The Pulmonary Paper

Dedicated to Respiratory Health Care

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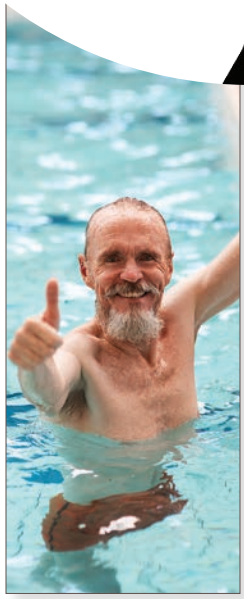

The Changing Seasons of Life are Filled with Joys!

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We are hiding The Pulmonary Paper logo on our front cover. Can you find it?

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Sharon, left, and Jane have been friends for many seasons and support each other through good and bad times!

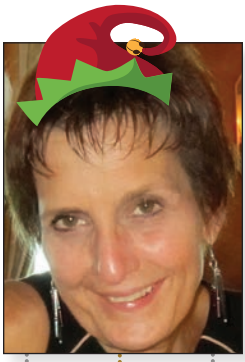
Don and Sandy Fraser, using oxygen with Oxy-View glasses, recently visited the 911 Memorial in New York City.

Change of Seasons

Your "circadian" biological clock is responsible for telling your body when it is time to feel awake and when it is time to feel sleepy. Since it revolves around predictable patterns of light and darkness, any changes in your usual patterns tends to disrupt the balance.

Chamomile tea may help with sleep and peppermint may help with alertness. Besides getting enough sleep, try and eat foods that are currently in season. In winter, root vegetables and squashes, which are high in Vitamin D are good for you since we are getting less of it from the sun. No matter what the season is, try and drink plenty of water – your body can adjust more quickly to heat and activity when you are well hydrated. Changes in barometric pressure, temperature and humidity can influence pain levels for those with joint and nerve pain.

Dealing with the changing seasons of our lives can also be stressful. You might fear losing your independence or becoming physically frail. You may look in the mirror and wonder just who that is looking back at you! Talking with supportive friends and family when you identify your fears, often makes you feel better even if nothing has changed.



Editor's Note

Now that my three children are married and my husband is retired, I feel like I am entering a new season of life.

Thirty years ago, in the fall of 1988, *The Pulmonary Paper* was set up as a nonprofit organization and our first newsletter was published the next year. We have talked about some of the same things through the years, such as the importance of getting your annual flu shot and giving up cigarettes. And how Medicare's premium was going to go up from $27.90/month to $29 – now it begins at $134/month.

"The only way to make sense out of change is to plunge into it, move with it, and join the dance."
— Alan W. Watts

Twenty years ago, we were talking about how the National Emphysema Treatment Trial was finally about to begin to see if lung volume reduction surgery was effective. Five years later, researchers identified two characteristics – emphysema mostly in the upper lobes of the lungs and low exercise capacity – that helped predict who would benefit from surgery. Those with both characteristics were more likely to survive longer and function better after the surgery.

Ten years ago, we were saying goodbye to the propellant CFC used in the inhalers with which we were so familiar for the more environmentally-friendly option we have today, as well as learning we were not going to be responsible for the maintenance of our home oxygen concentrators that was proposed.

Pictured are four generations of Belyeas at the wedding of my youngest son.

We can only hope the future will bring changes in the costs of medication in our country as well as oxygen reimbursement.

Earl Nightingale, an American radio speaker of the 1950s, advised us to learn to enjoy every minute of our life. Be happy now. Don't wait for something outside of yourself to make you happy in the future. Think how really precious is the time you have to spend. Every minute should be enjoyed and savored.

We hope you find happiness every day!

Dr. Michael Bauer

Calling Dr. Bauer …

Dear Dr. Bauer,

Why do some people use portable concentrators and some have liquid oxygen? Stephanie Jones, New York

I have been practicing pulmonary medicine for over 35 years. One of the biggest changes I have seen during this period is how oxygen is supplied to my patients to use when home and for portability. Liquid oxygen systems were commonly prescribed but have been almost completely replaced by stationary home oxygen concentrators (powered by home electric supply) and portable oxygen concentrators (POCs) that run on either electric or battery power. The liquid portable systems are lighter but need refilling from a reservoir; the POCs let you be independent as long as you have charged batteries but are limited in how much oxygen they deliver. Home oxygen concentrators easily deliver higher oxygen flows as long as you are in the house!

In many surveys, a significant proportion of people indicate they prefer using liquid oxygen. The bottom line is money! The home care companies supplying oxygen are currently reimbursed a fixed dollar amount per user that is determined by Medicare guidelines. Medicare reimburses home care companies that are successful in a competitive bidding process. The costs to home care suppliers to supply liquid systems are higher than tanks. Each customer on liquid oxygen needs to be visited by the home care company every week or so. I have been told that these companies would not remain financially viable if they had to switch back to liquid.

The solution? Things have to change at the reimbursement levels. Write and call your government representatives and tell them how these regulations are directly affecting your lives! Physician and Respiratory Therapy medical societies need to lobby our government regulatory processes for ongoing improvements in the reimbursement process. It may help to have your physician write liquid oxygen system on your oxygen prescription and see what happens. We can hope that POC technology continues to improve.

I hope all our Pulmonary Paper readers are staying warm this winter!

Dr. Bauer and his family wish everyone a great holiday season! Dr. Bauer is shown here with his family. (L-r) Dr. Bauer, his wife Stephanie, his son Bob and wife Michelle (newlyweds), and sons Ed, Ben and Henry.

Questions for Dr. Bauer? You may write to him at The Pulmonary Paper, PO Box 877, Ormond Beach, FL 32175 or by email at info@pulmonarypaper.org.

Many times, people with breathing problems have trouble maintaining their weight as they can use 10 times more calories than those of a person without lung disease. If your dietitian has suggested you get calories from fats (polyunsaturated, monosaturated and low-cholesterol fats), they may recommend adding a supplement to your diet. Pulmocare® therapeutic liquid nutrition is a low-carbohydrate, high-fat formula specifically designed to reduce carbon dioxide production. It can be found in local drug stores or ordered on the Internet to be delivered to your home.

Meal Tips This Holiday Season

- Choose foods that are easy to prepare. If you use all your energy to cook, you won't have enough left to eat.
- Ask a family member or friend to help with grocery shopping or cooking if you are too short of breath to do these tasks.
- Rest just before eating.
- Eat more food early in the morning if you're usually too tired to eat later in the day.
- Avoid foods that cause gas or bloating, they tend to make breathing more difficult.
- Eat 4 to 6 small meals a day. This enables your diaphragm to move freely and lets your lungs fill with air and empty out more easily.
- Use water-packed fruit or fruit with no added sugar. Fresh fruit is also a good choice.
- Add margarine or other sources of fat to breads and vegetables. If high cholesterol levels are a problem for you, use mono- or polyunsaturated fats, oils and margarines.
- If drinking liquids with meals makes you feel too full to eat, limit liquids with meals; drink an hour after meals.

Try These Recipes Using Vanilla Pulmocare!

Peanut Butter Pie

Prepared 9-inch chocolate-cookie crust
3.4 oz. (1 pkg.) vanilla instant pudding
3 tablespoons natural-style, smooth peanut butter
1 tablespoon canola oil
16 fl. oz. (2 cans) Vanilla Pulmocare®

1. Combine pudding, peanut butter, oil, and Pulmocare® in a medium bowl.
2. Beat with a mixer at low for 1 min.
3. Pour into chocolate-cookie crust.
4. Freeze until set.

Yield: 8 servings (9-inch pie)
Per serving: Calories 330, Protein 7 g, Carbohydrate 34 g, Fat 19 g, Sodium 460 mg.

