



However, there are some factual errors. One is the statement that the use of antibiotics in agricultural animals is "100 to 1000 times that in the human population" (although he corrects this later to the more generally accepted "half of all antibiotics"). Another is the statement that "to improve the growth of swine, 2–500 g of [10 different, named antibiotics] is added to each ton of feed." No feed mill in Canada would make up such an illegal and bizarre mix. More serious than these errors is the lack of balance in the article. There is no recognition of the fact that almost all resistance in human bacterial pathogens results from the use (including misuse and overuse) of antibiotics in medicine.

This lack of balance might not matter were it not for the carefully timed press releases on this review that somehow turned the article's mundane title into the *National Post's* front-page headline, "Antibiotics in food spawn deadly superbugs." Agriculture cannot be made a scapegoat for the problems of antibiotic resistance in medicine. In 1971 Health Canada and the Canadian Infectious Diseases Society convened a meeting in Montreal on antimicrobial resistance. Participants recognized that control of antibiotic resistance could only result from the partnership of all users. *CMAJ* should have taken care to inform readers of the very serious and dramatic way in which the agricultural antibiotic connection is being addressed in Europe and the US as well as (though more slowly) in Canada. The journal could have provided balance. Good public policy is made by thought-

ful and balanced analysis, not by the manipulation by dubious headlines.

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[The author responds:]

The emergence of certain human pathogens resistant to antibiotics has come from the use of antibiotics in animals and not the other way around. Drug-resistant *Salmonella* infections in humans originated with antimicrobial drug use on farms. This conclusion came from studies in the 1980s, which are in fact cited in *Antimicrobial Therapy in Veterinary Medicine*, a book co-edited by Dr. Prescott.¹ Likewise, new evidence from Asia, 7 European countries and North America supports the assertion that the primary transmission of antibiotic-resistant *Escherichia coli*, *Enterobacter* and *Enterococcus* is from animals to humans.^{2,3} Further, vancomycin-resistant enterococci have been isolated only from gastrointestinal tracts of meat-eating but not vegetarian people.⁴ Until molecular and epidemiological studies prove otherwise, nonhuman reservoirs can be as suspect as human reservoirs. In the meantime, an increasing number of reports point to animals.

The example of an agricultural use of antibiotics that is 1000 times greater

than in human populations is that of vancomycin and avoparcin in 1994 in Denmark: 24 kg of vancomycin in the human population and 24 117 kg of avoparcin in animals.⁵ The figure of 2–500 g of antibiotics per ton of feed is in accord with the *Canadian Compendium of Veterinary Pharmaceuticals, Biologicals and Specialties*⁶ and, from a regulatory perspective, with the *Compendium of Medicating Ingredient Brochures (CMIB)*.⁷ The *CMIB* also lists the following combinations (and sometimes with other therapeutic agents) as acceptable in feeds: bacitracin and penicillin; lincomycin and spectinomycin; oxytetracycline and neomycin; sulfamethazine and tylosin; sulfamethazine and chlortetracycline; sulfamethazine and penicillin and chlortetracycline. As all medicated feed manufactured, used or sold in Canada must adhere to and comply with the Feeds Regulations Act, we are already and legitimately using combinations of 2–3 different types of antimicrobials from 7 of the 10 listed in my article. Thus, there is nothing "illegal and bizarre" about this practice.

I do agree, however, that we need to re-examine public policy on the overall use of antibiotics. Should we get there, I have one last hope that the media will not generate more dubious headlines that misinterpret the message.

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Barometer falling

With regard to Patrick Sullivan's article on the military physician staffing crisis,¹ the Canadian Forces have access to a large pool of retired, well trained and experienced physicians whom they could employ as civilians on bases located in Canadian cities. This would free up military physicians to serve overseas.

Incidentally, the 3 flight surgeons pictured as experiencing the symptoms of hypoxia are located in a decompression or hypobaric chamber, not a hyperbaric chamber. By creating a vacuum in the chamber the effects of altitude are simulated. Conversely, by increasing the pressure in a recompression or hyperbaric chamber the effects of increased pressure as experienced by divers may also be reproduced.

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Update on the new virus in Malaysia

A *CMAJ* public health article recently described the emergence of a new morbillivirus causing febrile encephalitis among pig farmers and abattoir workers in Malaysia.¹ As of Apr. 27, 1999, 257 cases have been reported. Almost half of those affected died. Several cases were also reported in Singapore among workers handling pigs imported from Malaysia. The virus, formerly known as Hendra-like virus because of its similarity to an equine morbillivirus identified in Australia in 1994, is now called Nipah virus.² Most human cases continue to be connected to exposure to pigs. In an effort to control the out-

break, approximately 890 000 pigs have been killed in Malaysia, transport of pigs within the country has been banned, and education has been provided about contact with pigs and use of protective equipment. The incidence of infection in humans has been decreasing, from a peak of 46 cases between Mar. 13 and 19 to 4 cases between Apr. 10 and 16. Nipah virus infection has been confirmed in a necropsied dog. No human-to-human transmission has been reported to date.

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New method for prostate exam

I would like to propose an alternative to the conventional way of performing the digital rectal examination for palpation of the prostate. I believe this method is more comfortable for the examiner and thus may facilitate the detection of abnormalities. A search of the literature has shown no prior reference to this method.

Conventionally, examination of the prostate is performed with the patient in the left lateral or left lateral prone position (Sim's position).^{1,2} To palpate the prostate adequately, the examiner must have the palmar surface of his or her hand facing the ventral prostate gland. The examiner must therefore pronate his or her arm maximally and may even need to turn his or her body away from the patient to feel the area. This position is unnecessarily awkward and makes it especially difficult to reach the prostate and the right rectal wall.

I suggest that the patient be placed instead in a right lateral or right lateral semi-prone position. Using this method, the examiner need not pronate his or her hand to the same degree. In this more natural position, the examination can be performed more easily, comfortably and reliably. Of course, the

posterior rectal wall may be more difficult to palpate in the proposed position, but the emphasis of the technique is on palpation of the prostate. Once the patient's hips and knees are flexed, the examiner should stand below the level of the hips to visualize the perineum, the anal orifice and the buttocks. The remainder of the exam is then performed in the usual manner.

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2. Swartz MH. *Textbook of physical diagnosis: history and examination*. Philadelphia: WB Saunders; 1998.

Alternative views on alternative therapies

Although I can understand Drs. Ian F. Tannock and David G. Warr's frustration with limited research funding,¹ I find that their article belittles the qualities of science, which are to seek evidence and truth, wherever that search may lead. The accusation that the *CMAJ* series on unconventional therapies represents a "low point for both *CMAJ* and the Canadian Cancer Society" is an unwarranted insult, one that may be viewed as unsympathetic to the educational needs of both health care professionals and patients with cancer. Nowhere is an endorsement of these therapies implied and, quite frankly, the information provided may persuade open-minded, but sceptical, readers that evidence for their efficacy is limited.

I agree that many inappropriate quasi-scientific therapies are touted for the alternative treatment of cancer. These should be distinguished from alternative paradigms of health care, for example traditional Chinese medicine and ayurvedic medicine, which operate within a very different cultural philosophy.² The strength of these paradigms is that they convey a humanistic and holis-