

Canadian Cardiovascular Congress



Co-hosted by the
Canadian Cardiovascular Society and the
Heart and Stroke Foundation of Canada



INFO CARDIO

MONDAY EDITION

11th Anniversary of the Official Newspaper of the
Annual Canadian Cardiovascular Congress
October 21-25, 2006 / Vancouver, British Columbia

Look for the
PRIORITY PRESS™
Clinical Supplements from
Medical Education Network
in this issue of **INFO-CARDIO**
You can find us in Meeting Room #6
Convention Centre

Veillez prendre note que la version française des
suppléments cliniques d'Info-Cardio est accessible
sur le site www.cardiocongress.org.

Meeting at a Glance

MONDAY, October 23

8:45-9:45 CCCN Opening Plenary: "Ethical issues in cardiac care at the end of life: Negotiating with patients, families and teams"
Presenter: Patricia Rodney
Location: Regency Ballroom D, Hyatt Regency

9:00-10:00 CCC State-of-the-Art Lecture: "HDL cholesterol—from bench to population health"
Presenter: Dr. Jacques Genest, Jr.
Location: Exhibit Hall C, Convention Centre

10:00-10:30 CCS Research Achievement Award Presentation
Location: Exhibit Hall C, Convention Centre

11:00-12:30 CCS Public Policy Session: "It takes a country: Improving access to care for Canadians"
Location: Exhibit Hall C, Convention Centre

14:00-15:30 Access-to-Care Workshop: "It takes a country: Practical approaches to improve access to care"
Location: Room 11, Convention Centre

15:00-16:00 CHS Presidential Lecture: "Uremic hypertension: Role of NO deficiency, oxidative stress and EPO therapy"
Presenter: Dr. Nosratola D. Vaziri
Location: Pacific Ballroom, Fairmont Hotel Vancouver

16:00-17:30 2007 CHEP Recommendations
Location: Pacific Ballroom, Fairmont Hotel Vancouver

19:00-23:00 Vancouver Night (ticket required)
Location: Regency Ballroom, Hyatt Regency Hotel



Dr. Charles Kerr and The Honourable Gordon Campbell, Premier of British Columbia, at the 2006 CCC opening ceremonies on Sunday



Dr. Peter Morley, Melbourne, Australia, HSFC lecturer

At the opening ceremonies, the Honourable Tony Clement, Minister of Health, announced the federal government's support of Canada's new Heart Health Strategy via live telecast. Funding for the initiative will begin at \$3.2 million this year, which will increase to \$5.2 million in the near future. The steering committee responsible for guiding the development of the new Heart Health Strategy will be chaired by Dr. Eldon Smith, editor, *Canadian Journal of Cardiology*.

HSFC keynote address: improving emergency cardiac care

Strengthening the chain of survival for sudden cardiac death patients who never make it to the hospital by necessity must revolve around improved availability of, and training for, lay rescuers. "In the pre-hospital arena, we need to de-mystify CPR," says Dr. Peter Morley, Senior Specialist in Intensive Care at the Royal Melbourne Hospital, Australia, and the Heart and Stroke Foundation of Canada's keynote speaker. "We need to pass on some simple messages to the bystander or lay rescuer: that any attempt at resuscitation is better than no attempt, that it's all right to leave out mouth to mouth ventilation if [they] are afraid of disease transmission, and to push hard in the middle of the chest."

This is just one issue Dr. Morley will discuss during his opening ceremonies address. Emergency cardiac care practitioners, in turn, must continually assess current practices and seek ways to advance them, Dr. Morley adds. "Some of the greatest challenges are to know what we actually do - for example, with regard to ventilation and compression during cardiopulmonary resuscitation, and to find effective

ways of improving what we do - for example, decrease the time without compressions, improve the quality of external cardiac compressions, and avoid the potential adverse effects of ventilation." Other issues that should be discussed include the use of adjunctive devices for CPR and escalating versus fixed energy levels for defibrillation.

Dr. Morley frequently confronts thorny issues surrounding resuscitation, as well as improvements in current practice and still-present gaps in knowledge. He was also instrumental in the development of the 2005 update to the International Liaison Committee on Resuscitation (ILCOR) guidelines, as one of two experts assigned to ensure the quality of all data submitted by hundreds of international reviewers. Among the important results of this wide-ranging endeavour were a number of important changes made to the universal cardiac arrest algorithm, including the new compression:ventilation ratio of 30:2, a single shock for a shockable rhythm, followed by immediate CPR, and providing two minutes of good CPR before checking for a heart beat. □

All CCC Satellite Symposia have been accredited as a Group Learning Activity (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada.

Info-Cardio, the official newspaper of the CCC, is made possible through unrestricted grants from industry.

Thank you to this year's supporters!

AstraZeneca Canada Inc.
Merck Frosst Canada Ltd.
Merck Frosst/Schering Pharmaceuticals
Novartis Pharmaceuticals Canada Inc.
Pfizer Canada Inc.
sanofi-aventis



Dr. Blair O'Neill

Public policy session: tackling wait times

Practitioners must do their part in helping provincial and federal governments manage wait times so that patients do receive the care they need in a timely fashion.

"We as practitioners have a role to play in helping manage the wait list," states Dr. Blair O'Neill, Chair, CCS Access-to-Care Working Group, and chair of the public policy session, "and we have to do a better job at being part of the system and take away the variability of individual wait lists and instead develop a system so patients can have access to those with shorter wait times." At the same time, practitioners must be aware that patients need timely access all the way through the continuum of CV care, i.e. the appropriate diagnostic tests within a reasonable time frame as well as timely access to specialists who can then

Continued on page 2



Continued from page 1

Dietary omega-3 intake likely well below recommended levels

Current dietary intake of omega-3 fatty acids from fish and fish oils is likely well below levels recommended by the American Heart Association (AHA) for patients with coronary artery disease (CAD). They are also probably a long way from optimal levels for overall health, predicts omega-3 fatty acid expert Peter Jones, PhD, Canadian Research Chair in Nutrition and Functional Foods, University of Manitoba, Winnipeg.

