European ban on bovine growth hormones should continue: expert

Despite the “small risk” that bovine growth hormones may contribute to certain types of cancer in humans, a member of the independent scientific committee that is reviewing the literature surrounding the hormones for the European Union says Europe should continue to ban them.

Dr. Annie Sasco, acting chief of the World Health Organization’s Program for Cancer Control, says that “most probably the risk is small because the quantities are small, but what is the benefit to consumers?”

She says the extensive literature review by the 9 committee members supports the need to adopt the precautionary principle developed during the 1992 Health Summit in Rio de Janeiro, which stated: “Sometimes we should not wait for absolute certainty to take measures to protect health.”

Canada is a signatory.

“This is our philosophy,” Sasco told participants at the World Conference on Breast Cancer held in Ottawa this July. “We have sufficient evidence to say it’s better to abstain [from ingesting these hormones].”

Sex hormones, including testosterone and 5 others, increase cattle’s weight by about 10%, making North American meat cheaper to produce. Europe has banned use of the hormones over fears that they pose a health risk; it has subsequently banned imports of hormone-treated Canadian and US meat. In 1997 the World Trade Organization (WTO) ruled against the ban, and Europe paid sanctions and fines to keep North American meat out. In 1998 the WTO gave Europe 15 months to develop data about its concerns. This summer, a full-scale trade war threatened to break out over the issue, with the US imposing huge retaliatory tariffs on many products from Europe.

The committee found that the highest rates of hormone-dependent cancer, such as cancer of the breast, endometrium, ovary, prostate, testes and colon, are found in North America. “One cannot fail to note that these are also countries where hormone-treated meat consumption has been considerable in the last 20 years,” states Sasco, who also heads the Unit of Epidemiology for Cancer Prevention at the International Agency for Research on Cancer.

Attendees also heard about the alleged hazards of recombinant bovine somatotropin (rBST), which increases the production of milk in dairy cows by about 10%. Dr. Samuel Epstein, a professor of occupational and environmental medicine at the School of Public Health, University of Illinois Medical Center, alleged that rBST in milk is “a grave hazard.” Although the growth hormone is used in the US, Canada extended its moratorium on the use of rBST last January.

Epstein said the growth hormone increases the cow’s level of insulin-like growth factor 1 (IGF-1), which is easily absorbed by the intestine and selectively accumulates and concentrates in breast cells, where it stimulates growth. “Women with breast cancer have high level of IGF-1,” he added.

Epstein cited “clear-cut epidemiological evidence” from the Harvard Nurses Health Study. He says participants with higher IGF-1 levels in their blood had a breast cancer rate 7 times higher than the norm. “Next to genetic determinants, there is no more potent indicator of breast cancer than IGF-1,” he said. — Barbara Sibbald, CMAJ
Hepatitis outbreak in UK blamed on alternative doctor

A physician has been condemned for causing Europe’s largest outbreak of hepatitis B at his clinic in north London. Dr. Madhusadan Shivadikar, 69, a registered physician, practised an obscure form of acupuncture. A report by the local health authority says 60 people from across Britain were infected after undergoing treatment at the Finchley Alternative Medical Centre.

The report, prepared with the Public Health Laboratory Service, found there was no infection control policy in place. Shivadikar had made no arrangements for blood spillages or splashes, and some of his medical notes were so stained with blood that inspectors did not want to touch them.

They found that he did not wear a gown or gloves to treat his patients and that the centre did not have any sterilization equipment. Clinical waste was thrown into an open rubbish bin and disposed of with general household waste.

His technique, called autohemotherapy, involves extraction of some of the patient’s blood, mixing it with saline and reinjecting it. Although Shivadikar used sterile needles he used the same syringe each time, and he used the same bottle of saline on up to 15 patients. “The incident team felt that this procedure posed a high risk of cross-contamination and the multidose bottle was the most likely vehicle of transmission of the infection,” reported Dr. Stephen Farrow, the authority’s director of public health.

A spokesperson for the General Medical Council, the disciplinary body for British doctors, told CMAJ that Shivadikar has been suspended. Despite the damning evidence, Shivadikar was unrepentant. “I do not believe all those people got hepatitis from here,” he told reporters. “The equipment would not have got contaminated and I do not know how it could happen. Lots of people are carriers already. I will practise it again because it helps people.” — © Caroline Richmond, London

Psychiatry via televideo an answer to specialist shortage?