Holiday Advice from Dr. Bauer

Big meals can stress the respiratory system. A stomach full of turkey or ham pushes up on the diaphragm and can make breathing uncomfortable. High calorie carbohydrate meals can produce more carbon dioxide in your bloodstream making lungs work overtime to get rid of the carbon dioxide.

Alcohol acts as a respiratory depressant and can lower oxygen levels during sleep. Please don't let this sound like you can't enjoy yourself! Unless your physician has told you otherwise, eating holiday foods in moderation will be fine!

Continued on page 6

Continued from page 5

Pineapple Pudding Cake

1/4 cup Egg Beaters
3 tablespoons canola oil
1 yellow cake mix (1-layer size)
3.4 oz. (1 pkg.) instant lemon pudding
20 fl. oz. (2-1/2 cans) Vanilla Pulmocare®, well chilled
20 oz. (1 can) crushed pineapple

1. Grease a 2-quart square baking dish.
2. Prepare the cake mix according to package directions, using the Egg Beaters, oil and 1/2 cup of Pulmocare®.
3. Pour batter into prepared pan.
4. Combine the remaining 2 cups of Pulmocare® with the lemon pudding. Mix for 1 minute.
5. Stir together the pudding and undrained crushed pineapple. Pour over cake batter.
6. Bake at 350°F for 50 minutes, or until a toothpick inserted into the cake portion comes out clean. Serve warm or chilled.

Yield: 9 servings
Per Serving: Calories 330, Protein 6 g, Carbohydrate 45 g, Fat 14 g, Sodium 440 mg.

Tai chi is an internal Chinese martial art practiced for both its defense training and its health benefits. Chinese and British researchers suggest the practice of tai chi boosts the exercise capabilities and the quality of life of those with COPD. Physical activity, endurance and strength training are the keys to success. Tai chi requires no equipment and can be done daily at home.

The Mayo Clinic describes tai chi as a graceful form of exercise that involves a series of movements performed in a slow, focused manner and accompanied by deep breathing. It is a self-paced system of gentle physical exercise and stretching. Each posture flows into the next without pause, ensuring that your body is in constant motion.

Tai chi has many different styles, some may focus on health maintenance, while others focus on the martial arts aspect of tai chi. The benefits of tai chi may include:

- Decreased stress, anxiety, depression
- Improved mood
- Improved aerobic capacity
- Increased energy and stamina
- Improved flexibility, balance, agility
- Improved muscle strength, definition

Although you can rent or buy videos and books about tai chi, consider seeking guidance from a qualified tai chi instructor to gain the full benefits and learn proper techniques.

You can find tai chi classes in many communities today. To find a class, contact local fitness centers, health clubs and senior centers. You may enjoy greater benefits if you continue tai chi for the long term and become more skilled. It is a good idea to practice tai chi in the same place and at the same time every day to develop a routine. If your schedule is erratic, do tai chi whenever you have a few minutes. You can even practice the soothing mind-body concepts of tai chi without performing the actual movements when you are in a stressful situation.

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Mark Mangus, RRT
EFFORTS Board

Ask Mark …

Leila from EFFORTS heard that taking the antibiotic, Levaquin, for her bronchiectasis has many side effects and might not be the best choice for her.

Mark answers, Levaquin, a class of drugs known as fluoroquinolones, has mental health side effects as disturbances in attention, disorientation, agitation, nervousness, memory impairment and delirium and serious blood sugar disturbances. A "black box" warning has been added by directive of the FDA. (A boxed warning is a type of warning that appears on the package insert for certain prescription drugs, so called because the FDA specifies that it is formatted with a 'box' or border around the text.) They say the use of fluoroquinolones has a place in the treatment of serious bacterial infections – such as certain types of bacterial pneumonia – where the benefits of these drugs outweigh the risks, and they should remain available as a therapeutic option. It is not to be used as a first line or early intervention antibiotic. There are other medications that can and should be used before resorting to Levaquin. Fluoroquinolones are not a good choice for respiratory infections unless the organism is specifically sensitive to them and other classes of antibiotics will not kill the organism.

Discuss your choices with your physician as I think Azithromycin would be much better and safer alternative for you.

Ann B. was warned not to take N-Acetyl-L-Cysteine (NAC) because a new report has found it may cause bronchospasm and asks Mark for his opinion.

Mark tells us, I have promoted NAC for a very long time. NAC, taken orally as a supplement, does not and cannot generate or cause bronchospasm – spasm of the smooth muscles that surround your airways. On the other hand, it has long been known that inhaled NAC (Mucomyst, Mucosol) can cause bronchospasm, as it is irritating to the bronchial mucosa.

Oral supplements of NAC help stimulate the production of glutathione, perhaps the most powerful anti-oxidant and anti-inflammatory molecule in our body. It is produced in the liver as a primary site but can be made by any cell. Several studies have been conducted to determine if there is any beneficial effect of taking NAC as a supplement for those with

Mark Mangus RRT, BSRC, is a member of the Medical Board of EFFORTS (the online support group, Emphysema Foundation For Our Right To Survive, www.emphysema. net). He generously donates his time to answer members' questions.

Idiopathic Pulmonary Fibrosis (IPF), but findings have been disappointing. In my humble opinion, too low a dose of NAC was used in these studies. I recommend 2400 mg/day (1200 mg in the am and 1200 mg in the pm). Taken with meals, any gastrointestinal side effects as gassiness, upset stomach or worst case, nausea, are blocked.

For those with COPD and mucus issues, NAC supplements not only provide the anti-oxidant benefit, NAC helps mobilize and liquefy mucus and change its properties. It has anti-inflammatory action for the airways, reducing swelling by natural body processes. Prednisone provides a similar effect in the airways – and theoretically, for some, NAC's action could reduce the need for or the dose needed of prednisone. It can help inhaled steroids work better or reduce their required doses. So, all in all, there is a much more compelling reason to take NAC – as a nutritional supplement and not as an inhaled medication – than there is any evidence against its use or showing negative benefit from its use. It is important to understand that it doesn't react with other medications a user might be taking.

N-Acetyl-L-cysteine

N-Acetyl-L-Cysteine (NAC) has many uses as medicine. Besides COPD and lung cancer, it is used to counteract acetaminophen and carbon monoxide poisoning. It is also used for chest pain, Lou Gehrig's and Alzheimer's diseases, allergic reactions, and ear and eye infections as well as many, many other indications including as a treatment for hangovers! NAC is given intravenously (by IV), is inhaled by aerosol for lung disorders, and also orally by mouth.

Joy from Missouri asks Mark about the best way to lose weight. She has tried using a salad plate instead of a dinner plate for meals to cut down on portions and chewing slowly while eating.

Mark relates, When I embarked on my weight loss journey, I cut 500 to 700 calories from my diet daily which kept me at about 1500 calories/day. I also cut the percentage of carbohydrates I ate and increased fat intake and lost 45 pounds. Since then, maintaining about 1600 to 2000 calories/day, I've managed to lose and keep off about 57 pounds! I am on what would qualify as a modified Paleo diet – lots of fats, about 30 percent protein and keeping carb intake to between 90 to 120 calories/day. I lost 10 inches in my waist. It has been costly with my wardrobe! I'm on my third round of clothing purchases since beginning to lose weight. But I can easily live with this since I look and feel so much better! My target weight is 135 pounds being 5' 4". I'm at about 138 pounds, right now.

I have to say that eating more fat is really satisfying! I have not been hungry the whole journey. Even though I consume a fair amount of 'saturated' fats, my lipids continue to be normal to low normal, with my HDL running around "80"! That's very high and very good! Normal levels are 40 to 60 milligrams per deciliter (mg/dL). HDL stands for high-density lipoproteins. It is called the "good" cholesterol because it carries cholesterol from other parts of your body back to your liver. Your liver then removes the cholesterol from your body.