The AHA recommends patients with no known CAD consume fatty fish at least two times a week, those richest in eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) being mackerel, lake trout, herring, sardines, albacore tuna and salmon. However, for patients with CAD, the AHA recommend patients consume approximately 1 gram of EPA plus DHA per day, preferably from fatty fish, but otherwise taken in capsule form on the advice of their physician. Patients with hypertriglyceridemia need even higher amounts of between 2 and 4 grams of EPA plus DHA per day, which would have to be taken in capsule form.

However, according to Dr. Bruce Holub, Professor of Human Biology and Nutritional Sciences, University of Guelph, Ontario, the mean current daily intake of EPA and DHA in a typical North American diet—which includes about one fish serving every 10 days—approaches 130 mg/day (*CMAJ* 2002;166:608-15).

Even if a patient with CAD consumed fish 2.5 to three times a week, their intake of EPA and DHA would total only about 500 mg/day.

Certainly, there is good evidence supporting the myriad health benefits of the omega-3 fatty acids. “Essentially, the omega-3s come in two basic categorical flavours: one is plant and one is fish,” Dr. Jones indicates. Plants lack EPA and DHA but they do contain alpha-linolenic acid (ALA). The typical North American diet provides about 1 to 3 grams of ALA per day, so most people are not deficient in ALA.

EPA and DHA in turn are found predominantly in fish and fish oils, and epidemiological studies have shown that the higher the consumption of fish containing EPA and DHA, the lower the mortality from CAD. Intervention trials with fish oil supplements have also shown that the supplements reduce mortality in post-myocardial infarction patients, especially the risk of sudden cardiac death. EPA and DHA have also been linked to a lower risk of cancer including breast, prostate and colon, and they also appear to improve certain features of autoimmune disorders.

In Dr. Jones’ view, people should be consuming closer to a gram of omega-3 fatty acids for optimal health. While fatty fish and omega-3-enriched foods such as eggs and yogurt would get us part way there, realistically, we need omega-3 supplements to reach optimal levels. A variety of supplements are easily obtained in health food stores, but as Dr. Jones cautions, they are not as quality-controlled as consumers may wish.

Alternatively, supplements are available for physicians from the Nutritional Fundamentals for Health, an association formed by Drs. Jones, Holub and several other nutritional experts to provide high-quality, toxin-free supplements. □

decide what the best course of action might be, depending on the results of those tests, he adds.

Dr. O’Neill addresses this issue in “Universal Access, But When? Treating the Right Patient at the Right Time,” one of the articles previously published in the *Canadian Journal of Cardiology* and rebound together in a booklet. Delegates will find a copy in each delegate kit available at the CCS booth and outside the public policy session.

He writes that improved access to care has become the rallying cry for those who wish to repair the reputation of Canada’s health care system. “Many have felt the system is at a crossroads,” Dr. O’Neill acknowledges, “and that donors, administrators and providers must ensure that the system is able to meet current and future projected needs.”

As he also notes, most providers would agree that an appropriately triaged and monitored wait list is necessary to achieve efficient use of health care resources in a publicly funded system. Keys to a “fair and legitimate” wait list strategy therefore include evidence and consensus-based criteria that minimize adverse events. “Wait lists become unsafe when they increase due to insufficient resources to meet the medically determined demand,” Dr. O’Neill observes, “and this may relate to shortages of specialist physicians or to inadequate time or budgetary resources available in the operating room, or catheterization or electrophysiological laboratory.”

When resources are inadequate, they by necessity have to be rationed, which is inevitable when dominated by fiscal constraints. Dr. O’Neill does not believe it is up to physicians to be gatekeepers to the system, “as to do so would place the physician in conflict with his or her duty to the patient.” Rather, both as individuals and through their organizations such as the CCS, physicians themselves “have an important role in advocating on behalf of their patients and the general public to ensure that the policymakers have the appropriate information and knowledge to make decisions regarding the amount of public resources that should be made available for the competing priorities within the public health care system.”

Physicians and their professional associations also need to come to a consensus and develop guidelines and standards for the allocation and use of limited health care resources, he emphasizes.

“At no other time in the history of health care delivery in Canada has access to care been such an urgent priority for the public, health care professionals, administrators and policymakers,” Dr. O’Neill concludes. “The timing is right for the CCS to come forward and lend its expertise, with the goal of establishing national standards for access to cardiovascular services and procedures.” □

Concrete examples of wait time management that work

The public policy-related workshop will provide practical insights into how various institutions have managed their wait times and streamlined the delivery of cardiovascular (CV) care for delegates struggling with the same issues.

Out of some 30 responses received by the CCS from members around the country on how they manage their wait times, the CCS has chosen four examples to discuss in detail. But brief case studies of innovative approaches that will not be presented at the meeting (though available to delegates at the session) include the following:

The Scarborough Hospital, General Division,

has established an Urgent Cardiac Clinic for patients who have been sent home from the ER within the last one or two days with cardiac symptoms and who were advised to see their family physician who might then refer them to a cardiologist. The patient is seen by the same cardiologist supervising non-invasive cardiology for the day, thereby allowing the patient to be examined and undergo an expedited stress ECG or other appropriate tests done in the department. Practitioners can see an extra seven to 10 patients without disrupting office schedules or imposing on patients who have already waited their turn to be seen.

The Pediatric Cardiology Program at Children’s

Hospital of Eastern Ontario is inundated with referrals, but in contrast to the situation amongst adults, the vast majority of new referrals will not have significant pathology (innocent murmurs, benign chest pain). By triaging referrals according to structured guidelines and taking a more interactive approach to referring physicians, a small cadre of nurses has been successful in identifying those children more likely to have pathology.

