



ARE OPERATIONS SAFE FOR COPD PATIENTS? THE COMBINATION OF COPD AND ANESTHESIA CAN BE RISKY BUSINESS.1



REMOVING MUCOUS NATURALLY! COUGHING IS THE NATURAL WAY TO REMOVE SUBSTANCES FROM YOUR LUNGS.5



COPD PEOPLE! FORMER CODE BUSTER, GARY BREWER, LOVES TO UMP BASEBALL.7

Living with COPD

Are Operations Safe for COPD Patients?

The combination of COPD and anesthesia can be risky business. In fact, the long-term survival rate of patients with severe lung disease who have any type of major surgery is poor.

Any type of surgery involves risks. And while major surgery may be particularly risky for COPD patients, identifying risks early in the preoperative period, along with preoperative preparation can help lower those risks. There is also a significant risk of postoperative complications, especially within the lungs. But this doesn't mean that COPD patients should never have surgery.

Identifying risks early in the preoperative period starts with a thorough history and physical examination. Things that your doctor may question include:

- Your exercise tolerance especially with climbing hills and stairs.
- If, and how often, you've had exacerbations.
- Have you ever been hospitalized for exacerbations?
- Have you ever needed mechanical ventilation to help you breathe?
- Your smoking history.
- Do you currently have a cough or high sputum production (both have been associated with a higher risk of post-operative complications).
- Any other illnesses or an active lung infection.

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Chronic Obstructive Pulmonary Disease The Key to Understanding Sinus Infections in COPD

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

The 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 allows 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 antibiotics

At various stages in this process, doctors

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Ask Dr. Chapman

by Kenneth R. Chapman, MD, MSc, FRCPC, FACP

Director of the Asthma and Airway Centre of the University Health Network, Toronto



What is CO₂ retention?

Breathing delivers oxygen to the body and removes carbon dioxide that living tissues produce. If breathing is impaired, oxygen levels can drop and carbon dioxide or CO₂ can build up. This "CO₂ retention" happens either because the lungs are so damaged they cannot breathe out the

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Continued from Page 1 are quick to prescribe antibiotics but relatively few of them consider the drainage question. I would argue that there is little sense in giving an antibiotic if the infected fluid is not drained.

The short term use of a nasal decongestant can be helpful

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 helps wash away previously trapped sinus fluid.

— Dr. Kenneth Chapman

Ask Dr. Chapman

Continued from Page 1 isn't driving the breathing muscles hard enough ("won't breathe"). Some patients with COPD have CO₂ retention persistently because of very severe obstruction and some have it temporarily during exacerbations when their obstruction is a little worse than usual. Some COPD patients have breathing drive that is impaired by the use of pain medications, sedatives or by sleep apnea, a disruption of breathing during sleep.

Do all smokers eventually develop emphysema?

Tobacco smoking is the most obvious cause of emphysema but other factors contribute as well. Being born with the wrong set of genes will make a person susceptible to the destruction of the air sacs in the lung, the tobacco related injury doctors call emphysema. The genetic story behind common types of COPD is still being unraveled but one rare genetic form of emphysema has been well understood for more than 40 years. It is estimated that 50,000 to 100,000 North Americans living today were born deficient in a blood protein known as alpha1 anti-trypsin (AAT). This protein is normally present to protect the lungs from injury. Without sufficient protein in circulation, the lungs are easily damaged leading to the form of emphysema called alpha1 antitrypsin (AAT) deficiency-related emphysema. This kind of emphysema can develop after only a few years of tobacco smoking and, in some instances, without any tobacco exposure at all. AAT deficiency is thought to account for about 1 to 2 per cent of COPD diagnosed in North America.

Is there a cure for alpha1 anti-trypsin (AAT) deficiency?

AAT deficiency can be treated but not cured. In addition to the standard treatments for COPD, specific treatment involves adding to or replacing the missing protein with intravenous infusions every week. A lung transplant may be an option for patients who are seriously ill. Staying away from cigarette smoke is crucial.

