



COPD SELDOM EXISTS IN A VACUUM: COMORBIDITIES CAN BE A CONCERN.

## Be mindful of breathing pauses during sleep

leep apnea is a serious sleep disorder that is characterized by periods of apnea (breathing pauses) during sleep. During an apneic episode, you may stop breathing for up to 10 seconds or more and, as your blood oxygen levels drop, you may awaken abruptly with a loud gasp or snort. The number of apneic events experienced may be as high as 20 to 30 per night or more, and the effects may lead to serious health complications. It is often accompanied by loud, disruptive snoring.

It's not unusual for a person to have both sleep apnea and COPD, but the presence of sleep apnea is not any higher in COPD patients than in the general population. Having both disorders at the same time is certainly challenging, though.

Obstructive sleep apnea (OSA) occurs when your throat muscles, including your tongue, relax during sleep and block your airway. Because many people who experience OSA are overweight, they often have an enlarged tongue and soft palate and/or excess fat in their throat area.

Although anyone can have sleep apnea, it is found most often in older men of African-American, Hispanic or Pacific Islander extraction. Other factors include being obese, having a large neck circumference (17" or more for men and 16" or more for women) and smoking and alcohol consumption.

Along with periodic episodes of apnea during sleep and intermittent snoring, symptoms of sleep apnea include excessive daytime sleepiness, morning headache and sore throat. You may find that there are changes in your personality and that you develop behavioural disorders **Continued on Page 6** 

Addressing the needs of the Canadian COPD patient



## Chronic Obstructive Pulmonary Disease www.copdcanada.info

# **COPD** seldom exists in a vacuum

ne thing we've learned about COPD is that it seldom exists in a vacuum and comorbidities can be a concern. According to the Global Initiative for Obstructive Lung Disease, the impact that the disease has on the life of a COPD patient depends upon the severity of COPD symptoms, and the existence of other illnesses, also known as comorbid conditions. Current data reports that, in those 65 years of age and older, up to 25% have at least two comorbid conditions, and 17% report three. Signs and symptoms of comorbidities are important to recognize and report to your doctor.

Age and smoking are the major risk factors for COPD and a number of other illnesses, often resulting in the fact that many COPD patients have multiple coexisting diseases. The presence of other diseases is so strongly associated with the management of COPD that the need for thorough attention to them is emphasized even in the COPD definition by GOLD (Global Initiative for Chronic Obstructive Lung Disease) guidelines.<sup>1</sup>

Chronic obstructive pulmonary disease is characterized by airflow limitation that is usually progressive and associated with an enhanced chronic **Continued on Page 5** 

## Ask Dr. Bourbeau

Jean Bourbeau is a respirologist and full professor in the Department of Medicine and Epidemiology and Biostatistics, McGill University, Montreal



Recently I went to the hospital when breathing became extremely difficult. I also had thicker mucus that was darker than normal. I was prescribed prednisone 60 mg and azithromycin which I took for five days. A friend, who also has COPD, keeps both prednisone and azithromycin on hand to self administer when flare-ups occur. Is that a good strategy?



This is a common practice in some clinics although we have to be cautious before considering a **Continued on Page 2** 

## Ask Dr. Bourbeau

#### Continued from Page 1

generalization of this approach to care. Guidelines on best practices in this area (Criner GJ, Bourbeau J, Diekemper RL et al: CHEST 2015; 147(4):915-917) tell us that for patients with COPD, "it is suggested that education with a written action plan and case management can prevent severe acute exacerbations of COPD as assessed by a decrease in hospitalizations and emergency department visits". Not having a case manager for patient coaching (an educator that you communicate with, that empowers good practice of self-management) may hinder the expected benefits or may result in inappropriate use of antibiotics and/or prednisone (i.e., using these medications unnecessarily).

When I first quit smoking, I couldn't get the phlegm out of my throat. I felt like I was choking on it all day everyday and most of the night. I was experiencing a lot of anxiety which only made my breathing more difficult. I almost concluded that I was better off when I smoked. Can you recommend good phlegm management techniques or medicines?

