

Antimicrobial resistance: What's the big deal?

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A recent study from China reported an alarming finding: a gene that confers resistance to certain antibiotics (used against dangerous bacteria) is found in a growing number of bacteria from meat samples in China and from some hospital patients.

In a report released by the World Health Organisation (WHO), it was shown how confused the general population is about the topic of antibiotic resistance. Surveys administered in a number of countries revealed the following:

- Three quarters of respondents think antibiotic resistance happens when the body (not bacteria) becomes resistant to antibiotics.
- Two thirds believe individuals are not at risk for a drug-resistant infection if they personally take their antibiotics as prescribed.
- Nearly half of the respondents think antibiotic resistance is only a problem for people who take antibiotics regularly.
- Nearly two thirds (64%) believe the medical community will solve the problem before it becomes a serious threat.
- Nearly two thirds of respondents believe antibiotics can be used to treat viruses, and one third (32%) believe they can stop taking antibiotics when they feel better.

These findings are worrisome, especially that we are in the age of booming of information and easy accessibility to it. Coming



to realise the extent of misconception about antimicrobial resistance requires immediate action by healthcare professionals.

So, what exactly is antibiotic resistance? According to the Center for Disease Control and prevention (CDC), "antibiotic/antimicrobial resistance is the ability of microbes to resist the effects of drugs - that is, the germs are not killed, and their growth is not stopped."

Bacteria will inevitably find ways of resisting the antibiotics developed by humans - this is their evolutionary mechanism to protect themselves. No one can completely avoid the risk of antibiotic-resistant infections.

The use and misuse of antimicrobial drugs accelerates the emergence of drug-resistant strains. Poor infection control practices, inadequate sanitary conditions and inappropriate food-handling encourage the spread of antimicrobial resistance. The use of antibiotics is by far the single most important factor leading to antibiotic resistance around the world.

Trends in drug resistance

• Antibiotics are among the most commonly prescribed drugs used in human medicine and can be lifesaving drugs. However, up to 50% of the time antibiotics are not optimally prescribed, often done so when not needed, incorrect dosing or duration.

• Another major factor in the growth of antibiotic resistance is spread of the resistant strains of bacteria from person to person, or from the non-human sources in the environment.

Need for concerted action

Antimicrobial resistance is a complex problem. Coordinated action is required to minimise emergence and spread of antimicrobial resistance.

People can help tackle resistance by:

- Hand washing, avoiding close contact with sick people to prevent transmission of bacterial infections and viral infections; and using condoms to prevent the transmission of sexually-transmitted infections
- Getting vaccinated and keeping vaccinations up to date
- Using antimicrobial drugs only when they are prescribed by a certified health professional
- Completing the full treatment course, even if they feel better
- Never sharing antimicrobial drugs with others
- Health workers and pharmacists/drug dispensers can help tackle resistance by:
 - Enhancing infection prevention and control in hospitals and clinics
 - Only prescribing and dispensing antibiotics when they are truly needed
 - Prescribing and dispensing the right antimicrobial drugs to treat the illness

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HAVE A NICE DAY

Importance of hand washing



We are more or less aware about the importance of washing hands. The healthcare professionals and persons responsible for patient care certainly needs to be concerned about hand hygiene and should be able to perform it correctly at the right time.

It would be best if they follow World Health Organisation (WHO) guidelines about handling sick persons. They need to clean their hands by rubbing them with an alcohol-based formulation, as they are the preferred mean for routine hygienic hand antiseptics if hands are not visibly soiled. It is faster, more effective and better tolerated by hands than washing with soap and water.

If exposure to potential spore-forming pathogens is strongly suspected or proven, including outbreaks of Clostridium difficile, hand washing with soap and water is the preferred means.

The use of gloves does not replace the need for cleaning doctors or nurses hands. Hand hygiene must be performed when appropriate regardless of the indications for glove use. Discard gloves after each task and clean your hands — gloves may carry germs as well. Wear gloves only when indicated according to standard and contact — otherwise they become a major risk for germ transmission.

Thousands of people die every day around the world from infections acquired while receiving health care. Hands are the main pathways of germ transmission during health care. As a result, hand hygiene is the most important measure to avoid the transmission of harmful germs and prevent health care associated infections.