For me, as a consummate "foodie" and one who loves to cook, this has been monumental! I continue to eat everything that I love to eat but I eat less than I did for so many years! Fancy diets will not work for life-long changes! One must find a diet pattern and eating habits that are sustainable.

Airline Travel and Oxygen Levels

Many of you may be planning on traveling for the holidays. We thought it would be a good time to discuss the facts you need to consider when flying. Dr. James Stoller recently reviewed the effects that altitude on commercial airlines may have for people with lung problems. Unfortunately, each airline carrier has its own set of rules – we recommend you print out the information from the airline's web site to make sure you have followed the rules and carry it with you, along with your oxygen prescription. The popularity of portable oxygen concentrators has made them more familiar to airport personnel, making travel much less stressful. Planning ahead is the key!

Dr. Stoller advises that traveling by airplane exposes people to decreased air pressure and lower than normal oxygen levels. For most people, these changes are not noticeable. However, for people with underlying lung conditions, small atmospheric changes can have significant effects. Air pressure drops as altitude increases. As an airplane ascends, the air pressure inside the plane is reduced. Inside commercial airplanes, pressurization of the cabin limits the fall of pressure. This allows the airplane to cruise at altitudes up to 40,000 feet without exposing travelers to dangerously low levels of air pressure.

Cabin pressurization levels vary by the type of airplane. The United States Federal Aviation Administration (FAA) requires that the cabin pressure on commercial airplanes be maintained at levels equivalent to the atmospheric pressure below 8,000 feet. The FAA allows for brief drops in air pressure for safety purposes only, such as to avoid bad weather conditions. The minimum air pressure to which travelers could be exposed for short periods of time is equal to that encountered 10,000 feet above sea level.

The effects of increased altitude and reductions in air pressure can result in expansion of the air or gas trapped within the body. Trapped air or gas can be located in many different places, including nasal sinuses; tubes within the ear; abnormal pockets within the lung (bullae); the space between the outer layer of the lung and the

inner layer of the chest wall (air trapped in this region is referred to as a pneumothorax), and internal organs in the abdominal cavity. As atmospheric pressure drops, trapped air expands. This explains the "ear-popping" with which most travelers are familiar.

Low air pressure during air travel also decreases the amount of oxygen in the air. This effect is modest and generally not noticeable for healthy travelers. For people with significant lung disease, a small decrease in available oxygen can cause significant symptoms, especially with exercise. Although air travelers usually remain sitting and are relatively inactive during flight, even modest exertion (e.g., walking to lavatory) under these conditions can cause low oxygen levels in up to 80 percent of people with lung disease. *Do not even think of going to the lavatory without your oxygen!*

Despite the theoretical risks associated with air travel, studies indicate that medical emergencies and deaths are uncommon in people with chronic lung disease or pulmonary hypertension who fly. Most studies suggest that medical emergencies occur in about one in every 19,000 to 40,000 travel episodes and that deaths occur in approximately one in every 3,200,000 travel episodes.

The European Lung Foundation also has a section on air travel at their web site, *www.europeanlung.org/airtravel*

You will be able to access listing of airlines with their oxygen policies; information including a video on the fit-to-fly test, getting a medical certificate and arranging special assistance along with other practical tips.

Before you get to your destination, either to someone's home or to a hotel, find out beforehand if there are a lot of stairs or other difficult situations you may encounter. Remember to look for an elevator or escalator that may be around the corner before tackling a flight of stairs. Pucker up and blow out as you step up those steps. Find out if anyone will be around you that is smoker. Wash your hands frequently.

Have a checklist of things you need to bring with you including all of your portable oxygen concentrator batteries and accessories. Don't forget your powerstrip, cords for your CPAP units and extra batteries and cannulas. Pack light but pack smart!

Don't be afraid or feel bad about having to rest or take naps instead of participating in a family or friend activity. Pace yourself and know when to participate and when not to. We hope your travels will be safe and enjoyable!

Fibrosis File

monARC Bionetworks is a company who wants to make it easy for you to share your health care data with researchers in what is known as a Patient Research Network. Members supply information from their past and current medical records as x-rays and laboratory results to researchers in hopes to pre-qualify for clinical trials by becoming involved early and on a continuous basis. To become a network member, you or your loved one must have an active diagnosis of idiopathic pulmonary fibrosis (IPF) or interstitial lung disease (ILD) and be at least 18 years of age. monARC Bionetworks also worked with the Pulmonary Fibrosis Foundation (PFF) to develop an app called PF Health that is available for download on your mobile phones. For more information on becoming involved with the research network, visit *www.monarcbio.com*

The Pulmonary Fibrosis Foundation (PFF) has created an educational website at *www.aboutpf.org* to increase awareness about pulmonary fibrosis (PF), with a goal of promoting earlier diagnosis. According to the PFF, the website includes a video explaining the disease and outlining possible causes, stories from people with the disease, and a downloadable Pulmonary Fibrosis Risk List worksheet to promote better discussion with your physician on how to manage symptoms. You may also connect with others to share tips on how to manage PF. If needed, the site also provides help with locating a pulmonologist through the PFF Care Center Network.

The most common type of pulmonary fibrosis is idiopathic, meaning that the cause of the disease is not completely understood. PF is complex and encompasses many diseases. What these diseases have in common are inflammation and scar tissue with the main symptoms being shortness of breath, a dry cough and fatigue. PFF's goal is to prevent and cure the disease, but in the short term, researchers are working to control disease progression and symptoms. If you need assistance or want to learn more, you may call the Foundation's Patient Support Line at 844-825-5733.

A big problem with idiopathic pulmonary fibrosis (IPF) research has always been scientists' inability to have an animal model of the disease. Penn Medicine has developed the first mouse model with an IPF mutation. The mutation includes scarring and other damage seen in humans with IPF. Investigators can now look at pathways that lead to the start and persistence of lung fibrosis. The news was reported in the *Journal of Clinical Investigation*.

A new medication from Samumed, SM04646, is on the horizon. It inhibits a molecule found to be involved in IPF development which is believed to reduce the activity of genes associated with fibrosis. It will be administered as an inhaled aerosol.

Recent clinical research news tells us treatment with Esbriet (pirfenidone) can effectively benefit those with IPF who have more advanced lung function impairment, by preventing a decline in exercise capacity and worsening of shortness of breath. Esbriet is an anti-fibrotic and anti-inflammatory medication that was approved in the United States just four years ago. Results from the long-term PASSPORT clinical study are consistent with its known safety profile, further strengthening the safety of the therapy.

Another medication, Ofev (nintedanib), was approved at the same time as Esbriet and has shown to be effective in reducing the decline of lung function and IPF progression. A study in *Respirology Case Reports* showed Ofev can also prevent the progression of squamous cell carcinoma in the lungs of people with IPF. Both drugs have significantly improved outcomes!

When cold weather comes, emergency room visits increase dramatically. Tips for protecting your lungs this winter include:

1. Keep oxygen tubing inside clothes.
2. Have someone pre-heat your automobile before you get in.
3. Put a scarf over your nose and mouth.
4. Avoid carrying items yourself to save energy.
5. Drink a glass of warm water slowly when returning indoors.

Genetech, who is the pharmaceutical company that promotes Esbriet, has a web site for IPF support at *www.faceipf.com*

Boehringer Ingelheim, the company behind Ofev, has a support program, Open Doors, at *www.ofev.com* You have access to 24/7 nurse support at 1-866-673-6366 for questions about your medication or IPF.

