WORLD HEALTH ORGANIZATION

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WHO ANSWERS QUESTIONS ON GENETICALLY MODIFIED FOODS

What are the benefits and risks of genetically modified (GM) foods and crops for human health and the environment?

Are GM foods safe?

How do scientists determine if a new GM food is safe for human consumption? Does the method used differ from the safety assessment of traditional foods?

In which countries are GM foods available on the market?

How have public concerns about the safety of GM foods affected their marketing in the European Union?

What future developments are expected in the field of genetically modified organisms?

What is WHO doing in this area and why?

These are some of the questions the World Health Organization answers in a first-ever document published today entitled 20 Questions on Genetically Modified Foods. 20 Questions is available at: http://www.who.int/fsf/GMfood/q&a.pdf. Its intended audience is thepublic, governments, the media and public health specialists working in this area.

20 Questions comes at a time when some countries, out of concern for safety and trade of their foodstuffs, have refused to accept donations of GM food, and public debate still rages in many countries.

20 Questions points out that individual GM foods and their safety must be assessed on a case by case basis, making general statements on the safety of all GM foods impossible. GM foods on the international market have passed risk assessments and are not likely to present risks for human health. No effects on human health have been shown as a result of the consumption of such foods by the general population in the countries where they have been approved.

However, WHO will take an active role regarding GM foods to ensure that public health can benefit as much as possible from the new technology and to make sure health will not be adversely affected by consumption of GM foods. It is imperative to guard against allergenicity of GM foods and transfer of antimicrobial resistance from food to humans, for instance. On the positive side, GM foods could help improve food security through better protection from pests and drought, produce vaccines and increase nutrient levels of foods.

Modern technologies must continue to be thoroughly evaluated, looking at both human and environmental effects together and not in isolation.

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All WHO Press Releases; Fact Sheets and Features as well as other WHO information on this subject can be obtained on Internet on the WHO home page: http://www.who.int

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EMBORGOED FOR FRIDAY, 18 OCTOBER 2002, 5:01 GMT; 12:01AM EST CARDIOVASCULAR DEATH AND DISABILITY CAN BE REDUCED MORE THAN 50 PERCENT

More people at risk than previously thought, particularly in developing world. Conditions could be controlled quickly with medical, social interventions. More than 50 percent of deaths and disability from heart disease and strokes, which together kill more than 12 million people world-wide each year, can be cut by a combination of simple, cost effective national efforts and individual actions to reduce major risk factors such as high blood pressure, high cholesterol, obesity and smoking, the World Health Organization (WHO) says. Most of the benefits from these combined interventions can be achieved within five years of their implementation, since the progression of cardiovascular (CV) disease is relatively easily interrupted.

If no action is taken to improve cardiovascular health and current trends continue, WHO estimates that 25 percent more healthy life years will be lost to cardiovascular disease globally by 2020. The brunt of this increase will be borne by developing countries.

These findings come from the first-ever global analysis of disease burden due to major CV risks: high blood pressure, high cholesterol, tobacco, obesity, physical inactivity and low consumption of fruits and vegetables.

They are contained in the upcoming World Health Report 2002: reducing risks, promoting healthy life, to be released at the end of this month.

One major finding of the report is that blood pressure alone causes about 50 percent of CV disease world-wide. Cholesterol causes about one-third.

Inactive lifestyles, tobacco use and low fruit and vegetable intake account for 20 percent each. (These percentages add up to more than 100 percent because some risks overlap. One individual could be at risk from cholesterol alone, while another could be at risk from cholesterol and blood pressure together.)

It was estimated that about nine million deaths and more than 75 million lost healthy life years annually were due to unfavourable levels of blood pressure or cholesterol.

Overall approximately 75 percent of CV disease can be attributed to the established risks assessed in the report, far higher than the one-third to one-half commonly thought. The burden is about equally shared among men and women.

In total, 10-30 percent of adults in almost all countries suffer from high blood pressure, but a further 50-60 percent would be in better health if they had lower blood pressure. Even small reductions in blood pressure for this "silent majority" would reduce their hearth attack and stroke risk. A very similar pattern occurs for cholesterol.

"The global disease burden due to blood pressure is twice as much as previously thought," says Gro Harlem Brundtland, M.D., Director-General of WHO. "This reflects recent findings on how strongly blood pressure is linked to disease in many diverse populations around the globe and the realization that most people have sub-optimal levels."

The most immediate improvements in cardiovascular health can be achieved with a combination of drugs - statins for cholesterol lowering and low-doses of common blood pressure lowering drugs and aspirin - given daily to people at elevated risk of heart attack and stroke. This highly effective combination therapy could be much more widely used in the industrialized world, and is increasingly affordable in the developing world.

