PRN-BC

Pulmonary Rehabilitation Network of British Columbia

February 2013 Edition 1

News

Finally, after several false starts, the first edition of the newsletter for the Pulmonary Rehabilitation Network of BC is in your hands.

In this first newsletter, you will find summaries of two research articles on PR that were recently published in the *JCRP Journal* and *Chest* in recent months. You also read about health status and dyspnea scales that you might find helpful in your practice; upcoming events; PR research studies that are happening in BC, and a list of PR facilities and contact numbers for the programs in BC.

Canadian Pulmonary Rehabilitation Survey 2012

By now, you would have received an email inviting you to participate in the Canadian Pulmonary Rehabilitation Survey, a project sponsored by the Canadian Lung Association / Canadian Thoracic Society and led by myself and Gail Dechman, a physiotherapist faculty member at Dalhousie University. If you haven't already done so, I urge you to complete this survey as soon as possible. It will give us much-needed information on the programs in Canada in terms of capacity and practice. It will also allow us to create the educational programs that are needed in PR in order to continue to improve our programs.

If you haven't received a survey, please contact me at pat.camp@hli.ubc.ca or phone me at 604-806-9144.

BC Lung Association funds equipment for UBC Pulmonary Rehabilitation and Exercise Physiology (PREP) Laboratory

The BC Lung Association has provided funding to equip a Pulmonary Rehabilitation and Exercise Physiology Laboratory, located at St. Paul's Hospital and Vancouver General Hospital. ***Part of this funding will go toward developing knowledge translation strategies to better reach out and engage PR clinicians throughout BC.*** This will include workshops, webinars, and other programs that will enable clinicians to further develop their PR skills without the expense of travelling outside of their communities. Stay tuned for the first webinars on exercise and PR.

I hope you enjoy this newsletter, and please contact me with your suggestions and ideas for future topics.

Yours truly,
Pat Camp, PT, PhD
Clinician Scientist, UBC
Head, St. Paul's Hospital Pulmonary Rehab Program

Journal Club

Turner LJ, Houchen L, Williams J, Singh SJ. Reliability of pedometers to measure step counts in patients with chronic respiratory disease. *Journal of Cardiopulmonary Rehabilitation and Prevention* 2012; 32:284-291.

Rationale: Strategies that promote increased activity in pulmonary rehab patients may increase their physical fitness and health outcomes. Pedometers may be one useful tool to increase activity, but their ability to accurately detect steps during slow walking speeds typically seen in COPD is unknown.

Purpose: To examine the reliability and accuracy inexpensive pedometer (Yamax CW-700 digi-walker pedometer) against an activity monitor, and visual assessment, in healthy subjects and in patients with COPD.

Methods: Reliability. 8 different pedometers were worn by the same subject who walked at standardized walking speeds. Accuracy. A pedometer and an activity monitor were worn by 48 subjects with COPD who underwent a structured walking test, that included walking at different speeds. Steps measured were assessed against a visual count.

Results: There was a great deal of variation between the pedometers, indicating that they were not interchangeable. In addition, both the pedometer and the activity monitor could accurately detect steps at higher walking speeds (2.72 km/h, 3.60 km/h and 4.36 km/h with greater accuracy as the speeds got higher. The pedometer and the activity monitor consistently underestimated the steps at the lowest walking speed (1.78 km/h).

Conclusion and Clinical Significance: If you use pedometers with your patients, it may be important to ensure that you use the *same* pedometer for a given patient. In addition, the pedometer may significantly underestimate steps in patients who walk slower than 1.78 km/h. This is likely the case for many patients within the typical pulmonary rehab program. *Pat Camp*

Dolmage TE, Janaudis-Ferreira T, Hill K, Price S, Brooks D, Goldstein RS. Arm elevation and coordinated breathing strategies in patients with chronic obstructive pulmonary disease. *Chest* 2013 (on-line).

Rationale: Arm activities are challenging for patients with COPD. It isn't known whether coordinating inhalation or exhalation with arm activity would result in better performance.

Methods: 36 COPD patients with hyperinflation were randomly assigned to Group 1 (taught to inhale during lift); Group 2 (taught to exhale during lift; or Group 3 (sham). Each subject completed high and severe intensity repetitive constant-load lifting tasks to interolance.

Results: Group 2 (exhale during lift) were able to perform high intensity exercise for longer periods than either of the other two groups (2.8 mins longer than sham, and 3.3 mins longer than the inhalation group).

Conclusion and Clinical Significance: In many programs patients are told to perform their resistance training while avoiding a Valsalva maneuver. However, there are no guidelines for other breathing strategies while performing lifting tasks. The results from this study may indicate that patients are able to perform lifting tasks for longer periods if they exhale while lifting. Whether this results in improved muscle strength, or whether this applies to other strengthening exercises (lower extremity, or core exercises) has not yet been determined.

Hopefully these articles are available through your hospital library. Unfortunately, copyright law prevents us from emailing articles to interested readers.

