

WHO-Facts Sheet

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1. TOO MANY PEOPLE ARE LOSING LOWER LIMBS UNNECESSARILY TO DIABETES

Diabetes mellitus is a chronic disease caused by the body's inability to produce insulin, or by the ineffective use of the insulin produced. Such a deficiency results in increased concentrations of glucose in the blood, which in turn damage many of the body's systems. Diabetic foot problems are caused by changes in blood vessels and nerves that can lead to ulceration and subsequent limb amputation. Amputations due to diabetes cause unnecessary loss of life and disability.

On the occasion of World Diabetes Day celebrated each year on November 14, the World Health Organization (WHO) and the International Diabetes Federation (IDF) called attention to this problem and stated that more than half of these lower limb amputations could be prevented with adequate detection and care.

It is estimated that more than 170 million people are suffering from diabetes globally and this number is expected to double by 2030. Diabetes and its numerous complications are extremely burdensome on the health and economies of countries worldwide. In high income countries, for instance, treatment of diabetic foot complications accounts for 15-25% of total healthcare resources for diabetes. This is an enormous waste not only of scarce public health resources but also of healthy lives. It is estimated that with basic diabetes management and care, up to 80% of all diabetic foot amputations can be prevented.

"It is unacceptable that so much disability and death are caused by leg amputations, when the solutions are clear and affordable," said Dr Catherine Le Galès-Camus, WHO Assistant Director-General for Noncommunicable Diseases and Mental Health, "Small investments in

prevention and education can mean fewer leg amputations, increased quality of life for individuals and dramatic reductions in health-care costs."

Leg and foot amputations of people with diabetes can be prevented using low cost, low technology solutions. Simple behaviours should be encouraged such as regular foot examination and examining the inside of shoes before putting them on, not walking barefoot, wearing comfortable footwear, keeping feet clean, and maintaining good care of the skin and nails.

"People with diabetes need to take an active role in their own care," said Professor Pierre Lefèbvre, President of IDF, "but they need to be supported by their health-care system to learn how to self-manage effectively. Timely access to proper treatment and medical advice is also vital."

Beyond prevention of diabetes complications, type 2 diabetes, which accounts for the vast majority of the disease, is also largely preventable. Type 2 diabetes can be prevented by addressing risk factors such as physical inactivity and overweight/obesity. These risk factors are shared by other chronic diseases such as heart disease, stroke and cancer. As such, WHO advocates an integrated framework for the prevention, control and treatment of all chronic diseases, particularly in low resource settings. The integrated approach incorporates cost-effective measures to prevent common risk

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2. GLOBAL MEETING TO DEVELOP COMMON APPROACH ON AVIAN INFLUENZA AND HUMAN PANDEMIC INFLUENZA

The H5N1 avian influenza virus is firmly established among animals in Asia and has begun to extend its reach into Europe. The disease in animals caused by the H5N1 influenza virus has resulted in the culling of at least 150 million birds in the last two years. H5N1 remains for the moment an animal disease, but the World Health Organization (WHO) has warned that H5N1 is a virus that has the potential to ignite a human influenza pandemic.

While no one can predict the timing or severity of the next influenza pandemic, governments around the world are taking the threat seriously. "This virus is very treacherous," says Dr Margaret Chan, Representative of the WHO Director-General for Pandemic Influenza. "While we cannot predict when or if the H5N1 virus might spark a pandemic, we cannot ignore the warning signs." Because influenza pandemics have typically caused enormous social and economic disruption, WHO is advising its member states to develop national strategies to cope with such a public health emergency, as well as coordinating with international partners to develop a comprehensive response.

As the Food and Agriculture Organisation (FAO) expects avian influenza to reach the Middle East and Africa in the near future, it is essential that the global community and affected countries mobilize more resources to combat the virus, which is thought to be spread in part by migratory birds, before it becomes embedded in new regions.

Strengthening disease surveillance systems worldwide was on the agenda of a latest Geneva meeting co-organized by WHO, the Food and Agriculture Organisation (FAO), the World Organisation for Animal Health (OIE) and the World Bank. Early detection and rapid response mechanisms are essential to tracking the evolution of the H5N1 virus. The delegates also discussed ways to strengthen veterinary and human health services so that any H5N1 cases—in animals or humans—will be identified quickly.

"This is crucial for the prevention of any future global crisis associated with emerging animal diseases potentially transmissible to humans," says Dr Bernard Vallat, Director-General of the World Organisation for Animal Health (OIE).

At the same time that animal control efforts are to be intensified, several critical issues related to potential human disease remain to be addressed. Meetings in the last several months have identified

several key pandemic preparedness issues. For example, many countries are concerned about the lack of access to antiviral medicines and the antiquated production methods for human influenza vaccines. Communication with the public is also a critical issue.

At present, at least ten vaccine developers in about as many countries are carrying out demonstration projects to develop and evaluate vaccines primarily against the H5N1 subtype. Participants expressed the need for continued sharing of technical information, strengthened international coordination of work related to pandemic influenza vaccines so as to avoid duplication of efforts, support to vaccine research initiatives in developing countries and integrating the science into the public health context.

"It's impossible to exaggerate how important pandemic preparedness is, and how dire the consequences would be for the entire world if some of the worst-case scenarios for a human influenza pandemic were to unfold," says James Adams, the World Bank's Vice-President for Operations Policy and Country Services, and head of the Bank's avian flu taskforce. "For the first time in human history, we have a chance to prepare ourselves for a pandemic before it arrives," says Dr Chan. "It is incumbent upon the global community to act now."