"This drug combination could cut death and disability rates from CV disease by more than 50 percent among people at risk of cardiovascular disease," says Christopher Murray, MD, Ph.D., Executive Director of the Cluster on Evidence and Information Policy at WHO. "More people at elevated risk for CV disease should start taking the combination now, before they have heart attacks or strokes."

This drug combination would cost less than US$14 to treat each person annually. Although this is a very low cost, it might not be affordable to poor countries facing the traditional burdens posed by

communicable diseases and the growing burden of non-communicable and chronic diseases.

New resources would need to be found if the opportunities presented by this combination are to be fully realized. The recent WHO Commission on Macroeconomics and Health highlighted the need for major new injections of resources from high income countries.

The World Health Report 2002 also urges countries to adopt policies and programs to promote population-wide interventions like reducing salt in processed foods, cutting dietary fat, encouraging exercise and higher consumption of fruits and vegetables and lowering smoking.

The fact that the vast majority of adults world-wide have blood pressure and cholesterol that are not optimal for health has clear implications for governments, which have the capacity to address the root causes with population-wide measures. Such efforts will also require increased access to cost-effective medications for those at elevated risk.

"Prevention is the key to lowering the global disease burden of heart attacks and strokes," says Dr Brundtland. "The ideal strategy for many countries would be to devote many more resources to introduce broad measures that can benefit the whole population and at the same time target those at elevated risk with the combination of pills."

"Our new research finds that many established approaches to cutting CV disease risk factors are very inexpensive, so that even countries with limited health budgets can implement them and cut their CV disease rate by 50 percent," says Derek Yach, M.D., Executive Director of the Cluster on Non-communicable Diseases and Mental Health. "In addition, established drug treatments are increasingly affordable in middle and low-income countries, as effective drugs come off patent."

WHO has developed a first-ever system of identifying and reporting cost-effective health interventions consistently across settings that it calls CHOICE (CHOosing Interventions that are Cost-Effective). Various CHOICE options are contained in a new statistical database that is also a part of the World Health Report 2002. These interventions can be implemented on an a la carte basis, depending on each country's individual circumstances.

CV Disease: No Longer a "Western" Problem The Report shows for the first time that most of the global burden due to CV risks occurs in the developing world. This is a result of already high and increasing risk factor levels (e.g. high cholesterol) and large and ageing populations. Tobacco, blood pressure and cholesterol are leading risks in industrialized countries, together accounting for more than a quarter of lost healthy life years. But they also feature prominently in the top risks in middle income countries and are beginning to appear in the leading risks of poorer developing countries.

"We are seeing that conditions like high blood pressure and high cholesterol are much more prominent in developing countries than previously thought and contribute significantly to their overall disease burden," says Anthony Rodgers, M.D., Ph.D., of the University of Auckland, New Zealand and a WHO consultant who is one of the report's main writers.

"The world once thought of CV disease as a Western problem, but clearly this is not the case. We can no longer frame diseases in terms of where they occur, but rather with what frequency they occur in any given population."

"The need to control CV disease is especially important in poor countries, because its places a double burden on national health systems, which must simultaneously deal with the infectious diseases found primarily in these countries as well as newer cardiovascular conditions," says Dr Brundtland.

"In the new mega-cities of the developing world, we see massive illness due to under-nutrition side by side with poor cardiovascular health."

The trend toward increased CV disease in developing countries may be particularly dangerous to the lower end of the socio-economic spectrum. In industrialized countries, CV disease once afflicted wealthier people in disproportionate numbers. However, as knowledge of cardiovascular health increased, the wealthy were able to reduce the frequency that they suffer from these conditions while incidence of CV disease increased among the poor and minorities. If this trend repeats in the developing countries, the very poorest of the world's poor will be the ones most at risk.

Population-Wide Interventions Should be Given Priority While very effective, the combination of pills alone should not be considered the exclusive or even the primary means of reducing cardiovascular risks. Population-wide interventions are the most cost-effective methods of reducing risk among an entire population. They should be be the first to be considered in all settings.

In many countries, too much focus is being placed on one-on-one interventions among people at medium risk for CV disease, Dr Murray says.

A much better use of resources would be to focus on those at elevated risk and to use other resources to introduce population-wide efforts to reduce risk factors through multiple economic and educational policies and programs.

The WHO report also questions the accepted common threshold labels such as "hypertension." The report outlines the increasingly clear evidence that health risks are not restricted to those above these thresholds. Rather, the vast majority of people would benefit from lower levels, as the risks are continuous. In fact, cholesterol and blood pressure measurements that are considered "average" are actually usually too high for good health.