Tools and Measures

Quality of Life / Health Status Measures

COPD Assessment Test (CAT). 8 questions on symptoms, limitations, confidence, sleep and energy. Easy to score. Well-validated. Translated in over 20 languages. Obtained via website: www.catestonline.org

Chronic Respiratory Questionnaire. 20 questions on symptoms, confidence, energy and emotions. Easy to score. Well-validated. Translated in 8 languages. Obtained through email to: austinp@mcmaster.ca May require fee.

St. George's Respiratory Questionnaire. 76 questions on symptoms, activities and impact. Well-validated in research, can be difficult to use clinically. Need computer algorithm to score it. Obtained through email to: Paul Jones pjones@sghms.ac.uk

Dyspnea Measures

Modified Medical Research Council. 5 categories that describe different activities. Patient identifies the category that best describes his dyspnea experience. Well-validated in resaerch. Used clinically. Easily obtained with a Google™ search.

University of California, San Diego Shortness of Breath Questionnaire. 24 items on dyspnea during specific ADLs. Well-validated in research. Obtained through email to: Andrew Ries aries@ucsd.edu

Research Corner

Pulmonary Rehab Research Studies in BC

Does a Nintendo Wii exercise program provide a similar exercise stimulus as a traditional pulmonary rehabilitation program in adults with COPD?

Study summary: Many people with chronic lung disease do not have access to a pulmonary rehab program in their community, so other forms of improving exercise outcomes need to be developed. This study will compare the energy expenditure and other exercise parameters in patients using the Wii Fit system with a traditional treadmill protcocol. Investigator: Pat Camp pat.camp@hli.ubc.ca

Mechanisms of exertional dyspnea in patients with fibrotic interstitial lung disease.

Study summary: Shortness of breath is the hallmark symptom of patients with fibrotic interstitial lung disease (ILD). Unfortunately, the precise physiological mechanisms of this symptom have not been identified in this population. This study will systematically evaluate the mechanisms of shortness of breath in fibrotic ILD and will determine if supplemental oxygen can reduce this symptom and improve exercise capacity. Investigator: Jordan Guenette jordan.guenette@hli.ubc.ca

Does pain limit physical performance in people with COPD?

Study summary: Did you know that ~80% of people with COPD experience ongoing pain? This project will examine whether people with COPD who experience moderate to severe pain will demonstrate lower six-minute walk distances, lower knee extensor torque and lower physical activity levels (measured by 3-D accelerometry) compared to a COPD cohort with mild or no pain. Investigator: Darlene Reid darlene.reid@ubc.ca

Events

Heart + Lung FEST
February 19-23, 2013
Vancouver, B.C.
Sheraton Wall Centre
www.fest.heartandlung.ca

Canadian Respiratory Conference
April 11-13, 2013
Quebec City, Quebec
Quebec City Convention Centre
www.lung.ca/crc

American Association of Cardiovascular and Pulmonary Rehabilitation
October 3-5, 2013
Nashville, Tennessee
Gaylord Opryland Hotel
www.aacvpr.org

American Thoracic Society Conference
May 17-22, 2013
Philadelphia, Pennsylvania
Pennsylvania Convention Centre
www.ats.org

American College of Sports Medicine
May 28 – June 1, 2013
Indianapolis, Indiana
www.acsmannualmeeting.org

Pulmonary Rehabilitation Programs in BC

CHASE. Chase Primary Health Care Services. 250-679-1419
CHILLIWACK. Chilliwack General Hospital. 604-795-4141 ext. 4261
DUNCAN. Duncan Community Centre. 250-737-2004
KAMLOOPS. Kamloops Lung Health Program. 250-851-7976
KELOWNA. Interior Health COPD/PR Program. 250-862-4066
LADYSMITH. Home and Community Care, VIHA. 250-739-5783
LANGLEY. Langley Memorial Hospital. 604 534-4121 Ext. 745273
MAPLE RIDGE. Ridge Meadows Hospital . 604-463-1820
NANAIMO. Nanaimo General Hospital. 250-755-7691 Local 53640
NEW WESTMINSTER. iConnect Health Centre FHA . 604-523-8800
NORTH VANCOUVER. Lions Gate Hospital. 604-984-5888
QUESNEL. G.R. Baker Memorial Hospital
PENTICTON. Integrated Health Centre. 250-276-2181
RICHMOND. Richmond Health Services- Garratt Wellness Centre. 604-204-2007
SURREY. Jim Patterson Outpatient Care and Surgery Centre. 604-582-4565
VANCOUVER. St. Paul's Hospital. 604-806-9032
VANCOUVER. Vancouver General Hospital. 604-875-4111 ext 63099
VANCOUVER. Kerrisdale Community Centre. 604-267-4430
VERNON. Vernon Jubilee Hospital 250-503-3712
VICTORIA. Royal Jubilee Hospital 250-519-5300 ext 13166

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