



**UNIVERSITY OF SASKATCHEWAN
RETIREES ASSOCIATION NEWSLETTER**



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No. 45, April, 2002

Editor- Garry Wacker

PRESIDENT'S REPORT

I would like to wish all retirees a healthy and happy 2002. As you will see in this Newsletter, your Executive has been fairly busy this year. Our annual symposium is scheduled for Saturday, May 4 and I think this year's topic, "Wills & Estate Planning" will be of interest to many retirees.

Our membership is growing significantly, due primarily to the efforts of Les Coleman. Our numbers have increased by over 100 to a current total of nearly 350, which represents over 60% of retirees eligible for membership. Your Executive has approved a "life membership" option, which I think will result in further growth in membership.

Enclosed with this edition of the Newsletter is the Association's brochure. As part of a review of the mandate of the Association currently underway, this brochure will be revised and updated. If you have any comments or suggestions about either the brochure or the mandate of our Association, please let me or any member of the Executive know.

This issue also includes a new feature of the Newsletter that will focus on health related matters relevant to retirees. We hope that you will find this medical column beneficial. Your feedback will be much appreciated.

The Association's annual spring barbeque will be held on Monday, June 3, 2002. I look forward to seeing you there.

Iain MacLean

ANNUAL BARBEQUE
Date: June 3, 2002
Time: 5:00 p.m.
Location: Faculty Club
Cost: \$15.00 per person
RSVP: 966-6618 by noon May 31
 (leave message on answering machine)

NEW LIFETIME MEMBERSHIP OPTION

USRA memberships that expire in 2002, or expired in 2001, (the expiry date is printed on the mailing label on the envelope) are payable as of July 1st. (USRA uses the university calendar year.) The \$20 annual fee remains an option, for those who wish to "pay as you go".

Additionally, the Executive recently approved a new one-time Lifetime Membership fee as an option. Anecdotal feedback from members indicated support for this idea. The Lifetime option provides for membership privileges for the life of the member and his or her spouse. The option is available immediately, or can be selected later. The one-time fee is based on the member's age on July 1st at the time of its election, according to the schedule shown below. Members who have paid dues beyond July 1, 2002 and who wish to avail themselves of the Lifetime option will be given credit for any amounts paid beyond July 1st, 2002.

One-Time Lifetime Membership Fee

<u>Age (on July 1st)</u>	<u>Fee</u>
<60	\$180
60 to 64	\$160
65 to 69	\$140
70 to 74	\$110
75 to 79	\$80
80+	\$50

ANNUAL SYMPOSIUM
Title: "Wills and Estates"
Presenters: Chris Boychuk
 & Nancy Hopkins
Date: Saturday, May 4, 2002
Time: 10:30 a.m. to 12:30 p.m.
Location: Room 133 Arts Building
Cost: \$5.00, open to the public
Free Parking: In Faculty & Staff Lots

NEW MEDICAL COLUMN

Dr. Ian Holmes has agreed to write articles for USRA from time to time on subjects of interest to retirees. This Medical Column appears for the first time in this issue of the Newsletter, and we wish to express our sincerest appreciation to Dr. Holmes for his time and effort in preparing the article.

We need your help in several ways. Firstly, we would appreciate feedback as to the merits of including such a column in our Newsletter. Secondly, we would appreciate suggestions for topics you would like to see covered in future articles. Finally, we need a title for this column and are inviting suggestions before May 10, 2002. The individual whose title is chosen will receive a buffet lunch voucher for two at the Faculty Club. Please submit your entries to the Editor.

? FUTURE COLUMN HEADING ?

AIR TRAVEL FOR PEOPLE WITH CARDIOVASCULAR AND PULMONARY DISEASES

Ian H. Holmes, M.D. March, 2002

Preamble

Useful evidence-based information on the effects of air travel on persons with cardio-pulmonary diseases has accumulated slowly over the past decade. Larger, randomized prospective studies are still needed in order to produce reliable recommendations. Meanwhile, two groups in Canada have introduced recommendations for air travel that can be changed and up-graded as proven data accumulate. These two Canadian groups are:

- a) the Canadian Cardiovascular Society in co-operation with the Occupational Health and Services Department of Air Canada, and
- b) the Canadian Thoracic Society.

We shall consider first the effects of air travel on persons with chronic pulmonary diseases and leave consideration of cardiovascular diseases to a later date. In most reports, chronic pulmonary diseases account for about 10% of incidents of a medical nature in the air. Pulmonary difficulties that arise at

altitude have multiple causes, several of which are generally active in every instance. These causes may include any of the following: physiologic factors related to altitude; structure and handling of aircraft; scheduling of flights and flight delays; duration of flying time; factors associated with fatigue and anxiety; drug and alcohol use; decreased humidity and insufficient fluid intake; and immobility from cramped seating space.

