



A bi-monthly publication by the Department of Pulmonary Rehabilitation

Pulmonary Rehabilitation and Acute Exacerbations

Pulmonary rehabilitation (PR) has become a key strategy in improving the health status of patients with COPD. Researchers evaluated patients admitted to a hospital with an acute exacerbation or serious flare of COPD (AECOPD), comparing 30 patients randomly assigned to either usual care or PR after hospital discharge. The usual care patients experienced 10 readmissions for AECOPD in the three-month follow-up; the PR group had two readmissions. Other outcomes significantly improved in the PR group compared with the usual care group at three-month follow-up were quadriceps muscle strength, walking capacity and quality of life. The study highlights the importance of PR in COPD and the important potential role of PR in decreasing the most costly

and often ultimately critical aspect of COPD – acute exacerbations. These events occur about once per year in moderate to very severe COPD and can be extremely debilitating or fatal, often lasting for weeks. These events are also the single most expensive component of COPD treatment, amounting to 75 percent of the total annual cost.

DRIVE4COPD is a national campaign to improve COPD awareness. For a COPD Population Screener (a simple five-question test), see <http://www.drive4copd.com/copd-screener/screener.aspx>. Boehringer Ingelheim, manufacturer of Spiriva and Combivent is partnering with the Country Music Association for a **Tune Up For COPD** Songwriting Competition featuring country music stars Billy Ray Cyrus and Patty Loveless.

The contest is soliciting “songs with a motivational message” that encourage people to be proactive in taking control of their lives and be healthy. Contestants can upload their videos and lyrics sheets to tuneup4copd.cmaworld.com, and a “fan favorite” will be determined by the highest number of online votes.

Repeated Inhaled Medication Instruction – Does It Matter? A study by M. Takemura and colleagues evaluated 55 COPD patients to determine factors associated with inhaled medication adherence. They found that those receiving repeated instruction about inhaler techniques used their medication more regularly and had better quality of life scores than those receiving no instruction.

A VERY SPECIAL BETTER BREATHERS CLUB

New and Current Effective Treatments for COPD and Asthma



Speaker: Stephen C. Lazarus, M.D. Professor of Clinical Medicine, Director, Training Program in Pulmonary & Critical Care Medicine, UCSF

March 31 at 3:30 p.m. at Seton Pulmonary Rehabilitation, 1900 Sullivan Ave. Please RSVP. For questions, please call 650-991-6776 or email chrisgarvey@dochs.org.

Need an App for Your Abs?

Ever feel like you spend a lot of time in front of a computer and wonder about its impact on being active and eating right? Some are finding electronic applications and social media useful in charting and controlling food intake, exercise and weight control. Social networking has made its way into fitness electronic applications or apps. Mike and Albert Lee, developers of the *MyFitnessPal* calorie tracking app found in 500,000 of their app users, that the more “friends” a user had who they shared their information and progress with, the more likely they were to lose weight. For some, sharing their progress electronically with others helped reinforce positive behaviors. Free social fitness apps include:

- **DAILYBURN:** www.dailyburn.com
- **LOSEIT:** www.loseit.com
- **MYFITNESSPAL:** www.myfitnesspal.com
- **SOCIALWORKOUT:** www.socialworkout.com
- **GAIN FITNESS:** www.gainfitness.com

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Medical Oxygen and Respiratory-Related Equipment from the Transportation Safety Administration (TSA)

http://www.tsa.gov/travelers/airtravel/specialneeds/editorial_1374.shtm#2

According to the TSA's website, medical oxygen systems and other respiratory-related equipment and devices (e.g. nebulizers) are permitted through the airport screening checkpoint once they have undergone security screening. Any respiratory equipment that cannot be cleared during the inspection process will not be permitted beyond the screening checkpoint. For persons connected to oxygen:

- Inform the security officer if you cannot be safely disconnected from your oxygen supply. Ask the security officer for an alternate inspection process while you remain connected to your oxygen source.
- Oxygen equipment will either undergo X-ray screening (only disconnected oxygen equipment) or physical inspection, and explosive trace detection inspection.

- An oxygen supplier or personal assistant may accompany you to the gate or meet you at the gate once they have obtained a valid gate pass from the appropriate aircraft operator.

