

# Prevent six dreadful disease by immunisation

## STAR HEALTH DESK

### 1. MEASLES

**Symptoms**  
Children suffering from this disease usually have a rash, high fever, cough and red eyes. Sometimes children also have a sore mouth, diarrhoea and vomiting.

**What causes it**  
This disease is caused by a virus which cannot be cured by drugs, but which can be prevented by immunisation.

**How it is caught**  
Children catch this disease from other children with it. When an infected child coughs, small droplets go into the air with the virus in them. When children who have not been immunised breathe in these droplets, they may get the disease two to three weeks later.

**2. WHOOPING COUGH**

**Symptoms**  
Children suffering from this disease

usually have long coughing spells, sometimes followed by vomiting. They will often lose weight or fail to gain weight because of a decreased appetite or vomiting.

**What causes it**  
This disease is caused by a bacterial infection and whilst immunisation does not altogether prevent the disease, it reduces the symptoms so they are not so serious.

**How it is caught**  
This disease is caught from other children who have the disease. When an infected child coughs, small droplets go into the air with the bacteria in them. When children who have not been immunised breathe in these droplets, they may develop the disease.

**3. TETANUS**

**Symptoms**  
Children suffering from this disease will have muscle spasms, stiff muscles in the whole body, and difficulty in swallowing.

**What causes it**  
This disease is caused by bacteria, it is almost totally preventable by immunisation.

**How it is caught**  
This disease can be caught when the bacteria enters the body through various ways. These include:  
λThrough the umbilical cord in new-born babies, or through pierced ears, circumcision or other cuts when babies are between 14 and 21 days old. Most new-born babies who catch this disease die.  
λIn older children, the bacteria enters the body through cuts, scratches, wounds, ulcers or decayed teeth.

**4. POLIO**

**Symptoms**  
Children suffering from this disease will usually have weakness or paralysis of the limbs, especially the legs.

**What causes it**  
This disease is caused by a virus which damages the nerves. Once

nerves have been damaged, they can never be repaired again. Most children who are paralysed are under three years old and the disability is usually very serious.

**How it is caught**  
This disease is caught through contact with contaminated food, water and other objects. It is more common and more severe where there is poor sanitation.

**5. TUBERCULOSIS**

**Symptoms**  
Children suffering from this disease will usually have a cough, which lasts a long time, and loss of weight. Children are more likely to catch this disease if:  
λThey have had several contracts with a person who has the disease but received no treatment for it.  
λThey are weak from malaria, measles or whooping cough.  
λThey are malnourished.

**What causes it**  
This disease is caused by a bacterial

infection which mainly affect the lungs. It can occur at any age, even in infants, and is particularly common in overcrowded, insanitary housing.

**How it is caught**  
This disease is caught by an infected person breathing out spores into the air, which are then breathed in by others. Once the spores settle in the lungs, they begin to damage the lung lining and produce the coughing fits.

**6. DIPHTHERIA**

**Symptoms**  
Children suffering from this disease will have a severe sore throat, sometimes accompanied by a swollen and tender neck, and be very ill.

**What causes it**  
This disease is caused by bacteria. These bacteria produce a toxin which is absorbed into the tissues and bloodstream of the body, causing the swelling and subsequent damage.

**How it is caught**

This disease can be caught in a number of ways:  
λBy droplet secretions from the nose and throat of an infected person being released into the air and breathed in by others.  
λBy close face to face contact with an infected person.  
λFrom articles which have been contaminated by the droplet secretions.  
λFrom contaminated raw milk.

**Immunisation**  
Immunisation can be achieved against these six dreadful disease by EPI vaccines. Despite available EPI programme some children are not immunised just for the lack of awareness. BCG, DPT, OPV, MMR and TT vaccines are available in the EPI schedule to prevent the diseases. Recently vaccine to prevent hepatitis B is given in pilot project. Pregnant women should be conscious about tetanus of their own and of their coming baby.



Measles



Diphtheria



Whooping cough



Polio



Tetanus

## The environment: where is the risk and where are children safe?

Around the world, polluted air and water and other environment-related hazards kill more than three million children under the age of five every year.

