



the person reaches hospital. — *Sonia Toews*, Heart and Stroke Foundation

Women reminded of heart disease's heavy toll

Last September, the Tai Kwon Do lessons, therapeutic massage, tips on surfing the Internet, blood pressure testing and instructions on giving up

smoking made the Ottawa Congress Centre look a little like a freshers' fair during initiation week. But the crowd milling around the 52 booths were there for their health, not their social lives. At the first-ever "Hug Your Heart" day, close to 300 women were taught about cardiovascular disease and ways to prevent it. More sessions will follow in other parts of the country.

In Canada, 7 times more women die of heart disease than breast cancer, but most women aren't aware of this, the risk factors in their own lives, or heart attack symptoms. What's more, physicians are more likely to miss the warning signs among women than men. "We want to do for heart disease what the pink-ribbon campaign has done for breast cancer," said Barbara

Queen's researcher honoured for breakthroughs in cardiology

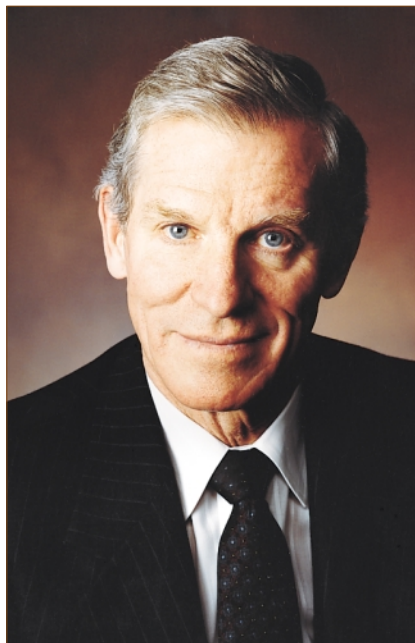
Dr. John Parker, one of the first Canadians trained in the techniques of cardiac catheterization and a central figure in the evolving story of nitroglycerin tolerance, was honoured recently for his contributions to research involving nitrates. Parker, who has retired from the Kingston General Hospital and Queen's University in Kingston, Ont., continues his research in cardiology and maintains a consulting practice at the Kingston General.

Parker, a Queen's graduate who began his clinical practice in Kingston in 1961, was named director of the cardiovascular laboratory at Queen's a few years later. "In 1963 we started doing coronary angiography," he said. "We were the second centre in Canada to develop that technique — the Toronto General had done 30 or 40 patients when we initiated our program." He also helped establish a busy angiography training program.

His research endeavours initially focused on cardiac changes associated with angina. Using newly developed catheter techniques he was able to demonstrate that left ventricular function was markedly impaired during periods of induced angina. If sublingual nitroglycerin was given before the onset of anginal pain, left ventricular function remained normal and anginal pain was prevented.

Fifteen years ago he decided to

study nitrates taken orally because "there was a lot of controversy as to whether they were absorbed enough, remained active after they were absorbed, or whether there was any clinical effect." He found that, initially, a single morning dose of isosorbide dinitrate (ISDN), the



Dr. John Parker: an impressive career

most commonly used nitrate at that time, was effective in improving exercise tolerance for 8 hours. However, after 2 weeks of 4 daily doses the efficacy was reduced by about 50%, and no clinical effect could be demonstrated after 2 hours.

"We saw that each dose [as high

as 120 mg] was effective for 8 hours, but after the short period of sustained therapy the doses had the same diminished effect, indicating tolerance." It was later discovered that if the evening dose was eliminated, the pattern of response to ISDN improved significantly. "That laid the groundwork for a change in prescription pattern to reduce the magnitude of the tolerance problem," said Parker.

In the 1980s transdermal nitroglycerin patches, which were designed to be worn continuously, were introduced. "Many of us, knowing that tolerance developed with continuous oral ISDN, were sceptical," he said. In fact, in a treadmill study he showed that continuous-patch therapy was no better than placebo after 2 weeks. Intermittent therapy with a 12-hour-on and 12-hour-off period seemed to be the answer.

