**Asthma Case Study**

Archie was in the E.R. with asthma symptoms for the third time this year. Archie, a 25-year-old artist, had no health insurance and although he’d gotten a prescription for a corticosteroid-based inhaler, the medication cost several hundred dollars each month, so instead, he’d been relying on over-the-counter Primatene Mist epinephrine inhalers.

He’d been at a party at a house owned by some people who had a cat. Archie is allergic to cats. He thought he’d be fine if he just stayed for an hour or so, but he ended up meeting an interesting woman and got distracted from his plans. When his asthma symptoms started, he left the party, but by the time he got home, he was struggling to stay conscious, and his inhaler wasn’t really helping, so he had his roommate drive him to the emergency room again.

Archie was given a breathing treatment, which calmed his symptoms, but the E.R. doctor wouldn’t let him go until he’d had a stern talking-to. “Your hematocrit levels are elevated, which means that your body isn’t getting enough oxygen on a regular basis. You need to take your asthma medicine every day and not just use the inhaler when you’re having an attack! You can die from this! And stay away from cats, too!”

Archie felt embarrassed, and knew that the doctor was right.

**Questions**

1. What is asthma? Why is it sometimes linked to allergies?

2. How might inhaled epinephrine improve asthma symptoms? What might be the side effects of an epinephrine inhaler?

3. Why does elevated hematocrit indicate chronic low oxygen levels?