

# WHO-Facts Sheet

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## 1. IMPROVED FORMULA FOR ORAL REHYDRATION SALTS TO SAVE CHILDREN'S LIVES

### Improved formula means better treatment for life-threatening diarrhoeal dehydration

The World Health Organization (WHO) and UNICEF announced a new formula for the manufacture of Oral Rehydration Salts (ORS). The new formula will better combat acute diarrhoeal disease and advance the Millennium Development Goal of reducing child mortality by two-thirds before 2015.

Diarrhoea is currently the second leading cause of child deaths and kills 1.9 million young children every year, mostly from dehydration.

The latest improved ORS formula contains less glucose and sodium (245 mOsm/l compared with the previous 311 mOsm/l). The lower concentration of the new formula allows for quicker absorption of fluids, reducing the need for intravenous fluids and making it easier to treat children with acute non-cholera diarrhoea without hospitalization.

ORS use is the simplest, most effective and cheapest way to keep children alive during severe episodes of diarrhoea. The ORS solution is absorbed in the small intestine, thus replacing the water and electrolytes lost. WHO provides the only updated international quality specifications for this formula and UNICEF is a leading supplier of ORS to poor countries. WHO and UNICEF have jointly issued guidance for the production of the new ORS.

WHO and UNICEF recommend that countries manufacture and use the new ORS in place of the previous formula. WHO and UNICEF will help national authorities develop manufacturing guidelines and procedures for the new formula. Establishing the local production of ORS will be a key step to

ensure countries can meet their own needs in controlling diarrhoeal disease.

According to UNICEF and WHO, oral rehydration therapy should be combined with guidance on appropriate feeding practices. Provision of zinc supplements (20 mg of zinc per day for 10 to 14 days) and continued breastfeeding during acute episodes of diarrhoea protect against dehydration and reduces protein and calorie consumption to have the greatest impact on reducing diarrhoea and malnutrition in children.

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## 2. NEW TUBERCULOSIS THERAPY OFFERS POTENTIAL SHORTER TREATMENT

### Phase III Trials Results

Clinical results on a new combination treatment that could dramatically shorten the length of tuberculosis (TB) treatment were presented at the 45<sup>th</sup> Annual Interscience Conference on Antimicrobial Agents and Chemotherapy in Washington, D.C in December 2005.

The phase II trial results of a gatifloxacin-containing regimen are demonstrating good potential. The regimen is significantly more potent than the currently recommended six-month regimen of isoniazid, rifampicin, pyrazinamide and ethambutol, and suggests that when gatifloxacin is used instead of ethambutol, the standard six-month regimen may be shortened to four months.

"We are working to bring together public and private partners to speed development for this new treatment," says Dr. Robert Ridley, Director of the World Health Organization-based Special Programme

for Research and Training in Tropical Diseases (TDR). This is the most advanced shorter TB treatment regimen presently in development, and could be available to the public by the end of 2009 if positive results continue.

Finding options to shorten the length of treatment has been declared a public health priority by the Stop TB partnership. "The gatifloxacin fixed-dose combination responds to the new WHO Stop TB Strategy's call for new tools, in particular, new regimens that can significantly shorten the current six-month treatment time," said Dr. Mario Raviglione, Director of WHO's Stop TB.

One-third of the world's population is infected with *Mycobacterium tuberculosis*, the causative agent of TB, with approximately eight million people developing the active form of the disease every year. The HIV/AIDS pandemic has dramatically increased the incidence of this disease. A shorter TB regime will also help improve treatment adherence and preventing the development of multidrug-resistant TB.

The phase II trial was conducted by the South African Medical Research Council in Durban, South Africa, in patients with newly diagnosed pulmonary tuberculosis with and without HIV co-infection. It was designed to measure the anti-tuberculosis activity of the treatment in the first two months of therapy when compared to standard WHO recommended treatment and two other similar regimens which contained either ofloxacin or moxifloxacin. Treatment with either the gatifloxacin or moxifloxacin containing regimen was shown to be significantly more active than either the standard regimen or the ofloxacin containing regimen after two months of treatment.

