

What Is Causing My Sleep Apnea?

Like you, our goal at the Penn CPAP Alternatives Clinic is to have excellent patient outcomes. This question, “what is causing my sleep apnea” is a very common and important one. After all, if we can accurately identify the cause for the blockage(s) in your throat, we can tailor treatments to address them. While the answer is often not straightforward, we use several tests to best address the question.

It is important to understand that obstructive sleep apnea is generally caused by two problems working together: anatomy and physiology.

- Anatomy refers to the development of the bones and soft tissues of the face and throat. Patients with sleep apnea often have bones that are too small (“small room size”) or too much soft tissue (“large pieces of furniture”) that result in airway restriction.
- Physiology refers to the muscle tone of your throat during sleep. Patients with sleep apnea often have reductions in muscle tone that cause the throat to collapse in sleep.

In order to determine the best surgical plan, we often require 3 tests to be performed.

1. Sleep Study (physiology) – this overnight study would likely have been performed before your consultation visit. However, the study may need to be updated in preparation for a procedure. This study captures airflow and oxygen changes throughout the night, providing an understanding of the severity of your sleep apnea and other details (e.g., sleep apnea is worse on your back than side)
2. CT Scan (anatomy) – this 3-dimensional x-ray will provide high-resolution images of your jaws, throat tissues and airway from top to bottom. Several measurements will be made which have been shown to help determine which sleep apnea procedure(s) is right for you.
3. Drug Induced Sleep Endoscopy or DISE (anatomy & physiology) – this sedation procedure uses IV medicine to reproduce Stage 2 sleep. Once you are in this sleep state, a thin scope is passed through your nasal passages to examine your throat. The Penn team has developed state-of-the-art diagnostics to determine both the site and severity of collapse.

With these tests, Dr. Dedhia and team will be able to determine where your throat collapses during sleep and **develop a treatment plan to address these blockages.**