Pulmonary fibrosis often brings a nagging cough with it. People have been finding relief with this banana this mixture that has been around for a long time. You'll need:

400 ml (about 14 ounces) boiling water
2 medium ripe bananas
2 tablespoons of honey

1. Peel the bananas and puree them with a wooden fork or spoon.
2. Place the mashed bananas in a pot and add boiled water. Let the mixture steep for 30 minutes.
3. When the remedy is cool, add the honey. It is important to add the honey when the mixture is cool so the honey does not lose any of its heat-sensitive antioxidants.
4. Place the mixture in a sealed container and use 100 ml four times a day.
5. Use the remedy for 5 days in a row, making a new batch every morning.

What is Sarcoidosis? PART 1

Sarcoidosis (sar-coy-DOE-sis) is a disease of unknown cause in which inflammatory cells clump together and form tiny lumps of cells in various organs and tissues of the body. These lumps are called granulomas (gran-yu-LO-mas). Sarcoidosis most often affects the lungs and its hilar lymph nodes but can also involve other areas of the body including the eyes, skin, sinuses, liver, kidneys, brain and heart. Sarcoidosis varies in how active and how severe it is for each person and over time. The granulomas, when active, can cause short term and/or long term damage to the organ involved. This fact sheet provides a general overview of sarcoidosis. For more information about treatment of sarcoidosis, see "Treatment of Sarcoidosis" at *www.thoracic.org/patients*

Chronic inflammation and damage leads to symptoms and occasionally, permanent loss of function of the involved tissue/organ. When sarcoidosis affects the lungs (pulmonary sarcoidosis), the disease can reduce the amount of air the lungs can hold and cause abnormal stiffness, called "restriction," of the lungs. This results in breathing problems that can interfere with daily activities.

What causes sarcoidosis?

The cause of sarcoidosis is unknown. The disease can be seen in people of every race, sex and age. However, sarcoidosis is more common in people who are:

- African-Americans
- Of German, Irish, Scandinavian, Asian or Puerto Rican origin

Sarcoidosis is not contagious and it is not a cancer. People with a family member who has sarcoidosis have a low risk (1 in 20) of also getting the disease.

What are the signs and symptoms of sarcoidosis?

Many people with sarcoidosis do not have any symptoms. Others have only vague symptoms that can be seen in many other illnesses, such as weight loss, fever, loss of appetite, depression, night sweats, and sleep problems. Signs and symptoms that may come from problems with a specific organ include:

- **Lungs:** Shortness of breath, wheezing or dry cough that may lessen or go away over time in some people, but remain in others.
- **Lymph nodes:** Enlarged and sometimes tender lymph nodes, most often in the neck and chest, but sometimes under the chin, arm pits or groin.
- **Eyes:** Burning, itching, tearing, redness, sensitivity to light, dryness, seeing black spots, blurred vision, reduced color vision, and, in rare cases, blindness.
- **Skin:** Bumps, ulcers, or rarely, flat areas of discolored skin that appear mostly near the nose or eyes or on the back, arms, legs and scalp. Painful and tender discreet reddened bumps called *erythema nodosum* can suddenly appear on the ankles and shins. This rash is most often seen in younger patients and can be associated with joint pains, fever and enlarged lymph nodes in the chest called *Löfgren's syndrome*.
- **Bones and Joints:** Bone lumps (nodules), causing pain in the hands and feet, and/or swelling of ankles or other joints.
- **Spleen and Liver:** There can be pain in the upper abdomen, under the ribs on the right (liver) or left (spleen).
- **Heart:** Shortness of breath with activity and swelling in the legs. One may have an irregular or fast heart beat at times, or pass out without warning.
- **The Nervous System:** Headaches, vision problems, numbness, weakness, or loss of movement of arms or legs, drooping of one side of the face, pain or a "pins and needles" feeling.
- **Fatigue** is a common problem, seen in more than half of patients.

How is sarcoidosis diagnosed?

Since sarcoidosis can affect one or more parts of the body, the signs and symptoms depend on the tissue/organs involved. Some people with the disease do not have any symptoms and it may be noticed by chance when they are being seen for other problems. Other people may be hard to diagnose because the symptoms they have are not very specific. But certain clinical features such as the *erythema nodosum*, rash or eye findings may lead a healthcare provider to suspect sarcoidosis.

There is no specific blood test to diagnose sarcoidosis. Sarcoidosis can mimic infection and several other diseases. Hence the diagnosis requires checking for other causes of symptoms and disproving infection, cancer and other diseases as a cause.

Your healthcare provider will do a history and physical exam to look for signs of sarcoidosis and rule out other diseases. A number of other studies may be done including:

- A **chest x-ray** to look for enlarged lymph nodes and small round spots, called granulomas, in the lungs
- **Pulmonary function tests** to measure how well the lungs work. (For more information, see ATS Patient Information Series: Lung Function Testing at *www.thoracic.org/patients).*

- **Bronchoscopy and bronchoalveolar lavage** A bronchoscopy is a test in which a flexible tube is put into the airways and mucus fluid samples can be suctioned out. This fluid is called bronchoalveolar lavage (BAL) and the cells in it can be examined under the microscope. (For more information, see ATS Patient Information Series: Flexible Bronchoscopy at *www.thoracic.org/patients)*.
- A **tissue biopsy** – taking a small piece of tissue to examine under a microscope to look for signs of disease. This can be obtained through surgery or bronchoscopy (endobronchial or transbronchial biopsies). A special device with ultrasound guided biopsy via bronchoscopy (EBUS) may also be used to get samples from the lung.
- An **eye exam** with a specially lighted tool allows the doctor to look inside the eye for possible signs of sarcoidosis.
- **Blood tests** can reflect abnormal function of the involved organs such as the liver, kidney, bone marrow and calcium levels.
- A **CT scan** of the chest may show enlarged lymph nodes and scars in the lungs that a regular chest x-ray may not.
- An **electrocardiogram (EKG)** is a test that records a tracing of the electrical activity of the heart. It shows the rate of heart beats. It may show how regularly the heart beats and may show if there is any strain on the heart, irregular rhythm, heart blocks.
- An **echocardiogram** may detect abnormal heart function and/or increased pressure in the arteries of the lungs (pulmonary hypertension) that can occur in some cases.
- An **MRI** of the heart is a type of imaging scan that can detect heart involvement by sarcoidosis earlier than an EKG. It can also be helpful to identify areas in the heart to biopsy, if needed.
- **PET scan** of the may detect sarcoidosis in various parts of the body and may predict response to treatment. A dedicated cardiac PET scan can be done to detect sarcoidosis in the heart.

Definitive diagnosis requires the provider to put together information from the history, physical exam, and laboratory results that show granulomas (characteristic features of sarcoidosis).

How serious is sarcoidosis?

The course of sarcoidosis varies greatly among people and over time for an individual. In many cases, sarcoidosis is mild and self-limited. A short time after appearing, the granulomas may stop growing or shrink. Symptoms may go away within a few years without treatment.

Sarcoidosis starts with active, ongoing inflammation. Granulomas (lumps) form and grow. Symptoms develop, and scar tissue can form in the organs where the granulomas are growing. In most patients, the inflammation decreases, and the granulomas stay the same size or shrink within a few years. But any old scars will remain and can still cause symptoms. However, for some patients, sarcoidosis can become chronic, lasting life-long.

The severe form of sarcoidosis slowly worsens over a period of years, and can cause permanent organ damage. Treatment can help, but the disease may still leave scar tissue in the lungs, skin, eyes, sinuses, heart or other organs. Between 20 and 30 percent of people with pulmonary sarcoidosis end up with permanent lung damage.

