

## An effective approach to manage and prevent diabetes

**KARAR ZUNAID AHSAN**

Diabetes Mellitus is a complex metabolic disorder with disturbances of carbohydrate, fat, and protein metabolism in which the body is unable to produce or properly use as well as store glucose. As a result, glucose backs up in the bloodstream and causes blood glucose (referred to as blood sugar) to rise too high.

There are two major types of diabetes. Type 1 and type 2. In type 1 diabetes, the body completely stops producing any insulin (a hormone that lowers the blood glucose level) and people with type 1 diabetes must take daily insulin injections to survive. Though it can occur at any age, children or young adults are more susceptible for developing type 1 diabetes. Type 2 diabetes is the most common type of diabetes and it results when glucose builds up in the blood due to the body's inability to use insulin effectively.

Usually people over 40 years of age, overweight, and have history of diabetes in the family are more susceptible for developing type 2 diabetes, although today it is increasingly occurring in younger people. Sometimes the disease can be prevented or controlled through diet and exercise, but some patients need insulin or other medications.

The factors behind the increasing prevalence of diabetes is due to population growth, aging, urbanisation, high calorie diet, obesity, and physical inactivity. Lifestyle changes in childhood, in particular unhealthy diets and low exercise levels, are leading to an increasing prevalence of type 2 diabetes in children both in developed and developing countries.

**Diabetes situation in Bangladesh**

Studies found that the increasing trend of type 2 diabetes is common in South-East Asian countries and hence unsurprisingly,

about 90-95 percent of all diabetes patients of Bangladesh belong to Type 2 diabetes. Physiologically, Bangladeshis are more susceptible to develop diabetes and some other non-communicable diseases (NCDs). Bangladesh is among the top ten diabetes prevalent countries in the world with 3.2 million diabetic patients and in next 30 years, this figure is projected to reach 11.1 million.

The crude prevalence of type 2 diabetes in Bangladesh is 4.3% and age-standardised prevalence rate is 3.8%. Studies also indicate that adjusting for age, sex, and social class, the prevalence of diabetes in rural and urban areas do not differ significantly and there is evidence that increased age, higher socioeconomic class, and higher waist-to-hip ratio are the independent risk factors for diabetes in Bangladesh.

**to prevent and manage diabetes in Bangladesh**

On the basis of evidence of effectiveness, following approaches to diabetes prevention and management in Bangladesh should be emphasised and implemented:

- Develop a national policy for diet, physical activity and health to address the emerging problems of diabetes and other NCDs.
- Manage financing mechanisms for health-promoting activities and recognising health promotion as a part of the national development plan.
- Establish and strengthen the national surveillance systems on behavioural risk factors and using the WHO step-wise approach, standardised data on diabetes risk factors should be collected periodically.
- Strengthen the quality-control system of imported and locally produced food to ensure that it meets required standards and has standard labeling of food ingredients on packaging.

- Interact with food industries to promote the production and marketing of healthy food, for example, minimising the use of harmful saturated fats, high sugar and salt.
- Control the advertising and marketing of "unhealthy" food products (especially those targeted at children) and misleading health claims.
- Provide a conducive environment with suitable infrastructure to encourage and facilitate daily physical activity (making safe bicycle and pedestrian lanes), improving public transportation to discourage the use of cars.
- Initiate/strengthen schemes like school health programmes and health-promoting schools by including teaching and practice of healthy lifestyles, and provide enough facilities for physical activities for schoolchildren and staff.

**Conclusion**

The rising prevalence of diabetes in Bangladesh demands

effective strategies to combat and manage before the condition become an epidemic. Changing the state of diabetes care in a resource constraint setting like Bangladesh is a challenge to all stakeholders in the healthcare sector.

The benefits of successful control and management of diabetes in Bangladesh will be multifarious. Study indicates that after a 20-year period of successful prevention and management of diabetes, the production value would be 610% higher than today (Novo Nordisk 2004).

To make this possible, it is very important to integrate the government and private sector to address the problems of access to adequate diabetes care in Bangladesh.



