In a bid to improve the medical care that bronchiectasis patients were receiving in our community, the local respirologists asked to be able to refer these patients to our respiratory rehabilitation program for instruction in airway clearance techniques. Most of our training had been in deep breathing and coughing, and postural drainage with manual percussions, and had taken place many years ago. To update our skills, we attended the Airway Clearance Techniques Training Class which is a 1 1/2 day workshop frequently offered prior to the North American Cystic Fibrosis Conference. Two of our staff attended the course in 2005 in Baltimore. It was a valuable learning experience where lung physiology was thoroughly reviewed, the clearance techniques were taught and practical sessions were held to integrate the knowledge.

Many of the patients we work with as respiratory health educators, have increased mucus production. It may be persons with COPD, Bronchiectasis, Atelectasis, Asthma or Cystic Fibrosis. Preventing infection through the regular use of airway clearance techniques should be a main goal of treatment in this population. Each subsequent infection that our patients are exposed to, through the inflammatory process, causes further damage to the airway walls and hence more susceptibility to subsequent infections and possibly hospitalizations.

Teaching correct coughing techniques should also be a primary treatment goal as without proper techniques patients use repeated, forced coughing which leads to inelastic or “floppy” airways that result in more airway compression during expiration and trapping of the secretions in the lungs.

Traditional “chest physiotherapy” often involved placing people in head down postural drainage (PD) positions and manually percussing their lungs followed by strong coughing to clear the secretions. Not only is this an uncomfortable position for the patient, it is now known that this position significantly increases the incidence of Gastroesophageal Reflux Disease (GERD) and other unwanted side effects. If PD is being used, then it is best to position the patients on a flat surface. PD with percussing can also cause strain injuries to the caregiver.

As such there has been a shift in thinking and now current therapy for good lung hygiene should include: 1) optimal inhalation therapy, 2) physical exercise, and 3) airway clearance techniques.

Inhalation Therapy
Patients should use their medication prior to performing airway clearance techniques to reduce airway obstruction. This would include...
Executive Team Message

Lorelei Samis, BScPT, Physiotherapist and COPD Educator, St. Mary’s of the Lake Hospital, Providence Continuing Care Centre, Kingston

Greetings from the Executive Team. We hope everyone had a fun-filled summer and that you are successfully managing your busy fall schedules. I was pleasantly surprised to see many articles in the local newspaper this summer about respiratory health, more than usual it seemed. How the summer heat and smog affected our bodies and our breathing seems to be a common topic of conversation when you greet someone these days. It made me think about all the knowledge Respiratory Health Educators possess, and how there are so many different areas where our skills are needed and used. I also thought of how RHEIG needs to continue to help educators to expand their skill-sets and knowledge so we can continue to evolve not only in our traditional work situations, but also to play a role in any new initiatives.

I was able to attend a Clinical Tobacco Intervention seminar this summer. These are funded in part by the Government of Ontario, and are a cooperative effort between the Medical, Pharmacist, and Dental Associations of Ontario. Each of these professionals can bring a support worker, and it was under this capacity that I attended. It was a very informative evening on tobacco intervention and smoking cessation assistance, and I would highly recommend that any RHEIG members who have the opportunity take advantage of this wonderful program. Another opportunity for smoking cessation training, listed in this issue, is being provided through the Centre for Addiction and Mental Health in early October. I hope that soon we will have certification courses for Respiratory Health Educators to become smoking cessation experts.

The Executive Team wishes you to know of a number of exciting developments on the horizon. There is currently ongoing discussion regarding the implementation of a training program so that Respiratory Health Educators can become experts on managing anaphylaxis. RHEIG has been invited to participate in The Lung Association COPD Advisory Panel which will make recommendations to the Ontario Government regarding the prevention and management of COPD. COPDRec is being offered by The Lung Association for health professionals who wish to become COPD educators. The ORCS Provincial Education Committee has put together a fantastic program for Better Breathing 2007 (Feb 2-3) with more workshops than ever, and as always we encourage you to attend. As we have done for several years now, RHEIG is hosting our pre-conference workshop on Thursday February 1, 2007, with a variety of topics on the slate. These include: work-related asthma, palliative care issues, anaphylaxis management, and coping with anxiety, panic and depression in chronic lung disease. We hope to see you all there!

So much for us to learn and so much to pass on to our patients/clients. It is our desire to ensure that RHEIG continues to assist you in developing yourself as an educator in the respiratory field. We welcome your suggestions and feedback.

