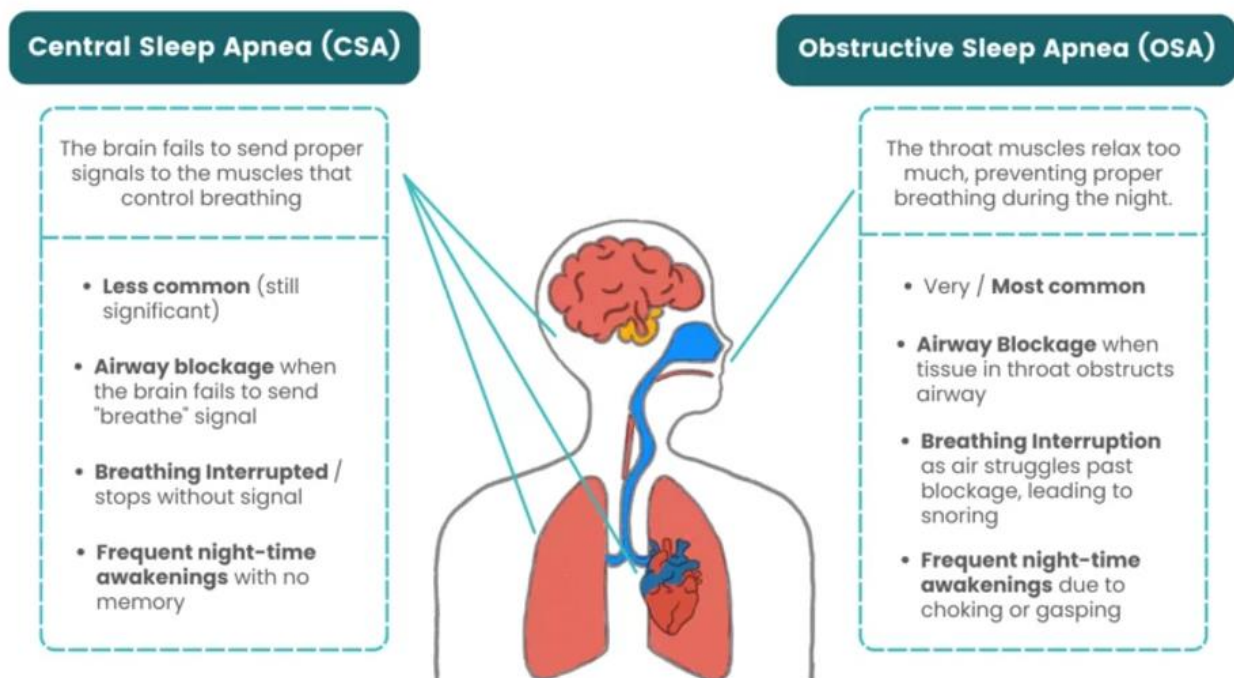


# 1. Is it important for Sleep Medicine Clinicians to differentiate between Obstructive Sleep Apnoea and Central Sleep apnoeas and Hypopnoeas?

This is blog one of a series of 5 that will explore this topic in more detail. Differentiating between Obstructive Sleep Apnoea (OSA), Central Sleep Apnoea (CSA) events and Obstructive and Central hypopnoeas is an important consideration because they have different underlying causative mechanisms that require targeted treatments, to achieve the optimum health benefits 1. Let's explore this in a bit more detail.



1. OSA : This type of event occurs when there is a physical blockage in the upper airway, typically due to the collapse/partial collapse of soft tissue at the back of the throat during sleep, with an associated decrease in oxygen saturation or arousal from sleep 2. It is often associated with snoring and is more common in individuals who are overweight.

2. CSA : CSA is characterised by repetitive apnoeas or hypopnoeas with absent or diminished respiratory effort during sleep, occurring 5 or more times per hour of sleep. In CSA the brain does not send the correct signals to the muscles that control breathing, often due to instability in the respiratory control centre. This type is less prevalent than OSA and may occur in people with conditions like heart failure or those who may have experienced a stroke 3.

3. Hypopnoeas: These are events where breathing is unusually shallow or the respiratory rate is abnormally low, and they can occur with both OSA and CSA. They are significant as they disrupt sleep and lower oxygen levels.

Distinguishing obstructive from central hypopnoeas has important therapeutic implications for the individual patient and this distinction is key since the treatment of central sleep apnoeas and hypopnoeas differ considerably from that of obstructive sleep apnoea. OSA might be managed with lifestyle changes, Continuous Positive Airway Pressure (CPAP) therapy, mandibular advancement devices (MAD's), and other surgical options. CSA treatment may focus on resolving the underlying condition, such as assessing and adjusting prescribed medications that may contribute to CSA 5. Furthermore, central sleep apnoea/hypopnoea (CSAH) may respond to oxygen, theophylline, acetazolamide, phrenic nerve stimulation, and in some cases adaptive servo-ventilation, as, for example, in opioid-induced CSA 1,3. The use of more advanced CPAP devices, which include advanced algorithms with close attention to remote monitoring data and subsequent changes to prescribed settings can resolve CSA in many cases. Some recent evidence on medications that stimulate breathing shows promising results. Accurate diagnosis through initial sleep studies and repeating sleep studies on therapy to assess treatment efficacy is crucial to customise treatment and enhance health outcomes.

So the answer to our initial question: Is it important for Sleep Medicine Clinicians to differentiate between Obstructive Sleep Apnoea and Central Sleep apnoeas and Hypopnoeas?

Our Answer: YES it is. In blog 2 second in this series we will explore and explain the published evidence on why this differentiation between OSA and CSA does matter.

1. [jcsm.aasm.org/doi/pdf/10.5664/jcsm.10420](https://jcsm.aasm.org/doi/pdf/10.5664/jcsm.10420)
2. [Obstructive Sleep Apnea - StatPearls - NCBI Bookshelf \(nih.gov\)](#)
3. [Central sleep apnoea - Symptoms, diagnosis and treatment | BMJ Best Practice](#)
4. [Distinguishing central from obstructive hypopneas on a clinical polysomnogram \(aasm.org\)](#)
5. [The Pathogenesis of Central and Complex Sleep Apnea | Current Neurology and Neuroscience Reports \(springer.com\)](#)