### Head injury

Most head trauma involves injuries that are minor and don't require hospitalisation. However, call for emergency medical assistance if any of the following signs are apparent:

- Severe head or facial bleeding
- Change in level of consciousness for more than a few seconds
- Black-and-blue discoloration below the eyes or behind the ears
- Cessation of breathing
- Confusion
- Loss of balance
- Weakness or an inability to use an arm or leg
- Unequal pupil (dark circular opening in the centre of the iris of the eye) size
- Repeated vomiting
- Slurred speech

If severe head trauma occurs:

**Keep the person still:** Until medical help arrives, keep the person who sustained the injury lying down and quiet in a darkened room, with the head and shoulders slightly elevated. Don't move the person unless necessary and avoid moving the person's neck.

**Stop any bleeding:** Apply firm pressure to the wound with sterile gauze or a clean cloth. But don't apply direct pressure to the wound if you suspect a skull fracture.

**Watch for changes in breathing and alertness:** If the person shows no signs of circulation (breathing, coughing or movement), begin CPR (Cardiopulmonary resuscitation).

### Some facts about bird flu

**What is avian flu?**

"Avian" refers to bird and "flu" is the common name for influenza. Avian flu is the influenza that infects birds. The recent avian flu is caused by an influenza virus type A named H5N1 virus.

**Is bird flu a matter of concern for human?**

This H5N1 influenza virus is highly contagious. It has the ability to replicate in human beings and human body does not have any antibody against it. Though man to man transmission of this virus not yet observed. More than 140 human cases have been reported by the World Health Organisation since January 2004 and most of them were fatal. Most of these cases have occurred as a result of people having direct or close contact with infected poultry or contaminated surfaces.

**Osetamivir, is it for both prevention and treatment of bird flu?**

Yes. Osetamivir 75 mg twice daily is to be taken for the treatment of bird flu. For pre-exposure prophylaxis the dosage schedule is 75 mg once daily maximum for 6 weeks including one week after last known exposure. For post exposure prophylaxis osetamivir is to be taken 75 mg once daily during the incubation period (usually for seven days).

**How vulnerable is Bangladesh to bird flu?**

Although at this moment, there is no evidence of bird flu infection in our country; this should not be seen as a matter of satisfaction however. Because the virus may show its manifestation at any time. More important is that the

### Did you know?

## Roller coasters raise risk in heart patients

**REUTERS, Dallas**

Keep your hands inside the cars may not be enough warning for people with heart disease who want to ride roller coasters, a new study found.

"The rising heart rate in riders with pre-existing heart disease could result in heart attack, irregular heart rhythms and possibly sudden cardiac death," said Dr Jurgen Kuschyk, who presented the findings of his study at the American Heart Association's annual scientific sessions.

The German study of 37 men and 18 women volunteers with no heart disease and average age of 28 found heart rates increased dramatically both during and after the ride to an extent that could cause arrhythmias (variation in the rhythm of the heartbeat), or a dangerous irregular heart beat, in



some people.

Forty-four percent of the participants had marked heart rhythm irregularities that lasted up to five minutes after their ride on the Expedition GeForce roller coaster at Holiday Park in Hassioch, Germany, researchers said.

People with high blood pressure, a previous heart attack, an implanted pacemaker or defibrillator (apparatus used to apply an electric impulse to the heart to make it beat regularly) and those with heart disease should not ride roller coasters, the researchers said.

Kuschyk, a cardiologist from University Hospital in Mannheim, Germany, suggested that roller coaster operators keep a defibrillator on hand.

"A lot of people don't know they have heart disease, yet they are riding roller coasters," he said.

## One third of cancer deaths avoidable

**REUTERS, London**

If people avoided major risk factors for cancer, more than a third of the 7 million annual deaths from the disease could be prevented, scientists said.

In a report in The Lancet medical journal, the researchers estimated how many deaths from 12 types of cancer were caused by exposure to nine risk factors.

They calculated that smoking, alcohol, obesity, poor diet, unsafe sex, lack of exercise and other factors contributed to 2.43 million cancer deaths worldwide in 2001.

"A third of cancer deaths could have been avoided had those risks been reduced," said Dr Majid Ezzati of the Harvard School of Public Health in the United States.

"Prevention is probably still our best bet for reducing cancer deaths. It is by far larger than what we may be able to achieve using medical technology."

Smoking, which is linked to lung, mouth, stomach, pancreatic and bladder cancers, is the biggest avoidable risk factor, followed by alcohol and not eating enough fruits and vegetables.

