

Reflexology and the Respiratory System: Take a deep breath!

Did I leave you hypothetically sleep deprived and headachy last month? Bear with me.

Breathing seems like such a simple activity - moving air into and out of our lungs. Did you know we do it about 15,000 times per day? It is so important to our survival it's only partly under our control. The brain automatically causes our respiratory muscles (diaphragm) to contract. Think of a child threatening to hold its breath!

How we breathe plays a vital role in our well-being. It's a gas exchange! Oxygen and carbon dioxide switch between the air, lungs, and the blood. Oxygen allows the body to change glucose (a sugar molecule) into carbon dioxide and water. One of the by-products of that reaction is energy. And, our respiratory system has other functions: smelling, vocalization, and cleaning and warming the air we breathe.

One of the first things I notice during a reflexology treatment, is the client's breathing rhythm changes. The person may take a deep breath and sigh, as these reflexes are being stimulated.

The nervous, endocrine, muscular, skeletal, and circulatory systems are intimately involved with the respiratory system whenever we take a breath.

The Parts:

The **nose** is for both inhalation and filtration of air. It filters using nose hair and mucous secreted by its lining to trap dust and other harmful particles. The nose warms the air and mucous membranes also moisturize the air before it goes to the lungs. Our nasal cavities make olfaction (smelling) possible. I'm concerned by the prevalence of removing nose hair for aesthetics. It's there for a reason!

The **pharynx** is basically a connector to the larynx.

The **larynx** leads to the trachea, sometimes called the windpipe; the air comes down the trachea, splits into two bronchial tubes, which then split into bronchioles, like an upside-down tree root system, which expand into the lungs. This is where the oxygen and carbon dioxide exchange take place.

The **lungs** are made up of tiny sacs called alveoli. Millions of these make up the lungs. The lungs are a spongy organ with a rich blood supply. The expanding and contracting action of the lungs is important for lymphatic drainage. This expansion and contraction acts like a bellows and pumps the lymph. We have a high surface area for the blood to make its gas exchange with the inside air in the surface area within the lungs.

The **diaphragm** is actually a muscle, but is included in the respiratory system to understand how it works. Located beneath the lungs and above the stomach, it is a dome-

shaped muscle that separates the chest area from the abdominal area and tightens and releases to act as an accelerating pump for breathing.

The hypothetical sleep-deprived, headachy scenario:

You're not sleeping, so the nervous system is immediately out of whack. Stress and chronic pain are two culprits that often keep us awake at night. Our emotions affect our nervous system. Many people find soothing music, meditation, or journaling helpful.

Amongst the tossing and turning, or lying staring at the ceiling, the endocrine system is trying to release hormones to balance things, but the nervous system isn't cooperating. Physiologically, the body is stuck in a fight or flight response rather than a rest and repair state.

Chronic pain and sleep deprivation go hand-in-hand. Muscles tense and our brain wills them to relax, we get into a vicious circle. I don't want to get into the use of pain medications here, but soothing soaking baths and foot soaks often help relax tight muscles.

And, I imagine the respiratory system is acting up. In all likelihood, you're shallow-breathing, rather than taking nice deep, calming breaths, so you might be interested in trying out a breathing exercise.

We haven't got to them yet, but chances are our Digestive System and Circulatory systems aren't happy either – further contributors to the headache.

Can you see how the body systems relate to and impact each other? Though we'd like to think so, overcoming illness, particularly chronic illness, is never a simple, quick fix.

Next month, take a look at the Cardiovascular system with me.

Warmly,

Brin