While industrialisation, urban population growth, climate change, the increasing use of chemicals and environmental degradation expose children to risks that were unimagined a few generations ago, it is the old and largely understood basic threats that are still today responsible for killing most children: factors such as unsafe water, lack of sanitation, malaria and indoor air pollution.

Just 10 percent of the world's population is under five years of age, yet 40 percent of the environment-related disease burden falls on children in this age group. This is partly because they have a higher intake of harmful substances in relation to body weight, and partly because they have less strength and knowledge to protect themselves.

To illustrate the impact of the environment on children's health, the World Health Organisation (WHO) is launching the first-ever Atlas of Children's Environmental Health and the Environment. Presented at the Fourth European Conference of Health and Environment Ministers in Budapest, Hungary, this book brings together a range of facts about the effects of environmental risks to our children's health, which, when taken together, paints a graphic picture of the hazards we all face and the reasons for over three million annual deaths in children under age five worldwide.

"Children are the main sufferers of environmental hazards. It is unacceptable from every point of view that the most vulnerable members of a society should be the ones who pay the price for failures to protect health from environmental dangers," said Dr LEE Jong-wook, WHO Director-General, on the occasion of the launch.

The United Nations Millennium Declaration calls on governments to reduce by two-thirds the under-five mortality rate by 2015. This may be one of the most ambitious goals. "This is a wake-up call for us and for the world. The number of child deaths is alarming. It paints a dismal picture of neglect. We must face up to reality and act now to work towards a sustainable and brighter future," said Dr Kerstin Leitner, WHO Assistant Director-General for Sustainable Development and Healthy Environments.

Extensively illustrated, the Atlas clearly demonstrates the threats children face everywhere. It underscores the impact of poverty on children's health and the efforts needed to tackle environmental problems. It also discusses the relationship, interlinkages, and impact of the environment on the health of our children. While this crisis cannot be ignored and demands urgent action, success stories show a way forward for the world to make sure that our children will inherit a safer planet and a brighter future.

**Health and the environment - some Atlas facts:**  
λUnclean water causes diarrhoea, which kills an estimated 1.8 million people worldwide each year, 1.6 million of whom are children under five. It's also responsible for many diseases including cholera, dysentery, guinea worm, typhoid and intestinal worms.  
λ86 percent of all urban wastewater in Latin America and the Caribbean, and 65 percent of all wastewater in Asia, is discharged untreated into rivers, lakes and oceans.  
λThe Ganges River alone has 1.1 million litres of raw sewage dumped into it every minute, a startling figure considering that one gram of faeces in untreated water may contain 10 million viruses, one million bacteria, 1000 parasite cysts and a hundred worm eggs. Diseases which result include diarrhoea, cholera, dysentery, typhoid, guinea worm, intestinal worms and trachoma.  
Nearly one million children die each year from diseases caused by air pollution inside their own homes. Over 75 percent of households in most Asian and African countries cook with solid fuels, such as wood, dung, coal or crop waste, which produce a black smoke that, when inhaled, may give rise to, or worsen pneumonia and other respiratory infections.

## A brief history of Leishmaniasis (Kala-azar)



Although cutaneous leishmaniasis can be traced back many hundreds of years, one of the first and most important clinical descriptions was made in 1756 by Alexander Russell following an examination of a Turkish patient. The disease, then commonly known as "*Aleppo boil*", was described in terms which are relevant: "After it is cicatrised, it leaves an ugly scar, which remains through life, and for many months has a livid colour. When they are not irritated, they seldom give much pain."

It affects the natives when they are children, and generally appears in the face, though they also have some lesions on their extremities. In strangers, it commonly appears some months after their arrival in an endemic area; very few escape having lesions, but they seldom affect the same person above once.

Representations of skin lesions and facial deformities have been found on pre-Inca potteries from Ecuador and Peru dating back to the first century AD. They are evidence that cutaneous and muco-cutaneous forms of leishmaniasis prevailed in the New World as early as this period.