A multi-centre Phase III clinical trial is planned to definitely assess whether the four month gatifloxacin containing regimen is equivalent to the current standard six month short course regimen. Study sites are in Benin, Guinea, Kenya, Senegal and South Africa. Arnd Hoeveler, of the European Commission (EC), says, "The clinical trial sites are the result of an EC funded Consortium of ten European and African institutions (the OFLOTUB Consortium) that are in the process of finalizing the terms of a proposed collaboration with the WHO to develop a new short course treatment regimen. We are delighted to contribute to this effort."

The research is planned to continue as part of an international collaboration which is being developed between the World Health Organization-based Special Programme for Research and Training in Tropical Diseases (TDR), the European Commission (EU), the OFLOTUB Consortium that is coordinated by the French Institut de Recherche

pour le Développement (IRD), and Lupin Pharmaceuticals, Ltd. "The IRD is extremely proud to have significantly contributed to the foundation of this collaborative effort," says Jean Francois Girard, chairman of IRD.

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### 3. BLINDING TRACHOMA: PROGRESS TOWARDS GLOBAL ELIMINATION BY 2020

Several countries are on track to eliminate the infectious eye disease, blinding trachoma, the World Health Organization (WHO) announced today. This progress results from efforts to achieve the global goal set by the World Health Assembly in 1998 to eliminate this disabling disease by the year 2020.

The estimated number of people affected by trachoma has fallen from 360 million people in 1985 to approximately 80 million people today. This is the result of a concerted effort by the WHO Alliance for the Global Elimination of Blinding Trachoma (GET 2020) combined with socioeconomic development in endemic countries. Trachoma affects the poorest and most remote rural areas of 56 countries in Africa, Asia, Central and South America, Australia and the Middle East.

At today's 10th meeting of GET 2020, held at WHO Headquarters in Geneva, the Islamic Republic of Iran, Mexico, Morocco and Oman have reported successfully implementing their national strategies of interventions necessary for eliminating trachoma, based on the WHO-recommended SAFE strategy. The WHO SAFE strategy emphasizes comprehensive public health action and stands for lid surgery (S), antibiotics to treat the infection (A), facial cleanliness (F); and environmental changes (E). If implemented comprehensively, the SAFE strategy could prevent virtually all cases of blindness.

"This is very encouraging progress," said Dr LEE Jong-wook, WHO Director-General. "If countries continue at this rate, the global goal to eliminate blinding trachoma as a public health problem by 2020 can be achieved."

WHO is currently developing the specific epidemiological assessment criteria to determine when countries have fully eliminated blinding trachoma. The criteria are expected to be finalized by the end of 2006, at which time WHO will be able to evaluate the effectiveness of national strategies and provide country-by-country certification that the disease has been eliminated.

### Blinding trachoma

Trachoma originates from an eye infection that is spread from person to person, is frequently passed from child to child and from child to mother within the family, especially in environmental conditions of water shortages, flies, and crowded households. Through the discharge from an infected person's eyes, trachoma is passed on by hands, on clothing, or by flies that land on the person's face. Infections often begin during infancy or childhood and become chronic. If left untreated, these infections eventually cause the eyelid to turn inward which in turn causes the eye lashes to rub on the eyeball, resulting in intense pain and scarring of the front of the eye. This ultimately leads to irreversible blindness, typically beginning between ages 30-40 and often resulting in deepening poverty for individuals and their families. Women are blinded two to three times more often than men, probably due to their close contact with affected children.

### The alliance for the global elimination of blinding trachoma

Launched under WHO's leadership in 1997, the Alliance for the Global Elimination of Blinding Trachoma by the Year 2020 (GET2020) is a partnership formed to support country implementation of the SAFE strategy. The Alliance is led by WHO and is open to members from all sectors - public, nongovernmental and commercial willing to work with governments to implement the SAFE strategy. Alliance members include WHO, national governments, nongovernmental organizations research institutions, foundations, and the pharmaceutical industry.