When You Make Your Reservation:

- Neither the Air Carrier Access Act nor the ADA requires airlines to provide oxygen service. Airline policies, procedures and services on accommodating passengers who use supplemental oxygen vary widely.
- When you make your reservation, notify the carrier that you will need to use supplemental oxygen aboard the aircraft(s).
- Airlines are now required to permit passengers to bring aboard FAA approved portable oxygen concentrators and use them during the

flight. Policies vary from carrier to carrier, so be sure to check with your airline well in advance.

- Notify the airline that you will need oxygen at the airport(s). Let them know that your O2 supplier will be meeting you at the gate with an O2 canister.
- Contact your supplier and request that they make arrangements for your O2 at the city or cities needed.
- Have a local phone number and a contact person for your oxygen needs in the event of any unforeseen events or changes.

More information on airline accommodations for oxygen users can be found at the National Home Oxygen Patient's Association website <http://www.homeoxygen.org/> as well as the "Airline Travel With Oxygen" brochure.

An Introduction to Indoor Air Quality (IAQ): Volatile Organic Compounds (VOCs)

From Medscape Seymour JM, Moore L, Jolley CJ, et al. Thorax. 2010;65:423-428, <http://www.epa.gov/iaq/voc.html>

Volatile organic compounds (VOCs) are emitted as gases from certain solids or liquids, and can cause short-term and long-term adverse health effects. Concentrations of many VOCs are consistently higher indoors (up to ten times higher) than outdoors. VOCs are emitted by paints, lacquers, varnishes, solvents, paint strippers, cleaning supplies, disinfectants, wax, pesticides, air fresheners, stored fuels, automotive products, dry cleaned clothing, building materials, furnishings, copiers and printers, correction fluids, carbonless copy paper, glues,

adhesives, permanent markers, and photographic solutions.

The EPA's Office of Research and Development's "Total Exposure Assessment Methodology" (TEAM) studies indicate that while people are using products containing organic chemicals, they can expose themselves and others to very high pollutant levels, and elevated concentrations can persist in the air long after the activity is completed.

Health effects from VOCs include eye, nose, and throat irritation; headaches, loss of coordination,

nausea, and damage to the liver, kidney, and central nervous system. Some organics can cause cancer in animals and some are suspected or known to cause cancer in humans.

The ability of organic chemicals to cause health effects varies greatly from highly toxic to no known health effect. The extent and nature of the health effect depends on level and length of exposure.

Steps to reduce exposure include increasing ventilation when using products that emit VOCs. Do not store

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Medical News You Can Use

Healthy Gums May Lead to Healthy Lungs

From PRNewswire-USNewswire/1/18/11

Gum health may contribute to a healthy respiratory status, according to research published in the *Journal of Periodontology*. The study suggests that gum disease may increase the risk for respiratory infections, including pneumonia. The study of 200 participants included 100 participants hospitalized with pneumonia, COPD, or acute bronchitis who were compared to 100 healthy control subjects. Each participant underwent a comprehensive oral evaluation to measure periodontal health status. Those with respiratory diseases had worse periodontal health than the control group, suggesting a relationship between respiratory disease and periodontal disease. Researchers suspect that the presence of oral bacteria associated with periodontal disease may increase a patient's risk of developing or exacerbating respiratory disease.

Taking a Walk Can Help Reduce Cravings

If you want to break a bad habit, go for a walk. A brisk walk around the block can significantly dampen cravings for food or smoking. A study of "regular chocolate eaters" who ate at least two bars of chocolate a day found that subjects who walked for 15 minutes

on a treadmill at a brisk but not tiring pace had far fewer cravings and had lower blood pressure when exposed to chocolate. In another study that looked at smokers, those who took self-paced low intensity walks lasting 15 minutes had rapid reductions in the urge to smoke and reduced withdrawal symptoms.

The Low Income Home Energy Assistance Program (LIHEAP)

If you can't afford to pay your home energy bill, LIHEAP may be able to help you. LIHEAP is a federally funded program that helps low-income households with their home energy bills. For more information about LIHEAP and where to apply, call the National Energy Assistance Referral (NEAR) project at: 1-866-674-6327, e-mail to: energy@ncat.org or visit <http://www.acf.hhs.gov/programs/ocs/liheap/grantees/states.html>.