The scarring from sarcoidosis is often in upper portions of the lungs. The lungs are at risk of infection due to fungus or bacteria, including mycobacteria. A 'fungus ball' can form and a person can develop bleeding (cough up blood). There are two reasons to treat sarcoidosis: concern for developing organ damage (including respiratory failure) and/or to improve quality of life. Treatment is aimed at maintaining good function of the organ involved, reducing symptoms, improving quality of life, and preventing organ damage. Talk with your healthcare provider about how sarcoidosis is affecting your health and what treatment you may need

Author: Ganesh Raghu, MD; **Reviewers:** Marianna Sockrider, MD, DrPH; Hrishikesh S. Kulkarni, MD; Ginger Spitzer; Robert Baughman, MD

Rx Action Steps

- ✔ Talk with your healthcare provider about whether you need treatment for sarcoidosis and what options you have.
- ✔ Do not smoke and try to avoid being around tobacco smoke.
- ✔ Take action to stay healthy and watch for early changes with sarcoidosis.

Healthcare Provider's Contact Number:

_____

Additional Information

Foundation for Sarcoidosis Research
http://www.stopsarcoidosis.org
American Thoracic Society
www.thoracic.org/patients
National Heart, Lung and Blood Institute
http://www.nhlbi.nih.gov/health/health-topics/topics/sarc (also available in Spanish)
American Lung Association
http://www.lung.org/lung-health-and-diseases/lung-disease-lookup/sarcoidosis/learn-about-sarcoidosis.html
American Lung Association of Canada
http://www.lung.ca/lung-health/lung-disease/sarcoidosis-1

Am J Respir Crit Care Med Vol. 197, P3-P4, 2018.

Ryan Diesem

The Ryan Report

Home Oxygen Guru – The HO_2G Pen

A **hearty 'ho ho ho'** to everyone this holiday season from this writer, who sees the streak of white hairs in his beard and is therefore already prepping for his future part-time job as a mall Santa. I hope everyone has a great holiday and that you all are excited to see what 2019 brings. In the meantime, we'll close out 2018 by answering a couple reader questions that have come in over the last few months

C.B. asks, I've seen several product listings and review sites on the Internet for portable oxygen concentrators that I've never heard of. They don't seem like real POCs. Can you shed any light on these products?

Oxygen users show the Oxygen Bar in Las Vegas, NV, how it is done!

This is a good question that comes up every once in a while as oxygen users often use the Internet to seek out information on newer POCs that may interest them, and they end up finding a lot of product and manufacturer names that they haven't seen before. A cursory search I just completed now of *Amazon.com* using "portable oxygen concentrator" as the search term will bring up many listings, and they all show products that look very much like a POC, including having flow settings from 1-5 LPM and featuring additional accessories like batteries, AC/DC power cords, and carrying cases.

One thing that will usually pop out to the reader is the price – these listings are priced anywhere from $300 to $1,000, which anyone that has purchased a new POC before knows would be an incredible bargain. POCs like the Inogen One G3 and CAIRE SeQual Eclipse are usually priced in the $2,000 to $3,000 range, and most certainly any brand new POC is *not* going to retail for under $1,000. So any listing for a POC in this price range should be the first red flag that what the reader is seeing is *not* a normal POC as we know it.

Reading the details of these listings will give the next clues that these products are not your typical POC. Many of these product listings will also have some sort of description in the product blurbs such as "air purifier", "air ionizer", or "oxygen bar machine", which is not a descriptor typically associated with POCs for medical use. Reading further, the absolute clearest indicator that the product is not a true POC is the oxygen pu-

Ryan Diesem is Research Manager at Valley Inspired Products, Apple Valley, MN. Contact Ryan at rdiesem@inspiredrc.com with questions or comments.

rity specifications. Typically, these products will promote delivery of less than 0.09% oxygen at 1 LPM, but when you look at the higher flow rates, you see these numbers drastically reduced: at 2 LPM the listing states oxygen purity is delivered at 70%, and at 5 LPM the purity drops all the way to 30% (which is only about 10% greater than room air). All POCs designed for medical use are specified to deliver their oxygen at purity greater than 87% no matter what the setting is, so if you are seeing a "POC" listing that states it delivers 30% purity at 5 LPM, then that product is not a POC specifically intended for medical use.

All of this discussion is not meant to say that these products couldn't be valuable or beneficial to someone that is interested in them. The term "portable oxygen concentrator" does, in effect, describe what these products are and can do, but unfortunately it also can be greatly confusing to those looking for viable POCs that are truly designed with medical use in mind. What can be clearly stated is that because these "POCs" have low purity output at high flow settings, these products are not viable for long-term oxygen use and should not be considered when shopping for a medical POC. I would recommend using our annual guide to POCs published in the May/June issue every year as a starting point for POC shopping as it has all of the current models available that are fit for patient use.

L.K. asks, I am currently on 4 LPM oxygen 24/7 and require 8 to 10 LPM during exertion and walking. I use a Millennium M10 with a 50 foot tubing at home and when sleeping, and an Equinox when out. I noticed that Inogen has a GS-100 5 LPM which is not a POC but seems appropriate for use at night during travel since it weighs much less than the M10.

L.K. is correct in that the Inogen GS-100 ("Inogen At Home") is not a POC, which some readers contacting me have confused it for previously. The GS-100 concentrator does not come with a battery nor a DC cable like a POC would, and it must be plugged in whenever it is being used.

Inogen At Home

That said, if you are on 5 LPM or less at night, then yes, the Inogen At Home would probably be a good fit for you for travel purposes (provided you are not wanting to use it on an aircraft). It is the lightest stationary concentrator available at 18 lbs., the same as the Eclipse POC with a battery – and it capably delivers its oxygen flow and oxygen purity at accurate levels, even with extension tubing such as L.K. uses with the M10. Another benefit the GS-100 has over most other stationary concentrators is its power consumption – if used at lower settings the GS-100 will not pull as much power as a typical concentrator would since it can adjust its compressor output to match the current setting. Most other stationary concentrators have their compressors running at a constant rate no matter what the flow setting is.

My only real issue with the GS-100 is that is does not have wheels – it must be carried by the handle, which isn't always easy for some people to manage. Also, like the Inogen POCs, the GS-100 has user-replaceable sieve beds, meaning any service needed on the sieve canisters (which would be indicated by constant low purity alarms) can be done by the user in the home instead of the device needing to be sent in or swapped out for repair. Since L.K. mentioned travel but did not state which type, I must state that if one wanted to fly, they would not be able to take the GS-100 on the plane with them to use, but it could be checked and used at the destination.

That's it for 2018! Happy holidays, and may the new year bring you health and happiness. My best to you all! Ryan

Health Insurance Quiz

1. Which government program helps elderly Americans pay their health care costs?
   a. Medicare
   b. Medicaid
   c. Social Security
   d. WICC

2. In health insurance, what is meant by the term "network?"
   a. Hospitals owned by the same company
   b. Physicians who consult with other physicians
   c. Health care professionals that are part of health plan's group of providers
   d. Physicians who charge the same rate for the same type of procedure

3. Which of the following is a form of an out-of-pocket expense?
   a. Co-pay
   b. Broker
   c. Beneficiary
   d. COBRA

4. Which is not an example of a pre-existing condition?
   a. Cancer
   b. Broken Leg
   c. Diabetes
   d. Asthma

5. Which is the major difference between an indemnity care plan and a managed care plan?
   a. Indemnity care plans cost less than managed care plans.
   b. Those enrolled in an indemnity care plan can go out of network, while those that are covered by a managed care plan cannot.
   c. Indemnity care plans cost more than managed care plans.
   d. Indemnity care plans are solely catastrophic in nature, while managed care plans are not.

