

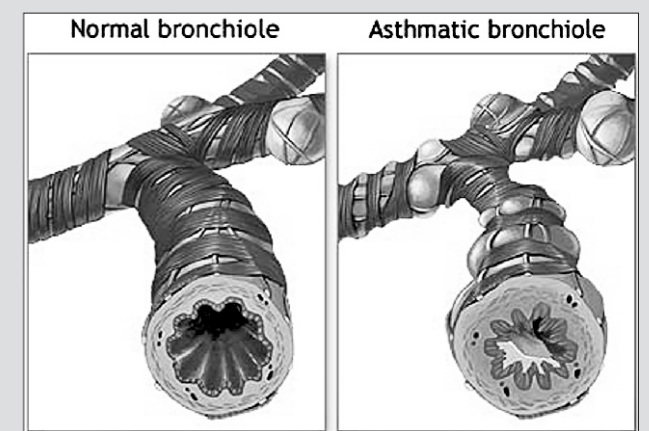


A comparison of home- and facility-based obstetric care

Efforts are being made to train and post professional birth attendants at the community level throughout Bangladesh. ICDDR,B conducted an historical cohort study between 1987 and 2001 in Matlab where both home- and facility-based obstetric care approaches had been implemented. The findings reveal marked differences in the use of professional attendants according to wealth quintile, mother's and father's education, and distance to the attendant. Interestingly, the differences were similar for home- and facility-based obstetric care.

Source: ICDDR,B

Healthcare workers risk getting asthma on the job



Healthcare workers are at risk for occupational asthma, according to new data from a surveillance systems that monitored work-related asthma cases. Latex and disinfectants are the main culprits.

The most common exposures among healthcare workers with work-related asthma were to latex and disinfectants that can cause asthma, and to numerous other chemicals that can exacerbate asthma, including cleaning products, renovation materials, mold and poor indoor air quality.

The findings are important due to the "size and projected growth of the healthcare industry". Over a 5-year period, healthcare workers accounted for 16 percent of all confirmed cases of work-related asthma.

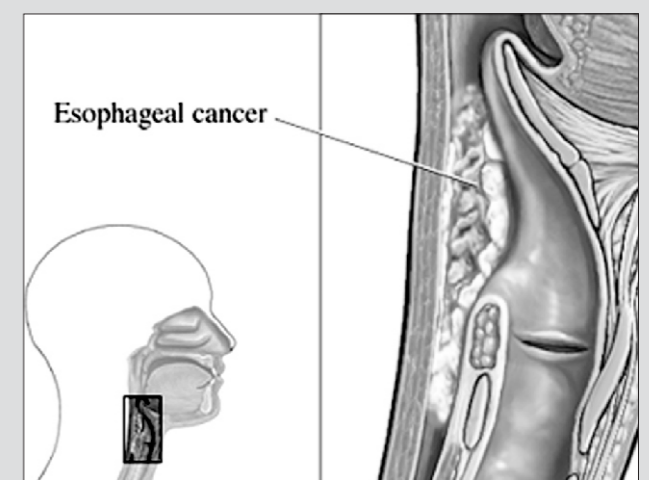
Most of the healthcare workers (67 percent) developed "new-onset" asthma. "These were primarily nurses or other healthcare workers who had never had asthma in their lives, or who had been symptom-free for two years or more," said lead author Elise Pechter, an industrial hygienist in the occupational health surveillance program of the Massachusetts Department of Public Health.

"Work-related asthma among healthcare workers can be prevented," Pechter emphasized, "by replacing powdered latex gloves with non-latex or low-allergen powder-free gloves and using disinfectants selectively."

The lessons from these surveillance data are important in reducing the burden of asthma and reducing risk factors for hundreds of thousands employed in the healthcare industry.

Source: American Journal of Industrial Medicine

Zinc shortage linked to esophageal cancer



People with low levels of zinc in their tissues may be at increased risk for developing cancer of the esophagus, according to a research.

In the study, investigators determined zinc levels in esophageal biopsy samples obtained from 132 residents of Linzhou, China. Of these subjects, 60 subsequently developed esophageal cancer and 72 did not.

People in the highest quartile of zinc levels were 79 percent less likely to develop esophageal cancer than those in the lowest quartile, Dr. Christian C. Abnet, from the National Cancer Institute in Bethesda, Maryland, and colleagues report. This finding supports

studies conducted in animals showing that zinc deficiency enhances the effects of certain nitrosamines, which act as esophageal carcinogens (cancer causing substance) in rodents.

While the current findings are interesting, their applicability to the population is unclear, the authors warn. "We did this study in a population that is at extremely high risk for esophageal cancer," Abnet told. He said his group is interested in conducting a similar study in populations with a lower risk of esophageal cancer and higher zinc levels.

