

## Climate change and our health

### STAR HEALTH REPORT

Climate change is a significant and emerging threat to public health, and changes the way we must look at protecting vulnerable populations.

The most recent report of the Intergovernmental Panel on Climate Change confirmed that there is overwhelming evidence that humans are affecting the global climate, and highlighted

a wide range of implications for human health. Climate variability and change cause death and disease through natural disasters, such as heatwaves, floods and droughts. In addition, many important diseases are highly sensitive to changing temperatures and precipitation. These include common vector-borne diseases such as malaria and dengue; as well as other major killers such as malnutrition and



diarrhoea. Climate change already contributes to the global burden of disease, and this contribution is expected to grow in the future.

The impacts of climate on human health will not be evenly distributed around the world. Developing country populations, particularly in Small Island States, arid and high mountain zones, and in densely populated coastal areas, are

considered to be particularly vulnerable.

Fortunately, much of the health risk is avoidable through existing health programmes and interventions. Concerted action to strengthen key features of health systems, and to promote healthy development choices, can enhance public health now as well as reduce vulnerability to future climate change.

## New survey finds highest rates of drug-resistant TB to date



### STAR HEALTH DESK

Multidrug-resistant tuberculosis (MDR-TB) has been recorded at the highest rates ever, according to a new report, says World Health Organisation (WHO). The report presents findings from the largest survey to date on the scale of drug resistance in tuberculosis.

The report, "Anti-tuberculosis drug resistance in the world", is based on data collected between 2002 and 2006 on 90,000 TB patients in 81 countries. It found that extensively drug-resistant tuberculosis (XDR-TB), a virtually untreatable form of the respiratory disease, has been recorded in 45 countries.

The report also found a link between HIV infection and MDR-TB. Surveys in Latvia and Ukraine found nearly twice the level of MDR-TB among TB patients living with HIV compared with patients without HIV.

Based on the analysis of the survey data, WHO estimates there are nearly half a million new cases of MDR-TB a year, which is about 5% of nine million new TB cases of all types. The highest rate was recorded in Baku, the capital of Azerbaijan, where nearly a quarter of all new TB cases (22.3%) were reported as multidrug-resistant.

Proportions of MDR-TB among new TB cases were 19.4% in Moldova, 16% in Donetsk in Ukraine, 15% in Tomsk Oblast in the Russian Federation, and 14.8% in Tashkent in Uzbekistan. These rates surpass the highest levels of drug resistance published in the last WHO report in 2004. Surveys in China also suggest that MDR-TB is widespread there.

### Frontal assault needed

"TB drug resistance needs a frontal assault. If countries and the international community fail to address it aggressively now we will lose this battle," said Dr Mario Raviglione, Director of the WHO Stop TB Department. "In addition to specifically confronting drug-resistant TB and saving lives, programmes worldwide must immediately improve their performance in diagnosing all TB cases rapidly and treating them until cured, which is the best way to prevent the development of drug resistance."

For the first time, the global survey includes analysis of XDR-TB. However, because few countries are currently equipped to diagnose it, limited data were available for this report.

The report also points to some successes. Thirteen years ago, Estonia and Latvia were singled

out by WHO as drug-resistant TB "hotspots". Following a substantial investment and a sustained assault on MDR-TB, rates in these two Baltic countries are today stabilising and TB case notification rates are falling.

The true scale of the problem also remains unknown in some pockets of the world. Only six countries in Africa - the region with the highest incidence of TB in the world - were able to provide drug resistance data. Other countries in the region could not conduct surveys because they lack the equipment and trained personnel needed to identify drug-resistant TB.

"Without these data, it is difficult to estimate the true burden and trends of MDR-TB and XDR-TB in the region. It is likely there are outbreaks of drug resistance going unnoticed and undetected," said WHO TB expert Abigail Wright, the principal author of the report.

WHO estimates that US\$ 4.8 billion is needed for overall TB control in low- and middle-income countries in 2008, with US\$ 1 billion for MDR-TB and XDR-TB. But there is a total finance gap of US\$ 2.5 billion, including a US\$ 500 million gap for MDR-TB and XDR-TB.

"The threat created by TB drug resistance demands that we fill these gaps, as laid out in the Global Plan to Stop TB, a roadmap for halving TB prevalence and deaths compared with 1990 levels by 2015," said Dr Marcos Espinal, Executive Secretary of the Stop TB Partnership. "The Plan also calls for another imperative - sufficient resources for research to find new diagnostics, new drugs effective against resistant strains and an effective TB vaccine."