6. What's the main benefit of a managed care plan?
   a. Lower costs
   b. Higher costs
   c. More out-of-network doctors
   d. Access to better health care

7. What's a formulary?
   a. An insurance company's list of covered drugs
   b. An insurance company's list of in-network doctors
   c. An insurance company's list of out-of-network doctors
   d. An insurance company's list of customers who do not pay their bills

8. What does "HMO" mean?
   a. Health Maintenance Organization
   b. Health Management Organization
   c. Holistic Medicine Organization
   d. Happy Management Organization

9. Which of the following statements best describes "reasonable and customary?"
   a. The median cost of a medical procedure
   b. Prevailing cost of a medical service in the United States
   c. Prevailing cost of a medical service in a given geographic area
   d. The rate Medicare charges for medical treatment

10. Which word or term below best describes the amount you must pay each year before your health plan begins paying?
    a. Deductible
    b. Rider
    c. Single-payer
    d. Co-payment

Insurance Facts

For information on Medicare coverages and options for supplemental insurance and drug plans, visit *www.medicare.gov*

A health insurance marketplace is a website to buy a health plan. Each state must either have a health insurance marketplace, also called an Exchange, or use the federal one at *www.healthcare.gov* You use them to compare health plans and find out if you qualify for a subsidy, which is money from the federal government to lower your insurance costs. There are sites for people who don't have insurance from an employer or through Medicare, Medicaid or the military.

Under the Affordable Care Act, you cannot be denied health insurance for a pre-existing condition. Before the act was passed, health insurance plans could deny coverage or limit benefits if you had a pre-existing condition. Insurers can no longer refuse to cover anyone because of pre-existing conditions or charge them more for a health plan based on their medical condition.

Your health insurance does not run out, no matter how much the insurance company has paid for your care. Lifetime limits are now banned for all new health insurance policies. Insurance companies used to have annual limits and lifetime limits on how much they'd pay for your health care. For example, if you had $100,000 or more of treatment in one year, or more than $1 million over a few years, you hit your limit. After that, you had to pay for 100 percent of your health care.

If your insurance company denies a claim – meaning that it refuses to pay its part for services you think are covered – you have the right to appeal, and the health plan is

required to respond. If the plan rules against your appeal, you can request an external review of your case. That means someone who's not connected to your health insurance company will decide whether the health plan must pay.

Long-term care insurance covers a range of services and support you may need to meet your personal care needs. Most long-term care is not medical care, but rather assistance with the basic personal tasks of everyday life called Activities of Daily Living as bathing and dressing. Most policies will reimburse you for care given in a variety of places, such as your home, a nursing home, assisted living facility or adult day care center.

Considering long-term care costs is an important part of any long-range financial plan, especially in your 50s and beyond. Waiting until you need care to buy coverage is not an option. You won't qualify for long-term care insurance if you already have a debilitating condition. Most people with long-term care insurance buy it in their mid-50s to mid-60s.

Great Tips, Old and New!

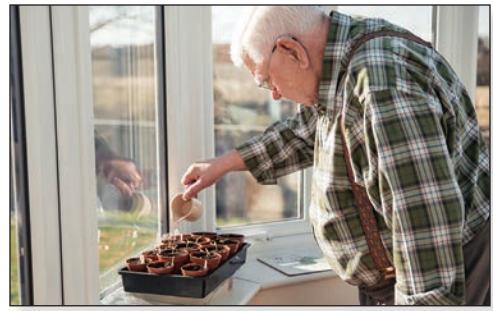
COPD.net is a community for people affected by COPD operated by Health Union LLC to learn, share and connect with peers and healthcare professionals. They also have a Facebook page with over 38,000 followers. There is always something new to learn for the person who is newly diagnosed to the veteran.

John Bottrell RRT gives this advice to the newbies:

- A diagnosis can be looked at as good. Now that you know you have COPD, you can begin the process of learning how to cope with it.
- Coping with it means making changes – often hard to do but change can also be good.
- If you smoke, quitting can prolong your life – that's why it's said over and over and over.
- COPD Action Plans can help you decide what actions to take when you have flare-ups.
- The earlier you seek help, the easier it is for doctors to help you.
- You can live a long, quality life despite your diagnosis.

Veteran Michelle Vincent recommends these activities for self-care:

1. Getting dressed for the day can give you a sense of normalcy and lifts your spirits a little instead of staying in pajamas.
2. Take a sponge bath if it's too taxing to get in the bathtub or shower – it doesn't take as much energy and feeling clean is sure to make you feel better.
3. Reading is a great activity. It engages the brain and the imagination and it's



something you can do even if you have an infection.

4. Hobbies are a great way to feel better, even if you can only do a little bit at a time. If you can find something that gives you joy, that's the best self-care you can have.
5. Sometimes you just need to relax. If that means sipping tea, or taking a nap, or meditating, whatever it is for you, do it.
6. Coloring, painting, or using colored pencils or pens is very soothing because it shifts your focus on to what you're doing. Don't lose your ability to create.
7. Writing is another process of creating, which makes us feel good. It can be a whole list of complaints if you want. Getting those words out can be cathartic.
8. Sometimes you just need to treat yourself – whatever that is. A little splurge can be great and you deserve it.
9. Pets – our furry (or feathered or scaled) friends can make us feel better like no other. Unconditional love is the best.
10. Listen to music – it stimulates the brain. Listen to music for the memories, the melodies, and the mood.
11. Watch TV/movies to take your mind off things for a while. It's entertaining, escapist, informative and engaging.

Vaping and Health Consequences in Minors

Over two million middle and high school students were e-cigarette users in 2017. In the largest coordinated enforcement effort in FDA history, 1,300 warning letters and fines were recently sent to electronic cigarette retailers for illegal sales of vaping devices to minors. The vast majority of the violations were for the illegal sale of five products – Vuse, Blu, JUUL, MarkTen XL and Logic – which make up 97 percent of the United States market for e-cigarettes.

E-cigarettes heat a chemical-packed liquid that typically contains nicotine and often a flavoring agent, creating an aerosol. By delivering nicotine without tar and other by-products of combustion, e-cigarettes purportedly give smokers a healthier alternative to cigarettes while still satisfying cravings. This past January, the National Academies of Sciences, Engineering, and Medicine released an FDA-commissioned report on the potential public health consequences of e-cigarettes. The report found evidence that users completely switching from smoking cigarettes to e-cigarettes reduce their exposure to numerous toxicants and cancer-causing carcinogens. However, the report also found that youth and young adults who use e-cigarettes are more likely to try smoking cigarettes, indicating that e-cigarette usage is a "gateway" to combustible cigarette smoking.

Statins are medications, as Lipitor, which are taken to reduce your cholesterol and lower your risk of heart problems. Italian researchers assessed individuals with COPD and cardiovascular disease to examine the relationship between taking statin therapy and the risk of flareups of their lung disease. As reported in the journal, *Drugs Aging,* evidence revealed markedly reduced risk of COPD exacerbations that correlated to taking the statin drugs. The researchers hope to have more clinical trials to examine the benefits of taking statins for people with COPD.