In a clinical trial with 240 patients, Parker demonstrated that a 12-hour patch application improved exercise tolerance even after 28 days of therapy. The pattern of response was stable for dosages from 0.2 to 0.8 mg per hour, and no problems were encountered during the period drug levels were low. This study led to the standard practice of using intermittent dosing for transdermal nitroglycerin to prevent tolerance. — © *Wendy Wilson*



Ramsay, the pharmacist who got the Hug Your Heart idea rolling.

Dr. Wilbert Keon, director general of the University of Ottawa Heart Institute, said that in the past 25 years the proportion of women patients at the institute has risen from 7% to 30%. He said research indicates that once coronary artery disease has been diagnosed in a woman, she is more likely to die of it than a man and less likely to survive surgery. Despite that grim news little research being done on female cardiovascular disease, even though most doctors now recognize that their symptoms can be dramatically different from men's.

Hug Your Heart organizers Jay Acton and Barbara Ramsay hope the Ottawa event will serve as a blueprint for similar events, sponsored by the Women's Television Network. During the low-fat luncheon, Ramsay un-

derlined the importance of building momentum. "In 12 months we will have said goodbye to another 37 000 mothers, sisters, daughters, partners, wives and employees because of heart disease." More information is available from Acton, 613 761-8475. — © *Charlotte Gray*

Liposuction making inroads

The Canadian Society of Plastic Surgeons reports that liposuction is now the most common cosmetic procedure practised by Canadian plastic surgeons. Approximately 10 000 of the procedures are now conducted annually and more than 85% of patients are women. The society says liposuction is not a substitute for weight loss. Instead, it is a "contouring procedure" for removing fatty deposits that are resistant to diet and exercise.

Potential savings through drugs?

Alberta's newsletter on drug use in the elderly (DUE) recommends a more integrated system of funding health care so that savings realized in 1 sector can offset potential increases in another. The *DUE Quarterly* cites low-molecular-weight heparin therapy as an effective, safe and less costly therapy than traditional intravenous heparin therapy for the treatment of proximal vein thrombosis in elderly patients. Although increasing use of the therapy may increase financial pressures on drug-benefit budgets, the newsletter says it could lead to potential savings in the hospital sector. The newsletter is a joint effort of the Alberta Medical Association and Alberta Pharmaceutical Association.

Research Update • Le point sur la recherche

BSE and Britain's CJD outbreak: definitive link established

Two studies provide the best evidence to date that bovine spongiform encephalopathy (BSE) and "new variant" Creutzfeldt-Jakob disease (vCJD) are the same disease and that vCJD is caused by exposure to BSE (*Nature* 1997;390:448 and 498).

Two research teams studying BSE, vCJD, other animal spongiform encephalopathies and sporadic human cases of CJD arrived at the same conclusion from different directions. One team injected strains of mice with brain tissue from victims of a variety of spongiform encephalopathies. In mice infected with BSE or vCJD, a characteristic set of symptoms developed after the same incubation period, and the

disease attacked the brain in a similar way. Taken together, these characteristics were called the "BSE signature." Animals infected with other spongiform encephalopathies and with sporadic human CJD did not have the BSE signature, indicating that they are distinct from BSE/vCJD.

The other team developed a biochemical analytic method to examine strains of prions (aberrant proteins) in the brains of infected transgenic mice. This evidence also supports the link between BSE and vCJD, and indicates that sporadic CJD is not the same disease. Additional important findings also emerged.

- Other well-known animal spongiform encephalopathies, including the sheep disease scrapie, are distinct from BSE/vCJD, making it unlikely that BSE is

caused by exposure to scrapie.

- Unusual recent cases of spongiform encephalopathy in British cats and exotic zoo animals fit the BSE signature, meaning that the disease may be capable of infecting many species.
- The BSE signature was produced in mice infected with tissue from other animals, such as pigs, that had been infected with tissue from cattle with BSE.
- Two dairy farmers who died of CJD during the outbreak appear to have had sporadic CJD rather than vCJD.

The studies didn't indicate the incubation period of BSE/vCJD in humans, although in mice it is a little longer than a year, shorter than the period for other transmissible encephalopathies. As well, the studies do not reveal how, or how easily, the disease is transmitted. — *C.J. Brown*