ORCS and RHEIG Membership

To become a member of the Respiratory Health Educators Interest Group (RHEIG) and receive this publication three times each year, join the Ontario Respiratory Care Society, a section of The Lung Association for health care professionals, and select the optional RHEIG membership. ORCS membership for the year 2006-2007 costs $40 and the RHEIG supplementary fee is $15 (total $55). Two year memberships are available.

Visit www.on.lung.ca/orcs for details.

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Update on Airway Clearance Techniques... Continued from page 1

their usual medications prescribed by the physician managing their lung disease and often includes bronchodilators.

Physical Exercise
Physical exercise should be undertaken by all patients with lung disease. A combination of endurance and strength training (3 to 5 times/week) as well as stretching and thoracic mobility exercises (daily) can help loosen secretions. This may be all some patients require to clear their airways while others may need to intersperse exercise with airway clearance techniques.

Airway Clearance Techniques
Airway clearance techniques (ACT) are done either independently or with coaching from a caregiver. Positioning is usually seated with elbows supported on a table. All these techniques depend on airflow to push the secretions out of the lungs as opposed to gravity helping secretions flow out. Eliminating the risk of GERD, reducing oxygen desaturation, headaches and shortness of breath, improving patient comfort, and reducing caregiver stress are all benefits of these techniques.

The following is a brief introduction to some of the ACT that can be tried:

A. Active Cycle Breathing: Active Cycle Breathing includes three components which are cycled through in the following order and are continued until you have two consecutive cycles with no secretions. The three components are:

1) Breathing control (BC): relaxed tidal volume breathing using either the diaphragm or, in hyperinflated patients, the accessory muscles (used to be called Diaphragmatic Breathing); 2) Thoracic expansion: breathe to total lung capacity (TLC), hold breath for 3 seconds to allow air to leak in behind the secretions, relaxed expiration; 3) Forced expiration technique: use huffing to expel secretions. Huffing is a gentle cough which keeps the glottis open and prevents collapse of the airways. To huff, hold your hand in front of your mouth and pretend it is a mirror which you are trying to fog with your breath or put a toilet paper roll in your mouth and try to blow through it. Huffing can be done at either low or high lung volumes. Huffing at low lung volumes (close to FRC) moves secretions in the smallest airways, while huffing at high lung volumes (close to TLC) moves the secretions in the large airways.

B. Autogenic Drainage: Patients must keep their upper airways or throat open and exhale through an open mouth and glottis. It is started by taking a large breath and holding for 3 to 4 seconds. Exhale to the end of tidal volume, inspiratory reserve volume, and then take small breaths at this low lung volume (Unsticking phase). When you feel/hear the secretions moving upwards, increase your lung volume to the middle of your tidal volume and take small breaths in that range (Collecting phase). When the secretions move up, increase your lung volume to vital capacity and take small breaths at this higher lung volume (Evacuate phase). The final evacuation is done by huffing or coughing once the secretions have reached upper airways. This technique requires a lot of practice.

C. Oscillating Positive Expiratory Pressure Therapy: This technique involves the use of specially made devices. These devices, Flutter®, Acapella® and Cornet®, provide positive expiratory pressure (PEP) to hold open the airways and allow air to get in behind the secretions, as well as vibrating the air column which liquefies and moves the secretions and eases their expectoration. Patients need to have strong cheek muscles so that their cheeks do not vibrate such that all the energy is transmitted to the airways. Contraindications are pneumothorax, haemoptysis, severe cardiovascular disease or post lung surgery. An average treatment is divided into a cycle of 1 to 2 minutes of breathing with the device followed by huffing and then relaxed breathing. This cycle should be repeated about 10 times, a process which can take about 15 to 20 minutes. This should be repeated 1 to 2 times per day. Treatment time does need to be individualized. Testing these devices in the clinical setting can be difficult due to their cost. A trial of Bottle PEP (underwater PEP therapy) which was featured in our Spring 2006 newsletter may help determine if this type of therapy will work for your patient.

The Flutter® (which costs approximately $120) consists of a steel ball inside a plastic pipe that oscillates when you exhale through it. You can alter the frequency of the vibrations by tilting the Flutter up or down. The patient must reposition the Flutter up or down until they feel the vibrations in their abdomen.