For persons with chronic pulmonary disease, what are the important physiological considerations in air travel?

The earth's atmosphere contains 4 parts nitrogen, 1 part oxygen and very small portions of carbon dioxide, ammonia, nitrites and organic matter. Pressure exerted by this weight of atmosphere is about 760mmHg at sea level. The higher a person rises through this atmospheric cover the less pressure it exerts. Oxygen makes up 21% of this atmosphere at all levels and exerts a pressure of 159mmHg at sea level. This is oxygen's contribution to the total atmospheric pressure and it is called the "partial pressure of oxygen" (PO_2).

When we breathe in air at sea level, the PO_2 is 159mmHg. In the windpipe (trachea) this air mixes with air from the previous breath that has given up much of its O_2 to the lungs. The PO_2 is now about 149mmHg. When this air reaches the air sacs of the lungs it gives up O_2 to the blood stream until the pressures in the air sac and the adjacent capillary are the same at about 100mmHg. Thus, when arterial blood is saturated with oxygen the pressure is 100mmHg, and we measure it as the partial pressure of oxygen in arterial blood, or the PaO_2 .

Hemoglobin is the substance in the red blood cells that carries oxygen. It has the ability to pick up oxygen avidly from the lungs where the pressure of oxygen is high and to give up oxygen rapidly to the tissues where the pressure is low. When the PaO_2 at sea level is 100mmHg, both the red blood cells and the fluid portion of the blood are fully saturated with oxygen. "Oxygen saturation" is the term used to indicate the amount of oxygen in the plasma. A number of mechanisms combine to maintain blood oxygen levels no matter where in the world one lives and at what elevation. The majority of the world's populations live at elevations between sea level and about 6,000 feet. Our systems learn to adapt, but this is not the case for people with chronic lung disease.

What are the environmental changes that can affect people with chronic pulmonary diseases?

Routine flying altitudes for most current passenger jet aircraft vary from 6,700 meters to 13,400 meters above sea level. There are a number of reasons why cabin pressures are not maintained equivalent to ground level, but they are maintained at levels between about 1,828 meters (6,000 feet) and 2,438 meters (8,000 feet) on most jets. Variations in these levels occur often in flight and the atmospheric pressure may vary from 565mmHg to 690mmHg. While oxygen in the inspired air remains at 21%, the PaO₂ may often be rather low. For an example, if a person has a normal PO₂ in the windpipe at sea level of 149mmHg, he/she will have a PO₂ of about 118mmHg in the windpipe at an altitude of 2,400 meters because there is a 4mmHg drop in the pressure of inspired air for every 300 meter rise in altitude. Measurements of PO₂ in inspired air in the cabins of aircraft in flight have varied from 106 to 135mmHg. This means that the PaO₂ (i.e. – the partial pressure of O₂ in the arterial blood) can drop to between 55 and 85mmHg during flight. Most normal individuals have no trouble adjusting to a PaO₂ of 55mmHg. People with lung disease often can not. Add to this the disruption of schedules, physical stress and fatigue, and the effects of medications and lack of sleep, and it is easy to appreciate why passengers have difficulties.

What do current studies reveal?

References for several recent studies are appended. They reveal that the best indicator of probable difficulty in flight (i.e. – symptoms of breathlessness, wheezing and chest discomfort, etc.) is to do blood gas studies to determine the PaO₂ before the flight. This is a simple blood test. It helps to combine the PaO₂ with a measure of FEV₁. The FEV₁ is a measure of how much air a person can expel from the lungs in the first second after taking a maximum breath. They are simple tests that your doctor can arrange. Oxygen saturations at rest and on exercise can also be done easily and can help decide on disability. When more sophisticated testing is required, the use of gas mixtures containing only 15% oxygen in a pulmonary function laboratory may be available. Hypobaric gas chambers have also been used.

If a person's PaO₂ pre-flight is less than 70 to 72mmHg, that person may require supplemental oxygen in flight.

