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## Human thermostat

Sir—In his piece on the human thermostat, Sidney Lowry (Oct 11, p 1244)<sup>1</sup> suggests that the setting of human body temperature to just below 37°C might be the result of an evolved physiology that corresponds with the midpoint of Newton's exponential law of cooling.

Although we share a similar core temperature with some mammals, the average body temperature for our subclass of Eutheria (placentals) is 38°C, with 30–33°C for Metatheria (marsupials), and 28–33°C for Prototheria (monotremes). *Homo sapiens* has evolved to survive in particular bio-environments, and can suffer from substantial thermopathology requiring invasive management<sup>2</sup> when exposed to unadapted surroundings that are successfully inhabited by other mammals.

Core temperature might not, therefore, be the result of a candid coalescence of nature and Newtonian physics, but a reflection of a complex system of bioadaptive interactions that allows the various species to exist in their specific ecosystems.

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- 1 Lowry WS. The human thermostat. *Lancet* 2003; **362**: 1244.
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## Influenza vaccination coverage in Japan

Sir—Vaccination is the main method used to prevent influenza. In the USA, 33% of the population aged older than 65 years were vaccinated in 1989 compared with 64% in 2000–01.<sup>1</sup> One of the objectives of Healthy People 2010 is to achieve a vaccination coverage in the USA of 90% in this age-group.

From 1976 to 1994, influenza was listed in the Japanese Preventive Vaccination Law, which stated that all children aged 7–15 years had to be vaccinated against the disease. The law was, hence, meant to control influenza epidemics in entire communities via suppression of transmission in schools. However, in 1979, a 7-year-old child fell ill after receipt of the vaccine. This event along with adverse data reported with respect to the preventive

effects of vaccination, made many people suspicious of the vaccine's effectiveness.<sup>2</sup> Vaccination became voluntary after a 1994 amendment to the Preventive Vaccination Law.

However, in 1998–99, an influenza epidemic in Japan resulted in the deaths of about 250 elderly residents of nursing homes, resulting in recognition by the government of the need to vaccinate at least the frail elderly population. The Law was, therefore, amended again in November, 2001. Under the new Preventive Vaccination Law, primary target groups are defined as those aged older than 65 years and those with certain chronic medical conditions who are aged 60–65 years. The degree of subsidy for the cost of vaccination is worked out independently by each local government.

The number of influenza vaccines produced in Japan rose greatly from 300 000 in 1994 to more than 10 million in 2001, but only 27% of the target population in Japan were vaccinated in 2001–02.<sup>3</sup> The amount of vaccines produced continued to increase to 13 million in 2002 and 14.5 million in 2003. Because the Ministry of Health, Labor, and Welfare predicts demand to be 12.4–14 million in 2003–04, little effort is being made to raise the vaccination rate in target populations. However, we believe this increase in the production of vaccines and rate of coverage of target populations is insufficient, bearing in mind the rapid growth rate of the elderly population. Moreover, individuals who live with or care for people at high risk, and children, should be vaccinated—the total number of patients with influenza rose from 306 000 in 2000–01 to 675 000 in 2001–02; 58% of all patients were children aged 0–9 years.

In the USA, increasing the number of people vaccinated against influenza depends on greater acceptance of preventive medical services by practitioners, increased delivery and administration of the vaccine by health-care providers and sources other than doctors, and provision of new information with respect to the effectiveness, cost-effectiveness, and safety of the vaccine. Since Japan lags behind the USA and other countries with respect to vaccination coverage, a national policy to increase uptake should be developed.

In 2003, severe acute respiratory syndrome (SARS) was pandemic, and in the coming winter, people, including providers, will seek influenza vaccination to avoid any confusion with SARS. There could be a panic if

influenza becomes epidemic and the amount of vaccine is inadequate. Now is the time to reconsider a comprehensive strategy to promote influenza vaccination in Japan.

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- 1 CDC. Recommendations of the Advisory Committee on immunization practices, prevention and control of influenza. *MMWR Morb Mortal Wkly Rep* 2003; **52**: 1–36. <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5208a1.htm> (accessed Oct 21, 2003).
- 2 Hirota Y, Kaji M. Scepticism about influenza vaccine efficacy in Japan. *Lancet* 1994; **344**: 408–09.
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## Prevention campaigns for cardiovascular disease

Sir—We wish to respond to Jonathan Quick and colleagues' accusations about the joint media campaign between ARCOL (the French Non-profit Association for Coordination of Research on Cholesterol and Lipoproteins) and Pfizer (Aug 30, p 747).<sup>1</sup> As Quick and colleagues point out, cardiovascular disease is the number one cause of mortality in France, and more than 30% of the French population is affected by hypercholesterolaemia.<sup>2</sup> We have been criticised for concentrating on hypercholesterolaemia without considering other risk factors. This criticism is unjustified for several reasons.

First, in order for a communications campaign to work, it needs to be simple, direct, and can only carry one message. Second, ARCOL brings together clinical and scientific experts in the field of dyslipidaemia, and may not legitimately undertake campaigns in other areas that fall outside its competence. Third, in not having taken the precaution to contact ARCOL, Quick and colleagues seem to have grasped only a part of the overall actions that we have undertaken. Fourth, studies that assess the level of awareness of cholesterol and cardiovascular disease among the French population have shown that 76% of the population do