People are allergic to many things — bee stings, poison ivy, and shellfish, to name a few. However, one of the prevailing allergic reactions humans have is to cats. An allergic reaction is a **histamine** reaction that is usually characterized by coughing, wheezing, chest tightening, itching, nasal congestion, rash, watering eyes, sneezing and similar symptoms. Allergy medications contain **antihistamines** which block the histamine reaction. People with an allergy to cats are allergic to one of the five known cat **allergens**. The most common cat allergen is found in the saliva of cats and deposited onto the cat’s **dander** as the cat grooms itself. The dander then becomes airborne and is inhaled by humans.

But have no fear, cat-lovers with cat allergies, we have hypoallergenic cats! **Hypoallergenic** means these cats cause fewer allergic reactions than other cats. Some researchers claim cat breeds such as the Siberian and Russian Blue are naturally hypoallergenic. There are also some cat breeds that lack some of the normal layers of fur that are generally accepted to be less allergenic than other breeds.

In 2006 a company called Lifestyle Pets, formerly Allerca, announced they had produced a successful breed of hypoallergenic cats using **gene-silencing**. Gene-silencing basically means that during the process of a gene being developed within an organism, the gene is “switched-off” so that it no longer is active. Gene-silencing occurs naturally in organisms as an important part of the differentiation of many different types of cells. The theory is to use gene-silencing to “switch off” the genes that cause allergens in cats. More recently the company has been using traditional breeding methods beginning with breeds of cats that naturally lack the gene that produces the allergen.

Interested in purchasing a hypoallergenic cat? In 2010, an internet search showed that the cost of a hypoallergenic cat ranged from $8,950 to $42,000.

There are also specific dog breeds that naturally are less allergenic to most humans. The same company that first produced hypoallergenic cats in 2006 delivered its first hypoallergenic dog in early 2008.

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**Review Questions**

1. An allergic reaction is a ____________ reaction.
2. What are some characteristics of an allergic reaction?
3. The most common cat allergen is found in cat ___________.
4. What does it mean to be hypoallergenic?
5. A medication called an ____________ is taken for allergies.

**Language Connection**

Define the following terms:
- Histamine
- Antihistamine
- Allergen
- Dander
- Hypoallergenic
- Gene-Silencing