The University of Ottawa Heart Institute has implemented an automated patient call system (IVR) which calls surgical patients on day 3 and 10 post-discharge and assesses them against a standard symptom screen for complications. Based on the patients’ response, they may be called back within 24 hours for non-urgent issues, or they are kept on the line with the call being forwarded to the Heart Institute where they are immediately connected to a nursing coordinator. The system accurately identifies prodromal symptoms, which allows for early intervention. The system also enables the institute to continue with aggressive discharges, knowing the patient has access to timely follow-up for possible problems.

The Ottawa Heart Institute has adapted the AHA/ACC GAP tool for use as a patient discharge information contract. Upon discharge, if patients are not on the BPG for ACS, a nurse will follow up with the physician to determine the reason. The patient and all members of the care team, including the family physician, are aware of the treatment plan. The data from the copy that resides in the chart can be abstracted in less than one minute and is now part of the CIHI database facilitating national comparisons.

The Ottawa Heart Institute currently runs an acute home monitoring program for patients with arrhythmias, heart failure and ACS. Patients are discharged with a home unit that can monitor ECG, pulse, weight, BP, glucose, O₂ saturation and INR and download this information by telephone to the Institute. Alarms are set off when patients are outside individualized guidelines, and an advanced practice nurse intervenes based on medical directives. This program provides care closer to home, serves the needs of rural patients, and assists family physicians during acute phases of the condition. It also improves

the utilization of the Institute’s beds by allowing patients to remain in their home communities longer.

A group of researchers at the CHUM-Hôtel-Dieu is studying high thoracic epidural analgesia (TEA) for cardiac surgery. So far, investigators have observed pain control is significantly better with this strategy compared to patient-controlled analgesia, and extubation may be carried out earlier with TEA as well. Length of stay in the ICU is also shorter with TEA. Researchers initiated a project of awake cardiac surgery without endotracheal intubation, relying solely on TEA for the analgesia during the procedure. This method has enabled them to reduce pulmonary complications, myocardial damage, delirium and mortality rates. TEA has also reduced resource utilization and cost by 45%.

At the Ottawa Heart Institute, all patients are referred into the triage office where they are assigned dates and physicians based on their urgency. The move away from traditional physician-to-physician referral has improved wait times and response to family physician queries. This triage model improves scheduling efficiency, reduces the ability to jump the queue for non-clinical reasons, reduces the amount of administrative work for physicians, and improves access to information for remote family physicians.

The Ottawa Heart Institute STEMI program provides 24/7 access to primary PCI. Patients are received directly from the field where advanced-care paramedics interpret the ECG. Special arrangements have been made with ambulance services to provide for rapid transport for patients who walk into ER departments. Results of the first six months of in-the-field patients are: time to treatment has a median of 88 minutes (first medical contact to balloon); 7% (from 9% to 2%) reduction in AMI mortality; and paramedics have a positive predictive accuracy of 80% and a negative predictive accuracy of 99%. □



State-of-the-art lecture: setting our sights on HDL-C

Renowned hypertension specialist Dr. Jacques Genest, Jr., Director, Division of Cardiology, MUHC-Royal Victoria Hospital, is predicting that HDL-C will be the next big frontier in lipid research simply because so much has already been done to effectively lower LDL-C and the time has come for researchers to train their sights on new targets. Dr. Genest is delivering the state-of-the-art lecture this year entitled "HDL Cholesterol from Bench to Population Health."

Earlier guidelines identified low levels of HDL-C as a prime risk factor in the promotion of coronary artery disease (CAD). But it might have been a mistake to accord so much weight to low HDL-C, Dr. Genest argues, as it now appears that it is often the consequence rather than the primary cause of other common risk factors, the constellation of which add up to elevated CAD risk. "Most patients with low HDL-C levels have low HDLs because of poor lifestyle habits," Dr. Genest explains.

For example, obesity, cigarette smoking, lack of exercise, high alcohol intake, high blood pressure, glucose abnormalities and high triglycerides all cause low HDL, emphasizing the importance of lifestyle modification to raise HDL-C levels, as he suggests. Epidemiological evidence supports the theory that the lower the HDL, the higher the CAD risk.

In theory then—though not yet in practice—raising HDL-C should be cardioprotective. Until clinical trials demonstrate that raising HDL-C does, indeed, reduce CVD-related morbidity and mortality, there are a number of theoretical reasons why having elevated HDL-C levels would be desirable from a CVD point of view. As Dr. Genest explains, HDL-C prevents oxidation of

LDL-C, a key step in the atherogenic process. It also has anti-inflammatory properties, improves vascular function, inhibits thrombosis and, most importantly, removes cholesterol from tissues, especially from macrophages in atherosclerotic plaques through a process known as reverse cholesterol transport. "HDL-C is probably the most important lipoprotein that brings cholesterol to a lot of other tissues to synthesize hormones," Dr. Genest states.



Dr. Jacques Genest, Jr.

Prime directive of HDL-C

Interestingly, however, HDL-C probably did not evolve to protect human beings from heart disease but rather to keep cells alive which would otherwise die from having accumulated too much cholesterol. As Dr. Genest notes, right now, there are few if any good medications that raise HDL-C levels independent of their effects on other lipids.

However, there are a few promising candidates such as the first-in-class cholesteryl ester transfer protein inhibitor, now in clinical trials and which early findings suggest raises HDL-C levels by as much as 50%. New formulations of niacin that cause less flushing may prove helpful in patients with low HDL-C as well. Basic research in the lipoprotein field is also steadily uncovering new targets for treatment that will hopefully raise HDL-C more effectively than currently available strategies.

