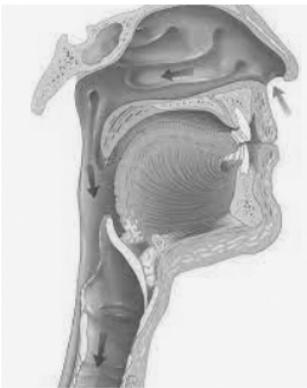


Local fire departments may give out File of Life kits (or buy for .89 cents). The File of Life is a magnetized medical record holder that goes on your refrigerator. Emergency responders are trained to look for them. (see previous page)

2. Learn how your breathing (respiratory) system has changed, and what you can do to improve the quality of the air you breathe.

It is helpful to know how your breathing system worked before you became a laryngectomee. What follows is an explanation of the breathing system of non-laryngectomees and how it worked before laryngectomy surgery:

Upper breathing system



Air enters the nostrils of the downward facing nose. Large particles in the air may catch on nose hairs. The area above the nostrils is called the *nasal cavity*. The surface is typically coated with mucus and it catches

contaminants such as dust, fibers, pollen, viruses, bacteria, etc.

The curved ridges in the nasal cavity cause the air to tumble, and more of the contaminants are trapped in mucus. Our noses may run and the mucus may need to be blown into a tissue, or a tickle sensation can cause a sneeze. This also helps remove the contaminants.

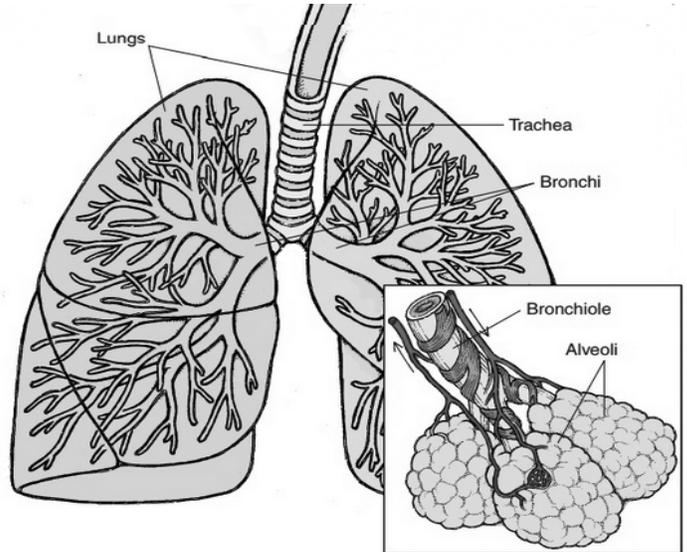
There are many causes of a runny nose. Pollen may still get in your nose, or your nose can react by producing more mucus because the air is cold, dirty, or dry. Saline spray helps.

The air then travels down the back of the throat (*pharynx*), which is also mucus coated, through the larynx (voice box), and down the wind pipe (called the *trachea*).

It continues down the trachea and into the lungs and then into the branches of the lungs called *Bronchi*. These are like the large branches of a tree.

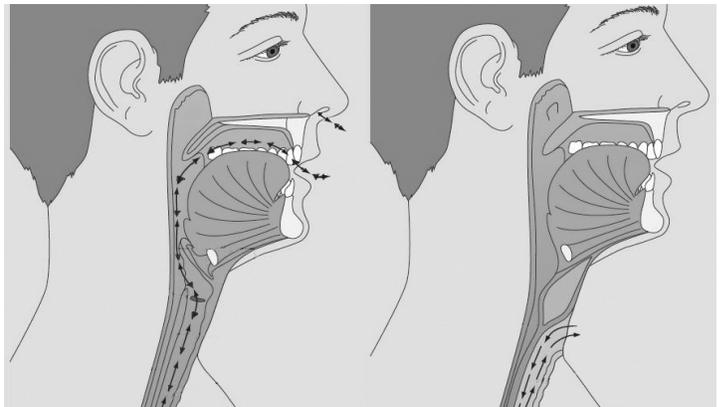
These further divide into smaller branches, and even smaller ones (see *Bronchioli* in the insert in the graphic to the upper right.)

