

Class Starters & Enders

Making the Most of Instructional Time Five Minute Lessons

Class Starters and Enders help utilize the last minutes of class when a lesson ends but there is not enough time to start another, or for an interest approach at the beginning of class. Mini-lessons correlate to GPS in the program areas below.

Nothing to Sneeze at: Hypoallergenic Cats

Program Area: Healthcare, Animal Science, Biotechnology

Instructions: Read the material and make notes of important points, answer questions, and be ready to discuss this topic.

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.



Russian Blue cat

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		