## Coping with male infertility

### DR MD ABEDUR RAHMAN

"Normal" sperm count, as defined by the World Health Organisation is characterized by:

- The concentration of spermatozoa should be at least 20 million per ml
- The total volume of semen should be at least 2ml
- The total number of spermatozoa in the ejaculate should be at least 40 million
- At least 75% of the spermatozoa should be alive (it is normal for up to 25 per cent to be dead)
- At least 30% of the spermatozoa should be of normal shape and form
- At least 25% of the spermatozoa should be swimming with rapid forward movement
- At least 50% of the spermatozoa should be swimming forward, even if only sluggishly

These numeric amounts the averages. Having a sperm count below these numbers does not guarantee that a man will be unable to be a father of a child; likewise, having a sperm count higher than these numbers does not guarantee that a man will be able to be father of a child.

Some common causes for low sperm count are

- Infected semen
- Heat that minimises sperm count. Some ways of loosening sperm due to heat are by wearing tight underpants, bathing in hot water, sitting in hot tub for long hours, being overweight
- Repeated ejaculation over a short duration of time
- Increased masturbation
- Smoking
- Increased alcohol consumption



- Excessive physical or mental exertion
- Zinc deficiency
- Anabolic steroid use
- Deformed genitals
- Prostate gland disorders
- Harmful or toxic pollutants

### To increase sperm count

• Exercise. Regular exercise will help reduce stress, but be careful. Excessive exercise can cause harm, as can certain exercises that may negatively impact the testicles, such as bicycling.

• Ejaculating less often. The more often a man ejaculates, the less dense the semen will be. Maintain a gap of three days between ejaculations.

• Refrain from smoking and drinking alcohol.

• Massage body with herbal oil, which may improve blood circulation.

• Have sex in the early morning or afternoon. It is believed that sperm levels are often highest in the morning.

• Avoid tight underwear, saunas and whirlpools - all of which may increase the temperature of the testicles.

• Use natural supplements and vitamins that may assist with sperm count.

• Maintain a high protein, low fat diet, rich in vegetables and whole grains. Avoid bitter and spicy foods, eat pumpkin seeds. They are naturally high in zinc and essential fatty acids which are vital to healthy functioning of the male reproductive system. Eat pumpkin seeds to help maintain a healthy reproductive system.

### Supplements

There are few supplements that may increase sperm count and/or motility. Allow 3-4 months for the supplements to work.

They are Arginine, Coenzyme Q10, Flaxseed oil, L-carnitine, multivitamin-mineral supplements, Selenium, Vitamin B-12, Vitamin C, Vitamin E, Zinc. Ask your physician for these supplements.

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Different initiatives to improve the health condition of the farmers at a health camp in Alampur, Sirajganj organised jointly by Hridoy-e Mati o Manush and Japan Bangladesh Friendship Hospital, Dhaka as a part of their series of health camps all over the country.

## Bringing healthcare to doorsteps of farmers

### MD RAJIB HOSSAIN, back from Sirajganj

Like other basic needs, healthcare for our farmers has been disgruntling over the years. Yet, it is the most unaddressed requirement which needs to be focused urgently.

Serious concerns had been identified by the experts about the lack of pathways for the appropriate healthcare of farmers and their communities.

Basic healthcare services are inaccessible to most of our 1.5 crore farmers. Most of them do not know the ways of protecting themselves from occupational hazards or ailments. A very few of them are aware of using simple tools to prevent themselves from occupational diseases. Most ironically, they are forced to work by poverty with serious ailments and come to hospital at the end stage of any disease when a very little options are left to save

them. While working hard in harsh conditions, our farmers often accompany some diseases that remain hidden in their lifetime; even after their death.

Apparently it does not matter for many of us whether they die or live. But in a real sense it matters a lot as our health and food security directly and indirectly depends upon their health. A very few people care about it while their health is more important than many of ours.

Hridoy-e Mati o Manush, a popular agriculture-based documentary programme of Channel 1 and Japan Bangladesh Friendship Hospital (JBFH) have come forward with several initiatives to address this problem. They have taken a joint programme to raise awareness regarding primary healthcare, preventive measures to protect occupational hazards and health education among

farmers. Along with the advocacy campaign, they organise health camps in different regions in the country to provide healthcare to the poor and marginalised farmers from the beginning of the year. They have already served farmers of six districts and they have a plan to complete their services by the year 2008.

They are providing extended health services like medical check-up, consultation and surgeries by specialised doctors to the farmers. Recently a special unit with four-bed entitled 'Jibon Kheyra' was opened at JBFH in the city with a view to providing healthcare services including laboratory test, medicine and surgery at free of cost. This is the first initiative of its kind in the country ever.