At the end of each of these small branches are sacks (called *alveoli*). This is where waste gas, carbon dioxide, is exchanged for oxygen which is then carried throughout the body by the blood stream. By the time the air gets to the *alveoli* sacks in the lungs it is body temperature (98.6 degrees F), 100% humidity (like fog), and usually very clean.



Laryngectomy surgery removes the voice box (*larynx*), brings the windpipe (*trachea*) forward to the front of the neck/upper chest, creates a hole there (the *stoma*), and stitches the *stoma* to the *trachea*. Now, when the laryngectomee inhales the air bypasses the entire upper respiratory system. It now only goes down a short length of the trachea and directly into the branches of the lungs. The air is cooler, drier and dirtier.

Breathing Before Laryngectomy Surgery Breathing After Laryngectomy Surgery



The cooler, drier and dirtier air can cause many problems, including serious ones. But there are things laryngectomees can and should do to improve the quality of air they breathe:

First, **cover the stoma at all times...24/7.**

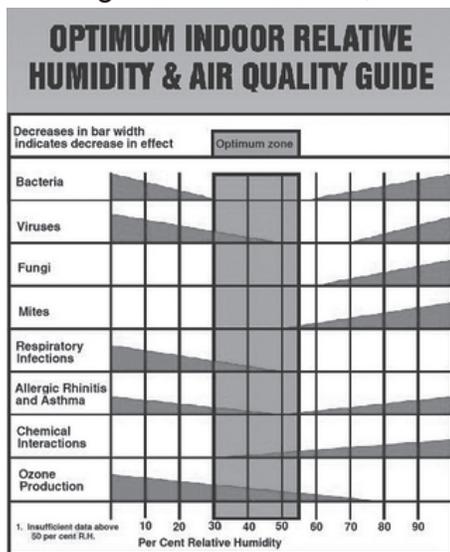
Stoma covers vary in how effective they are in screening out dirt, dust, smoke particles, viruses, bacteria, etc. The most effective are those where all air entering the stoma is filtered. These are the HME (Heat/Moisture Exchange) filters which attach to the stoma with a glued-on housing, or inserted into a lary tube or button.



Other types of covers include the foam patch, combination mesh fabric with foam insert, cloth types including lined ones, and others. The most effective at cleaning the incoming air are those which filter out the smallest particles.

Second, ***maintain a free flow of mucus***. Mucus is essential for the health of our lungs! It is the natural way the lungs bring contaminants up and out. It also keeps the lungs and trachea (windpipe) coated and protected. Without the free flow of mucus upwards the trachea can dry, crack, bleed, and become an entry way for germs. It can cause respiratory disease including pneumonia, which is a major killer. Mucus is 95% water.

Without mucus moving upwards, mucus plugs can form (including fatal ones) which partially or completely block breathing. The color of mucus can tell us if we have a prosthesis leak (if you wear one), or if we have a respiratory infection. Healthy mucus is clear or whitish, and we need to cough it out a number of times a day. Although it is a nuisance, it is essential to our health.



The major threat to free flowing mucus in larys is dryness. Keeping well hydrated with water helps; so drink plenty. Tea and coffee actually dry you out. It is recommended that laryngecto-

mees keep their indoor humidity at between 40-55%. This is the zone for maintaining the healthiest indoor air (see chart bottom left)



\$13 Humidity Gauge

If you have a whole house humidifier you can set it like you do the thermostat. If not, you can get a humidity gauge and one or more portable electric humidifiers. Many prefer the steam type humidifier since it uses tap water and does not disperse the minerals dissolved in tap/well water as dust.



\$15 Portable Humidifier

In order to loosen mucus many laryngectomees use "pink bullets" (salt dissolved in sterile water) which come in sealed plastic containers, or use salt nasal sprays like *NeilMed Nasal Mist*



or *Simply Saline*. Check the spray bottles to confirm that they only contain purified water and sodium chloride (salt), with sodium bicarbonate. A brand without sodium bicarbonate is *Little Remedies Nasal Mist*.

"Never assume that medical staff understand how you breathe" Brian Shute, Ph.D., CCC-SLP



Never let medical personnel put an oxygen or anesthesia mask on your mouth and nose without questioning them on whether they understand that you are a laryngectomee and total neck breather.

Compiled by David Blevins

Part Two on threats to laryngectomy health and safety will appear in the July issue of the *IAL News*.