Time and distance are 2 of the barriers hindering physicians’ ability to provide consistent health care across the country. However, the importance of these 2 constants may be declining in importance in the delivery of psychiatric care and counselling, results from a pilot study involving “televideo” psychiatry indicate.

The study, which involved 2 mental health centres, was coordinated by Dr. Gene Duplessis of the Campbellford and District Community Mental Health Centre near Peterborough, Ont., and Dr. John Farewell of Toronto’s Centre for Addiction and Mental Health.

Forty patients, all 18 or older and needing general psychiatric assessment, were recruited from family practices in the Campbellford area. None of the patients was actively suicidal. Twenty of them were assessed through a face-to-face, 90-minute interview, while the other half were assessed for the same length of time via televideo.

Farewell says this study is different from others because of the real distances involved. In most previous studies of the value and effectiveness of televideo, the psychiatrist and patient were separated only by a wall. With this recent Ontario study, however, the psychiatrist and patient were separated by 2.5 hours of highway.

Feedback provided by patients and psychiatrists indicated that both parties had no problem developing the rapport that characterizes the doctor–patient relationship, and that there was little difference in the psychiatric assessments and solutions found within the 2 groups.

If this technology is eventually adopted, there will have to be a change in the way psychiatrists are paid. Currently, the Ontario Health Insurance Plan covers only face-to-face consultations.

Farewell and Duplessis are encouraged by the initial results, and are confident that televideo will eventually become a common tool for delivering psychiatric services across Ontario. They think the technology may help alleviate the shortage of psychiatric care across the province. — © Peter Wilton, Toronto

Victoria to host medical bonspiel

Plans are well under way for the country’s largest medical bonspiel and golf tournament, which will be held in Victoria Mar. 29–Apr. 1, 2000. Calgary pathologist Trygve Larsen, one of the organizers, says the Canadian Interprovincial Medical Bonspiel and Golf Tournament is open to all Canadian physicians. MD Management Ltd., the CMA’s financial subsidiary, is one of the main sponsors. Details on registration, accommodations and costs are available from Larsen, 403 209-5204; (fax) 403 209-5292; trygve.larsen@cls.ab.ca.
Recent data compiled by the Canadian Institute for Health Information indicate that the number of physicians relative to the population has stayed stable over the last few years and currently stands at 185 per 100,000 population. In 1993 there was 1 physician for every 528 Canadians, compared with 1:541 today.

Provinces that exceed the national rate of physicians per 100,000 population include British Columbia (193), Nova Scotia (196) and Quebec (211). Furthest from the average are Saskatchewan and the Yukon (149) and the Northwest Territories (92).

As of December 1998, there were 56,203 active civilian physicians in Canada. As has been the pattern for many years, the distribution between family physicians (including GPs) and specialists is close to 50:50; the 1998 figures indicate that 51% of doctors are FPs and 49% are specialists.

Female physicians comprise 28% of the practising pool but the numbers are growing steadily. Almost half (47%) of all family physicians under age 40 are female.

Almost one-quarter (24%) of Canada’s practising physicians are graduates of foreign medical schools. They comprise 69% of physicians who graduated over 30 years ago but account for only 7% of practising physicians who graduated within the last 10 years. This points to much tougher entry requirements for doctors trained outside Canada. — Lynda Buske, CMA

A new test for detecting methicillin-resistant Staphylococcus aureus (MRSA) has been launched by Vancouver’s I.D. Biomedical Corporation. The company’s Velogene Rapid MRSA Identification Assay diagnostic test has already received approval from the US Food and Drug Administration, and approval from Health Canada was expected by the end of August. Marketing to hospitals across North America and Europe began this summer. The test costs $10 — about the same as current hospital tests — and the company hopes to sell about 5 million annually.

Company president Dr. Tony Holler says the test, which takes about 2 hours to complete, is the first truly rapid test to identify MRSA; normally it takes up to 2 days to get test results. About 4.6 million tests for MRSA are carried out annually in US hospital laboratories. “For hospitals, it’s a huge problem,” says Holler, who estimates that the market is growing by about 10% a year. If hospitals “can save 1 day through early diagnosis and treatment, that saves $1000 plus. The speed means that you are treating patients with the right antibiotic quicker, which leads to shorter hospital stays.”

