

How to Prevent Coronary Heart Disease and Heart Attacks

Prof Habibuz Zaman

As a result of positive actions against risk factors for coronary heart disease (tobacco smoking, elevated blood cholesterol level, obesity, physical inactivity, hypertension and diabetes), the past decade has seen a notable decline in the mortality rates for coronary heart disease in several developed countries. The rising trend for coronary heart disease, morbidity, and mortality in developing countries can be halted by timely individual and community action.

Here are the basic rules to avoid coronary heart disease and myocardial infarction (heart attack):

1. DO NOT SMOKE: Even if you have been smoking for many years, it is an excellent idea to cease smoking altogether and immediately, since the risk for coronary heart disease (CHD) can be reduced to zero within forty-eight hours (unlike the risk of lung cancer from smoking, which takes ten years or longer to revert to normal).

Remember there is no "safe" cigarette. A filtertip or "low-tar low nicotine" brand of cigarette does not help, since smokers, who change over to these brands of cigarettes, appear to inhale more, thereby maintaining their intake of nicotine, while actually increasing the retention of the gas phase products.

Nicotine increases sympathetic discharge and is related experimentally to thrombosis, endothelial damage and cardiac arrhythmias (irregularity in the

vascular damage or act through relative hypoxia (lack of oxygen).

CONTROL OF TOBACCO SMOKING IS CENTRAL TO ANY EFFORT FOR THE PREVENTION OF CORONARY HEART DISEASE IN AN INDIVIDUAL OR A COMMUNITY.



Control of tobacco smoking is central to any effort for the prevention of coronary heart disease.

2. TAKE A LOW FAT, LOW CHOLESTEROL DIET: Maintain your serum cholesterol level below 200mg per 100ml blood. The diet in rural Bangladesh is generally satisfactory. Use polyunsaturated vegetable oil for cooking (eg. corn oil, soybean oil, sun-flower oil). Take plenty of vegetables, seasonal fruits, whole

your total food intake, especially those with high calories — fats, commercially baked products and sweets. Weight reduction also helps in the control of hypertension, diabetes and reduces the total blood cholesterol level.

3. TAKE REGULAR PHYSICAL EXERCISE PREFERABLY

(pulses), high in fibre. Avoid saturated fats like ghee and butter, cream, full cream milk, eggs, cheese, red meat (beef and mutton), brain, ice-cream, chocolates, pastry, cake, sweets made with full cream milk.

4. AVOID OBESITY: If you are gaining weight cut down on blood circulation to the heart muscle and opens up many tiny vascular channels, which normally remain collapsed. A brisk walk for at least twenty minutes a day is recommended. Regular physical exercise also helps control incipient diabetes and hypertension.

5. MAINTAIN YOUR BLOOD PRESSURE, TO LEVELS WITHIN NORMAL LIMITS OF 140/80 MM HG: If hypertensive, control use of table salt, reduce weight, take regular exercise, if still uncontrolled, consult a physician and take medicines regularly — if necessary for life-time.

6. IF DIABETIC, MAINTAIN BLOOD SUGAR LEVELS WITHIN NORMAL LIMITS (Fasting blood sugar; 4.4-6.6 mm; 1/1 or 80-120 mg per 100 ml blood): If uncontrolled with dieting, regular physical exercise and weight reduction, consult a physician and use medicines regularly, if so required.

7. AFTER RECOVERING FROM A HEART ATTACK OR ANGINA ON EXERTION, FOLLOW RULES MENTIONED ABOVE. ALSO TAKE MEDICINES, AS PRESCRIBED: 150mg soluble aspirin (after meal), once a day, is known to reduce chances of subsequent

heart attacks, by preventing the process of clot formation within the coronary artery. Exercise with caution, under medical advice.

8. IF YOU USE ORAL CONTRACEPTIVES, DO NOT SMOKE.

9. REMAIN CALM AND COMPOSED; AVOID ANGER AND EXCITEMENT: "Speak your truth quietly and clearly; and listen to others."

10. DO NOT DRIVE YOURSELF TOO HARD:

"Beyond a wholesome discipline, Be gentle with yourself. You are a child of the universe, No less than the trees and the stars;

You have a right to be here." (Quotations from an anonymous poet).