How can you tell if you have AAT deficiency?

A simple and inexpensive blood test can tell if your alpha1 antitrypsin levels are low. If they are, a second and more complex test is needed to confirm the diagnosis. If the diagnosis is confirmed, family members should also take the blood test.

Dr. Chapman is Director of the Asthma and Airway Centre of the University Health Network, President of the Canadian Network for Asthma Care and Director of the Canadian Registry for Alpha1 Anti-trypsin Deficiency. A graduate of the University of Toronto and a former member of the faculty at Case Western Reserve University, he is now a Professor of Medicine at the University of Toronto.

We invite your questions. Please mail questions to: Ask Dr. Chapman, c/o COPD Canada, 555 Burnhamthorpe Road, Suite 306, Toronto, Ont. M9C 2Y3. Or you can e-mail questions to: copd.canada@gmail.com

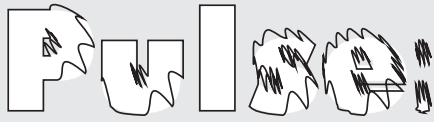
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News about COPD

Higher Risk of Death for Underweight COPD patients

■ **Amsterdam, Netherlands** / COPD patients who are underweight are at greater risk of dying from the illness, a new study has found. In a study by researchers at Uppsala University in Sweden, 552 patients were assessed. Information was collected using questionnaires to review patient's age, education, smoking status and level of care. They also looked at information on lung function and history of comorbidities. The results showed that heart disease, hypertension and being underweight were all associated with higher mortality in COPD patients. People who were underweight were 1.7 times more likely to die than people with a normal body weight. Additionally, people with heart disease or cardiac failure were 1.9 times more likely to die than people with COPD alone. The results were found even when taking into account age, sex, lung function and smoking. The researchers said that as the population ages people are more likely to suffer from more than one condition at any given time. It will be important for clinicians to recognize other symptoms outside of their specialist area to ensure patients are receiving all the necessary treatment.

 <http://tinyurl.com/RiskCOPD>

Steroids Work for COPD Attacks in Critically Ill

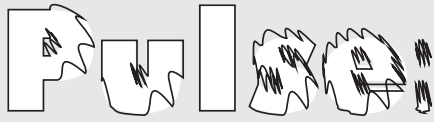
■ **Getafe, Spain** / Corticosteroids ease acute exacerbations of COPD in the intensive care unit, a randomized trial suggested. In critically ill COPD patients on mechanical ventilation, systemic corticosteroids cut the median duration of ventilatory support from four days to three and tended to reduce intensive care unit (ICU) stays as well, Andrés Esteban, MD, PhD, of the Hospital de Getafe, Spain, and colleagues found. Corticosteroid treatment also reduced the need to transition patients from non-invasive to invasive ventilation as a rescue measure (0 per cent versus 37 per cent without corticosteroids). These advantages would certainly be clinically significant and lead to substantial financial savings, according to Andrew F. Shorr, MD, MPH, and Chee M. Chan, MD, MPH, both of Washington Hospital Center and Georgetown University in Washington, D.C. Systemic corticosteroids have been proven to help with acute exacerbations in clinical trials before, but always excluded critically ill patients. The magnitude of effect appeared similar in Esteban's critically ill population to that seen in trials with COPD exacerbation patients not on mechanical ventilation, the researchers noted.

 <http://tinyurl.com/SmokingCOPD>

Brits Find Second-hand Smoke Way Down

■ **Bath, UK** / Levels of second-hand smoke exposure among non-smoking English adults declined significantly after smoke-free laws went into effect, according to a new U.K. study. Exposure to second-hand smoke, as measured by the percentage of the population with undetectable salivary cotinine, declined from 1998 to 2008. After the implementation of the legislation, there was also a significant fall in exposure, they reported in *Environmental Health Perspectives*. Data collection included interviews with all adults, 16 and over from the annual Health Survey. In addition, up to two children were eligible. These reductions in exposure to second-hand smoke were additional to already declining exposures which reflect the success of tobacco control policies implemented over the period examined.