In the meantime, Dr. Genest can't help but ask whether it is worth "fighting the wages of our sins" with yet another pharmacological approach when lifestyle, especially in the primary prevention setting, is so important in raising—and keeping—HDL-C levels in the cardioprotective range. □

Inaugural Jean Davignon/Pfizer CV Research Award



Dr. Jean Davignon

A new component of Pfizer's annual Cardiovascular Research Awards competition was created this year in an effort to support Canadian innovators in the fields of dyslipidemia and atherosclerosis research. It recognizes the outstanding contributions of Order of Canada Officer Dr. Jean Davignon to the fields of dyslipidemia and atherosclerosis throughout his career. As such, the inaugural Jean Davignon Distinguished Cardiovascular Research Award was presented to Dr. Davignon himself.

"We hope that this award, created in Dr. Davignon's honour, will help other researchers generate new scientific knowledge that may ultimately lead to improvement in our understanding and treatment of dyslipidemia and atherosclerosis," Pfizer stated in an announcement.

The Jean Davignon Distinguished Cardiovascular and Metabolic Research Award sponsored by Pfizer honours a single recipient with a total of \$500,000, to be granted in two instalments of \$250,000/year. Starting in 2007, there will be a yearly call for proposal submissions specifically for this award. Acceptable research projects for this aspect of the overall Pfizer award competition should focus on the areas of lipid disorders or

atherosclerosis, including their etiology, genetics, epidemiology, diagnosis, treatment and prevention.

As Pfizer also explains, the Jean Davignon award is just one part of the overarching Pfizer Cardiovascular Research Awards competition, which encompasses all aspects of cardiovascular research, including basic science, clinical, in vitro, animal, epidemiology and outcomes studies.

Applications to Pfizer's CV research awards competition for funding of research projects are evaluated by an independent peer review committee consisting of some 16 Canadian experts whose work spans the entire spectrum of health research. Reviewers are selected by Pfizer's medical division in agreement with the review committee chair, Dr. Jean-Claude Tardif of the Montreal Heart Institute. Pfizer in turn is responsible for managing and administering the competition.

Each recipient will receive up to a maximum of \$200,000 per award. For further information or to learn about proposal submission requirements, please visit www.pfizercv.ca. The deadline for the next wave of applications is November 30, 2006. □

HSFC to fund new research into obesity and resuscitation

The Heart and Stroke Foundation of Canada (HSFC) is funding new research into two of its priority areas, resuscitation and obesity.

The foundation will launch requests for applications on December 1, 2006, for policy-relevant collaborative projects on how the built environment contributes to obesity; how present and proposed resuscitation policies, strategies, tools, training approaches, legislation or guidelines influence the uptake of knowledge by lay-rescuers and/or first responders

such as health care providers; and monitoring and optimizing CPR to support research to enhance the quality of CPR and improve outcomes in adult and pediatric patients.

Research findings supported by these initiatives will contribute to the evidence base in these critical areas, and build research capacity in obesity and resuscitation knowledge in Canada, according to Carolyn Brooks, HSFC Chair of Research Policy and Planning Advisory Committee. □



HEART &
STROKE
FOUNDATION
OF CANADA

For more information,
please contact Louise
Marcus, HSFC Assistant
Director, Strategic
Research Initiatives
(lmarcus@hsf.ca)

Please plan to attend:

Symposium: "Medical Debate in Lipid Management: Meeting the Challenge of Evolving Evidence," Monday, October 23, 7:00-9:00, Ballroom, The Fairmont Waterfront Hotel.

CCS Position Paper Workshop: "Guidelines for the Diagnosis and Treatment of Dyslipidemia and Prevention of CV Disease," Tuesday, October 24, 15:30-17:00, Crystal Ballroom, Pan Pacific Hotel.

Symposium: "CVOLUTION: Challenging Ideas, Finding Solutions, Improving Treatment," Tuesday, October 24, 7:00-9:00, Ballroom A-B, Vancouver Convention and Exhibition Centre.

Symposium: "Consensus Conference – Recommendations on Heart Failure 2006: Diagnosis and Management," Tuesday, October 24, 14:00-15:00, Exhibit Hall C, Vancouver Convention and Exhibition Centre.

Workshop: "CCS Heart Failure Recommendations 2006: Help Shape the Future of Heart Failure Care in Canada," Tuesday, October 24, 15:30-17:00, Parkview Terrace 1, Vancouver Convention and Exhibition Centre.

Symposium: "Current Issues in Cardiology," Wednesday, October 25, 7:00-9:00, Ballroom, The Fairmont Waterfront Hotel.

Debate: "Controversies in Heart Failure," Wednesday, October 25, 7:25-7:45, Ballroom, The Fairmont Waterfront Hotel.



Finding answers. For life.

Canadian Nurses Association: "Toward 2020" offers new vision for future care

The current model of health care delivery where family physicians are the portal through which patients must pass in order to gain access to the system is unsustainable, according to Michael Villeneuve, Scholar in Residence, Canadian Nurses Association, and a new vision for health care delivery needs to be embraced to adequately address patient needs in the future.

In his document, "Toward 2020: New Directions for Canadian Nursing," Villeneuve and co-investigator Jane MacDonald lay out sound reasons why policymakers need to start thinking more creatively if we are going to meet increasing patient demand for health care services now and in the future. "There is a fundamental mismatch between both the number and the kinds of services people want and there is, if not less service now than before, certainly not more service," Villeneuve remarks.

Indeed, one million residents in Ontario do not currently have a family practitioner. Since they are not immune from becoming ill, "people who don't have access to front-line primary care go to the emergency room, for lack of another option," Villeneuve says. Consequently, more than 50% of patients in the ER shouldn't be there, he adds. Furthermore, fewer candidates now seem to be interested in pursuing a career in either family practice or nursing. Right now, apparently 30% of family practitioner positions for medical students remain unfilled, Villeneuve notes.

Despite the fact that there are 40% more "seats" in nursing schools now than there were in the year 2000, they remain empty, says Villeneuve, "so it's a very worrying trend."