Answers to our Flu Quiz in the September/October issue:

1. Cold symptoms tend to come on gradually where the flu starts suddenly. *True. You'll often feel a cold coming on over a few days. But flu symptoms begin quickly, over a period of 3 to 6 hours. Colds are milder. Fever, body aches, dry cough, and being very tired are more likely to be the flu.*
2. Feeling exhausted is a sign of? *B, The flu. If you feel like you can't get out of bed, don't. Serious fatigue, along with chills and body aches, are signs that you have the flu. So you need plenty of rest. Acetaminophen, naproxen, or ibuprofen can help with body aches.*
3. You can catch the flu from someone before they look sick. *True. Someone can spread the flu a day before they start to feel sick and up to 7 days after that so they can pass the virus on before they know they have it. People with colds are most contagious 2 to 4 days after symptoms show up. But a cold can be catchy for as long as 2 weeks. That's a good reason to wash your hands often during cold and flu season.*
4. Drinking fluids help the flu but not the a cold. *False. With a cold or the flu, fluids help break up congestion and thin mucus.*
5. When you have the flu, you can leave the house when your fever goes away. *False. Wait at least 24 hours after your fever goes away naturally – without using medicine to bring it down. Avoid travel, social events, movies, and other public gatherings for 24 hours after your temperature is normal.*
6. Chicken soup may help fight a cold. *True. It's good for you and keeps your fluids up and may also help fight infection and keep germs from entering the body through the nose. And it seems to thin mucus better than other warm liquids.*
7. When are you most likely to get the flu? *C. February. Winter is flu season, but flu outbreaks can happen anytime between October and April. The best time to get a flu vaccine is in the fall, before flu season starts, so your body has time to build up immunity. Getting a flu vaccine anytime during flu season offers some protection.*
8. Which can soothe a sore throat? *C. Both. Sucking on ice chips or a frozen ice pop numbs your throat and gets fluid into your body. Gargle with a mixture of 1 cup of warm water and half a teaspoon of salt. Spit the liquid out afterward. Warm drinks like tea, or a cool mist humidifier, may also give you some relief.*
9. The average cold lasts for? *B. One week. Colds usually end after 7 to 10 days. Most stick around for roughly a week. See a doctor if you've been sick more than 7 days or have a high fever, severe sinus pain, swollen glands, a cough that brings up mucus or blood or shortness of breath.*
10. If you have a bad cold, you should take antibiotics. *False. Antibiotics treat bacterial infections, but viruses cause colds. If your cold brings on a bacterial infection such as one in your ear or sinuses, your doctor may give you antibiotics.*

Device Quality Matters.

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The AEROBIKA® device has been clinically proven to reduce breathlessness, worsening of your COPD and deliver significant improvements in your quality of life.[1] The AEROBIKA® device is easy to use and offers a natural, reliable way to help raise secretions by air movement and positive pressure in your airways. The device has undergone rigorous testing to ensure consistent performance every time. Use the AEROBIKA® device daily in your respiratory treatment plan!

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Reference:
1. Svenningsen S, *et al.* COPD 2016;13(1):66–74.

Sharing the Health!

Joy H. of EFFORTS (Emphysema Foundation for Our Right To Survive – *www.emphysema.net*) believes keeping your mind sharp is important for overall health. She shares a listing of free courses available to take online at *www.openculture.com/freeonlinecourses* You may also check your local colleges which may have classes open to seniors at no cost.

When you want to make a statement! Respro® Pollution Masks have been manufactured and distributed from the United Kingdom for over 20 years to many countries with shipping included in the price of the masks. Visit *www.respro.com* to see the different models including the Techno model used by many people who have had lung transplants to avoid infections.

I found water aerobics to be a very enjoyable activity in my life! My local YMCA has a session six days a week. It gets me up and out of the house, I have met new friends and best of all, I feel stronger and more confident, especially with my balance. It is exercise that I can do that is both aerobic and resistance training. I highly recommend it for both men and women!

Ursula P., Daytona Beach, FL

My son put my front-loading washer and dryer on platforms to make it easier for me to do laundry. I don't have to bend over and use a long-handled reacher to help pull clothes out of the machines. When I have to iron, I use a swivel bar stool. This permits me to lean slightly forward and saves me a lot of tiring time on my feet.

S.H., Philadelphia, PA

Clinical Trial Opportunities

If you are interested in participating in a clinical trial, visit *https://clinicaltrials.gov*

You should know they are carried out in three phases.

Phase I is usually done with a small number of healthy volunteers. The researchers are trying to determine how much of the medication can safely be given.

Phase II will monitor the effects of the medication on the participants.

Phase III involves many more test subjects. The investigators want to compare how their new medication compares to medication currently on the market. They are also looking for any side effects that may appear when taking the drug.

When you enroll in the study, there is no guarantee that you will be given the new medication or treatment. You may be randomly chosen to receive a placebo, a harmless substance that will have no effect on your lung disease.

Be prepared to return to the clinical center for follow up examinations after the trial has ended. Important long-term information can be gathered from these visits. There are also Phase IV clinical trials which are conducted to identify and evaluate the long-term effects of new drugs and treatments over a lengthy period for a greater number of patients. Phase IV research takes place after the FDA approves the marketing of a new drug.

Buyer Always Beware!

Take our word for it, oxygen water or oxygen pills or Vitamin O will not cure lung disease and just because it is on the Internet does not mean it is true! Taking a liquid or pill "containing oxygen" will not increase the amount of oxygen in your blood. Oxygen enters your bloodstream through your lungs.

The U.S. Federal Trade Commission states that Vitamin O appears to be nothing more than saltwater even though it has been advertised as liquid oxygen! In 1999, the Commission charged and won a settlement from at least one company making false claims regarding oxygen supplements.

Be very skeptical if a product is advertised as a quick and effective cure-all. Don't be fooled when the promoter uses words like "scientific breakthrough," "miraculous cure" or "secret ingredient" and has credentials that no one knows what they stand for. Sometimes they claim the government, medical profession or research scientists have conspired to suppress the product or warn not to trust doctors. The advertisements often include case histories claiming amazing results with testimonials that are not documented. And surprise, you can only get the cure-all from their company!

Also know there are no stem cell treatments currently available to people with lung disease.

A recent study in *BMC Pulmonary Medicine* showed the use of supervised pulmonary rehabilitation is effective in reducing mortality following hospitalization for an acute exacerbation (worsening) of chronic obstructive pulmonary disease if started within four weeks of discharge.

Unfortunately, pulmonary rehabilitation programs are not always available where you live or may be difficult to get to. Dr. Noah Greenspan has the solution with his online program at *https://pulmonarywellnessonline.com* Designed for those with Chronic Obstructive Lung Disease, Pulmonary Fibrosis and Pulmonary Hypertension, the program offers online exercise and education sessions, daily thoughts and motivations, interactive group seminars and live question and answer sessions. The Pulmonary Boot Camp is six weeks (42 days) long to get you started on the right track. One-on-one personal consultations are also available. The team at Ultimate Pulmonary Wellness consists of health professionals including cardiopulmonary physical therapists, respiratory and therapists, exercise physiologists, registered dietitians, and others. Cost is $25/month to join with a discount of $50 if you pay for the year. The Pulmonary Wellness & Rehabilitation Center is located in New York, NY. Their telephone number is 212-921-0214.

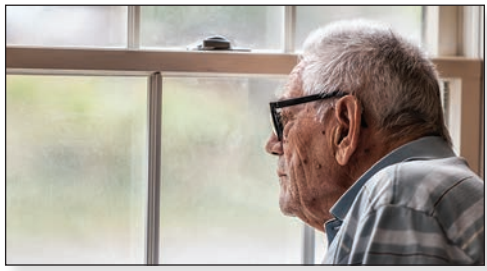
Dr. Greenspan has also made his book *Ultimate Pulmonary Wellness* available for free download at: *www.pulmonarywellness.com/book*

Flu activity this year in October includes a middle-aged woman in Kentucky, who succumbed to a flu-related illness. In Florida, the flu death was reported of a child not yet vaccinated who was previously healthy with no known health conditions prior to contracting the Influenza B virus. Both of these recent deaths are stark and tragic reminders early in this year's flu season that the virus is potentially lethal, and although common, should not be ignored or dismissed.

The Centers for Disease Control and Prevention earlier this month reported that nearly 80,000 Americans died due to consequences of the infection last year during one of the worst flu seasons in nearly four decades. The 2018-2019 flu vaccine composition includes changes updating the vaccine's defense against the H3N2 virus that caused much of last year's worst flu cases in the United States, as well as compositions related to the Influenza B virus have also been updated. The number of adults who got a flu shot during the 2017-2018 flu season declined by over 6 percent, hitting a seven-year low.

