

SAIL Home Oxygen Program

Tester's Newsletter



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Inside

New Research.....3

Carbon Monoxide
Poisoning.....4

Pathway for
Testing.....5

TB Facts.....6

Sleep Apnea in
Children.....7

Phone Numbers.....8



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

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Pulmonary Embolism

Acute pulmonary embolism (PE) is common and often fatal. Without treatment, the mortality rate is approximately 30%. Most deaths are due to recurrent PE within the first few hours of the initial event. Fortunately, therapy with anticoagulants decreases the mortality rate to 3-8%. It is therefore important for health care providers to be suspicious of the possibility of a PE and be aggressive with treatment whenever there is a high clinical probability of a PE.

About 75% of all patients who are diagnosed with PE have a deep vein thrombosis (DVT). Other causes of PE include fat embolism for a broken femur, amniotic fluid embolus in pregnancy or tumour tissue from cancer.

(cont'd on page 2)

Home Oxygen Tester's Workshops Via Telehealth Conference

Two Telehealth workshops have been scheduled this year:

Thursday, January 31, 2013 from 1 - 3pm

and

Monday, April 29, 2013 from 1- 3pm

Want to attend? Sign up with your local Telehealth coordinator 48 hours before the broadcast time.

SAIL Stats - January 2013

Continuous.....	1754
Exertional.....	419
Nocturnal	227
Pediatric	23
Total.....	2423

Lung Association Stats - 2012

Nocturnal tests completed.....	449
Waiting list names.....	59
Waiting time.....	2 months
% positive for sleep apnea.....	45%

The risk factors for a pulmonary embolism are the same as the risk factors for deep vein thrombosis:

1. Prolonged immobilization: extended travel; hospitalization or prolonged bed rest.
2. Increased blood clotting potential: medications such as birth control pills or estrogen; smoking; genetic predisposition; polycythemia; cancer; pregnancy; and surgery.
3. Damage to vessel wall from either: prior deep vein thrombosis; or trauma to the lower leg.

Signs and Symptoms of Pulmonary Embolism:

- Sudden onset of chest pain, usually when taking a deep breath
- Shortness of breath
- Cough, possibly with bloody sputum
- Increased heart rate
- Decreased oxygen saturation
- Hypotension

Diagnosis of Pulmonary Embolism:

Clinical assessment alone is unreliable. D-dimer testing is very valuable for ruling out a PE, especially when there is a low clinical probability. Ventilation-perfusion lung scanning or spiral (helical) CT scans can be used to diagnose. Evidence of a DVT on ultrasonography of proximal veins can also help diagnose a PE. The very best test is a pulmonary angiograph, but it is expensive and difficult to perform and interpret.

Treatment:

Empiric anticoagulation is the treatment of choice when there is a high clinical suspicion or when diagnostic testing is not immediately available. Anticoagulation is usually continued for 3 – 6 months after the event. Anticoagulation is contraindicated when there is an excessive risk of bleeding, such as active bleeding from stomach ulcers, cerebrovascular hemorrhage, severely low platelet counts, or severe liver disease. Other treatment choices include: insertion of an inferior vena cava filter or embolectomy.

Prevention:

- The majority of pulmonary embolisms occur in hospitalized patients. Early ambulation after surgery is recommended over bed rest whenever possible.
- Elastic stockings are a safe and effective method to limit or prevent thrombus formation. Stockings with a pressure of 30-40mmHg at the ankle, worn for 2 years are recommended.
- Taking walks during airplane flights and stopping for a short walk every hour during road trips is recommended to prevent blood clots in the leg veins.

References

1. Kearon C. Diagnosis of pulmonary embolism CMAJ, January 21, 200; 168 (2) p 183-194.
2. Ouellette DR, et al, Pulmonary Embolism Treatment and Management, <http://emedicine.medscape.com/article/300901-treatment> accessed January 2, 2013.

Dr. Darcy Marciniuk is the first Canadian President of the American College of Chest Physicians

Dr. Darcy Marciniuk was installed in October, 2012, as the President of the American College of Chest Physicians (ACCP) at the annual CHEST Conference held in Atlanta, GA. This marks the first time in the 77-year history of this prestigious organisation that a non-American has been named as the President.