What are the recommendations for air travel when a person has chronic pulmonary disease?

a) General Recommendations

- 1) Persons with chronic lung disease should have an evaluation of lung function done at some time to determine their arterial blood gases and oxygen saturation, especially if it is suspected that these values might be low.
- 2) Persons with known difficulty in eliminating carbon dioxide from their lungs should have a similar evaluation.
- 3) Persons already using supplemental oxygen and persons with any history of previous difficulties with air travel should be tested similarly.
- 4) Persons with a recent worsening of a lung condition, and persons with other conditions that may exacerbate existing chronic lung disease should also be tested.
- 5) Tests with adverse results such as a PaO₂ less than 72mmHg or an O₂ saturation less than about 88% should be reason for consultation between the person's own physician and the physician acting for the airline.
- 6) Persons should not travel by air if there is evidence of active spasm of the bronchial tubes, recent lower respiratory tract infection, recent blood clots in leg veins, recent chest surgery (within 4 weeks), or evidence of air between the lung and the chest wall (pneumothorax)

b) Use of Oxygen

There is no general policy among airlines. Most wish to use their own standard equipment. Most want their own designated physicians to be involved. Most insist on advance booking for O₂ containers. Costs of all this varies among airlines. It is often quite a hassle for the passenger to arrange for O₂ in-flight, and on the ground if necessary, while at the same time allowing for unexpected delays. Adequate lead time is most important.

References:

- Can Respir Journal Vol 5 No 2 Mar/Apr 1998
Perspectives in Cardiology May 1998
Aust/N.Z. J. Surg 1996, Vol 66, p431
Chest, 1999, Apr; 115(4): p991
Emerg Med; Clin Nor Am 1997; Feb; 15(1): p251

UPCOMING NATIONAL EVENT

CAERA Meeting at Congress 2002 May 31, 2002

CAERA (Canadian Association of Emeriti and Retired Academics) is the national association of retired university faculty/staff associations which will next meet at Congress 2002 in Toronto on May 31. The Congress (formerly the "Learned Societies") is being co-hosted this year by the University of Toronto and Ryerson University.

For additional information, a draft version of the program and updates please visit the CAERA web site at <http://caera.caut.ca/> OR follow the "Conference Update" link on the RALUT site at <http://www.ralut.ca>

The local organizing committee can also be reached by email to ral.ut@utoronto.ca or by leaving a voice message at 416-978-7256 or by writing to Conference c/o RALUT, J. Robert S. Pritchard Alumni House, 21 King's College Circle, University of Toronto, Toronto, ON M5S 3J3.

PENSION BENEFITS COMMITTEE REPORT

The Retirees Pension Plan Committee has just received the actuarial evaluation of the Plan as of December 31, 2001. As you might expect, the total fund value has declined as a result of the large current pension payouts and a decline in the value of the fund's investments. Nevertheless, the Plan is still in good financial shape as shown below.

	<u>Dec. 31, 2001</u>	<u>Dec. 31, 2000</u>
	(in millions of dollars)	
Fund value	96.403	109.869
Actuarial liabilities	<u>84.604</u>	<u>89.390</u>
Surplus	11.799	20.479
Contingency reserve	<u>(9.184)</u>	<u>(9.767)</u>
Unallocated surplus	2.615	10.712

Thus, in addition to a sizeable contingency reserve, the fund has a surplus of \$2,615,000. A newsletter to pensioners with more details will follow shortly.

PRIME OF LIFE ACHIEVEMENT AWARDS

Every autumn, USRA recognizes and honours former faculty and staff who, after their retirement, have made outstanding scholarly, artistic or service contributions, which have been recognized by local, national or international bodies. Deans and Department Heads have been invited to submit nominations, and individual USRA members may

also nominate candidates. Call the office or speak to any Executive member to receive a nomination form.

IN MEMORIAM

Allan Trew, Professor Emeritus of Pathology, passed away June 30, 2001 at age 77. He was a Professor of Biochemistry in the Pathology Department from 1963 until he retired in 1985.

Roly St. Arnaud passed away on February 20, 2002. He served as a Professor in Soil Science from 1971 until he retired and was named Professor Emeritus in 1989. He had a national reputation for his research in soils.

Bob Coupland died March 3, 2002. He served as Head of the Plant Ecology Department from 1948 to 1983 and Director of the International Biological Programme Centre for Grasslands Studies 1966-76. As Professor Emeritus, he served as Honorary Visiting Professor, Northeastern Normal University, Changchun, China 1984-95. He was internationally recognized for his research, and published three books on natural grasslands, numerous papers, and contributions to encyclopedias. He was appointed an Officer in the Order of Canada in 1995.

TRIAL RUN

Beginning with this Newsletter, members for whom we have e-mail addresses will receive their copy electronically. Please inform the office if this presents difficulties for you, or if members you know received neither an electronic or paper copy.

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