

# SAIL Home Oxygen Program

# Tester's Newsletter



Published by the Lung Association of Saskatchewan

Fall 2013

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This newsletter is produced by the Lung Association of Saskatchewan through a contract with Saskatchewan Health.

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## Asbestosis

Asbestosis is a diffuse interstitial fibrosis of the lung parenchyma caused by exposure to asbestos. Asbestos is a mineral with fibers similar to fiberglass. It is heat resistant, strong and flexible. These properties made it popular for use in many products including pipes, insulation, and brake linings to name just a few. Asbestos can be easily breathed in to the lungs. If the fibers are not expelled by the mucus lining of the lungs they can cause cell damage which can lead to inflammation (asbestosis), cancer (mesothelioma) or scarring (pleural plaques, effusions or thickening).

There is no safe level of exposure to asbestos. A history of smoking increases the possibility of developing asbestosis and other asbestos related diseases. Most cases of asbestosis occur 15 or more years after exposure. Mesothelioma commonly takes at least 30 years to develop. It is usually fatal.

(cont'd on page 2)

## Home Oxygen Tester's Workshops Via Telehealth Conference

Two Telehealth workshops have been scheduled this year:

**Thursday, September 19, 2013 from 1 - 3pm**

and

**Wednesday, December 4, 2013 from 1- 3pm**

Want to attend?

Sign up with your local Telehealth coordinator 48 hours before the broadcast time.

## Asbestosis

*continued from page 1*

Who is at risk for Asbestosis?

- Asbestos miners and millers
- Construction workers
- Insulators
- Pipefitters
- Millwrights
- Naval yard workers
- Plumbers
- Roofers
- Carpenters

The signs and symptoms of asbestosis are non-specific and include:

- Shortness of breath
- Persistent and productive cough
- Chest tightness
- Chest pain
- Loss of appetite
- Crackles in the lung bases on auscultation

Chest X-ray findings include small irregular opacities in the lung parenchyma, usually in the mid to lower lung fields. Pleural thickening or effusion is often seen.

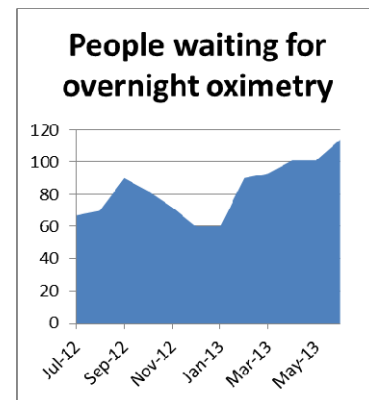
Unfortunately, there is no real treatment for asbestosis. Oxygen therapy is prescribed for desaturation that occurs first with exertion and then as time goes on at rest as well. Inhalers may relieve some shortness of breath.

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## Nocturnal Oximetry

The Lung Association of Saskatchewan is contracted by the SAIL program to provide oximeters for nocturnal testing in rural areas. This testing can be time consuming, involving shipping, contacting the client, returning the machine, and in some cases, organizing oxygen for the second night of testing. Unfortunately, any delay results in the waiting list increasing. The number of people on the list has ballooned to over 110, at least a 3 month wait.

The system works best if the oximeter is returned within a week at the most. Thank you very much to everyone who works hard to make this happen. Hopefully, over the next few months we will be able to catch up. If you have any clients who need testing urgently, please call Marion Laroque at 306-667-3016.

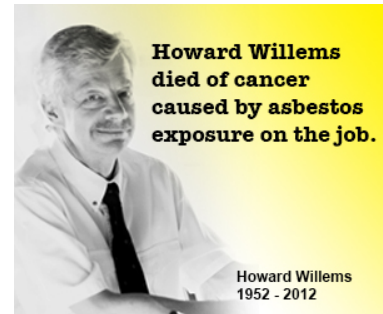


## Howard's Law

On April 18, 2013, the Saskatchewan legislation passed a public health amendment act called Howard's Law establishing a mandatory registry of all public buildings that contain asbestos.

The law is named after Howard Willems, a food inspector who unknowingly was exposed to asbestos when he entered buildings during renovations that disturbed the deadly fibers. He died in November 2012 from mesothelioma. Saskatchewan is the first province to make a public registry of buildings mandatory.

Over 60 countries have banned the use of all forms of asbestos. Canada has not banned asbestos, and in fact, has exported it around the world up until the fall of 2012 when the last 2 mines in Quebec closed. Due to the long time between exposure to asbestos and the development of disease from it, the health consequences of asbestos use are expected to continue for most of the 21<sup>st</sup> century.



### New Research

#### **Idiopathic Pulmonary Fibrosis and Sleep Oxygen Desaturation**

Idiopathic pulmonary fibrosis (IPF) is a chronic, progressive interstitial lung disease with no known cause. There is no actual treatment and life expectancy is usually 2-3 years. Shortness of breath, dry cough, fatigue and loss of energy are the main symptoms.

The prevalence of obstructive sleep apnea (OSA) is high in this group. The usual pattern of obesity and daytime sleepiness does not seem to apply to these patients. The loss of lung volume due to the pulmonary fibrosis is believed to be the reason for the development of OSA.