"Of the 2.43 million deaths, 37 percent of them are from lung cancer," said Ezzati. "The total lung cancer deaths in the world are 1.23 million and of those 900,000 of them are caused by these risk factors."

Smoking has increased in developing countries in the past few decades so the number of avoidable deaths could grow, he added.

Obesity also plays a role in

colorectal and breast cancer in high income countries, according to the research.

Infection with the human papillomavirus (HPV) through unsafe sex is a contributing cause of cervical cancer in women in sub-Saharan Africa and parts of Asia, mainly because of a lack of screening and clinical services.

Urban air pollution is a risk factor for cancer in eastern and southern Asia, while indoor smoke from burning coal is a particular problem in China.

Ezzati said hepatitis infection, which is linked to liver cancer, is sometimes spread by the use of contaminated syringes in health centers in poor countries.

More than 100 scientists around the world contributed data for the study and reviewed medical evidence.

## Scopes of Bangladeshi doctors in Australia

**ABDUL QUADER writes from Canberra**

In Australia, there are different kinds of professionals of Bangladeshi origin working in the public as well in the private sectors. One such group of professionals are medical doctors.

To practise medicine in Australia, overseas trained doctors are required to pass two examinations administered by the Australian Medical Council. These are the multiple choice examination (MCQ) and the clinical examination.

These two examinations basically focus on testing medical knowledge, clinical competency and performance of those doctors who intend to practise in medical field.

Apart from the above two examinations, overseas trained doctors must meet the English language proficiency requirement.

In recent MCQ and clinical examinations Bangladeshi doctors have performed relatively well in terms of the rate of pass and position of ranking within the pass list. For example, 206 overseas trained doctors sat for the September (2005) MCQ examination and 60 percent passed the test (123 out of 206).

A Bangladeshi trained doctor stood third in the merit list, which is quite a commendable achievement given that only 123 passed the MCQ examination held in September last year.

Over the past decade, a significant number of Bangladeshi doctors, both male and female, have migrated to Australia. Some other Bangladeshi doctors who originally went to New Zealand have come to Australia to settle here as permanent residents/citizens.

Many Bangladeshi trained doctors in Australia have by now gone through the examinations run by the Australian Medical Council and have become qualified medical practitioners. They have already made their pres-

ences. So many doctors, including Bangladeshi doctors, are taking advantage of relevant training to become qualified GPs. GPs usually earn more money than those doctors who work in the public hospital system.

A doctor must undergo the Australian General Practice Training programme to qualify for unsupervised general practice under the Medicare scheme in the country. Trainee GPs undertaking the programme are called GP Registrars. GP training includes practical on-the-job experience under the supervision of experienced doctors as well as some formal education component.

There are two training streams for GPs. One is called the General Pathway and the other the Rural Pathway. GP Registrars in both streams have to do some of their training activities in rural areas, with the GP Registrars in the General Pathway also required to complete a six-month term in an outer metropolitan practice.

The GP training follows the curricula and standards of the Royal Australian College of General Practitioners (RACGP) and the Australian College of Rural and Remote Medicine (ACRRM).

Bangladeshi-Australian doctors are undergoing both General and Rural Pathway GP training with a view to do general practice in Australia on private capacity. This will provide them with the opportunity to provide much needed medical services at various places in the country and serve the local community in a more direct way.

In fine, given the current trends and developments, Bangladeshi trained doctors in Australia are expected to be able to further excel in their medical profession in time to come.

Abdul Quader is a freelance contributor.

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### Health News



Recently Hearing International, Bangladesh Chapter and Bisnupriya Hearing Centre, Narshingdi organised a daylong workshop on detection and treatment of deafness at Narshingdi. Eminent ENT doctors from Japan and Bangladesh presented papers in the workshop.



A daylong seminar organised by National Healthcare Group, Singapore was held at a local hotel recently. Three eminent specialists, two cardiologists from Tan Tock Seng Hospital, Singapore and one orthopaedic surgeon from National University Hospital presented key tone papers on the seminar. The seminar was arranged as a part of 'Continued Medical Education and Technology Transfer' effort of National Healthcare Group Singapore to the developing countries in South Asian Region.