The Acapella® (which costs approximately $75) uses magnets and a counterweighted plug inside a plastic case that oscillates when you exhale through it. You can alter the amount of PEP versus oscillation by turning the dial at the bottom.

The Cornet® ($30 range, not readily available) is a plastic horn with a latex hose inside which vibrates as you exhale through it. You can alter the amount of PEP by twisting the mouthpiece. It is the loudest of all the devices.

In conclusion, current therapy for the clearance of secretions involves pharmacologic inhalation treatment, exercise and the application of airway clearance techniques. There are many options available to us to teach our patients to self-manage their lung hygiene and thereby influence their health by reducing the severity or frequency of acute infections. The need for this teaching should be assessed in all our patients. This brief overview offers insight into some of these techniques. There are many written references available to further clarify the information provided here. An Airway Clearance Techniques Training Class is being held in November at the 2006 North American Cystic Fibrosis Conference in Denver, Colorado.

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BETTER BREATHING CONFERENCE
February 1-3, 2007
Marriott Toronto Eaton Centre
Continuing Education OPPORTUNITIES

October 2-5, 2006
The Centre for Addiction and Mental Health and Ministry of Health Promotion offer training opportunities in smoking cessation counselling - MaRS Centre, Toronto. yvonne.hinds@camh.net.

October 19, 2006*
Inspirations: A Respiratory Care Update, presented by the ORCS, South Central Ontario Region. Lectures and workshops address Bronchial Thermoplasty, IPF, Work-Related Asthma, Outcome Measurement in COPD, Paediatric Asthma Education, Managing Dyspnea, Nutrition and Lung Disease, Ventilation and Airway Inflammation.

October 21-26, 2006
Chest 2006 - Salt Lake City, Utah. www.chestnet.org/CHEST.

October 25-27, 2006

October 26-28, 2006

November 1, 2006*
Hot Topics in Respiratory Care, presented by the ORCS, Southwestern Ontario Region. Topics include Skeletal Muscle Dysfunction in COPD, Home Oxygen Therapy, End-of-Life Care, Life after ARDS, Asthma Management in Female Athletes and Ethical Issues.

November 9, 2006*
Difficult to Manage Lung Disease, presented by the ORCS, Greater Toronto Region. Topics include Pulmonary Fibrosis, Bronchiectasis, Pulmonary Non-Tuberculous Mycobacterial Infections, Cystic Fibrosis, MDR-TB and Antibiotic Resistance.

November 10, 2006
Best Practice in the Care and Rehabilitation of Patients with Tracheostomy – Toronto Rehabilitation Institute. www.torontorehab.com/education/ed-view.cfm?autoid=106

November 16-17, 2006

LUNG ASSOCIATION NEWS:
COPD Public Forums 2006

In November of 2005, The Lung Association undertook a new initiative to improve public awareness of COPD, offering public forums in several communities. This fall, six public forums will be conducted again around the province on dates close to World COPD Day, November 15, 2006. They will each consist of a free two-hour talk for individuals diagnosed with COPD and/or their caregivers. Respirologists and COPD Educators deliver the talks.

Community Offices participating this year and scheduled dates and locations are:
November 2, 1:30-3:30 p.m. – Hastings-Prince Edward – St. Thomas Anglican Church, Belleville
November 7, 1:00-3:00 p.m. – Waterloo-Wellington – Terraces by Hallman, Waterloo
November 8, 2:00-4:00 p.m. – Huron-Perth – Spruce Lodge, Stratford
November 15, 1:00-3:00 p.m., venue TBA - Thunder Bay

Dates and locations will also be confirmed for the North Central (Timmins area) and Durham, Kawartha-Haliburton (Oshawa or Peterborough areas) Community Office areas.

Please make your COPD clients aware of these educational opportunities and encourage them to attend. For further information, please call The Lung Association’s BreathWorks Helpline at 1-866-717-2673.

Occupational Asthma Publications

Four publications on work-related asthma are now available for you and your patients. These resources were produced by the Occupational Asthma Prevention Project for Workers and Employers. This was a project of the Industrial Accident Prevention Association and Occupational Health Clinics for Ontario Workers funded by the Ministry of Health and Long-Term Care and the Ministry of Labour.

The four publications are a Fact Sheet on Baker’s Asthma, a booklet entitled Work-related Asthma and You: Preventing Work-related Asthma in Bakeries, a Fact Sheet on Occupational Asthma in specific industries and a booklet on Preventing Asthma in the Auto Parts Manufacturing and Foam and Expanded Plastic Industries.

