

Additional Research on Acrylamide in Food Essential

As follow-up of an experts' consultation on the implications of acrylamide in food hosted by the World Health Organization (WHO) and the United Nations Food and Agriculture Organisation (FAO), a network for research on acrylamide has been established to achieve a better understanding of human exposure and its possible health effects. In addition, Acrylamide will be added as a priority item to the agenda of the forthcoming meeting of the Joint FAO/WHO Expert Committee on Food Additives for a more detailed evaluation.

The consultation of 23 scientific experts specialising in carcinogenicity, toxicology, food technology, biochemistry and analytical chemistry, which was held in Geneva, identified a number of important issues requiring urgent research. Acrylamide is known to cause cancer in laboratory animals, for example, but no studies of the relationship between acrylamide and cancer in humans have been done. Present theoretical models to predict whether cancer would develop in humans from current average intake levels are not reliable enough to develop firm conclusions.

Acrylamide is a chemical used in the manufacture of plastics. It was first discovered to be present in certain foods cooked at high temperatures in April 2002. It is a known carcinogen and causes nerve damage.

When investigated in rats, acrylamide has potency similar to other well-known carcinogens formed through cooking, such as aromatic hydrocarbons formed in meat when fried or grilled. However, the intake levels for acrylamide are likely to be higher.

The Swedish research, and sub-

sequent studies in Norway, Switzerland, the United Kingdom and the United States found the acrylamide levels in certain starch-based foods, such as potato chips, french fries, cookies, cereals and bread, well above the level prescribed by the WHO's "Guideline Values for Drinking Water Quality."

Yet the average intake levels of acrylamide from all sources were determined to be in the range significantly below that which is known to cause nerve damage in laboratory animals at 70 micrograms per day for an adult.

The consultation did not consider the data available to be adequate to present specific quantitative estimates of cancer risk posed by levels of acrylamide in people's diets. The participants urged investigation of the possibilities for reducing the levels of acrylamide in food by changes in formulation, processing and other practices.

"After reviewing all the available data, we have concluded that the new findings constitute a serious problem. But our current limited knowledge does not allow us to answer all the

questions which have been asked by consumers, regulators and other interested parties," said Dr Dieter Arnold, the chair of the FAO/WHO consultation.

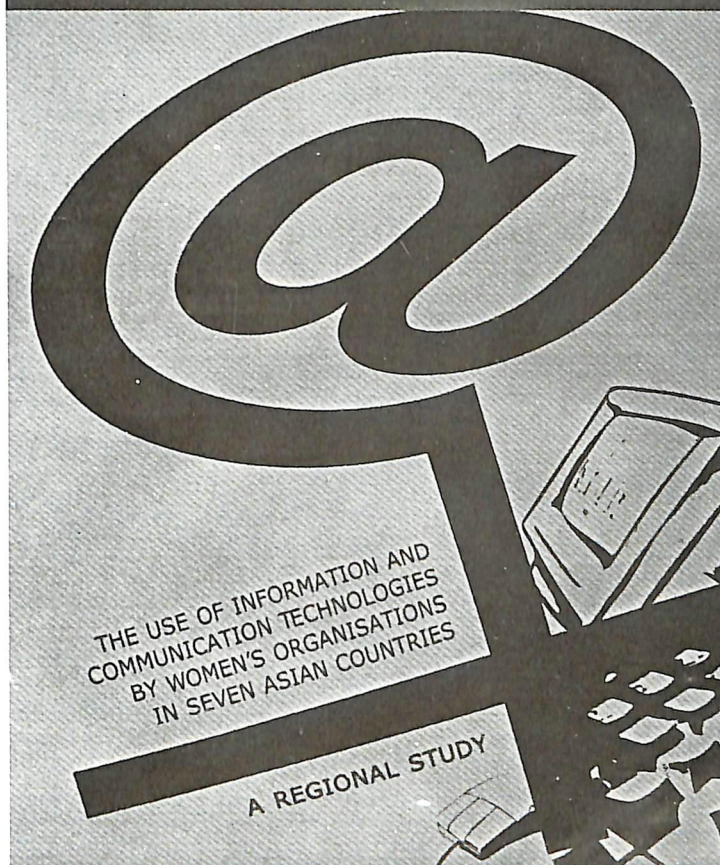
Foods in which acrylamide develops when cooked at above 120 degrees Celsius include potato chips, french fries, bread and processed cereals. The scientists acknowledged they have not yet determined if other foods also contained acrylamide. The experts also admitted the lack of data on foods consumed as parts of the regular diets outside Europe and North America.

Consequently, it is not yet possible to determine what percentage of overall acrylamide presence in the human body comes from starch-based foods. Indeed, because other food, such as fruits, vegetables, meats and seafood and beverages, as well as other exposures such as cigarettes, can also result in acrylamide entering the human body, it is not known what percentage of the total acrylamide in a human body is from food sources.

Scientists have yet to determine, moreover, how quickly the body can break down acrylamide.

For more information, contact Gregory Hartl, Communications Adviser, Sustainable Development and Healthy Environments, World Health Organisation, Geneva: Tel: (41-22) 791-4458; Mobile (41-79) 203-6715; E-mail: <hartlg@who.int>. All WHO Press Releases, Fact Sheets and Features as well as other information on this subject are on the WHO home page <<http://www.who.int/>>.

NGO_Women@asia.net



Asia is one of the fastest growing Information and Communication Technology (ICT) regions in the world. But the growth is uneven across the region and within the countries themselves. The growth of ICT is apparent in urban cities but the rural areas are neglected. If women's NGOs have access and connection in urban areas, does this automatically mean that their grassroots partners have the same access? What is the environment surrounding women's access and utilisation of ICTs? What kind of ICT training and networking will promote women's advancement?

These are some of the questions that the book *NGO_Women@asia.net* attempts to address. Culled from a wider regional study on women's use of information and communication technologies (ICT) that was carried out by Isis International-Manila, Asian Women's Resource Center (AWORC) and United Nations Economic and Social Commission for Asia-Pacific (UNESCAP), the book assesses the extent to which women's groups use ICTs in seven countries—India, Indonesia, Japan, Mongolia, Nepal, South Korea and the Philippines.

Price (inclusive of postage): US\$6 (international), PhP200 (Philippines only)

Book orders may be placed by writing to or calling:

Elvira Colobong

Isis International-Manila

3 Marunong Street, Barangay Central,

Quezon City 1100, Philippines

Tels.: (63-2) 435-3408, 435-3405, 436-0312, 436-7863 extension 102

Fax: (63-2) 924-1065

E-mail: <elvie@isiswomen.org>