Dr. Marciniuk is the Head of the Division of Respiratory Critical Care and Sleep Medicine, Department of Medicine, University of Saskatchewan in Saskatoon. He was raised in Hafford, SK and obtained his MD from the University of Saskatchewan. He then completed internal medicine training at the University of Western Ontario and respiratory training at the University of Manitoba. He returned to Saskatchewan in 1990 to join the Respiratory Division. He became Head of the Division in 2006.

Dr. Marciniuk has provided national and international leadership in the field of COPD. He is the lead author of the Canadian guidelines for COPD management. He has conducted extensive research on COPD and developed the COPD rehabilitation program in Saskatchewan. Dr. Marciniuk currently serves as a board member for the Lung Association of Saskatchewan.

New Research

Asthmatics at increased risk of pulmonary embolism

People with asthma have an increased risk of pulmonary embolism, according to new research published in the European Respiratory Journal. Previous research has found links between chronic lung diseases and blood clots, but this is the first study to look at any potential links with asthma.

The study examined 648 people with asthma in the Netherlands. The authors found that people with severe asthma were almost 9 times more at risk of pulmonary embolism, compared to the general population. Also, people with mild-moderate asthma tended to have a 3.5-times increased risk of pulmonary embolism. The study also identified oral corticosteroids as a potential risk factor for pulmonary embolism.

The lead author, Dr. Christof Majoor, hopes that these findings will encourage physicians to increase their awareness of the possibility of a pulmonary embolism, especially in patients with severe asthma.

Reference: Majoor C. et al, Risk of deep-vein thrombosis and pulmonary embolism in asthma. European Respiratory Journal, December 20, 2012.

Carbon Monoxide Poisoning

The tragic death of a 29 year-old man from Asquith on November 13, 2012 has served as a reminder about the dangers of carbon monoxide (CO) poisoning. CO poisoning is one of the leading causes of poisoning death. In fact, Saskatchewan has seen several deaths related to CO poisoning in recent years. In October, 2011, two people died in Saskatoon and in December, 2010 a CO buildup at St. Mary's Villa in Humboldt contributed to the death of three seniors.

Carbon monoxide poisoning causes hypoxia when CO combines with hemoglobin in place of the usual oxygen. Hemoglobin binds with CO 200-250 times more readily than with oxygen. The presence of CO also makes it more difficult for hemoglobin to release oxygen (a left shift of the oxyhemoglobin dissociation curve). Research in recent years has also shown that carbon monoxide poisoning causes direct cellular changes through both immunological and inflammatory damage.

Symptoms of CO poisoning

No single symptom is specific in CO poisoning, however, the most common symptoms are:

- headache
- dizziness
- nausea/vomiting
- confusion
- fatigue
- chest pain
- shortness of breath
- loss of consciousness

For years health care professionals were taught to look for 'cherry red' skin in patients with CO poisoning, but this is rare. Research has found that less than one half of patients who were dying of CO poisoning had 'cherry red' skin.

Diagnosis of CO Poisoning

Diagnosis is made through a triad of:

1. history of potential exposure to CO;
2. symptoms consistent with CO poisoning; and
3. elevation of arterial or venous blood carboxyhemoglobin levels: > 3-4% in non-smokers or > 10% in smokers.