First, it is common that after someone discontinues smoking there is an increase in productive cough and/or phlegm. Here's why: the bronchial tree has cilia that work like an escalator to move secretions upwards so that you can expectorate more easily. Those cilia are damaged or destroyed with smoking but regain some function in someone who stops smoking. Therefore, during the first six months, patients experience more secretions and more symptoms. Controlled coughing techniques ("huffing" technique) and/or Oscillating Positive Expiratory Pressure devices, such as Aerobika, can be extremely helpful when trying to remove phlegm and mucus. (See

additional information on these techniques here: https://tinyurl.com/26hvuu5k

I have severe COPD and have a paralyzed diaphragm. I had surgery on the diaphragm called diaphragm plication. It didn't seem to do much good, not much improvement. Is there anything else that can be done to help my breathing?

This is a very specific condition for which it is impossible to make recommendations without seeing you and conducting a very careful evaluation. Only after an evaluation by a respirologist can we see if there is anything else to be done beyond what you have already received as surgical and/or medical treatments. That being said, a comprehensive approach of care including pulmonary rehabilitation with breathing techniques and a supervised exercise program can help anyone's functional capacity and impact on breathlessness.

There is a lot of talk and news about Covid-19 vaccinations, hand washing and social distancing, but not very much about medicines to combat the virus. Where are we with medicines to treat us if we get infected? Will people with COPD need special meds?

Medications to treat Covid-19 are still being researched. Currently, there are limited treatments being used, including supportive therapy (such as oxygen therapy) and treatment to reduce the inflammatory process, such as a corticosteroid called dexamethasone that has been shown to reduce the complications of Covid-19 in those who are hospitalized with hypoxia and/or intubated on mechanical ventilation. There is no current treatment that has been shown to be effective as a generalized approach to be given to anyone in an outpatient setting.

After I recently had another flare-up, I was prescribed a nebulizer. Is there an advantage to using the nebulizer after things stabilize when you don't feel bad? Can you become immune to the nebulizer's effects?

Using a nebulizer is another method of delivery for your inhaled medication. It can facilitate the administration of shortacting bronchodilator inhaled medications in some patients, but it has not been shown to be superior to metered dose inhalers used with an aerochamber. Although this approach seems to have many advantages, it also has many inconveniences. To name a few, it is not practical for people who want to go out, it increases the risk of contagion of respiratory viral infections (flu, Covid-19, etc.). You should discuss this with your physician and come to a shared decision best suited for you. Nowadays, there are many long-acting bronchodilators that are much more effective than short-acting bronchodilators for when you are back to a stable condition. Finally, you cannot become immune or used to an inhaled medication, but your disease can progress, and medications may not be as effective as when you initiated the treatment.

Dr. Jean Bourbeau is director of the Center for Innovative Medicine (CIM) of the Research Institute of the McGill University Health Centre (MUHC) and director of the Pulmunary Rehabilitation Unit. He is the past president of the Canadian Thoracic Society (CTS) and is a member of the scientifitic committee of GOLD.

We invite your questions. Please mail questions to: Ask Dr. Bourbeau 555 Burnhamthorpe Rd., Suite 306, Toronto, Ont. M9C 2Y3—or you can e-mail questions to: AskCOPDCanada@gmail.com. General inquiries: COPD Canada Tel: 416–465– 6995 E-mail: exec.copdcanada@gmail.com

**Editor's note:** For more information on Dr. Bourbeau's Living Well with COPD program, visit www.livingwellwithcopd.com

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# PUISE: News about COPD

## COVID re-infection rates as expected

New York/While U.S. federal data on breakthrough Covid-19 infections following vaccination only recently became available, a handful of states and independent health systems have put forward their own analyses, and the findings are reassuring: the rate of breakthrough infections are as expected. On April 8th, the Centers for Disease Control reported national data, finding 5,800 breakthrough infections, with 396 requiring hospitalization and 74 deaths. The agency has a team that has been monitoring these infections since February, according to the Washington Post. During a White House press briefing, National Institute of Allergy and Infectious Diseases director Dr. Anthony Fauci said he didn't have any concerns about breakthrough infections after vaccination. More than 74 million people in the U.S. have been fully vaccinated as of April 13, according to the CDC's vaccination tracker. "That number of individuals who were breakthrough infections is not at all incompatible with a 90-plus per cent vaccine efficacy," Dr. Fauci said. "I don't think that there needs to be concern about any shift or change in the efficacy of the vaccine. There's nothing there yet that's a red flag."