Source: Journal of the National Cancer Institute

Reducing cholesterol reduces the risk of heart diseases

DR MD HABIBE MILLAT

"Hypercholesterolaemia", which is an increase in the blood cholesterol level, is one of the most frustrating of health problems we encounter in today's world. You can not see it and you can not feel it, but, if it gradually builds up in your arteries causing a great deal of damage and risk to your health. It narrows the blood vessels and it weakens its walls, which is one of the primary causes of stroke, heart attack, and even sudden death. Approximately 3 percent of the people of Bangladesh suffer from raised cholesterol levels. This is a clear warning sign that the risks of high cholesterol can not be underestimated.

What is cholesterol?

Cholesterol is a soft, waxy substance found among the lipids (fats) in the bloodstream and in all your body's cells. It is an important part of it is used for the formation of cell membranes, some of the bodies hormones. It is a component of the nervous system and also a valuable source of energy. However, a high level of cholesterol in the blood is a major risk factor for coronary heart disease, which can lead to heart attack. Cholesterol and other fats cannot be dissolved in the blood. They have to be transported to and from the cells by special carriers called "lipoproteins". While there are several kinds of these lipoproteins, the ones to focus on are low-density lipoprotein ("LDL") and high-density lipoprotein ("HDL").

Good and Bad cholesterol:

About one-third to one-fourth of all blood cholesterol is carried by HDL. HDL tends to carry cholesterol away from the arteries and back to the liver, which is the main source of cholesterol. HDL removes

excess cholesterol from plaques and thus slows their growth. HDL cholesterol is known as "good cholesterol" because a high HDL level has proven to protect against heart attack and stroke. However, the opposite is also true -- a low HDL level indicates a greater risk to the body. Low-density lipoprotein (LDL) is the major cholesterol carrier in the blood. If too much LDL cholesterol circulates in the blood, it can slowly build up in the walls of the arteries feeding the heart and brain. Together with other substances it can form plaque, a thick, hard deposit that can clog those arteries. A clot (thrombus) that forms near this plaque can block the blood flow to part of the heart muscle and cause a heart attack. If a clot blocks the blood flow to part of the brain, a stroke results. A high level of LDL cholesterol reflects an increased risk of heart disease. That is why LDL cholesterol is called "bad cholesterol". Lower levels of LDL cholesterol reflect a lower risk of heart disease.

Causes of hypercholesterolaemia

The causes of hypercholesterolaemia may be primary (i.e. genetic) or secondary. Genetic hypercholesterolaemia includes familial hypercholesterolaemia, polygenic or familial combined hyperlipidaemia. Secondary hypercholesterolaemia is due to diabetes mellitus, obesity, having an under active thyroid, liver disease, kidney disease and also some drugs.

Diagnosis

The presence of xanthelasma (deposits of cholesterol in the skin around the eye), tendon xanthomas (swelling on the tendons of muscles, typically the Achilles' heel, on the back of the hands or on the elbows), or early corneal archus (a white

ring found in the outer part of the cornea of the eye) may suggest hypercholesterolaemia, but the only way to be absolutely sure is to have your blood cholesterol levels measured. Cholesterol levels are quite variable within an individual. Cholesterol levels may vary with age, sex, season, menstrual cycle, pregnancy, illness and some drugs.