 <http://tinyurl.com/Smoking2COPD>



News about COPD

Genes May Make Quitting Tougher for Smokers

■ **Atlanta, Ga.** / A new study suggests that your particular DNA may explain why you can't break the habit. Despite decades of public health efforts aimed at snuffing out cigarette smoking, 20 per cent of Americans still light up. Two out of three adults who smoke want to quit, the Center for Disease Control reported and more than half (52 per cent) had attempted to quit in the past year. Study lead author Jason Boardman, an associate professor of sociology at the University of Colorado at Boulder, said anti-smoking messages, higher taxes and restrictions on smoking have made a difference. "But for hard-core smokers, there may be something else going on," he said. That "something else" is likely genetics, he added. The researchers drew this conclusion after analysing the smoking habits between 1960 and 1980 of nearly 600 pairs of twins who answered an extensive health questionnaire; 363 were identical sets of twins and 233 were fraternal twins. Identical twins come from the same fertilized egg before it splits into two embryos and they share the same genes or DNA, while fraternal twins come from two separately fertilized egg cells and only share some genetic similarities. In the identical twin group, 65 per cent of both individuals quit within a two-year period of each other, while only 55 per cent of the fraternal twins quit within that same stretch of time. "The logic here is that the identical twins share genes, so if they act alike it probably reflects a genetic component," said Pampel. The new research adds to a growing body of literature suggesting there is probably a substantial genetic influence when it comes to nicotine addiction.

 <http://tinyurl.com/GenesCOPD>

CT Can Detect COPD

■ **Amsterdam, Netherlands** / Low-dose CT scans used in screening for lung cancer in heavy smokers might also help detect COPD, a Dutch study found. Smoking-associated COPD is an underdiagnosed condition associated with considerable morbidity and mortality, which could be lessened with early smoking cessation. The recent finding that CT screening reduced mortality from lung cancer has prompted considerable interest, and Mets and colleagues hypothesized that screening could also be useful for diseases other than lung cancer "Because smokers die not only from lung cancer but also from COPD and cardiovascular disease, the rationale for evaluating lung cancer screening CT scans for additional information may prove important," they wrote. Participants' mean age was 62.5 years, mean body mass index was 27.1, and the median number of smoking pack-years was 38. A CT diagnosis of COPD was made for 274 participants. The diagnosis was made in 54 per cent of those with mild obstruction, in 73 per cent of patients with moderate obstruction, and in 100 per cent of those whose obstruction was classified as severe. If these findings can be validated in an independent cohort, using both an inspiratory and expiratory CT scan, the test might aid in diagnostic accuracy with little additional radiation exposure or scan time, Mets and colleagues noted.

 <http://tinyurl.com/CTScanCOPD>

Coughing Away Mucous

I recently completed a six week pulmonary rehab program at Toronto West Park Respiratory Rehabilitation Service. It was quite exhausting...but I feel much better.

In the rehab program we learned some important coughing techniques to help remove mucous from the lungs. Coughing is the natural way to remove substances from your lungs. COPD patients produce an excessive amount of mucous, which causes them to cough and excessive coughing can tire you out.

The techniques outlined below will assist you to cough more effectively, using the least amount of energy.

1. Sit and support your abdomen.
2. Take in a slow, deep breath using diaphragmatic breathing. This builds up a volume of air behind the mucous to make it easier to propel it toward your mouth.
3. Hold the deep breath for two seconds.

4. Cough twice with your mouth slightly open. The first cough loosens the mucous and the second cough moves it.
5. Pause.
6. Inhale by sniffing gently. If you take a big breath right after coughing it may cause you to cough again and it will drive the mucous back into your lungs.
7. Rest.

Helpful tips:

—Taking a drink of water prior to coughing can be helpful.

—Coughing is easier when you are sitting with your head slightly forward.

—Controlled, effective coughing should make a hollow sound.