Part of the problem, at least in nursing, is that nurses consistently have the highest rates of absenteeism of virtually any profession, with approximately 10,000 full-time equivalents taking off sick from work every year. At the same time, approximately the same number of nurses are working overtime, "so the work is



Michael Villeneuve

being done," Villeneuve reports, "but the prediction is that we will be one in four nurses short by 2020, which if you walked into a hospital that had eight floors, there would be two whole floors of people with no one to care for them."

What the co-authors envision instead is a new approach to health care delivery in which every Canadian has a primary caregiver—be it a nurse, physician, social worker or other health professional—all working in a community health centre or affiliated satellite. This would provide patients with a range of health professionals who could serve as gatekeepers to primary and specialist care. Nurses in particular could act as "shepherds," coordinating care, delivering services themselves and helping patients understand their options as they navigate the health care system.

As they already now do in many under-served areas, "Toward 2020" calls for a substantially enhanced role for registered nurses and registered psychiatric nurses in primary care, and for licensed practical nurses to have increased responsibility in long-term and transitional care. "We also have to stop pushing the medication cart," emphasizes Villeneuve, and provide the services and care nurses were trained to do, letting patients attend to tasks such as taking medications themselves or with the help of personal support workers.

"The system still does very well if you are acutely ill," he states, "but our hope is that if we did more upstream to prevent the need for acute care, then that would take the pressure off the system at the acute care level and it could work even better."

"Toward 2020: Visions for Nursing" was funded as part of a larger group of studies under the project title "Toward 2020: Strengthening Canada's Health Human Resources." The project was funded through the Office of Nursing Policy, Health Policy Branch, Health Canada. □

Have-a-Heart Bursary Program: Seeking out the cardiovascularly minded

The Have-a-Heart Bursary program is once again funding a select group of medical trainees whose attendance at the CCC hopefully will spark an interest in pursuing a career in cardiovascular (CV) medicine. The program is run by the Canadian Cardiovascular Society Academy (CCSA), a charitable foundation whose main purpose is to provide travel bursaries to young medical and research professionals who are potentially interested in pursuing careers in CV medicine and research. "What we're really interested in is finding ways to support future CV practitioners and scientists for Canada, so that is our mission," CCSA president Dr. Bob Howard explains. Recipients are selected by the CCSA committee to receive bursaries to cover travel and other expenses incurred while attending the congress.

The Vancouver Hospital Foundation has also donated an additional \$10,000 this year to augment the funds to a total of \$25,000 for bursary recipients. Each year, the CCSA receives approximately 70 submissions, from which 15 to 20 are chosen as eligible for a bursary. Recipients come from every province and from undergraduate medicine, early years of post-graduate training, as well from masters and PhD programs in the biological sciences.

As Dr. Howard describes, once at the meeting, each bursary recipient has access to an expert who fits in with their area of interest, and this allows each of them to discover what it might be like to pursue a career in CV medicine or research. They can also take in many different facets of the CCC, be it in basic sciences through to prevention of CV disease. Perhaps best of all, this year they will be treated to the vistas of Vancouver which, on a clear day, are nothing short of breath-taking.

"We have a number of programs we support but we are particularly proud of the Have-a-Heart Bursary program because it allows young people in training to attend the annual CCC meeting and provides them with opportunities to be mentored or coached by established leaders from across Canada," Dr. Howard notes.

Recipients of this year's Have-a-Heart Bursary Program are Tiffany Kwok, Medical School, Toronto; Erin Tranfield, PhD Program, Vancouver; Marie Lordkipanidzé, PhD, Pharmaceutical Sciences, Montreal; Fahad Razak, Medical School, Toronto; Antigone Oreopoulos, PhD, Clinical Epidemiology, Edmonton; Mariane Paquet, MD/PhD, Sherbrooke; Darren Kagal, Internal Medicine, Toronto; Marie-Claude Aubin, PhD, Pharmacology, Montreal; Aran Dangerfield, Medical School, Winnipeg; Andrew Grant, Internal Medicine, Halifax; Ciorsti MacIntyre, Medical School, Halifax; Kim Haberer, Medical School, Halifax; Annie Chan, Masters, Toronto; Yin Ge, Medical School, Montreal; and Selena Davis, Masters in Health Informatics, Nelson, BC. □

NCEP tips on how to lower cholesterol levels with diet alone

- Keep intake of saturated fatty acids to less than 7% of total calories.
- Consume no more than 200 mg/dL of dietary cholesterol a day.
- Limit total fat intake to 25 to 35% of daily calories.
- Keep trans-fatty acid intake as low as possible.
- Carbohydrates should make up approximately 60% of daily calories.
- Protein intake should make up no more than 15% of daily calories.
- Decrease consumption of saturated fats by at least one-third.
- Saturated fats can be significantly curtailed by replacing fatty and processed meats with leaner products and milk-based products with low-fat or fat-free alternatives.
- Avoid hard margarines and baked products containing shortening to reduce trans-fatty acid intake.
- Cut dietary cholesterol by one-third to one-half by limiting intake of foods containing egg yolks and by using low-fat or fat-free milk products. At the same time, decrease intake of fat from meats.
- Moderate consumption of vegetable oils helps keep triglyceride levels relatively low and elevates HDL-C levels.
- Plant stanols and sterols, typically found in esterified margarines, interfere with cholesterol absorption and approximately 2 grams of a stanol or sterol a day will reduce LDL-C by about 10%.
- Higher soluble fibre and soy protein intake will also reduce LDL-C.
- Elimination of animal fats in milk and meat should result in a net loss of calories and hence promote weight loss, which also reduces cholesterol levels.
- Consumption of foods that are high in sugar, even if low in fat, can offset much of the benefit derived from reduction in high-fat foods.
- Foods high in sugar and starch such as breads, potatoes, rice and pasta should be limited for more effective weight loss.
- To achieve a normal range body mass index (BMI), patients should aim for a 10% loss of body weight a year.
- Patients with a BMI of 25 to 29.9 kg/m² (overweight) should aim to reduce daily caloric intake by 300 calories.
- Patients with a BMI of 30 kg/m² or more (obese) should reduce food intake by 500 calories a day.