As a result of positive actions against the important risk factors for coronary heart disease (tobacco smoking, elevated blood cholesterol level, obesity, physical inactivity, hypertension and diabetes), the past decade has seen a notable decline in the mortality rates from CHD in several developed countries. The rising trend for coronary heart disease (CHD) morbidity and mortality in developing countries like Bangladesh can be halted by individual and community action.

CORRIGENDUM

The article entitled 'Can Heart Attacks be Prevented?', published on this page was erroneously credited to wrong authorship. The article was originally written by Prof Habibuz Zaman. The error is corrected.

Family planning as a human right

The world has accepted family planning as a human right since 1968. The Charter of Human Rights says "parents have a basic human right to determine freely and responsibly the number and spacing of their children." Yet only half the couples in developing countries have access to family planning services.

People want fewer children

When the ingredients of life provide security and autonomy people opt for family planning — if it is available.

● In developing countries in the 1970s parents wanted on average 4.5 children; in the 1980s, the figure went down to 3.5. But people are still having more children than they want.

● If for the next hundred years everyone were able to make their perfect choices in family size, world population would be smaller by about 2 billion people.

● The difference between good family planning programmes and no programmes at all could be over 4 billion in the same period.



Good for mothers, good for children

Every year half a million women die in pregnancy or childbirth. Nearly all are in developing countries. The youngest and oldest mothers, those who have had many pregnancies or had them too close together are much more at risk. Avoiding pregnancy could save 200,000 of those women.

Family planning programmes help children survive. Babies have the best chance when their mother is over 20 but under 35, when she has three children or fewer, and when they are born two or more years apart. The first child of a teenage mother is much more likely to die than the second or third child of a woman aged 20 to 24.

Teenage Pregnancies

Up to 15 million teenagers become pregnant each year. Four out of five of these pregnancies end in abortion or stillbirth.



Culture and religion

Cultural and religious attitudes need to be no bar to family planning. But programmes must be appropriate to the community concerned.

● In Muslim Bangladesh, many women leave their homes only with an escort. But they can be involved in family planning when information and services can be brought to them at home.

● In Catholic Mexico, birth rates dropped by 20% in a decade after a national family planning programme was introduced.

● In Buddhist Thailand, fertility dropped from an average of 6.5 children per woman to 3.5 in only 8 years. Nearly 70% of couples use contraception.



NEW HOPE FOR REGENERATION OF HAIR

A recent finding by researchers at the University of Pennsylvania School of Medicine and the New York University Medical Centre in the United States has significant implications for the study of baldness, hair loss and the regeneration of hair. The researchers have found that the source of new cells does not lie at the base of the hair, as had been earlier presumed, but just below the scalp. This discovery of the origin of hair could help them understand hair loss better. Hair needs constant regeneration and scientists believed that for

that to happen, beneath each hair, there must be a group of immature cells ready to grow and mature and form a new hair.

Until now researchers believed that the hair bulb at the base must contain the cells governing growth, partly because the bulb is situated above an important component of hair growth known as the dermal papilla. The dermal papilla consists of connective tissue and blood vessels which release hormones and send chemical signals to activate hair growth.

The recent breakthrough was made when scientists devised sophisticated techniques to discriminate between the immature cells, known as stem cells, and other types of cells. Identifying stem cells of any

tissue type is extremely difficult, but having overcome that problem, the scientists discovered that stem cells of a hair are situated a fraction of a millimetre above the bulb on the side of the hair follicle in a protrusion called the hair bulge.

The experiments have also shown that hair growth is more complicated than earlier thought. It is now believed that a new hair is born when the dermal papilla releases a signal to the stem cells in the bulge drawing them towards it. The stem cells then interact chemically with the dermal papilla resulting in cell division and maturation and finally the birth of a new hair which slowly pushes its way up and out above the scalp.

DEVICE HELPS AMPUTEES "FEEL" FEET

A new device designed at the Sabolich Prosthetic and Research Centre in the United States will not only help amputees walk, but will also help them "feel" their feet.