Pzifer International Inc and its Foundation have been key partners in the fight against trachoma. It has already donated 37 million doses of azithromycin and has committed to provide 100 million additional doses by 2008. Azithromycin is a long-acting antibiotic used as one component of the SAFE strategy.

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### 4. INVESTMENT IN CLEANER HOUSEHOLD ENERGY YIELDS MAJOR HEALTH AND ECONOMIC BENEFITS

#### New report calls attention to health threat from indoor air pollution

Every day for the next 10 years, 485 000 people would need to gain access to cleaner fuels in order to halve by 2015 the population relying on solid fuels. A new report from the World Health Organization, *Fuel for Life: Household Energy and Health*, demonstrates that investing in cleaner household fuels can yield a seven-fold economic benefit in health and productivity gains.

Cooking with wood, dung, coal and other solid fuels on open fires or simple stoves is a daily reality for more than half of the world's population. This leads to high levels of indoor air pollution, a major risk factor for pneumonia among children and chronic respiratory disease among adults. Globally, pneumonia remains the single most important child killer and is responsible for two million deaths a year.

Every year, the killer in the kitchen is responsible for 1.5 million deaths. Sub-Saharan Africa and South East Asia are particularly affected, with 396 000 and 483 000 annual deaths, respectively. Indoor air pollution also disproportionately affects women and children. In 2002, cooking with solid fuels was responsible for nearly 800 000 deaths among children and more than 500 000 deaths among women.

The good news is that effective solutions are available. Liquefied petroleum gas, biogas and other cleaner fuels represent the healthiest alternative. Switching from a traditional stove to an improved stove substantially reduces indoor smoke.

"Making cleaner fuels and improved stoves available to millions of poor people in developing countries will reduce child mortality and improve women's health," said Dr LEE Jong-wook, WHO Director-General. "In addition to the health gains, household energy programmes can help lift families out of poverty and accelerate development progress."

On an average, 100 million more homes using liquefied petroleum gas, biogas or modern fuels for cooking would lead to 473 million fewer women, children and men exposed to harmful indoor air pollution, and 282 thousand fewer deaths from respiratory diseases per year.

The economic case for adopting practical solutions on a large scale is just as strong as the humanitarian case. For as little as six dollars,

families can install better ventilated and fuel efficient stoves. A total cost of 13 billion dollars per year to halve the number of people worldwide cooking with solid fuels by 2015 shows a payback of 91 billion dollars per year, highlights the report. Making improved stoves available to half of those still burning biomass fuels and coal on traditional stoves would save USD 34 billion in fuel expenditure every year, and generate an economic return of USD 105 billion every year over a 10 year period.

The majority of these costs are borne at the household level which is also where the majority of the benefits occur. Nevertheless, donor investments are required upfront for designing appropriate technologies, setting up local businesses, and putting micro-credit systems in place. Developing energy infrastructure in this way would not only mean less illness and death but also less time spent ill, collecting fuel and cooking. With more time available, children would do better at school, while their mothers could engage in childcare, agriculture or other income-generating activities as a way to break the vicious cycle of poverty.

“It is a travesty that 1.5 million lives a year - many of those of children whose lives have not even started - are snuffed out every year because of needless exposure to indoor smoke. We have

simple, affordable solutions; let us ensure that they reach the people who can benefit from - and live by - using them,” said Dr Maria Neira, WHO’s Director for Public Health and Environment.

Some low-income countries with enormous financial constraints are already responding to the challenge, and programmes are operating effectively and producing results. The same commitment needs to be replicated worldwide.

The problem of indoor air pollution has been around since the Stone Age, yet international development agendas fail to recognize that missing out on clean energy equals missing out on life. Today’s report provides an overview of the global situation on indoor air pollution, and calls for vigorous action to close the household energy gap by developing energy infrastructure to meet basic household needs in a healthy, safe and sustainable way.

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