V. What are the consequences of an apnea?

While the upper airway is obstructed, no airflow can occur. As a result, the body's oxygen falls and carbon dioxide increases. Eventually the oxygen and carbon dioxide levels become so abnormal that the whole brain begins to wake up. Now partially awake, the brain sends nerve signals to activate the tongue. When the tongue contracts, it opens up the upper airway (often accompanied by a "snort") and airflow can resume. This much is good. However, once the oxygen and carbon dioxide levels are normalized, the brain falls asleep again and stops sending signals to the tongue. The tongue then falls back and obstructs the upper airway again and the whole process repeats in a never-ending cycle.

VI. How do apneas cause medical problems?

Apneas cause two main problems. The first is that during an apnea, the amount of oxygen in the blood falls. This places a stress on the cardiovascular system. Over time, this may result in hypertension (high blood pressure) and heart failure. The low oxygen also impairs brain function. The second problem is that there is a brief arousal at the end of each apnea. When these arousals are very frequent, they disrupt sleep so you feel sleepy during the day. Interestingly, the arousals are so brief that you don't even remember the majority of them.

VII. What are some of the symptoms of obstructive sleep apnea?

The main symptoms are excessive daytime sleepiness and loud, disruptive snoring. Here is a list of the most common symptoms:

- daytime sleepiness
- loud snoring
- restless sleep
- hypertension
- morning headaches
- cardiac arrhythmias
- heart failure
- motor vehicle accidents
- mood disturbances
- impaired thinking
- stroke (possibly)
- heart attack (possibly)