50-year-old Kalam Sorder from Alampur of Sirajganj is a poor farmer. He came to a free health camp organised by JBFH

and Hridoy-e Mati o Manush. He is handicapped due to cataract (a condition where lens of the eye becomes opaque) in his both eyes. Now he is blind. He took the disease as his fate and never thought of going even to a district hospital thinking of the costly treatment.

He expressed his grief, "Nobody cares of our health; we are deprived in case of health as we are in case of fertiliser, fair cost of our crops and so on. We are often harassed and overlooked by the local healthcare provider".

Like Kalam, 24 farmers of Sirajganj, who are blind due to cataract will undergo sight restoration surgery with the help of the programme. Kalam urged to run more programme like this.

Shaikh Siraj, Director of this programme and also the Director of Channel 1 expressed that their project is aimed at addressing many inequities existent in

healthcare facilities of our farmer communities.

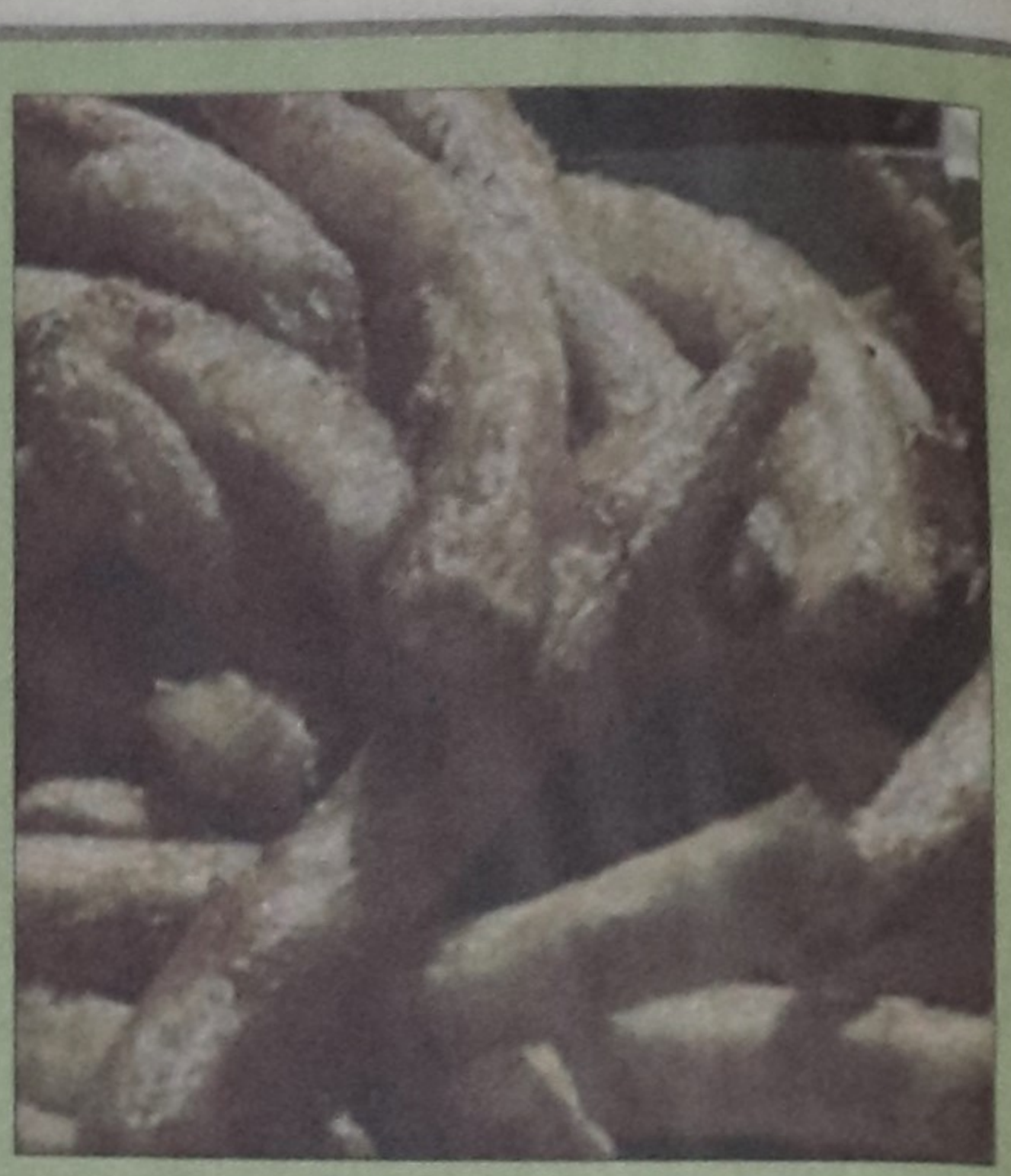
"We have been working to raise awareness among farmers regarding the cost-effective health services and increase the access to affordable healthcare for the farmers. We are arranging basic healthcare workshop in villages to provide them health education. We need to adopt affordable healthcare that provides more than just catastrophic coverage, which is the vital issue on the minds of farm families. We also try to build support for legislative initiatives that might improve quality and cost of coverage for farmers" he said.