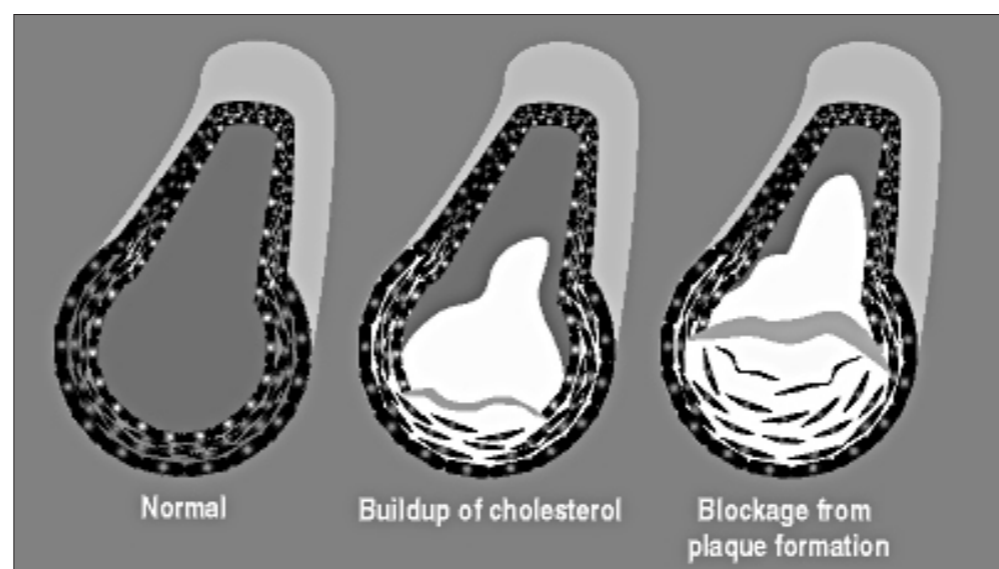
Treatment

The reasons for treating hypercholesterolaemia is to reduce the risk of coronary heart disease, stroke or even sudden death. Over the last 20 years, the benefits of treating hypercholesterolaemia have been clearly demonstrated. The main treatment is a change of diet and a change of life style which includes low fat diet, less salt intake, more fresh fruit, vegetable, high fibre diet, avoid animal fat, avoid red meat, give up smoking, loose weight and increase your levels of physical activity.

If somebody is at high risk, they may need to take medication. Statins, Fibrates and other cholesterol absorption inhibitors are the drugs of choice. However you should consult with a doctor before starting medication.

Reducing cholesterol reduces the risk of heart disease, increases expectation of life, and does not increase the likelihood of suffering from other diseases. Understanding the facts about cholesterol will help you to take better care of your heart and live a healthier life, reducing your risk for heart attack, stroke, and even sudden death. Therefore it is time to reduce your cholesterol to ensure a healthy heart!

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Diarrhoea: A common disease during hot weather



Oral Rehydration Saline (ORS) is the first, foremost and most effective therapy of diarrhoea.

TAREQ SALAHUDDIN

The spread of diarrhoea in different parts of the country has sharply increased in recent days, triggering a sudden influx of patients into the hospitals, specially into different city hospitals including ICDDR,B. On an average more than 500 patients have been admitted everyday. The Health Directorate estimated that about 96,000 people were affected by diarrhoea in 22 districts since last January, adding that only between 20 and 22 districts regularly inform them about diarrhoea disease.

This is a very usual season for diarrhoeal attack. People tend to drink more in the scorching heat and possibly because of drinking contaminated water they become more prone to the attack.

It is most commonly caused by gastrointestinal infections. Mostly children in are affected. The use of water in hygiene is an important preventive measure but contaminated water is also an important cause of diarrhoea. Cholera and dysentery cause severe, sometimes life threatening forms of diarrhoea.

The disease and how it affects people

Diarrhoea is the passage of loose or liquid stools more frequently than is normal for the individual. It is primarily a symptom of gastro-

intestinal infection. Depending on the type of infection, the diarrhoea may be watery (for example in cholera) or passed with blood (in dysentery for example).

Diarrhoea due to infection may last a few days, or several weeks, as in persistent diarrhoea. Severe diarrhoea may be life threatening due to fluid loss in watery diarrhoea, particularly in infants and young children, the malnourished and people with impaired immunity.

The impact of repeated or persistent diarrhoea on nutrition and the effect of malnutrition on susceptibility to infectious diarrhoea can be linked in a vicious cycle amongst children, especially in developing countries.

Diarrhoea is also associated with other infections such as malaria and measles. Chemical irritation of the gut or non-infectious bowel disease can also result in diarrhoea.

Causes

Diarrhoea is a symptom of infection caused by a host of bacterial, viral and parasitic organisms most of which can be spread by contaminated water. It is more common when there is a shortage of clean water for drinking, cooking and cleaning and basic hygiene is important in prevention.

Water contaminated with human faeces for example from municipal sewage, septic tanks

and latrines is of special concern. Animal faeces also contain micro-organisms that can cause diarrhoea.

Diarrhoea can also spread from person to person, aggravated by poor personal hygiene. Food is another major cause of diarrhoea when it is prepared or stored in unhygienic conditions. Water can contaminate food during irrigation, and fish and seafood from polluted water may also contribute to the disease.

Scope of the problem

Amongst the poor diarrhoea is a major killer. The unhygienic environment is most likely responsible for this.

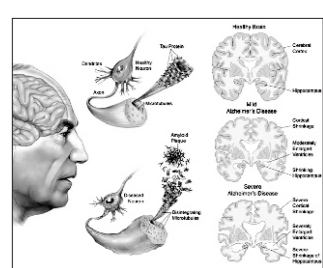
Interventions

Key measures to reduce the number of cases of diarrhoea include:

- 1. Access to safe drinking water.
 - 2. Improved sanitation.
 - 3. Good personal and food hygiene.
 - 4. Health education about how infections spread.
- Key measures to treat diarrhoea include:
- 1. Giving more fluids than usual, including oral rehydration salts solution, to prevent dehydration.
 - 2. Continue feeding.
 - 3. Consulting a health worker if there are signs of dehydration or other problems.