Canadian Cardiovascular Congress 2006

Vancouver, British Columbia / October 21-25, 2006

Tandem Relationships in LDL-C Lowering and HDL-C Raising

Vancouver - Intensive LDL-C lowering has been shown to reduce cardiovascular (CV) events. Results from the SPARCL (Stroke Prevention by Aggressive Reduction in Cholesterol Levels) trial have shown that statins reduce major coronary events and help prevent stroke in patients with a previous history of stroke or of transient ischemic attack. While new lipid guidelines advocate more aggressive LDL-C lowering in high-risk as well as "low-risk" patients, raising HDL-C may provide even greater protection. Ongoing studies with torcetrapib, a cholesterol ester transfer protein inhibitor, given alone or in combination with atorvastatin, showed both strategies increased HDL-C substantially. Consequently, investigators have launched several large-scale studies to further evaluate both options on plaque burden and hard clinical end points. In order to improve their CV risk profile, it is possible to get patients to make lifestyle changes with physicians effectively partnering with their patients in facilitating the processes leading to change.

By: Pam Harrison

There are good reasons why a statin should prevent ischemic stroke, including their ability to stabilize plaque, improve endothelial function and decrease both platelet aggregation and inflammation. In fact, each 10% reduction in LDL-C leads to a 15.6% reduction in the risk of stroke, according to a meta-analysis of all the major statin trials published prior to August 2003. However, despite good evidence, most stroke patients do not receive statin therapy, according to data from a stroke prevention clinic in Edmonton to be presented by Dr. Ashfaq Shuaib, Professor of Medicine, University of Alberta, Edmonton.

In over 2000 patients with transient ischemic attacks (TIAs) or completed stroke seen in over 2.5 years at the clinic, only 11% were on appropriate therapy; in the remaining patients, elevated LDL-C levels requiring treatment were diagnosed in almost 80% of them. This is not an isolated experience, as Dr. Shuaib notes, although it is improving, as over 57% of patients enrolled in the Canadian stroke registry in 2003 were on a statin vs. 39% in 2001. Results from the SPARCL (Stroke Prevention by Aggressive Reduction in Cholesterol Levels) trial indicated that statins are of value in what was a mixed population of primary and secondary prevention patients, all of whom had experienced either a TIA or a stroke within the previous six months with no history of coronary artery disease.

Baseline LDL-C levels were in excess of 100 mg/dL (2.06 mmol/L) and <190 mg/dL (<4.92 mmol/L). Approximately 4600 patients were randomized to atorvastatin 80 mg or placebo. At the end of six years, mean LDL-C had dropped from baseline by 7% in placebo patients vs. 38% in the statin group. This change in mean LDL-C was associated with a 16% relative risk reduction in fatal and non-fatal stroke in favour of the

statin group. Active treatment also provided a 35% relative risk reduction in major coronary events and a 45% reduction in revascularization rates. As Dr. Shuaib indicates, to prevent the first event in high-risk patients, physicians should lower LDL-C to <3.5 mmol/L, and for those at the very highest risk (diabetes, established atherosclerosis), physicians need to aim for levels of <2.0 mmol/L.

As will be discussed by Dr. Jean-Claude Tardif, Director, Research Centre, Montreal Heart Institute, and Professor of Medicine, *Université de Montréal*, Quebec, a number of landmark trials have clearly demonstrated the benefit of intensive lipid lowering with high-dose statins in high-risk patients. In the TNT (Treating to New Targets) trial, for example, atorvastatin 80 mg/day reduced major coronary events by 22% at the end of five years compared with the 10-mg dose. This "lower-is-better" strategy was again demonstrated in the PROVE-IT-TIMI 22 trial, where event rates consisting of all-cause mortality, myocardial infarction (MI), unstable angina or stroke at two years was 26.3% in ACS patients receiving pravastatin 40 mg/day vs. 22.4% in the atorvastatin 80 mg group, for a risk reduction of 16% in favour of the intensive therapy group.

Major coronary events were not significantly decreased in the IDEAL (Incremental Decrease in Endpoints through Aggressive Lipid Lowering) trial with atorvastatin 80 mg compared with usual-dose simvastatin in patients with a previous MI. However, the high-dose strategy did reduce the risk of other composite secondary end points as well as the risk of nonfatal MI. It was also shown to halt disease progression in the REVERSAL (Reversal of Atherosclerosis with Aggressive Lipid Lowering) trial as measured by intravascular ultrasound (IVUS).

Adding Benefit to Treatment: Increasing HDL-C

Nevertheless, lowering LDL-C is not the complete picture in reducing major coronary events, as it has been established that for every 1% increase in HDL-C, there is a 3% decrease in events. Thus, there is considerable interest in new options for raising HDL-C. One such pathway is through inhibition of the cholesterol ester transfer protein (CETP). Early studies of the first-in-CETP-class inhibitor torcetrapib showed HDL-C increases of up to 55% and LDL-C decreases of up to 17% with the 90-mg dose, while in statin-eligible patients, combination with atorvastatin 20 mg provided enhanced LDL-C lowering.

As Dr. Tardif will discuss, investigators have already launched several large-scale studies to see what effect the combination vs. the statin alone has on both underlying disease progression as well as hard clinical end points. The ILLUSTRATE study—an IVUS study measuring plaque burden—will involve 886 CAD patients randomized to atorvastatin alone or in combination with torcetrapib. In turn, ILLUMINATE will involve 15,000 patients and will evaluate the effect of the same combination vs. the statin alone on major CV events in CAD patients or its risk equivalents.