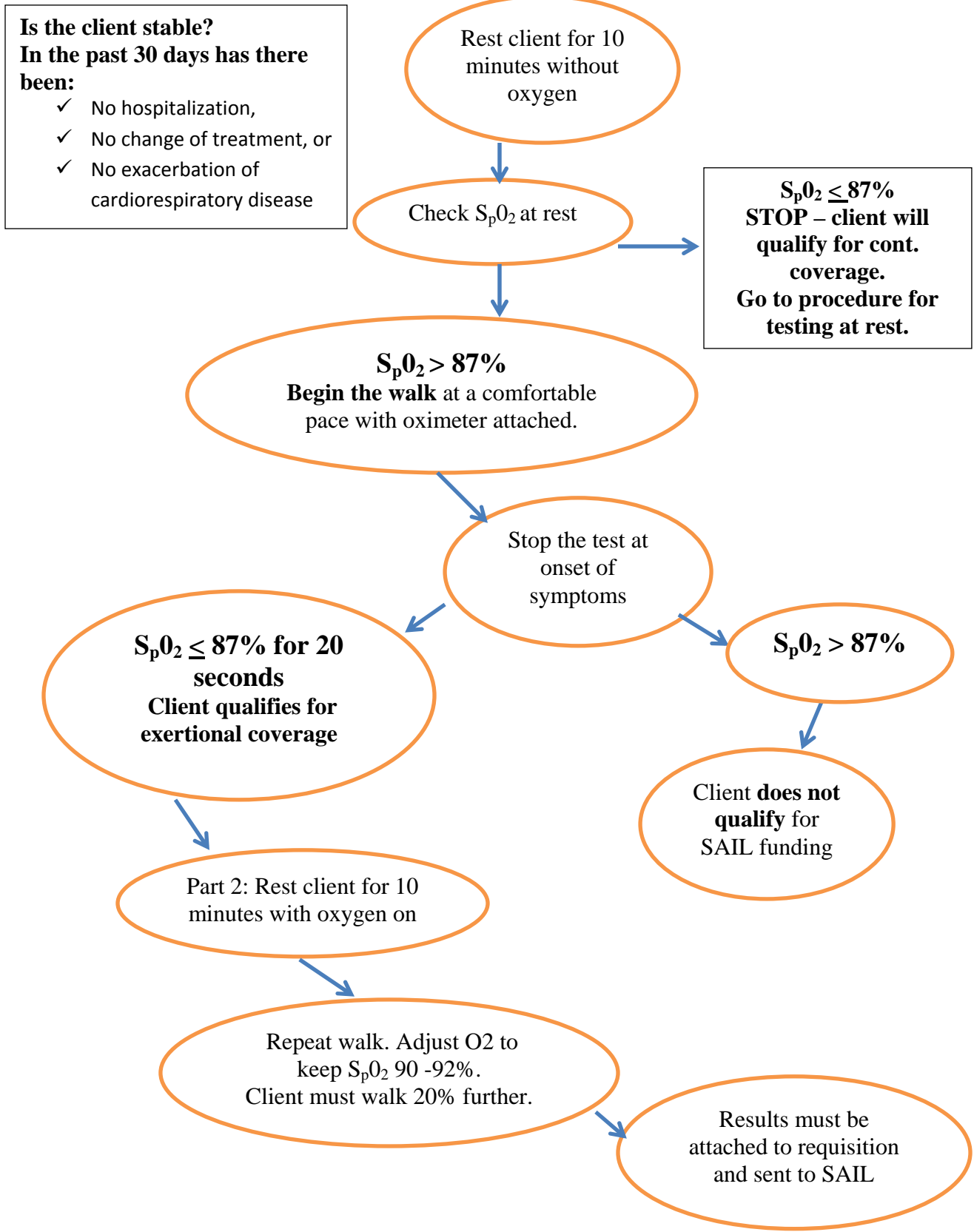
Treatment

- high flow oxygen, usually for at least 6 hours
- hyperbaric oxygen should be considered in all cases of serious CO poisoning
- if CO exposure was intentional (suicide attempt) toxicology screening for drugs and alcohol should also be carried out.

Prevention

SaskEnergy recommends yearly inspection of furnaces, boilers and water heaters, and people should take caution using natural gas space heaters. Vents on high efficiency furnaces should be checked for blockages by snow or ice. All homes should have carbon monoxide detectors. Do not depend on flu-like symptoms to warn you of a potential problem.

