

## Capnography Tip

Summer, 2010

### Capnography Trend Observation:

Capnography, when used appropriately, can be just as useful in determining when not to use certain therapy as well as what treatment may be indicated. This can be especially helpful in patients with difficulty breathing without the presence of bronchospasm. Bronchodilator medications delivered via updraft have lower cardiovascular side effects than those administered subcutaneously or intravenously, however, research has shown that especially in the setting of hypoxia they still may have dangerous cardiovascular side effects such as tachycardia, dysrhythmias, and hypokalemia. It makes sense that if the patient doesn't need these medications they should not be administered. The patient with an acute exacerbation of congestive heart failure may present with what is commonly known as "cardiac asthma". The term "cardiac asthma" refers to wheezing associated with heart failure that may mimic asthma. The distinction is important because treatments for asthma and heart failure are very different. Treatments for heart failure are directed at decreasing afterload, improving the pumping action of the left ventricle and reducing fluid overload.

Overusing treatments for true asthma, such as bronchodilators, may actually worsen symptoms and could cause dangerous heart rhythms. It is very difficult to differentiate wheezing caused by these two conditions and, especially in patients with a history of cardiac and respiratory disorders, the only way to determine if the patient has bronchospasm may be by assessing the capnography waveform.