

Global Update

***E. coli* Infections Appear to be Increasing**

Foodborne infections due to the recently recognized pathogen, *E. coli* 0157:H7, appear to be increasing, causing severe and potentially life-threatening illness, 42 experts on the prevention and control of this infection agreed at a World Health Organization (WHO) meeting.

While much of the problem has been related to contaminated cattle meat, the experts contended that a wider range of food is responsible for transmission of infections to humans. There is also some evidence of person-to-person spread and of transmission through contact with animals or animal manure.

"Meat products should continue to receive prime attention in implementing control measures, as exemplified in the recent outbreak of *E. coli* 0157:H7 in Scotland in 1996-97. This outbreak was traced to contaminated beef products from one popular butcher shop, causing 496 cases of illness and 19 deaths. However, fresh vegetables are becoming increasingly important as a source of foodborne transmission and we must develop prevention and control guidelines for ready-to-eat raw agricultural products," said Dr. Fritz Kaferstein of WHO's Feed Safety and Food Aid Programme.

The United States Centers for Disease Control (CDC) reported five outbreaks of *E. coli* 0157:H7 infections associated with

contaminated lettuce in 1995 and 1996 and also reported a large outbreak associated with the consumption of contaminated, unpasteurized apple juice in 1996.

Elsewhere, fermented sausages, yoghurt, mayonnaise and fruit juices have been associated with recent outbreaks. Information indicates that this pathogen is unexpectedly tolerant to acid environments, traditionally viewed as a barrier in food production, the experts said.

"These developments are particularly worrying because of the long-term health effects *E. coli* infections can have on children," Dr. Kaferstein said.

Escherichia coli 0157:H7 can cause bloody diarrhoea (haemorrhagic colitis). Some patients, mainly young children, may develop hemolytic uremic syndrome (HUS) which leads to kidney damage and failure, with long-term chronic consequences and even death in a small proportion of cases. Deaths can also occur among the elderly.

In the summer of 1996, an epidemic in Japan involved over 9,000 cases and 12 deaths in children. The largest outbreak, in Sakai City, involved 5,700 people and was associated with contaminated white radish sprouts. A further outbreak in Japan in 1997 also seemed to be linked to the same vegetable.

The experts, assembled from 14 countries at WHO headquarters for a Consultation on the Prevention and Control of Enterohemorrhagic *Escherichia coli* infec-

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tions at the beginning of May, agreed that basic hygienic practices should serve as the foundation for a range of more specific preventive measures which include the use of clean water in food production, presentation of clean animals at slaughter, improved hygiene throughout the slaughter process, the application of such food pro-

cessing methods as pasteurisation of milk to eliminate EHEC, thorough cooking of foods and education of food Handlers, abattoir workers and farm workers in principles and application of food hygiene.

Food safety advice for consumers is available in WHO's Golden Rules for Safe Food Preparation.

Obesity Epidemic Puts Millions at Risk From Related Diseases

An escalating epidemic of overweight and obesity is affecting many countries in the world and if action is not taken now to stem the pandemic, millions of people will develop noncommunicable diseases and other health disorders, warned nutrition and health experts at the end of a World Health Organization (WHO) Consultation on Obesity (Geneva, 3-5 June 1997).

Obesity is now well recognized as a disease in its own right, one which is largely preventable through changes in lifestyle, especially diet. Obesity is a major determinant of many noncommunicable diseases (NCDs) and induces diabetes mellitus (type 2: non-insulin-dependent), coronary heart disease and stroke. It increases the risk of several types of cancer, gallbladder disease, musculoskeletal disorders and respiratory problems. Because these complications are particularly common in those with high abdominal circumference, experts at the Consultation recommended that this measure should be used as an additional indicator for identifying NCD risk.

"Without societal changes, a steadily rising and already substantial proportion of adults will develop the many medical complications of obesity," experts from 25 countries at the Consultation agreed, adding that, "obesity's impact is so diverse and extreme that it should now be regarded as one of the greatest neglected public health problems of our time with an impact on health which may well prove to be as great as that of smoking."

Recent studies have shown that overweight and obesity affect over half the adult population in many countries. Obesity is common in industrialized countries and is rapidly increasing in many developing countries. The prevalence of obesity in adults is 10% to 25% in most countries of western Europe and 20% in some countries in the Americas.

This figure increases up to 40% for women in eastern European and Mediterranean countries, and black women in the USA. Even higher prevalences are observed among American Indians, Hispanic Americans, and Pacific Islanders, with probably the highest rates in the world among Melanesians, Micronesians, and Polynesians. Up to 70% of women and 65%

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of men on the island of Nauru in Micronesia are Class I obese (see definition below).

The principal causes of the accelerating obesity problem worldwide are sedentary lifestyles and high-fat, energy-dense diets, experts agreed. "The rising epidemic reflects the profound changes in society and in the behavioural patterns of communities over the last 20-30 years. Individuals may become obese, partly because they have a genetic predisposition to gain weight readily when they are exposed to unhealthy diets and lifestyles. Nevertheless, the fundamental causes for the obesity epidemic are changing behaviours and lifestyles, especially diets," the experts said.

The problem of obesity has so far been largely ignored as a public health issue. But the numbers affected are now so vast that sufferers from obesity problems already threaten to overwhelm countries' medical services. Prevention policies aimed at a country's entire population were therefore imperative; these could include promoting healthy lifestyles, including diets of lower energy density (increased consumption of

vegetables, fruits, grains and cereals); increased physical activity (such as walking); and behavioural change, with emphasis on weight management rather than on short-term extreme weight reduction.

The meeting agreed on an international standard for measuring overweight and obesity, the Body Mass Index (BMI), defined as weight (in kg) divided by the square of one's height (in m): kg/m^2 . For assessing obesity in adult populations, the BMI categories are:

- BMI $\geq 25 \text{kg/m}^2$ for overweight (Pre-obese: BMI 25-29.9 kg/m^2)
- BMI $\geq 30 \text{kg/m}^2$ for obesity:
- Class I obese: BMI 30-34.9 kg/m^2
- Class II obese: BMI 35-39.9 kg/m^2
- Class III obese: BMI $\geq 40 \text{kg/m}^2$

The advent of childhood obesity was of particular concern, the meeting noted, as well as the particular susceptibility of some ethnic groups, particularly in Asia, to weight gain and accumulation of abdominal fat.