**↓** https://tinyurl.com/3p6r6n9k

# Smoking cessation program yields high potential for detection of undiagnosed COPD

Madrid/Smokers attending smoking cessation units (SCUs) may offer a unique opportunity for early recognition of undiagnosed chronic obstructive pulmonary disease (COPD). Researchers aimed at assessing the impact of SCUs on the early diagnosis of COPD and describing the clinical and smoking profile of newly-diagnosed COPD cases at SCUs. Current smokers with no previously diagnosed respiratory disease and having one or more respiratory symptoms were included. Most patients were men in their early sixties, with mild symptoms and with high and lengthy smoking history. Lung functional tests were performed and previously undiagnosed COPD cases were identified and characterized based on national guidelines. Out of 401 individuals newly attending the SCUs, 252 participants were included and 73 (28.9%) met the definition of previously undiagnosed COPD. The researchers concluded that SCUs can have a substantial contribution to early diagnosis of COPD.

1. https://tinyurl.com/ajskzhsc

# PULSE: News about COPD

# EU told to back vaccine passports or technology companies will fill the void

Brussels/European Union leaders inched toward establishing bloc-wide vaccine certificates to enable countries to reopen to travel as Commission President Ursula von der Leyen warned that unless they hurry Apple Inc. and Google will step into the vacuum. During a five-hour video call, the EU's 27 leaders focused on how to haul their nations back to a form of normalcy after a pandemic that has claimed more than 500,000 lives and shut down large parts of their economies. While there was broad support for certificates of some sort, leaders did not agree on the type of privileges they would grant. "We have all agreed that we need vaccine certificates," said German Chancellor Angela Merkel. "In the future, it will certainly be good to have such a certificate but that will not mean that only those who have such a passport will be able to travel; about that, no political decisions have been made yet."

15 https://tinyurl.com/45uesyzu

## Sanofi to build new vaccine plant

Toronto/Sanofi announced an investment of approximately C\$925 million in a new vaccine manufacturing facility to be built at its current site in Toronto. The investment in such a facility will increase the antigen production and filling capacity for Sanofi's high-dose FLUZONE Quadrivalent influenza vaccine, increasing its supply in Canada, the United States and Europe. "As a leader in vaccine manufacturing, we are constantly looking to the future to meet the growing demand for influenza vaccines that have demonstrated clinical superiority over standard dose vaccines. This new investment will help ensure better protection of older people around the world against influenza and its complications. In addition, this vaccine will be a key resource to help fight future pandemics" said Paul Hudson, CEO of Sanofi. "We salute the ongoing partnership with the Canadian authorities, who have provided us with their support to bring this major project to fruition which will make Canada—which has a solid heritage in vaccine research and development—one of our main centers in our efforts to protect and improve human health worldwide."

1. https://tinyurl.com/5fh4p9hs

# Lung cancer and COPD share common risk factors

#### Comorbidities continued from page 1

inflammatory response in the airways and the lung to noxious particles or gases. Exacerbations and comorbidities contribute to the overall severity in individual patients. Comorbidities are most often responsible for impairing quality of life for early-stage patients, for increasing mortality in end-stage patients, for increasing the burden of COPD management on health care costs and creating therapeutic dilemmas for health care providers.

COPD comorbidities is a rather broad and diverse term, including diseases that independently coexist with COPD with no other causation, diseases that share common risk factors and pathogenetic pathways with COPD, diseases that are complicated by the interaction with the lung, and systemic manifestations of COPD, and vice versa. This diversity has given rise in recent years to a conceptual discussion about the appropriateness of the term "comorbidities", in an attempt to establish an agreement over its meaning. No universal definition has yet been accepted. Terminology issues though should not shift the focus from the fact that COPD patients with multiple diseases often have poorer outcomes and are in need of a more complex, tailored therapeutic intervention approach in order to optimize and achieve better outcomes.