"The problems of physical and mental health of the farmers are particularly related with their occupation. Maximum farmers using insecticides in their fields do not wear any protective barrier like gloves, masks or shoes. These poisons can easily mix

with air and enter the body via lung or it can directly pierce the unprotected eroded skin. If we could make them understand regarding these occupational diseases, we could improve their health status" he pointed out.

Currently there is no hospital that has special healthcare packages or no subsidiaries on health services for the farmers who are working hard to serve our entire population. Mr Siraj urged integrated efforts and supports by all to make healthcare accessible to the farmers.

Farmers, the backbone of our economy are facing serious crisis in healthcare. We need to stand beside the ailing farmers to make our economy healthier. Our simple and collaborative effort could help overcome the crisis and make them healthy and wealthy.



## Cut salt to keep children thin: study

Reducing the amount of salt that children eat could provide a short-cut to keeping them slim, British researchers reported.

They found that children who ate less salt drank fewer sugary soft drinks and could reduce their risk of high blood pressure and obesity.

Writing in the journal Hypertension, they said this could lower rates of heart attack and stroke in later life.

"Sugar-sweetened soft drinks are a significant source of calorie intake in children," said Dr Feng He of St George's University of London.

"It has been shown that sugar-sweetened soft drink consumption is related to obesity in young people," He added in a statement.

"If children aged 4 to 18 years cut their salt intake by half, there would be a decrease of approximately two sugar-sweetened soft drinks per week per child, so each child would decrease calorie intake by almost 250 kilocalories per week."

One pound of body weight equals 3,500 calories. He and colleagues analysed data from a 1997 national survey of more than 2,000 people between 4 and 18 in Britain. More than

1,600 boys and girls had salt and fluid intake recorded in a diary, with everything they ate and drank weighed.

"We found that children eating a lower-salt diet drank less fluid," He said. "From our research, we estimated that 1 gram of salt cut from their daily diet would reduce fluid intake by 100 grams per day."