"CV disease risk often falls along a standard bell curve, with the vast majority of the population at some elevated risk of CV disease and only a few with very high or very low risk," says Dr Rodgers. "The most inexpensive means of reducing CV disease in a given country is to move the entire population to a lower risk zone through public education and government-led interventions. This is particularly true in poor countries that may have more difficulty affording widespread medical treatments, despite their decreasing costs."

Modern-day conditions frequently mean that individuals, particularly the poor in developing world cities, often have little control themselves over the major risk factors. For example, urban poor often can only buy high-fat and high-salt processed foods. Many processed foods - breads, soups, meats, etc. - have salt concentrations approaching or even exceeding that found in seawater.

For example, when their sodium content is compared to that of seawater, which has 1g of sodium per 100g; Bread and crackers are about 50 percent as salty; Cornflakes are about 100 percent as salty; Soups are up to 300 percent as salty; Sausages are 50-150 percent as salty.

As a result, salt intakes are usually very high and, in industrialized countries, more than 75 percent is usually from processed foods.

Targeted Medical Interventions: Inexpensive, Yet Powerful An "absolute risk approach" to managing blood pressure and cholesterol is also very cost-effective in all regions and has the potential to lead to dramatic reductions in ischaemic heart disease and stroke. This involves people at elevated risk of vascular disease being provided with "low dose combination treatment" - a combination of multiple drugs including blood pressure lowering pills, statins and aspirin. This reflects recent evidence that such therapy benefits all groups at elevated risk, even those with average or below average blood pressure or cholesterol.

Side effects from these drugs exist, but they are less than generally perceived, and can be minimized with low-dose combinations. The benefits will considerably outweigh any harm in those at elevated risk of vascular disease.

This report will likely challenge current priorities for health systems in many countries: Few governments have yet to develop successful collaboration with the food industry to reduce salt and high fat in processed food.

The report calls for new strategies and new thinking. It is increasingly clear that people at elevated risk benefit from combined, multi-modal treatment, largely irrespective of what initially caused their risk to be high, and what their current risk factor levels are. This is a paradigm shift for many doctors.

WHO also suggests that the large resources now devoted to detecting, treating and monitoring people at comparatively low risk of heart disease or stroke be reduced, while greater resources be given to those with multiple risk factors who are at the highest risk, who are now often under-treated.

CHOICE: Finding the Most Cost-Effective Method The WHO CHOICE project reports that several established approaches to CV disease risk factor management easily meet international standards for cost-effectiveness, even in the poorest countries of the world.

"Take tobacco taxes, for example," says Dr Murray. "Countries that raise their tobacco taxes dramatically witness an almost immediate reduction in tobacco use and have corresponding improvements in cardiovascular health very quickly. A seven-dollar pack of cigarettes will go a long way toward persuading smokers to quit and non-smokers not to start."

Governments, industry and civil society can work together to enable the behavioural changes necessary to reduce risk among entire populations. The best approaches will be different from country to country, and many lessons can be learned from past experiences. Some of the successes include: In the

United Kingdom, a government-promoted program in consort with the food and drink manufacturing industry successfully reduced salt content in almost a quarter of manufactured foods. This occurred gradually over several years and examples included an agreement among members of the Bakers Federation and reductions within products produced by several major supermarket chains.

In Mauritius, cholesterol reduction was achieved largely by a government-led effort switching the main source of cooking oil from palm to soya bean oil.

Korea has worked to retain elements of the traditional diet. Civil society and government initiatives led mass media campaigns, such as television programs, to promote local foods, traditional cooking methods and the need to support local farmers.

In Japan, government-led health education campaigns and increased blood pressure treatment have reduced blood pressure population-wide, and stroke rates have fallen by more than 70 percent.

In Finland, community based interventions, including health education and nutrition labelling, led to population-wide reductions in cholesterol and many other risks, closely followed by a precipitous decline in heart disease.

In the USA, a decrease in saturated fat intake in the late 1960s began the large decline in coronary heart disease (CHD) deaths seen in the last few decades there.

In New Zealand, introduction of a recognizable food labelling logos for healthier foods led many companies to reformulate their products. The benefits included large decreases in the salt content of processed foods.

"If we consider the dramatic improvement in cardiovascular health that, for example, the Japanese and the Finns have experienced in the last few decades, we can see that entire populations have been able to significantly improve their situations without any change in their gene pool," says Dr Murray. "Clearly diet, exercise and a reduction in tobacco and alcohol intake are the most important factors to consider."

The World Health Report 2002 is focusing on risks to health. It will rank the top global risk factors and outline cost effective measures for reducing risks, showing in detail the reductions in death and disability that can result from a risk-focused approach to health issues. The Report will be launched 30 October.

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NOTE: Supplementary charts and graphs, including those referenced in the footnotes of this document, are available via e-mail or on the Internet. Please direct your browser to www.hoffmanpr.comor contact ian@hoffmanpr.com.