There is an increasing abundance of evidence that associates COPD with other age-driven diseases and diseases that share common risk factors (smoking) or other related pathways. This view is supported by the widely accepted hypothesis that COPD sustains systematic inflammation. In a report by Divo et al<sup>2</sup> they concluded that lung, pancreatic, esophageal, and breast cancers (the last only for female patients), pulmonary fibrosis, atrial fibrillation/flutter, congestive heart failure, coronary artery disease, gastric/duodenal ulcers, liver cirrhosis, diabetes with neuropathy, and anxiety are the most significant and frequent comorbidities.

Clinical trials investigating COPD treatment routinely exclude patients with multiple comorbidities or advanced age; the latter enormously affects the external validity and generalizability of the effectiveness of the treatments tested in the large clinical trials. In a review published by *Dove Press*<sup>3</sup> the authors focus on the major comorbidities that affect COPD patients, present an overview of the problems they face, the reasons and risk factors for the most commonly encountered comorbidities, the burden on health care costs, and provide a rationale for approaching the therapeutic options for the COPD patient afflicted by comorbidity.

#### Links between COPD and comorbidities

COPD comorbidities include clinical conditions that share common risk factors and pathogenetic pathways with COPD, i.e., diseases that are consequences of COPD and diseases that just coexist with COPD due to their large prevalence in the general population but affect outcomes such as hospitalization rates and mortality. As the knowledge of COPD and of the pathogenesis of COPD comorbidities is gradually elucidated by basic science data, the more the complexity of the interactions involved becomes apparent. As COPD becomes more and more understood as a systematic inflammatory disease, the focus is shifting from the lungs. Smoking and biomass exposure, along with genetic predisposition, are the major risk factors for developing COPD. Age is also a common risk factor for developing COPD but should not be overestimated. For example, COPD is often considered to be a disease of the later years, but estimates suggest that 50% of those with COPD are now younger than 65 years of age.4

Lung cancer and COPD may share certain risk factors, like age, smoking, or genetic predisposition, but bronchial and systemic inflammation due to COPD may also contribute to carcinogenesis. The same is evident in several cardiovascular diseases, which also share common risk factors and seem to have a bidirectional inflammatory link with COPD that impairs outcomes for both diseases. Systemic inflammation is the key for linking COPD and most of its dependent comorbidities. COPD remains a major health issue with a significant economic impact. The prevalence of COPD is rising in developing and developed countries, resulting in increased direct and indirect costs of COPD to health care systems worldwide.

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# **Understanding Sinus Infections**

# Many people with COPD complain they get frequent sinus infections that make their lives miserable.

he drainage of the sinuses is often neglected when doctors and patients try to address the issue of sinus infections. You might picture sinuses as large openings or "caverns" in the facial bones with very small orifices that allow drainage of natural fluids into the nasal passages. These small openings are sufficient when people are healthy but if the nasal mucosa or nasal lining is swollen by allergies or a viral infection, the orifice for the sinus will close and the sinus no longer drains.

Initially, normal and uninfected secretions will build up in the non-draining sinus. This can become painful but there is no actual infection that requires antibiotic treatment. If the buildup of fluid persists long enough, a bacterial infection can develop.

#### Consider drainage before using antibiotics

At various stages in this process, doctors are quick to prescribe antibiotics but relatively few of them consider the drainage question. There is little sense in giving antibiotics if the infected fluid is not drained.

Patients with allergies should use their nasal corticosteroid spray (a prescription medication) regularly if allergic swelling has closed off the sinus. If patients have a viral respiratory tract infection, the short-term use of a nasal decongestant can be helpful but some caution is needed. Nasal decongestants can increase the blood pressure transiently which might be a problem for some patients who already have high blood pressure. As well, these non-prescription nasal decongestants can lead to some habituation so that when patients try to stop using them after several days there is rebound congestion.

A safe rule of thumb is to avoid regular use of nasal decongestant sprays beyond five days. In addition to these nasal sprays, nasal saline rinses (available without a prescription) can be helpful. Patients often experience dramatic relief of pain and pressure when the nasal decongestant is used to open the sinus and a nasal saline rinse washes away previously trapped sinus fluid.

# Sleep apnea

#### Continued from page 1

such as bed wetting and possibly impotence. As well, your partner may begin complaining that you snore too loudly.