Guidelines and Patient Risk Assessment

Dr. Ruth McPherson, Professor of Medicine and Biochemistry, University of Ottawa Heart Institute, Ontario, will in turn offer the latest updates from the working group's new lipid guidelines and how they should be applied in clinical practice. Key among the changes are new, tighter LDL-C goals of <2.0 mmol/L for patients with established CV disease or high-risk equivalents such as diabetes and those with multiple CV disease risk factors. "We are also recommending starting with a statin alone and titrating up to higher doses—in a sense, 'maxing out' on statin use—before adding a second agent," she reveals.

The new guidelines also emphasize the need for physicians to identify those patients whose

Framingham risk assessment score may place them in a lower risk category but whose long-term risk is not, in fact, all that low. When that risk is truly <10% over the next 20 years, "the big emphasis is on lifestyle change," she notes.

However, some "low-risk" patients are actually at high risk for a CV event over the long term. One way to identify this subgroup of patients is to calculate their total cholesterol:HDL-C ratio (TC:HDL-C). Those who have a TC:HDL-C ratio ≥ 6 actually have a 20-year CAD risk of 20%, Dr. McPherson observes, so these patients need to be treated more aggressively than those with lower TC:HDL-C ratios. That said, physicians should make a "concerted effort" to treat all risk factors by lifestyle interventions in all categories of risk, she states.

Building an Effective Physician/Patient Partnership

Partnering with patients to help make those behavioural changes is critical to success, as will be discussed by Dr. Nigel Flook, Associate Clinical Professor of Family Medicine, University of Alberta, Edmonton. "The first thing you want to do is try to get an idea of how prepared patients are for change," he explains. Based on that initial assessment, physicians next need to increase patient motivation if they still are in the earlier stages of preparedness, he adds, "where the focus is usually geared to helping them increase their motivation to change." It is also important for physicians to address the benefits that change will bring, he stresses.

If patients are moving forward quite well in their preparedness for change, the next phase involves identification of any barriers to change. "If we can find strategies to help patients overcome barriers to change, that will increase their confidence to change," affirms Dr. Flook. Layered over this whole process is the need to identify issues in their environment that may hinder or even support their ability to maintain change. "It's all about learning how to become an effective partner with your patients so that you can help them facilitate change," he remarks. □

Please plan to attend:

Symposium: "CVOLUTION: Challenging Ideas, Finding Solutions, Improving Treatment," Tuesday, October 24, 7:00-9:00, Ballroom A-B, Convention Level, Vancouver Convention and Exhibition Centre.

Note: Unless specifically stated otherwise, the opinions and information presented in these reports are those of individuals and do not represent the opinions of the Canadian Cardiovascular Society.

© 2006 Medical Education Network Canada Inc. All rights reserved. Priority Press™ is an independent medical news reporting service providing educational updates reflecting peer opinion from scientific and clinical meetings worldwide. Views expressed are those of the participants and do not necessarily reflect those of the publisher or the sponsor. Support for distribution of this report was provided by industry through an unrestricted grant and under written agreement that ensures independence. Any therapies mentioned in this report should be used in accordance with the recognized prescribing information in Canada. No claims or endorsements are made for any products, uses or doses presently under investigation. No part of this newsletter may be reproduced in any form or distributed without written consent of the publisher. Information provided herein is not intended to serve as the sole basis for individual care. Our objective is to facilitate physicians' and allied health care providers' understanding of current trends in medicine. Your comments are encouraged.

Medical Education Network Canada Inc. 132, chemin de l'Anse, Vaudreuil, Quebec J7V 8P3
E-mail: mednet@mednet.ca / Web site: www.mednet.ca Please e-mail us at our address to receive reports on-line.



Canadian Cardiovascular Congress 2006

Vancouver, British Columbia / October 21-25, 2006

Improving Outcomes in Heart Failure: New Data and Novel Approaches

Vancouver - More than half a million Canadians currently have heart failure. Rates of diagnosis and heart failure-related events are projected to escalate and present a growing resource burden as an increasing proportion of the population becomes elderly, as high rates of obesity and diabetes take their toll, and as more patients survive myocardial infarction. Congress participants can attend several sessions outlining current and novel approaches to this complex and costly disease. Among these are a workshop on updated guidelines for heart failure diagnosis and management and a debate reflecting current evidence and issues in medical therapy. These and other presentations will stress that a multidisciplinary approach to disease management may improve outcomes by enhancing the use of proven therapies and strengthening patient monitoring and education.

By: *Carol Duthie*

Congress registrants may attend two important sessions on the 2006 recommendations for the diagnosis and management of heart failure on Tuesday, October 24: a consensus conference from 2:00-3:00 p.m. and a workshop from 3:30-5:00 p.m. A key message: "Every patient with heart failure should have a minimum standard of care that includes access to care, proper diagnosis, baseline therapy, and access to specialty management and therapeutic devices, where appropriate," summarizes Dr. Jonathan Howlett, co-chair of the 2006 heart failure guidelines committee. Dr. Howlett is Associate Professor of Medicine, Dalhousie University, and Medical Director, Cardiac Transplant and Heart Function Clinic, Queen Elizabeth II Health Sciences Centre, Halifax.

Evidence on Angiotensin Modulation

Based on evidence accumulated in numerous landmark clinical trials, the updated algorithm for treatment of chronic heart failure (*Can J Cardiol* 2006;22(1): 23-45) retains the recommendation that in patients with left ventricular ejection fraction (LVEF) <40%, therapy should generally begin with the combination of an ACE inhibitor and a beta blocker. An angiotensin receptor blocker (ARB) may be substituted if one of these agents is not well tolerated by the patient, and may also be considered as additional therapy if the patient's symptoms persist and his or her condition suggests a high risk of hospitalization.

Several papers published recently have offered additional data and opinions on the clinical effects and role of ARBs in heart failure, supplementing data from such large trials as the CHARM program and the VALIANT study. Among these is a re-analysis of the CHARM data, which determined that as compared

with placebo, the ARB candesartan significantly reduced the composite of cardiovascular death and nonfatal myocardial infarction in patients with heart failure.

