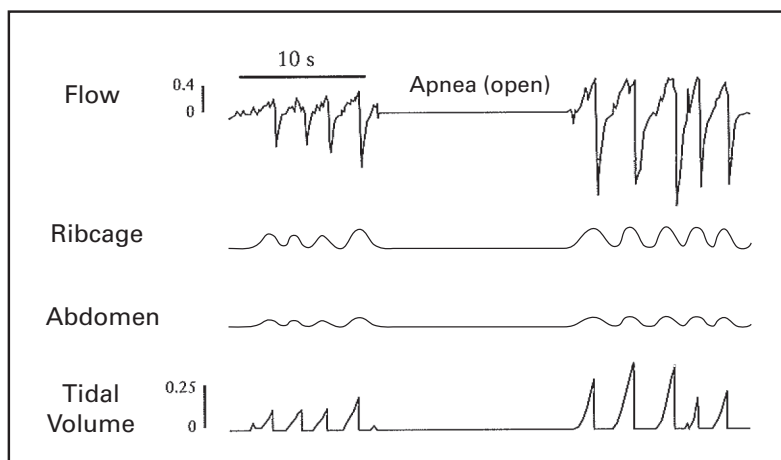
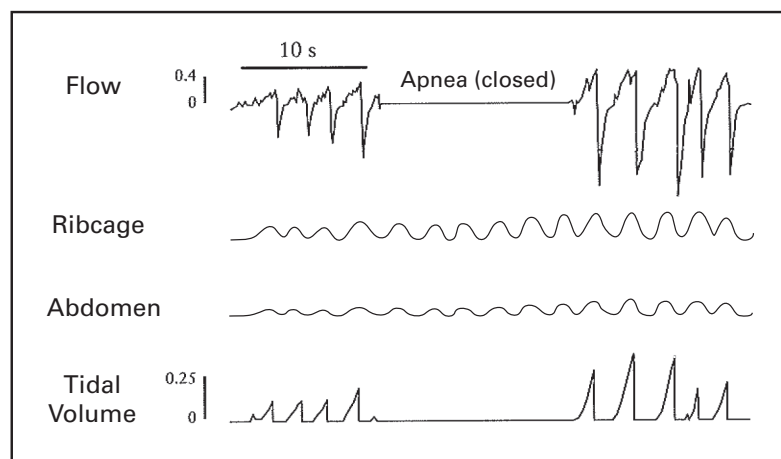


## Complex Sleep Apnea (CompSA)

### Educational Fact Sheet



Central Sleep Apnea



Obstructive Sleep Apnea

### What is complex sleep apnea?

Complex sleep apnea (CompSA) is a form of sleep apnea in which central apneas persist or emerge during attempts to treat obstructive events with a continuous positive airway pressure (CPAP) or bilevel device.

### CompSA is characterized by the following:

- The persistence or emergence of central apneas or hypopneas upon exposure to CPAP or bilevel when obstructive events have disappeared.
- CompSA patients have predominately obstructive or mixed apneas during the diagnostic sleep study, occurring at least 5 times per hour.
- With use of a CPAP or bilevel, they show a pattern of central apneas and hypopneas that meets the Centers for Medicare Services (CMS) definition of CSA (described below).

### A diagnosis of central sleep apnea (CSA) requires all of the following:

- An apnea index > 5
- Central apneas/hypopneas > 50% of total apneas/hypopneas
- Central apneas or hypopneas occurring at least 5 times per hour
- Symptoms of either excessive sleepiness or disrupted sleep



### **The difference between central, mixed and complex sleep apnea**

CSA is a form of sleep-disordered breathing (SDB) caused by the temporary absence of a signal from the brain's respiratory center. Without this signal, there is no effort to breathe. Mixed sleep apnea is fairly common and consists of both central and obstructive components. On the other hand, CompSA consists of all or predominantly obstructive apneas which convert to all or predominantly central apneas when treated with a CPAP or bilevel devices.

### **The challenge to treat CompSA**

Patients with CompSA cannot be adequately treated with CPAP or bilevel device. The clinical consequences are residual symptoms (fatigue, sleepiness, depressed mood) and intolerance to therapy.

Patients with CompSA may be seen as those who cannot tolerate conventional CPAP or bilevel therapy both during lab titration and at home. Neither CPAP nor bilevel therapy seems to alleviate their sleep disorders. For CompSA patients, treatment with CPAP or bilevel therapy will leave them with a somewhat elevated AHI, and their disorder will not be completely resolved.

### **How does the VPAP Adapt SV treat CompSA?**

ResMed's VPAP Adapt SV is the first FDA-cleared device designed to treat CSA, CompSA, mixed apnea and periodic breathing. VPAP Adapt SV uses adaptive servo-ventilation to adapt to a patient's ventilatory needs on a breath-by-breath basis, ensuring optimal therapy.