Researchers in Greece studied a group of IPF patients and discovered that 91% had OSA, ranging from mild disease to severe. Nocturnal desaturation was lower than the desaturation measured with maximal exercise. Nocturnal desaturation had a negative impact on survival. They summarized these findings by stating that sleeping was, for these IPF patients, a stressful practise, even harder on them than exercise.

It is hoped that future studies will show that treating IPF patients with CPAP will improve their quality of life and survival. For the home oxygen tester this research shows that it is good to keep in mind that patients with a diagnosis of IPF should have their oxygen saturation levels tested at night, and that they should be screened for sleep apnea.

## Vitamin D and Asthma

Vitamin D, known as the sunshine vitamin, is important for bone health and the immune system. It occurs naturally in only a few foods. Our major source of vitamin D is exposure to sunlight. Deficiency is caused by lack of sunshine, dark skin, obesity and poor diet.

In recent years researchers have been exploring the connection between vitamin D and asthma. A British team has discovered the mechanism through which vitamin D can reduce the symptoms of asthma.<sup>1</sup> Use of vitamin D supplements enhanced the effects of steroids and may be a safe and effective add-on treatment to the guideline recommended therapy regime.<sup>2</sup>

The exact amount of vitamin D supplement needed has not been determined. The table below from Health Canada gives the recommended allowance per day, as well as the upper limit. Measuring blood levels of vitamin D can determine if a deficiency exists.

<b>Age group</b>	<b>Recommended Dietary Allowance per day</b>	<b>Tolerable Upper Intake Level per day</b>
Infants 0-6 months	400 IU	1000 IU
Infants 7-12 months	400 IU	1500 IU
Children 1-3 years	600 IU	2500 IU
Children 4-8 years	600 IU	3000 IU
Children and Adults 9-70 years	600 IU	4000 IU
Adults > 70 years	800 IU	4000 IU
Pregnancy & Lactation	600 IU	4000 IU

### References:

1. Nanzer AM et al: Enhanced production of IL-17A in patients with severe asthma is inhibited by 1 $\alpha$ ,25-dihydroxyvitamin D3 in a glucocorticoid-independent fashion; Journal of Allergy and Clinical Immunology May 17, 2013, published on-line; <http://www.jacionline.org/article/S0091-6749%2813%2900526-5/abstract>
2. Paul G, et al, Vitamin D and Asthma; Am J Respir Crit Care Med, Vol. 185, Iss. 2 Jan. 15, 2012, pp 124-132.

<b>SAIL Stats - June 2013</b>	<b>Lung Association Stats – June 2013</b>
Continuous.....1830	Nocturnal tests completed.....198
Exertional.....446	Waiting list names.....115
Nocturnal .....249	Waiting time.....> 3 months
Pediatric .....29	% positive for sleep apnea.....45%
Total.....2554	

## E-Cigarettes

The Virginia based tobacco giant Altria, maker of Marlboro, announced in June 2013 that it will be introducing an electronic cigarette called the MarkTen. This device will join more than 250 brands on the markets with sales approaching \$1 billion.



An electronic cigarette (e-cigarette) is a cylindrical device that mimics a real cigarette. It has a battery, heating element, cartridges with or without nicotine, water and other unknown ingredients. E-cigarettes electronically vaporize a solution creating a mist that is then breathed into the lungs. These devices are not regulated and the level of nicotine can vary dramatically.

In 2009 Health Canada issued an advisory warning Canadians not to use e-cigarettes. The United Kingdom has also warned against the use of e-cigarettes and plans to regulate all products containing nicotine as medications by the year 2016. The Canadian Lung Association states:

1. Users of e-cigarettes inhale unknown, unregulated and potentially harmful substances.
2. There is a misconception that the e-cigarette is an effective tool to quit smoking. Research has shown no evidence that e-cigarettes are effective quit smoking aids.
3. There is a reasonable concern that e-cigarettes, if not regulated, may lead to more young people initiating smoking, since they can be bought by anyone, regardless of age.
4. The use of e-cigarettes may glamorize and normalize the act of smoking.

### Saskatchewan Thoracic Society

2013 Professional Education Day  
**Saturday, November 16, 2013**  
**Saskatoon Inn, Saskatoon**



Registration: 08:00  
Adjournment: 14:00  
To register please contact:  
The Lung Association of Saskatchewan: (306) 343-9511 or [info@sk.lung.ca](mailto:info@sk.lung.ca)

## The Rise of COPD in Women

Chronic Obstructive Pulmonary Disease (COPD) is mostly a disease of people who smoke. In the past, since the smoking rate among men was higher than that of women, so too was the diagnosis rate for COPD. This is no longer true. In fact, the number of deaths among women with COPD has more than quadrupled since 1980. Since 2000, the disease has claimed the lives of more women than men.

We are now seeing the effects of tobacco advertising that targeted women. In 1968, Phillip Morris introduced Virginia Slims, the first cigarette created specifically for women. The surge in women smoking during the 60's and 70's is now translating into an increased burden of lung disease and death.