The test identifies the gene responsible for methicillin antibiotic resistance approximately 90 minutes after a primary culture is obtained. The company says the test is both fast and accurate. In clinical trials at 4 US hospitals, the test demonstrated 100% accuracy when compared with polymerase chain reaction, the current gold standard in gene-identification technology.

I.D. Biomedical is now preparing for clinical trials for a second diagnostic test to detect vancomycin-resistant enterococci bacteria. — © Heather Kent, Vancouver
Australian scientist proposes recipe for cloning extinct tiger

In a story of life imitating art, Dr. Michael Crichton’s *Jurassic Park* may have paved the way for the genetic cloning of an extinct animal — Australia’s “Tasmanian tiger,” a marsupial wolf also known as the thylacine.

Crichton’s book envisioned the use of dinosaur DNA that had been preserved in amber-bound mosquitoes, while Professor Michael Archer is proposing to use the genetic material of thylacine cubs preserved in alcohol.

In 1998 Archer, director of the Australian Museum, discovered a whole baby thylacine, born in 1866, in the storehouse of his Sydney institution. Over the last year he tracked down 6 other pickled specimens at the British Museum in London and institutions in Australia and the US, offering the potential of a wider gene pool.

“There’s a population waiting to be kick-started,” Archer suggested. “There have been several geneticists who are saying it’s not a joke, it’s not silly, it could be done.”

The 2-metre long Tasmanian tiger, *Thylacinus cynocephalus*, roamed across Australia and New Guinea until several thousand years ago, when it became confined to the island of Tasmania. The last known example, Benjamin, who displayed the animal’s characteristic rigid tail and tapering dark brown stripes on his lower back, died in Tasmania’s Hobart Zoo in 1936. The nocturnal carnivore was hunted into extinction because it threatened sheep herds.

Prof. Mike Westerman, a senior lecturer in genetics at Melbourne’s Latrobe University, suggests that, should a full complement of perfect DNA be found, the genetic material could be inserted into the empty egg of the female of a similar species, who could then incubate it. The process would be a variation on the cloning of Dolly the sheep in Scotland.

“We’ve discovered the miracle bottle in which this time capsule is just waiting to pop back into life,” added Archer. “At the rate at which this technology is increasing, I wouldn’t say there’s any reason why we shouldn’t expect to be able to go into a pet shop and buy a pet thylacine and bring it home. We have cloning, we have DNA sequencing, we have the ability to read all the total information. If you like, the recipe for making a thylacine is there.”

But British geneticists scoff at the plan. Prof. Martin Jones, an archeological scientist at Cambridge University, argues that “the DNA will be fragmented even though it is quite recently preserved.”

Dr. Richard Thomas of the Natural History Museum in London added that the Tasmanian tiger has no close living relative and so successful incubation of an embryo is very unlikely. “There is a vast number of stages which we don’t have the slightest idea how to do,” he said. — © *Gil Kezwer*, Toronto

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British girl recovering after forced heart transplant

A 15-year-old girl has received a heart transplant against her wishes in an English hospital. The girl, who cannot be named, developed congestive heart failure in May. She was admitted to the Freeman Hospital in Newcastle, and when her condition worsened she was told her prognosis and advised to have a transplant. She remained adamantly opposed to the procedure despite pressure from her parents, doctors, nurses and clergy. However, because she is a child her consent is not needed under British law.

On July 9 her doctors applied to the High Court for permission to proceed with a transplant. The judge who heard the case, who specializes in family law, arranged for a lawyer to represent the girl. The girl told the lawyer: “I understand what a heart transplant means — checkups and pills. I am only 15 and don’t want a transplant. I am not happy with it. I feel selfish. If I die, my family will be sad. If I had children and were old enough, I would go along with whatever is best, with what they want. If I had someone else’s heart, I would feel different from anybody else [and] that’s a good reason not to have a transplant, even if it saved my life.”

The judge ruled that the girl was confused and allowed the operation to proceed. His decision was read out to the girl at her bedside, and she grudgingly agreed to have the operation. She is now making a normal recovery.