The device consists of pressure sensitive sensors which are implanted in the prosthetic foot. These transmit impulses to corresponding sensors placed against the patient's skin in the socket of the prosthetic leg, making it possible for the foot to "communicate" with the socket.

John Sabolich, president of

the Centre, who designed the device, says that constant use of the wearer's brain will begin to translate the sensation in the thigh as a feeling in the foot.

In his earlier experiments, Sabolich, who has spent more than six years looking for a way to enable amputees feel the floor, used a sound system in which pressure on the prosthetic set off a beeper. The sound made the wearer aware of when the foot touched the floor, and when the sound was turned off, Sabolich discovered, the patients often stumbled.

This inspired him to design a device that not only "told" the wearer that the foot had made contact with the floor, but actually enable the feet to "feel" the floor.

UCI Campaign a Success Story in Bangladesh

Tsuneo Sugishita

UNICEF has been actively promoting the universal immunization campaign throughout the world and has accelerated the effort in 1985 when the "Universal Child Immunization by 1990" was selected as a goal to commemorate the fortieth anniversary of the United Nations. This is a report on my observation of UCI activities in Bangladesh where dramatic achievement has been made.

Since early in the morning, many young mothers in bright coloured saris gathered at the health centre in Jhenida, some 10 kilometres north of Jessore town in Jessore District.

The health centre became a vaccination centre every Tuesday and the mothers bring their babies to be immunized. On the day I visited the centre, there were some 50 babies. Prior to the immunization of babies, mothers were gathered in a small room for lecture on health and nutrition.

In Bangladesh, women seldom have a chance to go out of homes. Vaccination of their children provide them a good opportunity for them to be exposed to the outside world as well as for them to gain new knowledge and to raise their consciousness.

When the lecture was over, mothers brought their children for vaccination of BCG, DPT, Polio, etc. in other room and left the centre for home around noon time.

In Bangladesh, various diseases have taken away the lives of so many children, but vaccination will protect our children from these diseases. At the same time, we mothers are happy that we were able to gain knowledge about nutrition, sanitation, etc. which can be utilized to promote the healthy growth of our chil-

dren," said Shamsun Nahar (age 45) how brought a one-year old girl child.

While looking at the happy expression on mothers' faces there, it did not seem real that 100 children die every hour, 2,400 a day, before they reach five years of age. Happy expression may be an evidence of social improvement in Bangladesh achieved by empowering mothers and giving greater access to immunization.

In the beginning of the 1980s, only less than 20 per cent of the world's children were immunized. With the efforts of UNICEF, WHO and their partners, and particularly with the renewed commitment of "Universal Child Immunization by 1990" to commemorate the fortieth anniversary of the United Nations, the immunization coverage improved very dramatically.

According to UNICEF, approximately 80 per cent of the world's children are immunized against vaccine-preventable diseases, thus lowering the infant and child mortality rate significantly in many countries.

Among many success stories, Bangladesh stands out. In 1985, the immunization coverage rates for BCG and DPT were less than 2 per cent and that for measles was only 1 per cent. However, according to the statistics dated February 1991, it is evident that miraculous improvement has been made — among the children between the ages of 12 and 17 months, the immunization coverage rates for BCG is 86 per cent, DPT is 69 per cent and measles is 65 per cent.

Of course UNICEF, WHO and other international organizations should be given due credit. However, the Government of Bangladesh should also be complimented for its efforts in establishing a system to promote immunization in towns and villages throughout the country.

Puritanism Wave Jars Product's Popularity

A wave of puritanism has struck the romantic image of Nirodh, the fastest selling condom in India.

The distributors, Population Services International (PSI), has just sold its 100th million Nirodh to a customer in a remote village in Haryana, some 50 kilometres from here. But trouble has struck PSI, a non-governmental organisation. For, the contraceptives advertised for several years at prime time on television are to lose their romantic sting.

Senior officials in the Union Health and Family Welfare Ministry have ordered the pullout of the ad, which showed a young boy and a girl in a romantic mood. The punchline said: "When you feel greedy for love, then you take to the safest way — Nirodh."