—In general, drink six to eight glasses of water each day to keep mucous thin, unless your doctor has restricted the amount of fluid you are to drink.

— *Mary Layton*



Join today:

The COPD Canada web site is your portal to our association, new and varied educational materials, medical resources and community interaction. **Membership is free of charge** but is restricted to individuals living with

COPD or their caregivers.

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www.copdcanada.info and

click on membership and fol-

low the step by step instructions. **Once**

you've joined you will begin receiving our quarterly "Living with COPD" newsletter and will have complimentary access to all COPD Canada seminars, on-line discussion forums and our member chat section.

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Supplemental Oxygen

How much do you know about using supplemental oxygen? Here are some handy tips about handling oxygen from Toronto's West Park Rehabilitation Centre.

If you use oxygen, remember, oxygen does not burn and it will never explode, but it does support combustion. All materials will burn faster in an oxygen-enriched atmosphere.

- Keep matches, lighters, cigarettes, candles, gas stoves etc. away from areas where oxygen is stored.
- Do not shave with an electric shaver while you are using oxygen.
- Store oxygen in a cool, well-ventilated spot away from any electric appliances.
- It is not possible to keep oxygen away from everything that burns, but highly flammable materials can and must be avoided.

Home Oxygen Equipment

If you use oxygen you will be given one or two of the following systems:

Concentrator

- A machine that concentrates oxygen from the air around you.
- Operates on electrical current therefore, you need a back-up oxygen delivery system (i.e. cylinder or liquid oxygen system) in case of electrical failure.
- Not portable, but the cylinders are for portability.

Liquid Oxygen

Liquid oxygen can be a convenient and portable oxygen delivery system for some people, but it is important that you are aware of the following points:

- Dry the connections before filling to prevent freezing as the portable unit is very cold. Freezing may cause the portable

- unit to stick to the base unit or the filling valve of the base unit to freeze open, causing the contents to vent into the room.
- Liquid oxygen systems produce gas as long as there is liquid oxygen in the container. A liquid container is slowly losing oxygen all the time whether you use it or not. Occasionally you will hear pressure venting from the container as a “honk” or “hiss”. You do not need to worry about this sound; it will stop in a few minutes.
- Liquid oxygen is extremely cold, so be careful not to receive a frostbite injury from personal contact with the liquid oxygen stream or from handling the filling connections after transfilling.
- Before filling the portable unit, check the contents gauge on the base unit to be sure that there is enough oxygen to fill the portable. Review the filling procedure by reading the filling instructions written on the top of the base unit. Remember to use a towel to dry the filling connections first.
- Fill the portable unit about 30 minutes before you need it when possible. This will allow you time to properly fill the container without rushing. Filling up early will also allow time for the units to thaw, if there is an accidental freeze up, without interfering with your schedule.
- Don't forget to use oxygen from the base unit while transfilling portables. Filling oxygen strollers is exertion and requires energy.

Cylinder an Alternative Source of Oxygen

- Contains oxygen in a gas form at high pressures.
- Can be used with a special cart for portability.
- No evaporation.
- Need to be replaced by company when empty.

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Operation Continued From Page 1

- Your nutritional status—patients who are both underweight and overweight are at increased risk.

Before having surgery, your doctor may order any or all of the following preoperative tests:

- Chest X-ray—helps to identify current lung infections or additional problems within the lungs.
- EKG—helps identify heart problems that may increase the risks of surgery.
- Spirometry —used to both diagnose and determine the severity of COPD.
- Lung diffusion test—tells your doctor how well oxygen passes from your alveoli to your bloodstream.
- Six minute walk test—helps to establish exercise tolerance.
- Arterial blood gases—helps to identify preoperative oxygen and carbon dioxide levels in the blood.

There may be some additional preoperative preparation required that your doctor will discuss with you. One of the most important preps before surgery is smoking cessation. Because current smokers have a much greater risk of developing post-operative lung complications from surgery, those who do smoke should quit at least eight weeks prior to surgery.