Women have smaller lungs, narrower airways, and less respiratory muscle power than men. These biological facts mean that women are more susceptible to COPD and have more severe disease. Estrogen also plays a role in worsening lung damage from smoking. The workplace can be a source of lung damage for women – jobs in healthcare, food and textile manufacturing, and cleaning expose women to biological dusts, mineral dust and gas fumes.

Early, accurate diagnosis, self-management, education, along with smoking cessation are the most important steps to treat this chronic, progressive illness. Exercise programs, and support to combat the very common depression are also useful.

## Did You Know?

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- The World Health Organization has estimated that at least 284,000 people died worldwide from the 2009 H1N1 'swine flu' pandemic. The majority of these deaths were in African and Southeast Asia.
- The total healthcare cost of COPD in Canada has been estimated to be \$1.5 billion per year.
- Evidence shows that mortality at 12 months following hospital admission for an exacerbation of COPD is higher than the mortality observed at 12 months following hospital admission with myocardial infarction.
- Humans inhale more than 6 billion tonnes of oxygen each year.
- Oxygen provides us with 90% of our nutritional energy, with just 10% coming from the food we eat.
- COPD kills more Canadian women than breast cancer.



**By 1973, less than six years after the introduction of Virginia Slims, the rate of 12 year old girls smoking increased by 110 percent.**

## Pulmonary Rehabilitation

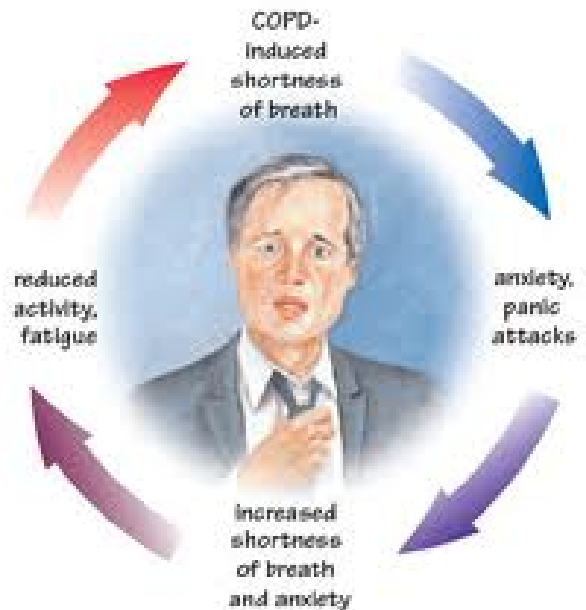
Chronic obstructive pulmonary disease (COPD) can lead to frequent exacerbations, hospitalization and decreased quality of life. Pulmonary rehabilitation (PR) programs have been proven to alleviate these problems by:

- Improving shortness of breath
- Improving health-related quality of life
- Improving exercise tolerance
- Reducing exacerbations
- Reducing hospitalizations
- Reducing health care costs

PR programs usually include both education and exercise. People with moderate to severe COPD can benefit from the program.

In Canada, only about 1% of COPD patients participate in a PR program. In Saskatchewan there are currently 28 PR programs of various types. Some are delivered via Telehealth, some are group programs with a leader, and some are combined with other chronic disease management programs. The Lung Association of Saskatchewan maintains a list of the current programs that the public can access through their web site: [www.sk.lung.ca](http://www.sk.lung.ca).

If a PR program is not available, or not suitable for a person with COPD, exercise in the home can be a reasonable alternative. The Lung Association of Saskatchewan has two factsheets available to help people interested in their own program. The Breathlessness factsheet teaches breathing techniques to combat breathlessness. The exercise factsheet provides practical exercises that can be safely done in the home. To order these factsheets and any other printed materials go to: <http://www.sk.lung.ca/index.php/services-mainmenu/resources/printed-materials#.UbjZwpzzaxg> or call the Lung Association at 1-888-566-LUNG.



## Phone Numbers

### **Saskatchewan Aids to Independent Living (SAIL)**

3475 Albert Street

Regina, SK S4S 6X6

Phone: 1-888-787-8996 Fax: 787-8679

## Oxygen Supply Companies

### **Medigas A Praxair Company**

Regina: (306) 721-2380 or 1-866-446-6302

Saskatoon: (306) 242-3325 or 1-866-446-6302

Swift Current: (306) 773-8064 or 1-866-446-6302

### **Prairie Oxygen Ltd.**

Regina: (306) 545-8883 or 1-877-738-8702

Saskatoon: (306) 384-5255 or 1-877-738-8702

### **Provincial Home Oxygen Inc.**

Regina: (306) 790-8491 or 1-877-352-5025

Saskatoon: (306) 651-1243 or 1-877-352-5025

Prince Albert: (306) 764-7344

### **VitalAire Healthcare**

Lloydminster: 1-780-875-9777

Regina: (306) 721-0071 or 1-800-567-0071

Saskatoon: (306) 931-3334 or 1-800-461-0096

Prince Albert: (306) 931- 3334



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