

## What is Asthma?

Asthma is a chronic inflammatory disorder of the airways. The inflammation in the asthma leads to persistence of airway hyper-responsiveness or “twitchiness,” airflow limitation and respiratory symptoms (cough, wheeze, shortness of breath). Airway remodeling (permanent changes in the airway) may occur even if symptoms are not present.

The characteristic features of asthma inflammation are:

- Mast cell activation
- Inflammatory cell infiltration
  - Eosinophils
  - Airway macrophages
  - Neutrophils
  - Lymphocytes
- Mucosal edema
- Disruption of the bronchial epithelium
- Collagen deposition beneath the basement membrane
- Goblet cell hyperplasia leading to mucous hyper-secretion
- Smooth muscle thickening and hyperreactivity

Children who are symptomatic are described as having an asthma **episode**, not an **attack**. The term attack implies that there is no warning, it sneaks up on the camper and there is no way to predict or prevent the “attack.” Campers will learn that there are effective ways to both control and predict most asthma episodes.