Pathway for Testing for Exertional Oxygen Funding



2013 Respirology State of the Art Conference

An update for family physicians and health care professionals

Saturday, June 1, 2013

Hilton Garden Inn, Saskatoon

Presentations: 8:00 to 14:00

Spirometry Interpretation Workshop: 14:15 to 17:30



To register please contact

The Lung Association of Saskatchewan: 343-9511 or info@sk.lung.ca

10 Tuberculosis Facts - World Health Organization

1. TB remains one of the world's top infectious killers. About 95% of TB deaths occur in low- and middle-income countries and it is among the top three causes of death among women aged 15 to 44.
2. The number of people falling ill with TB is declining and the TB death rate dropped 41% since 1990.
3. In 2011 8.7 million people fell ill with TB. But the good news is that tuberculosis is curable and preventable.
4. Up to 70,000 children died due to TB globally in 2011. Childhood TB is often overlooked by health providers and can be difficult to diagnosis and treat. There are about 10 million orphan children as a result of adult TB deaths.
5. TB is the leading killer of people living with HIV.
6. About 80% of reported TB cases occurred in 22 countries in 2011.
7. Multidrug-resistant TB (MDR-TB) does not respond to standard treatments and is difficult and costly to treat.
8. There were an estimated 630,000 people with MDR-TB in 2011.
9. About 51 million TB patients have been successfully treated since 1995 worldwide.
10. The world is on track to achieve two global TB targets set for 2015.

Sleep Apnea in Children

Sleep apnea is no longer thought to be a problem only in fat, middle-aged men. Attention is now being paid to the problem of sleep apnea in children. A recent Finnish study found that 10% of 6-8 year-olds had sleep disordered breathing. The American Academy of Pediatrics recommends that all children should be screened for snoring. Further testing for children with symptoms of sleep apnea can include nocturnal pulse oximetry, videotaping or audiotaping of the sleeping child, nap polysomnography, or nighttime polysomnography.

The consequences of untreated sleep apnea in children are serious. A British study showed that breathing problems during sleep were linked to a nearly 40% increased risk of needing special education for learning disabilities. Other problems such as hyperactivity, failure to thrive, hypertension and behavioral problems are linked to sleep apnea.

Adenotonsillectomy is the first line of treatment for pediatric sleep apnea. CPAP therapy is an option for children who are not a candidate for surgery, or who do not respond to surgery.

Reference: Clinical Practise Guideline: Diagnosis and Management of Childhood Obstructive Sleep Apnea Syndrome: *Pediatrics* 2002; 109; 704.

One in Five Saskatchewan Youth Smoke

For the ninth year in a row, Saskatchewan has the highest youth smoking rate in Canada. According to the 2012 Canadian Tobacco Use Monitoring Survey (CTUMS), 20% of youth aged 15 -19 in our province smoke. The national average is 12%.

“Our youth smoking rates stick out like a sore thumb” said Donna Pasiechnik, manager of Tobacco Control for the Canadian Cancer Society.

The Lung Association of Saskatchewan is calling for more government investment in tobacco control. “If we are serious about tackling our high smoking rates, we need to invest in all areas of tobacco control”, recommends Jennifer Miller, vice president of health promotion. Provincial revenue from tobacco taxes is expected to be \$247 million dollars and yet the government spends only less than one half of one percent on tobacco reduction.

A ban on all flavoured tobacco products, including smokeless tobacco is also advocated. Flavoured tobacco can act as a starter product for children. In Saskatchewan, a death due to tobacco use occurs every 8 hours.

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

Airgas Puritan Medical

Note: Airgas has now amalgamated with Medigas

Medigas A Praxair Company

Regina: 721-2380 or 1-866-446-6302

Saskatoon: 242-3325 or 1-866-446-6302

Swift Current: 773-8064 or 1-866-446-6302

Prairie Oxygen Ltd.

Regina: 545-8883 or 1-877-738-8702

Saskatoon: 384-5255 or 1-877-738-8702

Provincial Home Oxygen Inc.

Regina: 790-8491 or 1-877-352-5025

Saskatoon: 651-1243 or 1-877-352-5025

VitalAire Healthcare

Lloydminster: 1-780-875-9777

Regina: 721-0071 or 1-800-567-0071

Saskatoon: 931-3334 or 1-800-461-0096

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