I too had asthma. I went on a fairly high dose of oral steroids which made a big difference. Finally, relief! I could breathe!”

- Kristina, diagnosed with asthma at age 16

- Health problems that run in your family can increase your chances of developing the problem too. This is because families share their genetics, environment, and behaviors. These can be passed down in families and affect your health. But by knowing your past, you can make choices to protect your future.

- Asthma is a complex disease. We don’t know for certain what causes asthma, but studies have shown that both genetics and the environment can affect your risk of getting asthma.

Is there a genetic component to asthma?

- Yes. Asthma can run in families. Since the 1920’s studies done have shown that family history is a significant risk factor for asthma.

- There are many genes that may increase your risk of getting asthma.

Is there an environmental component to asthma?

- Yes. The environment in which you live, work, and play can affect your risk of developing asthma.

- Genomics - the study of how your genes interact with the environment - may hold the key to understanding why some people get asthma while others don’t.

If I have a family history of asthma, does that mean I will get asthma, too?

- Having a family history of asthma may increase your risk or your family members' risk of also getting asthma.
- If you have a parent, sibling, or child with asthma you have an increased risk of getting asthma.
- If both your parents have asthma, you have a greater risk of getting asthma than if only one parent had asthma.
- Your family health history can help you and your doctor understand what your risk may be for asthma. It can also help you learn what your triggers may be and medications that may help you control your asthma.
- Remember though, that just because asthma runs in your family, it doesn't mean you are destined to get it too.

If I don't have a family history of asthma, does that mean I won't get it?

- No. You can still get asthma even if no one else in your family has it.
- Although a person with a family history of asthma has an increased risk of getting asthma, not everyone who is diagnosed with asthma has a family history of asthma.
- Your genetics and environment can affect your risk of getting asthma. Many environmental factors have been thought to be risk factors in the development and exacerbation of asthma.

How do I collect a family health history?

- Use the Family Health History Toolkit. The toolkit has fun tips to help you talk about, write down, and share your family health history with your doctor and family members. It can be downloaded at www.health.utah.gov/asthma or www.health.utah.gov/genomics. (The toolkit is available in English and Spanish.)

What should I do if asthma runs in my family?

- Talk to your doctor about your family history and any allergy or breathing problems you have. This may help your doctor diagnose your asthma earlier, identify your triggers, and help you control your asthma.
- Protect your lungs. Don't use tobacco and limit your exposure to secondhand smoke.
- Be aware of common asthma triggers, like chemicals, pests, pollen, smoke, mold, air quality, pets, and exercise.
- Learn what the signs and symptoms of asthma are. They include wheezing, coughing, chest tightness, and stuffy nose.

To learn more about asthma, visit the Utah Department of Health Asthma Program website at www.health.utah.gov/asthma or call 801-538-6141.

Talk to Your Family

Ask Your Family:

- Do you have asthma?
- At what age were you diagnosed with asthma?
- What triggers your asthma?
- What medications do you take to help you control your asthma?