"Heart failure has come to a stage where a lot of the best evidence has now been consolidated. This is a time for us to step back and translate it into clinical practice. I think that's an exciting aspect—that we can put together all this wisdom that we have learned from clinical trials," states Dr. Peter Liu, Director, Heart and Stroke/Richard Lewar Centre of Excellence in Cardiovascular Research, and Heart and Stroke/Polo Chair Professor of Medicine and Physiology, University of Toronto.

Current evidence on the benefits of angiotensin-antagonizing agents for heart failure will be presented in a debate on Wednesday, October 25. Drs. David Fitchett, Director, Coronary Care Unit, St. Michael's Hospital, Toronto, and Jean-Lucien Rouleau, Dean, Faculty of Medicine, *Université de Montréal*, will examine the merits of ACE inhibitors and ARBs, respectively.

"[Such] debates are a good way to focus attention on the fact that being on angiotensin modulators is important," Dr. Liu remarks. "Previously, we knew that ACE inhibitors work for some patients but others couldn't tolerate them. The question was whether ARBs are as good or not. I think the real luxury right now is [that] either one or the other will actually help the patient."

Innovative Concepts in Heart Failure Treatment

That heart failure is an age-related disease and the Canadian population is growing steadily older mean heart failure prevalence and incidence, as well as heart

failure-related events, will likely increase. One set of investigators has projected that by 2025, at which time individuals aged over 65 will constitute more than 20% of the population, heart failure incidence will be more than double its current level. Poor control of hypertension and diabetes will also likely contribute. Effective therapeutic approaches aimed at decreasing complications, hospitalization, mortality and associated costs will be crucial, Dr. Rouleau noted in a recent review (*Can J Cardiol* 2005;21(12): 1084-8). He pointed to such advances as surgical interventions, some of which still require rigorous evaluation; cardiac devices such as biventricular pacemakers and implantable defibrillators; and newer approaches such as stem cell therapy.

Along with these technology-based advancements, progress in heart failure treatment can be made through the involvement of health care practitioners other than physicians, Dr. Howlett remarks. "There has to be collaborative care... I think many other health care providers have traditionally been shut out of the education process and we think it's important to recruit everyone, with the epidemic of heart disease that's coming."

Several presentations at this year's congress reinforce the potential utility of a multidisciplinary approach to heart failure. Erin Tjam, PhD, Director of Research, St. Mary's General Hospital, Kitchener, and colleagues are presenting poster data from the Epidemiology, Practice, Outcomes, and Costs of Heart Failure (EPOCH) study. They note that avoidable acute-care use can be prevented if those caring for patients with heart failure take part in an interdisciplinary education program. Similarly, according to an oral presentation by investigators led

by Sheri L. Koshman, PharmD, University of British Columbia, patient outcomes can be improved through the proactive involvement of pharmacists. Among the goals of a meet-the-experts session on Monday, October 23, 12:30-2:00 p.m., is a review of the multidisciplinary team approach to the medical optimization of advanced heart failure patients.

Dr. Liu notes, "There is little question that because heart failure is a chronic disease [with] periods of stability and deterioration, the best way to manage it is to have a disease management team. There are robust data now that when you use an appropriate multidisciplinary team, you not only have a happier patient, you have better outcomes as well: decreased hospitalizations, decreased utilization of resources, and better use of medications." Implementation of this care model is an ongoing challenge for the CCS and various other Canadian stakeholders, Drs. Howlett and Liu agree. "The CCS is taking the lead [in this regard]. It is not just publishing guidelines but taking them to the wider medical community, so that every practitioner knows the fundamental principles of treating patients with heart failure," Dr. Liu observes.

Over the next several years, the CCS will be evaluating the implementation and results of updated heart failure guidelines, Dr. Howlett reveals, with a view to continuous improvement in care. "The burden of heart failure will go up, so we need to get ready for it. Step 1 is to make [all health care practitioners] understand that it's their problem, too; step 2 is for them to understand they can do something about it; and the third step is to have these guidelines and best practices implemented, then measured for impact, so that we can improve in the future." □

Please plan to attend:

Consensus Conference: "Recommendations on Heart Failure 2006: Diagnosis and Management," Tuesday, October 24, 14:00-15:00, Exhibit Hall C, Vancouver Convention and Exhibition Centre.

Workshop: "CCS Heart Failure Recommendations 2006: Help Shape the Future of Heart Failure Care in Canada," Tuesday, October 24, 15:30-17:00, Parkview Terrace 1, Vancouver Convention and Exhibition Centre.

Debate: "Controversies in Heart Failure," Wednesday, October 25, 7:25-7:45, Ballroom, The Fairmont Waterfront Hotel.

Note: Unless specifically stated otherwise, the opinions and information presented in these reports are those of individuals and do not represent the opinions of the Canadian Cardiovascular Society.

© 2006 Medical Education Network Canada Inc. All rights reserved. Priority Press™ is an independent medical news reporting service providing educational updates reflecting peer opinion from scientific and clinical meetings worldwide. Views expressed are those of the participants and do not necessarily reflect those of the publisher or the sponsor. Support for distribution of this report was provided by industry through an unrestricted grant and under written agreement that ensures independence. Any therapies mentioned in this report should be used in accordance with the recognized prescribing information in Canada. No claims or endorsements are made for any products, uses or doses presently under investigation. No part of this newsletter may be reproduced in any form or distributed without written consent of the publisher. Information provided herein is not intended to serve as the sole basis for individual care. Our objective is to facilitate physicians' and allied health care providers' understanding of current trends in medicine. Your comments are encouraged.

Medical Education Network Canada Inc. 132, chemin de l'Anse, Vaudreuil, Quebec J7V 8P3
E-mail: mednet@mednet.ca / Web site: www.mednet.ca Please e-mail us at our address to receive reports on-line.