

Dear Reader,

Welcome to the December edition of the *COHERENCE Newsletter*. As I write this letter I'm comfortably situated in front of a massive stone fireplace, cat in lap. [I am fortunate.] Last month we looked briefly at blood pressure data before-and-after 8-12 minutes of *Coherent Breathing* with heart rate variability biofeedback. We saw that in the study group of 21 subjects and 71 assessments, average blood pressure [(systolic + diastolic)/2] dropped by an average of 8mmHg. Why? I theorize that it is because *Coherent Breathing* increases the rate of blood flow throughout the body. How much more blood flows when breathing coherently I can't yet say, but I am confident that the percentage is relatively high. The mechanism behind this increase is the "thoracic pump", powered by the diaphragm and intercostal muscles. According to this theory, when the thoracic pump is contributing to the movement of blood flow, the heart and vascular system relax – and when they do, average blood pressure decreases. [*In fact, I've been looking for an engineering or medical school to help model this. If anyone has an interest, please let me know.*]



This month's topic is: *What Is Snoring and Why Do We Do It?*

Inevitably, if you ask the question, "What is snoring?", you'll get the answer that it has to do with vibration of soft tissue in the throat. Here, I'll Google it... From Wikipedia: "Snoring is the vibration of respiratory structures and the resulting sound, due to obstructed air movement during breathing while sleeping." Now let's ask, "Why do we snore?" Again, I'll Google it... Hmm, without quoting copyrighted material, the resounding answer is "weak throat muscles", "fat neck", "drinking of alcohol before bed", etc." For this reason, you may know that one of the remedies for snoring is the "uvulopalatoharyngoplasty", where the uvula and soft tissue of the throat and pharynx are removed so there is nothing left to vibrate.

I propose that ten years from now we will see wrongful injury and malpractice suits due to this surgery. Why? Because I believe that it will be found in the long run to damage the health, specifically the heart. Why? Because I believe that snoring serves to accelerate blood flow while we are asleep very much as Coherent Breathing accelerates blood flow while we are awake. *Please note that this is at present a hypothesis.* Allow me to explain...

When we breathe properly it serves to move the blood. [See *Coherent Breathing - The Definitive Method*.] How does the autonomic nervous system facilitate blood flow while we're sleeping..... by *intelligently closing down* the airways such that negative and positive pressures in the lungs match negative and positive pressures in the thoracic cavity during inhalation and exhalation, respectively. In this way the autonomic nervous system matches the flow of blood and gas (air) into and out of the lungs during sleep. [It is quite well established that for most of us, breathing is quite slower and deeper at night than during the day.]

Remembering that respiration is really about imparting and departing gas into and out of the blood respectively, this is not surprising. There is no better time for effective breathing than when we are horizontal. Why? Because gravitational force acts uniformly on the body, exerting the same "inertia" on the blood in the head as it does the blood in the feet. [This is very different when we are standing!]

As I continue to research this matter, it is becoming clearer and clearer to me that the autonomic nervous system is mysteriously "all knowing". Specifically, it knows explicitly how to manage the body for optimal health, well-being, and longevity. And one of the requirements for health, well-being, and longevity is *optimal* blood flow. In fact, I anticipate that we will ultimately come to understand that "health" *requires* a certain rate (or ultimately volume/day) of blood flow and that the autonomic nervous system understands this requirement.

I believe that this is one reason why modest exercise uniformly improves health, young or old, regardless of condition – exercise requires the blood to move. This being said, one must choose the form of exercise that suits one's status. As many of you know, I advocate that "breathing" is the single most important form of exercise.

Here is an interesting point. Compared to adults, children have pretty good breathing habits and as you would expect their HRV amplitude is generally higher. Do children often snore?

I hope you find this month's *COHERENCE Newsletter* to be of value. Next month's topic will be "Cultivating The Arterial Pressure Wave" Until then, thank you for your interest and consideration. And best wishes for a peaceful holiday season.

Stephen Elliott, COHERENCE