If you have OSA and you live alone, you may not even be aware of it. Paying close attention to your sleep patterns and your daytime symptoms will help you recognize a potential problem. If you think you may have OSA or, if your partner complains that your snoring is intense, it may be time to visit your healthcare provider for an evaluation and more information.

COPD and OSA are often coined as overlapping syndromes. Both COPD and OSA are independent risk factors for heart problems that may include irregular heart-beat, high blood pressure, heart attack and stroke, and their coexistence may further increase these cardiovascular risks. This makes early identification of OSA in people with COPD extremely important.

Continuous positive airway pressure therapy (CPAP) uses a machine to help a person with obstructive sleep apnea breathe more easily during sleep. A CPAP machine increases air pressure in your throat so that your airway doesn't collapse when you breathe in. Other non-surgical treatment options for OSA include using tongue-retaining devices or bite guards. Weight loss will also help if you are currently overweight. There are also a number of surgical interventions that you can discuss with your doctor. It's important to be mindful of breathing pauses during sleep.



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# PD people Jane Beausoliel

Jane's dad was with the U.S. Army Air Force during the Second World War. For a time he was stationed at Uplands Air Force Base, near Ottawa, training pilots. That's when he met Jane's mother. They married and Jane's older sister was born there. The family was posted to different military bases over the next few years but her dad's family lived near Albuquerque, N.M. so they settled there. Jane and her brother were born in New Mexico. Her dad died in an aircraft accident when she was five. That sent the family back to Ottawa to her mom's home. Each year in the summer, when they were children, they would visit her dad's family in New Mexico, travelling by train. Jane went to school in Ottawa and then worked for the federal government. She held positions in different branches of government including First Nations Health Services, the Immigration and Refugee Board and Canada Border Services Agency. She loved the people she worked with and is thankful that her different roles took her across Canada and throughout British Columbia, where she now lives. Jane is married with three grown children. In 1996 she was diagnosed with COPD.

# Your children are now adults. What are their occupations?

Our eldest son is a banker and married to a psychiatrist. The youngest is married to a public health nurse and works as an electrician at a major hospital. A daughter and her husband are both RCMP officers.

# Describe how were you diagnosed with COPD?

My family physician referred me to a lung health study. He knew my smoking history. I also have multiple sclerosis. I was experiencing breathing and fatigue problems which I put down to the MS. The study was being run by an investigator, Dr. Mark Fitzgerald, out of Vancouver General Hospital. My lung capacity was established to be problematic through lung function tests.

# How many cigarettes per day did you smoke?

You know, you start small then you get big. In the end I was smoking about two packs a day. You have to remember that at that time you could smoke anywhere. You could smoke at work. A smoke was the first thing you had in the morning and the last thing you had at night.

#### Was it difficult to quit?

When they started to put in the restrictions, smoking became less attractive. I wasn't interested in smoking outside in the rain. As the rules became more draconian it became easier to quit. When I was ready, I used a nicotine patch for about six weeks. That was pretty effective.

#### Did you attend pulmonary rehab?

What an excellent program. I learned a lot about my condition, exercising and the progress

of COPD. I really liked the people I met at pulmonary rehab—learning about their lives and what they're dealing with.

#### Do you continue to exercise?

I'm a walker. My husband and I travel a lot. To do that, you have to be in reasonable shape. There's a lot of walking if you want to see the world and how people live.

# Where are your favourite places to travel?

Boy, that's hard to say. We've been all through the far east, Japan and China, Laos, Thailand and Vietnam. More recently, Syria, Turkey and Italy. We've been to Galapagos and Antarctica. One memorable trip was driving up from the bottom of Argentina through Patagonia to Buenos Aires. That was a fabulous trip. Flying down we stopped in Santiago for a few days. That's also a beautiful place worth visiting.

# Any travel advice for people with COPD?

Understand your limitations. Don't over challenge yourself and always have an exit strategy. Travel light and listen to your body.

#### Do you miss the desert?

We bought a little property in Cathedral City, Calif. near Palm Springs. So, we get a little taste of the desert each winter.

#### Are you a religious person?

No. I would say that I'm a spiritual person.

#### What's your favourite smell?

I love the smell of baking bread. My husband likes to bake bread, so I have the best of both worlds. I get to enjoy the results without any of the work.



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