Before making medical decisions

Your physician should be consulted on all medical decisions. New procedures or drugs should not be started or stopped without such consultation. While we believe that our accumulated experience has value, and a unique perspective, you must accept it for what it is...the work of COPD patients. We vigorously encourage individuals with COPD to take an active part in the management of their disease. You can do this through education and by sharing information and thoughts with your primary care physician and respirologist. Medical decisions are based on complex medical principles and should be left to the medical practitioner who has been trained to diagnose and advise.



people

Gary Brewer

Gary Brewer's family has been in Toronto since immigrating to Canada in the 1600s. His great, great, great grandfather was the Reeve of York. So, it's safe to say that he has deep roots in the community.

Gary left high school early to join the Royal Canadian military where he completed his formal education, graduating with a B.A. in Economics. Attached to the Royal Canadian Regiment, second battalion airborne, Gary achieved the rank of Company Sergeant Major, the highest rank for an enlisted man in Canada.

The military recognized Gary's aptitude for math. He was assigned to work for NATO as a code breaker. Through his work with NATO, he spent time in many exotic places including Berlin, Beijing, Moscow and North Africa.

With a passion for baseball, Gary has umpired for a number of years. Along with some teachers and colleagues, he started the Toronto High School Baseball Association (since taken over by the OFSAA). While a member of the Optimist Club of Keswick, Gary helped start The Optimist Baseball League which became The Georgina Baseball Association and continues to this day.

After leaving the military he got involved in property management. He attended George Brown College and attained his Humane Service Counselling certificate. He is now retired, spending a lot of time with his three children and two amazing granddaughters.

How do you feel?

I feel good. I know my limitations with my COPD but try not to let it slow me down.

Are you active?

Yes, I've been very active most of my life. I have been greatly involved in amateur sports, especially baseball. I didn't think I would be able to ever do that again. But thanks to my doctors and the Pulmonary Rehabilitation Program, my condition has improved so much that I think I'm going to get involved again.

What did you do?

I was involved in baseball. I've been an umpire as well as being active with various leagues as Umpire and Chief. I was also Supervisor of Umpires for the Ontario High School Baseball program for many years.

Did you train to be an ump?

Oh yeah. You have to qualify to be an umpire by Baseball Canada. I'm actually qualified to be an instructor as well. I've always been a baseball fan. I played semi-pro baseball when I was younger. I have two sons so I naturally got them into sports and coached them. Rather than continue coaching, I decided to start umpiring high level amateur and semi-pro ball.

Do you talk about COPD or smoking with the players?

I do, without being preachy about it. I try to be a good example—give them reasons not to start smoking or chewing tobacco.

How many games do you hope to ump going forward?

I used to ump 200 to 300 games a year. I can't do that now, but I hope to ump one or two games per week, during the season.

Did you smoke?

I smoked for about 50 years. I'm relatively new to being diagnosed with COPD though. I was just diagnosed last January, on New Year's Eve actually. I woke up in the morning feeling feverish, not feeling too well. I had the flu. All of the sudden, I couldn't breathe, I just couldn't breathe.

Did you get the flu often?

I'm an individual who just doesn't get sick. Never had the flu before. Never had a broken bone, nothing. I've been a very healthy individual. A friend of mine dropped by and took one look at me and said that I looked terrible. He took me to St. Mike's hospital where they diagnosed that I had COPD. That scared the daylights out of me. I haven't had a cigarette since.

Did you take anything to help you quit smoking?

Chantix. It helped me, but really, you have to be ready to quit. I was ready.

How did you get into the pulmonary rehab program?

My respirologist recommended that I attend the rehab program at Toronto Western Hospital.

Did they measure your lung function?

Yes, they have to determine if you qualify for rehab. My lung volume was tested at the beginning of the rehab program and then again after two months and I will have to continue every six months or so.

Did you improve?

Yes, I feel great. I still have breathing issues but I feel much better. I'm a lot better than I was because of the breathing techniques I've been taught. I still have to stop and catch my breath at the top of the stairs though.



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