TIPS ON ALZHEIMER'S

Healthy lifestyle could reduce Alzheimer's risk



Regular exercise and a healthy diet could go a long way to reducing the risk of developing Alzheimer's disease, a medical expert said.

A recent Finnish study showed that middle-aged people taking regular exercise at least twice a week could reduce their risk of developing Alzheimer's disease by 50 percent in old age, neurologist Miia Kivipelto expressed.

"An active lifestyle, both physical, mental and social, is preventive. It's never too early to start to prevent Alzheimer's disease," said Kivipelto, an Alzheimer's disease specialist at Stockholm's Gerontology Research Center.

An estimated 12 million

people worldwide suffer from Alzheimer's, which is the leading cause of dementia in the elderly. There is no cure for a condition which robs people of their memory and mental ability but drugs have been approved to alleviate symptoms.

Studies have shown that people with high blood pressure, high cholesterol and obesity could be running a greater risk of developing Alzheimer's and dementia than those with a more active, healthy lifestyle, she said.

People could reduce the risk of developing the disease by going to their doctor for regular check-ups to monitor their blood pressure, cholesterol and weight, she said.

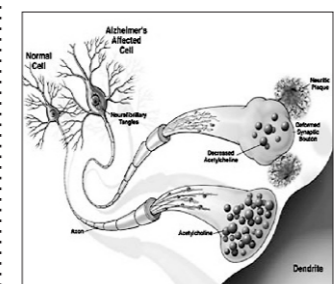
Other recent studies show that elderly people who take regular walks are less likely to suffer from dementia. Mental activities such as reading and doing crossword puzzles also help to slow mental decline.

Source: <http://www.reuters.com>

Drinking tea might delay Alzheimer's

Drinking tea appears to affect the brain in a similar way as drugs prescribed for Alzheimer's disease, UK researchers reported.

The team, based at Newcastle University's Medicinal Plant Research Center, investigated the properties of green and black tea, as well as coffee, in a series of laboratory experi-



ments. The results showed that both types of tea inhibited the activity of enzymes associated with the development of Alzheimer's disease. Coffee, however, had no significant effect, according to a report in the Phytotherapy Research.

Source: Phytotherapy Research

Gene modified tissue may slow Alzheimer's

The teas inhibited the activity of acetylcholinesterase -- the same mechanism of action used by drugs prescribed for Alzheimer's disease.

The teas also hindered the activity of the butyrylcholinesterase, which has been found in senile plaques in the brains of Alzheimer's disease patients.

Green tea obstructed the activity of beta-secretase, which also plays a role in the production of senile plaques. "Although there is no cure for Alzheimer's, tea could potentially be another weapon in the army which is used to treat this disease and slow down its development," lead researcher, Dr. Ed Okello, said.

The researchers are trying to find out which components of green tea inhibit the activity of the three enzymes and hope ultimately to develop a medicinal tea for Alzheimer's disease patients.

Source: Phytotherapy Research

Gene modified tissue may slow Alzheimer's

Alzheimer's patients given gene therapy seemed to regrow some damaged brain cells and seemed to experience a slower loss of their ability to think and remember, U.S. scientists reported.

The treatment did appear safe if done under general anesthesia. For this gene therapy experiment, researchers took skin cells from eight patients with mild Alzheimer's disease. They genetically modified the cells to produce a protein called nerve growth factor, or NGF, a protein that prevents cell death and stimulates cell function. They then infused these genetically engineered cells back into the patients' brains. After mean follow-up of 22 months in six subjects, no long-term adverse effects of NGF occurred.

"If validated in further clinical trials, this would represent a substantially more effective therapy than current treatments for Alzheimer's disease," said Dr. Mark Tuszynski, a neuroscience professor at UCSD who led the study. "This

would also represent the first therapy for a human neurological disease that acts by preventing cell death," Tuszynski said.

Positron Emission Tomography or PET scans done in four living patients suggested they grew some new brain cells and had fresh brain activity, the researchers said. Six patients had their cognitive function -- their ability to think, orient themselves and remember -- tested using a standard method.

Over the follow-up period of 22 months, the rate of cognitive decline was reduced by as much as 51 percent, the researchers said. "By comparison, currently approved medications for Alzheimer disease have an estimated impact on these cognitive measures of 5 percent to 27 percent, and are not known to affect decline over prolonged periods," the researchers noticed.

Source: Nature Medicine