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3. "STOP THE GLOBAL EPIDEMIC OF CHRONIC DISEASE": WORLD HEALTH ORGANIZATION

New report, 'Preventing Chronic Diseases: a vital investment' estimates hundreds of billions of dollars at stake

Currently, chronic diseases are by far the leading cause of death in the world and their impact is steadily growing. Nearly 60% of all deaths are due to chronic diseases such as heart disease, stroke, cancer, diabetes and respiratory diseases like asthma. 80% of these deaths occur in low and middle income countries, and half are women.

The World Health Organization (WHO) report, 'Preventing Chronic Diseases: a vital investment' says global action to prevent chronic disease could save the lives of 36 million people who would otherwise be dead by 2015. The report projects that

approximately 17 million people die prematurely each year as a result of the global epidemic of chronic disease.

Faced with the prospect of millions of people dying prematurely and suffering needlessly from heart disease, stroke, cancer and diabetes, WHO says the global epidemic of chronic disease must be stopped. Contrary to common perception, this largely invisible epidemic is worst in low and middle income countries, where 80% of all chronic disease deaths occur. The report details the latest findings from nine countries: Brazil, Canada, China, India, Nigeria, Pakistan, the Russian Federation, the United Kingdom and the United Republic of Tanzania and provides new projections for the economic impact of chronic diseases. For example, China, India and the Russian Federation could forego billions of dollars in national income over the next ten years as a result of heart disease, stroke, cancer and diabetes. "This is a very serious situation, both for public health and for the societies and economies affected, and the toll is projected to increase", said Dr LEE Jong-wook, WHO Director-General. "The cost of inaction is clear and unacceptable. It is vital that countries review and implement the health actions we know will reduce premature death from chronic diseases."

The global goal

In this report, WHO proposes a new global goal: to reduce the projected trend of chronic disease death rates by 2% each year until 2015. This would prevent 36 million people dying of chronic diseases in the next 10 years, nearly half of them before they turn 70.

But these problems and their solutions lie outside the control of any one sector. In order to achieve the goal, all sectors from government, private industry, civil society and communities will have to work together. "More and more people are dying too early and suffering too long from chronic diseases," said Dr. Catherine le Galès-Camus, Assistant Director-General of Noncommunicable Diseases and Mental Health, "We know what to do, and so we must do it now."

Preventable risk factors

The vast majority of cases of chronic diseases are caused by a small number of known and preventable risk factors. Three of the most important are unhealthy diet, physical inactivity and tobacco use. Globally, these risk factors are increasing as people's dietary habits change to foods high in fats and sugars, and people's work and living situations are much less physically active. Increased marketing and sales of tobacco

products in low and middle income countries mean greater exposure to the risk of tobacco.

One billion people globally are overweight or obese, and WHO predicts that will rise beyond 1.5 billion by 2015 without immediate action. The report examines the vast evidence-based knowledge about inexpensive and cost-effective measures that can produce rapid health gains and for which the benefits far outweigh the costs. Examples include: salt reduction in processed foods, improved school meals and taxation of tobacco products, which is not only cost-effective but also raises revenues for governments.

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4. WORLD HEALTH ORGANIZATION URGES RESPONSIBLE USE OF ANTIMALARIAL MEDICINES

In a new report published lately, "Susceptibility of *Plasmodium Falciparum* to Antimalarial Drugs," the World Health Organization (WHO) warns that as more and more people gain access to these life-saving malaria medicines - which combine a drug derived from the plant *Artemisia annua* with a second, synthetic drug - it is vital that countries closely monitor their effectiveness.

More than 50 governments have followed WHO's recommendations on malaria treatment and adopted artemisinin-based combination therapies (ACTs), the most effective antimalarial drugs available at present. This has enhanced prospects for reducing the burden of the disease worldwide.

Drugs derived from the plant *Artemisia annua* must be used as ACTs in combination with a second drug, and not alone. Otherwise, the medicines could lose their potency over time due to the development of resistance. This has already happened with other antimalarial drugs in the past. "It is crucial that these medicines be used correctly," said Dr Pascal Ringwald, a medical officer in WHO's Roll Back Malaria (RBM) Department and principal author of the new report on global monitoring of antimalarial drugs.

To avert resistance, WHO is calling on countries to use only WHO-approved ACTs (an artemisinin-based drug combined with amodiaquine, lumefantrine, mefloquine or sulfadoxine-pyrimethamine) of high quality, since drugs of low potency can promote resistance. The organization also advises that all people taking antimalarials should be educated about the importance of

finishing their medication courses, since incomplete treatment is another cause of resistance. Any change in efficacy of antimalarial drugs should prompt an appropriate update in a country's treatment policy.

The danger of resistance stems from the malaria parasite's ability to evade the lethal action of drugs. Because malaria parasites are genetically highly diverse, some strains can escape drugs unharmed and pass along their resistance to progeny. As sensitive organisms die off, resistant strains may come to dominate, and over time an antimalarial drug can lose its ability to cure infection.

Resistance is more likely to occur when only one drug is used. Combining an artemisinin-based medicine with another antimalarial drug, as WHO recommends, sharply reduces the risk.

"To date no treatment failures due to artemisinin drug resistance have been documented,

but we are watching the situation very attentively," Dr Ringwald said.

The report recounts the emergence of resistance to the former mainstays of malaria treatment, such as chloroquine, in most regions of the world, and the ways countries have changed their national policies to keep ahead of the advancing resistance. It also outlines new standardized methods developed by WHO for monitoring antimalarial drug efficacy and emerging resistance patterns worldwide.

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