Copies can be ordered from The Lung Association’s Asthma Action Helpline at 1-800-668-7682. For further information, see the article in the Spring/Summer 2006 edition of the ORCS Update or contact Nancy Bradshaw at nancybradshaw@rogers.com or (416)636-8008.
The Lung Association’s Asthma Action Helpline

More than 2.5 million Canadians suffer from asthma. Statistics show that:

• It is the leading cause of hospital admission for children.2
• In Ontario, this disease affects almost 20 percent of children.3
• Asthma is the most common childhood illness in North America.3

Further to this:
• Sixty percent of individuals with asthma have poorly controlled disease, which can often restrict their daily activities.4
• Although 287 Canadians died of asthma in 2003, mortality rates for asthma have fallen since 1990.5

The Lung Association’s Asthma Action Helpline began in 1999. Since 2002, the Ministry of Health and Long-Term Care has provided the majority of funding to support the Helpline. The toll-free Helpline is staffed by Certified Asthma Educators. Clients include individuals with asthma and/or their caregivers, health care professionals and other professionals such as teachers.

Following a protocol, the educators offer individuals with asthma and/or their caregivers an opportunity for a discussion on asthma management. The educators deliver evidence-based advice according to the Canadian Asthma Consensus Guidelines. The Asthma Action program also offers asthma resources and materials free of charge to all Ontarians as well as a website of information on asthma.

When people call the Helpline to discuss asthma, their initial concern is addressed and their level of asthma control is assessed. Initial concerns could be anything from questions about medications, asthma control, and diagnosing asthma to environmental concerns or simply a request for literature. Often, it is revealed that although one may believe their asthma is under control at the beginning of the conversation, it in fact may not be and this forms the basis for a discussion on how to improve asthma control.

Our services help people with asthma and/or their caregivers to better manage asthma. The goal of the Helpline is for those with asthma not to accept daily symptoms and not to be part of the sixty percent who restrict their daily activity. People with asthma should be participants in sports and activities, and not sidetracked by asthma.

Studies conducted by Dr. Lisa Cicutto, RN, PhD, ACNP, CAE, University of Toronto, have demonstrated value to receiving counselling by a CAE staffing the Helpline. At the 3 month follow-up from the initial call, 71% of callers reported returning to their health care provider for further consultation to address issues that were revealed during the original call. Over 60% reported having changes made to their medications during their visit with the health care provider. 92% of callers who completed an Ontario Lung Association action plan with their health care provider reported it as very helpful. At the 3 month follow-up call, the majority of callers reported an improved level of asthma control compared to their level of asthma control during the initial call.

Call 1-800-668-7682 to access the Asthma Action Helpline.

The Lung Association’s BreathWorks Helpline

• In 1999, COPD was the fourth leading cause of death in Canada.6
• By the year 2020, it is estimated that COPD will be the third leading cause of death worldwide.7
• It has been estimated that there are approximately 714,000 diagnosed patients in Canada, but studies have estimated that more than 50% of patients remain undiagnosed.8
• Cigarette smoking is overwhelmingly the most important etiological agent in the development of COPD.8
• In 1998, total costs for COPD in Canada were $1.67 billion.8

The Lung Association’s BreathWorks Helpline began in 2002 in order to address the needs of those diagnosed with Chronic Obstructive Pulmonary Disease. Those with COPD concerns have an option to speak with a COPD Educator. The Helpline includes a toll-free number and resources to help individuals and/or their caregivers to manage their disease.

We receive many calls from those who have just been diagnosed as well as those who have been diagnosed in the past but feel their COPD is worsening and are looking for some management/coping strategies. Following the Canadian Thoracic Society recommendations for the management of COPD, the educators address the initial concern and assess for level of severity. Some or several components of COPD management may be addressed. Typically, callers receive counselling on smoking cessation, medication, breathing and energy conservation techniques, exercise, nutrition, and/or advice on methods to minimize exacerbations. Often, they are unaware of pulmonary rehabilitation programs until they call the Helpline.

Often callers phone simply to express their feelings of anxiety around the challenges of breathlessness they face on a day-to-day basis performing activities of daily living that others may take for granted and may not understand when every breath is not a struggle for them.

During follow-up phone calls conducted by Dr. Dina Brooks, BS, CPT, PhD, University of Toronto, many callers comment that they appreciate being able to speak with knowledgeable people who provide thorough information.