"We were taken by surprise when we were told about it. But we are not dismayed. We will carry on selling as if nothing has happened," says a PSI spokesman reacting to the pullout order.

PSI is the only non-government organisation involved in selling Nirodh and another condom called Masti (Joy) all over North India.

Market research analysts had pointed out that the condom was perceived as dull, pedestrian and utilitarian. So the romantic ingredient was added and sales picked up.

But apparently Doordarshan, the government TV station, was flooded by letters from Hindu fundamentalists, who objected strongly to condoms being advertised at prime time. Some 100 million people watched prime time television when the contraceptives ads were shown.

"How dare you show this commercial when we are watching a programme with our children?" and angry letter writer protested to Doordarshan officials.

However, by and large, the Nirodh campaign was accepted by most viewers until the present government, headed by Mr. Chandra Shekhar, stepped in. Quite clearly, some devout Muslims and Hindus in parlia-

ment had lobbied hard for the removal of the commercial.

The PSI has a success story. For, in December it sold the 100th million condom just two years after taking to marketing Nirodh in 1988.

The PSI, registered as a charitable institution, is the second largest distributor of condoms in India. Its condom sales are next only to one of the biggest manufacturers of cigarettes — the Indian Tobacco Company which sold 120 million condoms in 1989.

Distributors like PSI get a high subsidy for selling condoms at nominal prices throughout North India. Private firms — like the Hindustan Lever, Indian Tobacco and Broke Bond (the tea firm) — have also been given rights to market Nirodh condoms.

PSI's target for 1990-91 is 60 million, which they hope to achieve by the end of April this year.

Some analysts believe that PSI is facing a tough job as the communal clashes and disturbances have disrupted the entire supply route.

"Unless things become normal, it is difficult to sell any product like Nirodh. You need to go on a hard-sell campaign in villages and small towns where initial resistance has to be broken down," says Ram Avtar Singh, a 50-year-old distributor who has some 20 years' experience of selling condoms.

He explains: "People have lost their usual reserve. Now they come and straight-away ask for a condom. They just say Nirodh. No embarrassment here. It is like asking for aspirin."

The PSI success story may not be repeated this year because of financial crunch. The Department of Family Planning has not yet released funds to distributors for procuring condoms.

It is being distributed free of cost at thousands of health centres and by social workers.

Under its multi-brand strategy, the government also supplies condoms which the

distributors can market under their own brands. The purpose is to ensure that the contraceptive has a presence in all households.

Another brand name, Masti (Joy), was launched by PSI in 25 districts of the Northern State of Uttar Pradesh. PSI sold 18 million Masti condoms in 1988-89 in North India. For 1989-90, PSI's target of 33 million pieces was exceeded by 20 million.

Also, the brand name may be changed. Market men are hunting for another brand name. Masti is not perceived uniformly in the country.

India's success story in selling condoms has excited interest in several Asian countries. What is PSI's strategy?

"We make sure that condoms reach actual users and do not lie as head stock on retail shelves," a PSI spokesman explains. "First, the product is taken beyond chemists to grocers and general merchants to ensure widest dispersal."

Credit is not given, so salesmen do not spend time collecting money. A PSI salesman thus makes about 50 calls a day on an average and the salesforce covers about 40,000 outlets in a month.

The PSI has 350 stockists. Whenever condoms are supplied to them, they pay PSI in advance. Then PSI's salesforce replenishes retail shops against cash which is paid to stockists. The retailer will buy no more than he can sell.

Also, since PSI does not sell any other product, stockists and retailers are under no compulsion to buy. Retailers get a commission of 25 per cent on the selling price and wholesalers 14.3 per cent.

There are three varieties of Nirodh: The unlubricated one is priced at 30 paise for three, deluxe (lubricated) at 1 rupee (US \$0.08) for five and super deluxe (thinner and lubricated) 20 rupees (US \$1.69) for four.

The PSI is shortly launching an oral contraceptive which is likely to be called Pea.

Depth news



Access to safe water is a pre-requisite for safe public health. Photo courtesy: Shasthya Tathya

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