Lawyers have hailed the ruling as humane and just, but medical ethicists have reservations. Vivienne Nathanson, head of ethics at the British Medical Association, said medicine is “coercing children,” and that children’s views about their treatment are accepted only when they agree with doctors’ views. — © *Caroline Richmond*, London
Smoking in pregnancy: pictures worth a thousand warnings

The capillaries that carry blood and oxygen to the placenta in pregnancy actually adapt and develop more surface area in mothers who smoke, according to startling electron microscopic images obtained by researchers in Germany, Scotland and Toronto (Lancet 1999;354[9175]). The blood vessels were obtained after cesarean section from 4 mothers who smoked and compared with vessels from non-smoking mothers. Images showed that the placental capillary loops from smoking mothers had increased branching and many dilations. It is thought that the increased surface area helps offset the impaired oxygen transport caused by carbon monoxide inhaled by smokers. The authors suggest showing these images to pregnant women to impress on them the dangers of smoking during pregnancy.

Bacterial infections can cause early miscarriage

A common bacterial infection of the vagina (bacterial vaginosis) doubles the risk of miscarriage in the first trimester, a British study has found (BMJ 1999;319:220-3). The prospective study looked at women undergoing in-vitro fertilization and found that bacterial vaginosis did not affect conception rates but did affect miscarriage rates. The increased rate is the equivalent of 1 extra miscarriage for every 4 pregnant women with bacterial vaginosis. The increased risk was significant even after adjustment for factors that increase the risk of miscarriage (age, smoking, previous miscarriages, no previous live births and polycystic ovaries). Bacterial vaginosis affects 15% to 30% of women of childbearing age. There is no evidence as yet that treating the infection will change outcomes.

A drink a day keeps mortality at bay in older-onset diabetes

People with diabetes diagnosed after age 30 benefit from drinking up to about a drink per day, finds a 12-year study of mortality from coronary heart disease (JAMA 1999;282:239-46). After adjustment for other risk factors, the risk of death due to coronary heart disease drops with the amount drunk, up to 1 to 2 drinks a day, after which it increases. The relative risk of death in a person with older-onset diabetes who has a drink or so per day is 79% less than for lifetime abstainers. However, an accompanying editorial warns that, in diabetes, alcohol may both induce and mask severe hypoglycemia. Heavy alcohol intake can also worsen diabetic neuropathy and produce or worsen insulin resistance.

Forecasting fever

The tools of weather forecasting — satellite data and temperature readings — may soon be used to predict disease outbreaks. Researchers studying Rift Valley fever endemic to East Africa tracked data from 1950 to 1998 and found that outbreaks followed periods of abnormally high rainfall (Science 1999;285:397-400). Analysis of rainfall, Pacific and Indian Ocean sea surface temperature and satellite data on local vegetation allowed the researchers to predict outbreaks accurately up to 5 months in advance. This advance warning gives communities time to vaccinate vulnerable domestic animals and control mosquitoes, which carry the virus that causes Rift Valley fever.

Forest fungus yields insulin-like drug

A fungus from the forests of Zaire yields a compound that may be an effective drug for diabetes (Science 1999;284:974-7). The compound, extracted from Pseudomassaria species found in the rain forest, mimics the effects of insulin. In experiments in a mouse model of non-insulin-dependent diabetes, the compound significantly lowered blood glucose levels. Furthermore, because it is not a protein like insulin, it can withstand the gastric juices of the stomach and may therefore be taken orally.

Cool site

Web Doctor Rural Chat Room
www.gretmar.com/webdoctor/framechat.html
One of the biggest challenges facing a northern or rural physician is isolation. Usually there are few colleagues with whom to compare notes, keep up with current research or just whine and complain. The WebDoctor may have just the medicine: a virtual meeting room that’s open all the time — rent free. Chat services offer a way for people to talk in groups in “real time.” Unlike discussion groups or email, people see what you type as you type it and can respond immediately. In this way, a real meeting can take place over the Internet. The Web Doctor Rural Chat Room runs on java-capable browsers only, so you need at least a version 3.0 Web browser. After that, all you have to do is arrange for everyone to get to the Chat Room at the same time, and start typing. — © Michael O'Reilly, moreilly@cancom.net