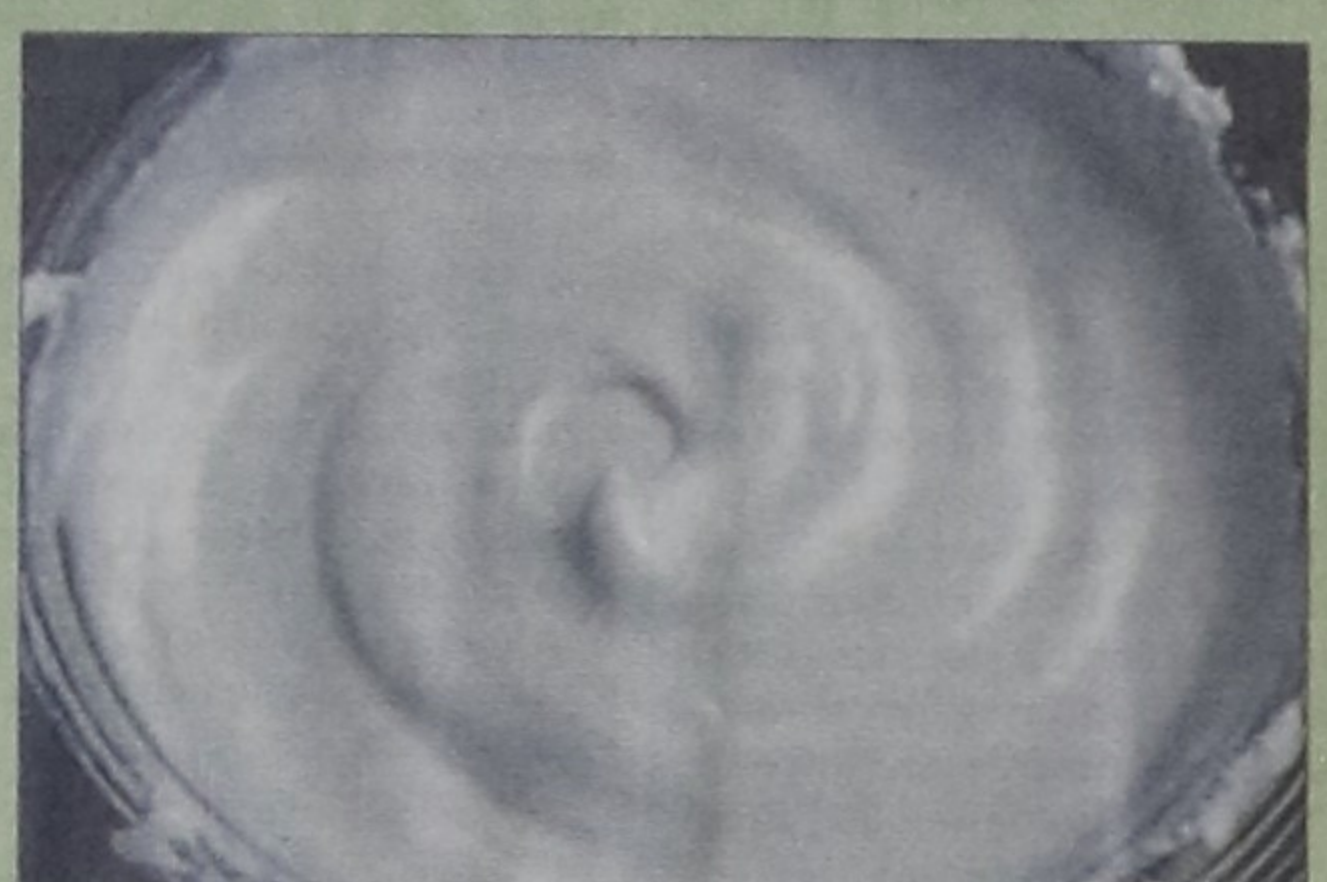
The children who ate less salt also drank fewer sugar-sweetened soft drinks, and He predicted that a 1 gram reduction in salt would reduce sugar-sweetened soft drink consumption by 27 grams a day, after factoring in age, gender, body weight and level of physical activity.

He said parents should check labels, choose low-salt food products and not add salt during cooking and at the table.

"Small reductions in the salt content of 10 percent to 20 percent cannot be detected by the human salt taste receptors," she said.

According to the American Heart Association, healthy adults should reduce their sodium intake to less than 2,300 milligrams or 2.3 grams per day. This is about 1 teaspoon of salt.

Source: Hypertension



## Yogurt may take the bite out of gum disease

Regularly eating yogurt and other foods with lactic acid may be good for your mouth, Japanese researchers report.

Dr Yoshihiro Shimazaki and colleagues found that consuming yogurt and lactic acid drinks was significantly associated with better periodontal health. "But, milk and cheese were not," Shimazaki said.

Periodontal disease is a chronic bacterial condition associated with receding gums and tooth loss in adults. Outside of regular brushing and flossing, effective measures to allay this disease are limited, Shimazaki, of Kyushu University in Fukuoka, Japan, and colleagues note in the Journal of Periodontology.

Previous research identified a lower occurrence of periodontal disease among people who eat high amounts of dairy products, but did not identify which dairy products were most beneficial, the researchers report.

Shimazaki's team assessed the severity of periodontal disease in 942 men and women, aged 40 to 79 years, and their intake of milk, cheese, and lactic acid foods.

They found that people with generalised (more advanced) periodontal

disease had a lower intake of lactic acid foods than people with localised (less advanced) periodontal disease.

Compared with individuals reporting no lactic acid food intake, those eating 55 grams or more of yogurt or lactic acid drinks a day had significantly fewer markers of severe periodontal disease, the investigators note, once they made allowances for factors such as age, gender, smoking, alcohol intake, frequency of tooth brushing, blood sugar and cholesterol levels.

"The beneficial effect on periodontal disease might be based on the probiotic effect of lactobacilli found in lactic acid foods," Shimazaki told. Probiotics are living microorganisms, such as the Lactobacillus bacteria in yogurt that are beneficial to one's health.

The investigators suggest follow up studies that further analyse the probiotic effect of lactic acid foods by assessing the distribution of lactic acid bacteria in subjects' mouths based on the lactic acid foods they eat. Future research should also examine whether continuing intake of lactic acid foods alters the progression of periodontal disease.

Source: Journal of Periodontology