This year marks the 100th anniversary of the 1918 Flu Pandemic, the deadliest disease outbreak in recorded history with an estimated 500 million people – one-third of the world's population at the time – becoming infected with the virus. The more people who get the flu shot, the less chance the virus can spread while protecting more people.

Please get your flu vaccination.



When you are physically or emotionally disconnected from family, friends or community, it can make you feel isolated and lonely. The AARP Foundation wants to address this problem, as prolonged isolation is recognized as a contributor to poor health. Visit their web site at *www.connect2affect.org*

Just because a 72-year-old woman lives by herself doesn't mean she is lonely. Many ladies are very active with activities and clubs and volunteering. And just because an 80-year-old man lives with his relatives, doesn't mean he is not lonely.

Make the effort to get connected with social groups like the local senior citizens center or at church. Be as active as possible!

Voice-activated technology as Amazon's Alexa has helped ease isolation. If you have wireless Internet at your home, you can ask Alexa to play your favorite music, get the weather forecast, set timers, play trivia games, get the news, and ask her to tell you jokes. Newer models include video screens that let you call people and see them in person.

See *www.amazon.com* for details and the funniest video about senior citizens using Alexa that appeared on Saturday Night Live at *www.youtube.com/watch?v=YvT_gqs5ETk*

The Perfect Gifts!

2019 TRIPS

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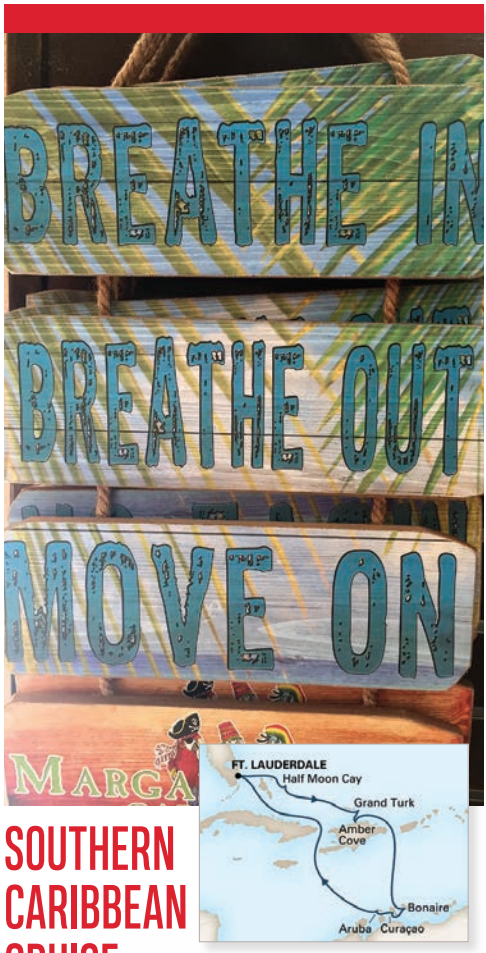


SOUTHERN CARIBBEAN CRUISE

February 24-March 6, 2019

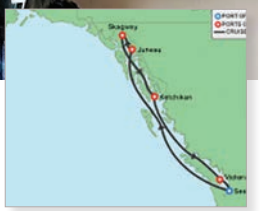
(on Holland America's Koningsdam)

Leave from Fort Lauderdale and enjoy the **beauty of the southern Caribbean**!

This journey will have you exploring:

Half Moon Cay, Grand Turk, Amber Cove, Bonaire Curaçao, and Aruba

See the Southern Caribbean, Alaska and Canada/New England.



ALASKAN CRUISE

July 20-27, 2019

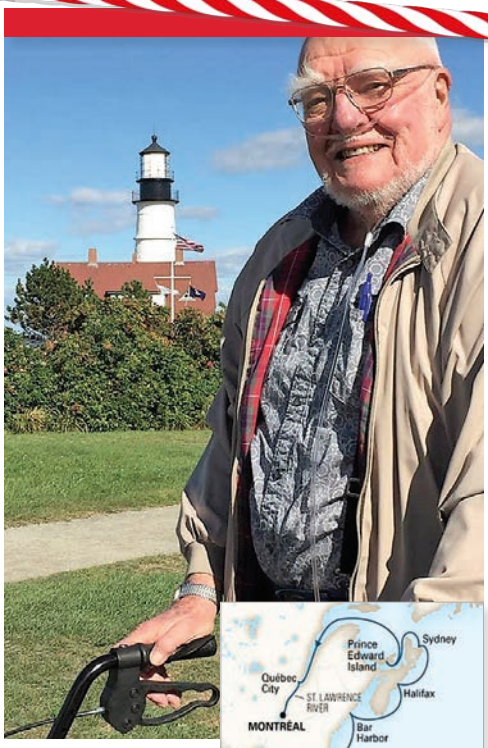
(on the Ruby Princess)

We are going back to everyone's favorite place –the **Inner Passage of Alaska!** Join us in Seattle as we leave on the Ruby Princess for the Last Frontier! Call today to reserve your pick of cabins.

Highlights:

Stephens Passage
Juneau
Glacier Bay
Skagway
Ketchikan
Victoria

"One of my best trips and groups!" PJ, Florida



CANADA/ NEW ENGLAND CRUISE

October 5-12, 2019

(on Holland America's Veendam)

Leave Boston and end the cruise in Montreal, Canada. Experience the beautiful fall season sailing the Atlantic coast.

Highlights:

Bar Harbor, Maine
In Canada: Halifax and Sydney (Nova Scotia), Charlottetown (Prince Edward Island), Quebec City, Montreal (Quebec)

Respiratory News

Pneumonia-causing bacteria can be spread through picking and rubbing the nose, according to research published in the *European Respiratory Journal*.

Pneumococcus, the bacteria that can cause pneumonia, is known to be spread through inhalation of airborne droplets containing the bacteria, for example in coughs and sneezes. This study is the first to show that transmission can also occur via contact between the nose and the hands after exposure to pneumococcus bacteria.

Listing suitable COPD and Interstitial Lung Disease candidates for unrestricted transplant preferences (either single or double lung) could increase the rate of transplants performed, according to a study published in *Annals of American Thoracic Society*. Leaving options open could increase your chances of getting a new lung!

Palliative care is a team-based medical specialty focused on providing relief from the symptoms and stress of a serious illness – care that you can get at any age and at any stage of your illness. The *AARP Bulletin* has an excellent article describing the advantages of palliative care that you can access at *https://tinyurl.com/y6wu6qz5*

If you have been diagnosed with Pulmonary Hypertension and are interested in participating in a clinical trial, visit PHAware at *www/phaware.global/clinical trials* You will be able to find if you are eligible for trials in your area and learn more about them.

FreeO2 is a device which automatically and continuously adapts the oxygen flow rate delivered to you according to a target oxygen saturation that is set up for you. According to a report in *Thorax*, people with severe COPD improved significantly both in endurance time and walking distance with the use of FreeO2 versus constant oxygen flow. The device is still in development and a home version will not be available for at least three to five years. the FreeO2 device is being developed in Quebec, Canada and can be seen at the web site *www.oxynov.com/en/freeo2*

The *American Journal* of *Respiratory and Critical Care Medicine* reports the use of triple therapy resulted in a lower rate of moderate or severe exacerbations (flare-ups) of COPD, better lung function and better health related quality of life than using two medications or just one in those with advanced COPD. Triple therapy consisted of a long acting muscarinic antagonist (LAMA) as Spiriva, a long acting β-agonist (LABA) as Serevent, and an inhaled corticosteroid (ICS) as Flovent.

Plerixafor, a drug used to treat forms of cancer, stimulates your immune system to release a certain kind of stem cell into the bloodstream. Researchers are hoping it may also be beneficial in treating emphysema according to the *American Journal of Physiology–Lung Cellular and Molecular Physiology*.

The Pulmonary Paper

Dedicated to Respiratory Health Care

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