**Leishmaniasis: A neglected disease**  
Texts from the Inca period in the 15th and 16th centuries, and then during the Spanish colonisation, mention the risk run by seasonal agricultural workers who returned from the Andes with skin ulcers which, in those times, were attributed to "*valley sickness*" or "*Andean sickness*".

Texts from the Inca period in the 15th and 16th centuries, and then during the Spanish colonisation, mention the risk run by seasonal agricultural workers who returned from the Andes with skin ulcers which, in those times were attributed to "*valley sickness*" or "*Andean sickness*". Later, disfigurements of the nose and mouth become known as "*white leprosy*" because of their strong resemblance to the lesions caused by leprosy. In the Old



## Breast-feeding cuts genetic breast cancer risk

The well-known risk of breast cancer for women who harbor mutations in the BRCA1 gene is significantly reduced among those who have breast-fed for a cumulative total of more than 12 months, new research shows.

The protective effects of breast-feeding seem to be much greater for BRCA1 mutation carriers than for women in general population. "This means that if the woman is identified to have a BRCA1 mutation, it is possible to modify her breast cancer risk without having to resort to surgery," Dr. Steven A. Narod from the Center for Research in Women's Health in Toronto told.

Narod's team evaluated of 965 women with breast cancer and an equal number of control women without breast or ovarian cancer. Among the 685 women with BRCA1 mutations, the average total duration of breast-feeding was significantly shorter for those who developed cancer than for those who did not.

Women carrying BRCA1 mutations who breast-fed for more than 1 year were about 60 percent less likely to have breast cancer than women who never breast-fed, the investigators report in the Journal of the National Cancer Institute.

Nonetheless, "the remaining risk is still high," Narod commented.

"We are making a lot of progress in identifying the means of reducing breast and ovarian cancer risk in BRCA1 mutation carriers," Narod continued. "And this means that it will become more acceptable to undergo genetic testing," he added.

Source: Journal of the National Cancer Institute, July 21, 2004.

## Condoms cut risk of Pelvic Inflammatory Disease (PID)

Consistent condom use can help prevent recurrence of pelvic inflammatory disease in women at high risk of the infection, a study showed.

The study of 684 teenagers and women with symptoms of pelvic inflammatory disease (PID) found that those who said they usually used condoms during sex were half as likely as women who never used them to develop a recurrent case of PID.

The findings give the first clear evidence that consistent condom use cuts the risk of bacterial - and not only viral - sexually transmitted diseases (STDs), according to the researchers. Though various bacteria can cause PID, most cases arise from the sexually transmitted bacterial infections gonorrhea and chlamydia.

It is well established that condom use lowers the odds of HIV transmission. But surprisingly, the new study's lead author told, there had been no previous prospective studies looking at whether condoms can prevent bacterial STDs. Prospective studies follow a group of people over time to try to establish cause-and-effect relationships.

These latest findings "close a gap" in the research on condoms and STDs, said Dr. Roberta Ness of the University of Pittsburgh's Graduate School of Public Health.

She and her colleagues report the results in the August issue of the American Journal of Public Health.

PID is an infection of the pelvic organs, the symptoms of which can include lower abdominal pain, irregular menstrual bleeding or discharge, fever and vomiting. Or it may cause no symptoms at all. Untreated PID can lead to complications such as chronic pelvic pain and infertility.

To see whether condom use cuts the risk of recurrent PID, Ness and her colleagues followed females between the ages of 14 and 37 who had symptoms of PID at the study's start. The women were interviewed every few months, over an average of three years, about their use of contraceptives and condoms.

The researchers found that women who said they used condoms at least 60 percent of the time were half as likely as those who never used them to develop PID again. They were also 60 percent less likely to become infertile.

Women in the study were considered consistent condom users if they used them during at least six out of every 10 sexual encounters. However, using condoms most of the time, rather than every time, is still a risky proposition outside of a monogamous relationship where neither partner has an STD, according to Ness.

"You have to use condoms correctly, and use them every time," she said.

Source: American Journal of Public Health, August 2004.