Since the inception of the BreathWorks Helpline, it has proven to be a valuable resource for individuals with COPD and/or their caregivers alike. The BreathWorks Helpline can be reached at 1-866-717-2673.

References
1. Respiratory Disease in Canada, Sept 2001, Canadian Institute for Health Information, Canadian Lung Association, Health Canada & Statistics Canada
Continuing Education OPPORTUNITIES

November 17-19, 2006
Optimizing Wellness in COPD, presented by The Canadian COPD Alliance - The Westin Calgary Hotel, Calgary. www.lung.ca.

November 20-21, 2006
The Face of TB, presented by The Lung Association’s Tuberculosis Committee - Crowne Plaza Hotel, Toronto. www.on.lung.ca/tbconf.

November 23, 2006*
The ORCS Essex/Kent Region - educational evening at the Chatham-Kent Health Alliance. Tentative topics are Pulmonary Fibrosis and Respiratory Medications.

November 30, 2006*
The ORCS Eastern Ontario Region and the Ontario Thoracic Society - educational evening on Asthma vs. COPD at The Holiday Inn, Kingston.

December 4-6, 2006

February 1-3, 2007*
Better Breathing 2007 will be held at the Toronto Marriott Downtown Eaton Centre (see article in this issue).

*RHEIG Pre-Better Breathing Seminar
Hosted by the Respiratory Health Educators Interest Group (RHEIG) of the Ontario Respiratory Care Society (ORCS)

Don’t miss the annual RHEIG pre-conference workshop at Better Breathing 2007!

WHEN: Thursday, February 1, 2006, 12:00 - 4:00 p.m.
WHERE: The Toronto Marriott Downtown Eaton Centre, 525 Bay St., Toronto

Schedule

11:30 a.m. Registration
12:00 Lunch and Networking
12:25 p.m. Welcome and Introduction – Lorelei Samis, Chair, RHEIG
12:30 Providing a Good Death: Key Concepts in Palliative Care – Dr. Debbie Selby, Associate Staff, Palliative Care Consult Team, Sunnybrook Health Sciences Centre, Toronto

1:00 RHEIG Annual Meeting – Chair: Lorelei Samis
1:30 Concurrent Workshops (Choose 1)
1. Practical Lessons in End-of-Life Care – Dr. Debbie Selby, Associate Staff, Palliative Care Consult Team, Sunnybrook Health Sciences Centre, Toronto
2. Anaphylaxis Management – Dr. David Hummel, Pediatrician, Clinical Immunologist and Allergist, North York; Staff, The Hospital for Sick Children, Toronto and Markham-Stouffville Hospital, Markham

2:30 Refreshment Break
2:45 Concurrent Workshops (Choose 1)
3. Helping Chronic Lung Disease Patients Cope with Anxiety, Panic and Depression – Dr. Sharon Jankey, Psychologist and Elizabeth Gartner, Occupational Therapist, West Park Healthcare Centre, Toronto
4. Work-Related Asthma: Prevention, Diagnosis and Management – Dr. Ted Haines, Associate Professor, Occupational Health Program, Department of Family Medicine, Department of Clinical Epidemiology and Biostatistics, McMaster University, Hamilton

3:45 Closing Remarks and Evaluation

Registration fees: $30 if attending the Better Breathing conference; $60 if attending only the workshop and $25 for full-time students. To register, sign up for the RHEIG Pre-conference Workshop on the Better Breathing registration form (available later this fall), contact the ORCS at (416) 864-9911 ext. 256 or by e-mail at dmisetic@on.lung.ca. Plan to attend the entire Better Breathing 2007 conference – three exciting days of lectures, workshops and networking opportunities. For details, visit www.on.lung.ca/orcs. The deadline for poster abstracts is October 16, 2006.

Notice of Annual Meeting
The Annual Meeting of the ORCS-RHEIG will be held during the Workshop at 1 p.m. The agenda will include reports on the year’s activities, membership and election of the Executive Team for 2007-2008. Nominations for membership on the RHEIG Executive Team, which meets by conference call approximately 5 times per year, are welcomed. Contact orcs@on.lung.ca if you are interested in putting your name forward or nominating a colleague.

Support The Lung Association’s Christmas Seal Campaign
www.on.lung.ca

THE LUNG ASSOCIATION OF CANADA
FALL 2006 CONNECTIONS