New U.S. Dietary Guidelines Focus on Salt Reduction

<http://www.health.gov/dietaryguidelines/dga2010/DietaryGuidelines2010.pdf>

Recent U.S. dietary guidelines focus on getting Americans to reduce salt

intake. The 7th U.S. Department of Agriculture's *Dietary Guidelines for Americans* recommends limiting daily sodium intake to less than 2,300 milligrams (about a teaspoon) a day and less than 1,500 milligrams for those aged 51 or older, blacks, and those with high blood pressure, diabetes or chronic kidney disease, regardless of age. Currently, the average American consumes approximately 3,400 milligrams of sodium daily. The advisory also emphasizes choosing healthier types of fats, eating more seafood, particularly cold water fish to increase omega-3 fatty acids, eating smaller portions, reducing calorie intake and increasing physical activity. Specifically, the guidelines suggest:

- Make half your plate fruits and vegetables and eat more whole grains.
- Eat more lean meats and poultry, legumes and nuts and seeds.
- Use fat-free or low-fat (1 percent) milk.
- Avoid added sugars, refined grains and solid fats.
- Compare sodium in canned and frozen foods; select those foods with the least salt.
- Eat less than 300 milligrams of cholesterol per day. Avoid trans fats.
- Get nutrients primarily from nutritious food; don't rely on supplements.
- Drinking water instead of sugary sodas or other sweetened drinks.

VOCs, continued from page 2

opened containers of unused paints and similar materials. Use integrated pest management techniques to reduce the need for pesticides. Use all household products according to manufacturer's directions. Throw away unused

or little-used containers safely; buy in quantities that you will use soon. Never mix household care products unless directed on the label.

Keep exposure to emissions to a minimum from products containing methylene chloride (paint strippers, adhesive removers, and aerosol spray

paints), benzene (environmental tobacco smoke, stored fuels, paint supplies, auto emissions), and perchloroethylene (newly dry-cleaned materials). If dry-cleaned goods have a strong chemical odor, do not accept them until they have been properly dried and consider a different dry cleaner.



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Barriers to Using Portable Systems

From BMC Pulmonary Medicine by E.Arnold et al, 2/11/11
<http://www.biomedcentral.com/1471-2466/11/9/abstract>

For persons with low blood oxygen levels, e.g., below 88 percent saturation, using oxygen improves survival, mental function, right heart function and other important outcomes. The authors evaluated 27 COPD patients using prescribed ambulatory oxygen systems which included a tank weighing 7.5 pounds, a shoulder bag and nasal cannula. The participants reported barriers to using their ambulatory oxygen include receiving no instruction on using their oxygen; being uncertain of the benefits; fear that the system would run out during use; embarrassment at being seen with the system in public; and being unable to carry the system because of the weight. The essential role of caregivers was also highlighted, as participants with no immediate caregivers did not use portable oxygen outside the house. All of these issues should be addressed to improve adherence and benefits from ambulatory oxygen. If you have questions about your oxygen, ask your medical equipment company or pulmonary rehabilitation staff.

It's Almost Tax Time!

Calculate your oxygen usage to determine the cost of electricity to run your home oxygen concentrator for an IRS medical deduction.

1. Calculate wattage: Look on concentrator label for Volts and Amps. Multiply for watts. Example: (115 Volts X 4 Amps = 460 Watts)
2. Calculate # of Kilowatt Hours per year. Using above numbers as an example, divide 460 Watts by 1000 = .46 KW X 24 hours/day X 365 days/year = 4,029.6 KWH/year.
3. Call the electric company to get the cost of a KWH of electricity. Multiply by KWH/year. For example: 4029.6 X .09 (9 cents per KWH) = \$362.66 deductible cost. This example is assuming a 9-cent per KWH charge and 24-hour usage daily. Adjust accordingly.

LUNGEVITY is published bi-monthly by the Department of Pulmonary Rehabilitation, sponsored by Seton Medical Center. Please note: The advice in this newsletter does not replace your physician's recommendations.

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