So, never come out of the washroom without washing your hands properly and always use few moments for washing before eating.

HEALTH bulletin

Nutrition in liver diseases

CHOWDHURY TASNEEM HASIN

Liver is the seat of metabolism in the body. Whatever food we eat, after digestion passes through liver. 85-90% of the blood that leaves the stomach and intestines carries important nutrients to the liver where the proteins are processed and broken down into amino acids, carbohydrates into glucose and fats into amino acids.

Liver diseases such as hepatitis and cirrhosis may change the way our body uses nutrients from food.

Most of the patients of cirrhosis of liver (replacement of damaged liver cells by fibrous scar tissue) are severely malnourished and require a high calorie and high protein diet. A diet containing approximately 2,000 Kcal which can be provided by 20-25 gms fat, 80-90 gms proteins and 400 gms carbohydrate is suitable.

Too much protein will result in an increased amount of ammonia in the blood; too little protein can reduce healing of the liver. Amount of protein to be given to the patient depends on the liver's ability to metabolise.

Diet tips for liver diseases:

- A healthy liver makes glycogen from carbohydrate. The glycogen is then broken down when the body needs energy. A damaged liver cannot do this. Without glycogen, more carbohydrate is needed from the diet to make sure the body has enough energy.
- A moderate amount of fat is needed. Fat provides calories, essential fatty acids, and fat-soluble vitamins.
- Liver damage can cause high blood pressure in the major vein of the liver. This can result in ascites. Limiting sodium can help prevent this.

• Extra amount of certain vitamins and minerals are needed. A damaged liver has problems storing many vitamins and minerals.

- Foods that contain vitamins C and E are important as antioxidants to protect and treat a damaged liver.
- Methionine and cysteine (egg yolks, red peppers, garlic, onions, broccoli, brussels sprouts, sesame seeds, whole grains and beans) are sulfur-containing proteins that are known to protect the liver and aid in converting fat-soluble toxins to water-soluble substances that can be eliminated through the urine.
- Choline (Soybeans, egg yolks, nutritional yeast, fish, peanuts, cauliflower, lettuce, cabbage, lentils, chick peas and brown rice) is needed to metabolise fats in the body.
- Vitamin B-complex is very important for liver as well.
- Coconut water is excellent in liver cirrhosis.
- Bitter tasting vegetables — all gourds, long gourd, bottle gourd, round gourds, bitter gourds and turnips, radish, carrots, and potatoes — are good in liver failure.
- Junk food, drugs, chemicals, preservatives, alcohol, soda, soft drinks should be avoided at all cost.
- Small meals served separately will be better tolerated than three large meals.
- Drinking water is very important if there is no water retention.
- Avoid sour fruits at all cost. Lemons, oranges are not recommended at all.



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What works to delay the age of marriage for girls in Bangladesh

New evidence on what works to delay the age of marriage for girls at highest risk in Bangladesh were released by the Population Council, says a press release.

Population Council findings released are from the "Bangladeshi Association for Life Skills, Income, and Knowledge for Adolescents" (BALIKA) project, a randomised controlled trial to evaluate whether three skills-building approaches to empower girls can effectively delay the age at marriage among girls aged 12-18 in parts of Bangladesh where child marriage rates are at their highest.

The trial found that three skills-building approaches: education support, gender rights awareness, or livelihoods skills, were successful in reducing child marriage and producing better health, educational, economic and social outcomes for girls.

More than 9,000 girls in 72 communities participated in the BALIKA project. Communities were assigned to one of three skills-building intervention strategies where girls received either education support through tutoring in math and English; life skills training on gender rights and negotiation, critical thinking, and decision making; or livelihoods training in entrepreneurship, mobile phone repair, photography and basic first aid.

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What is Cholesterol

Cholesterol is a fatty substance that occurs naturally in the body. It performs several vital functions. It is needed to make the walls surrounding the body's cells and is the basic material that is converted to certain hormones. Your body makes all the Cholesterol you need. You need only a small amount of fat in your diet to make enough Cholesterol to stay healthy

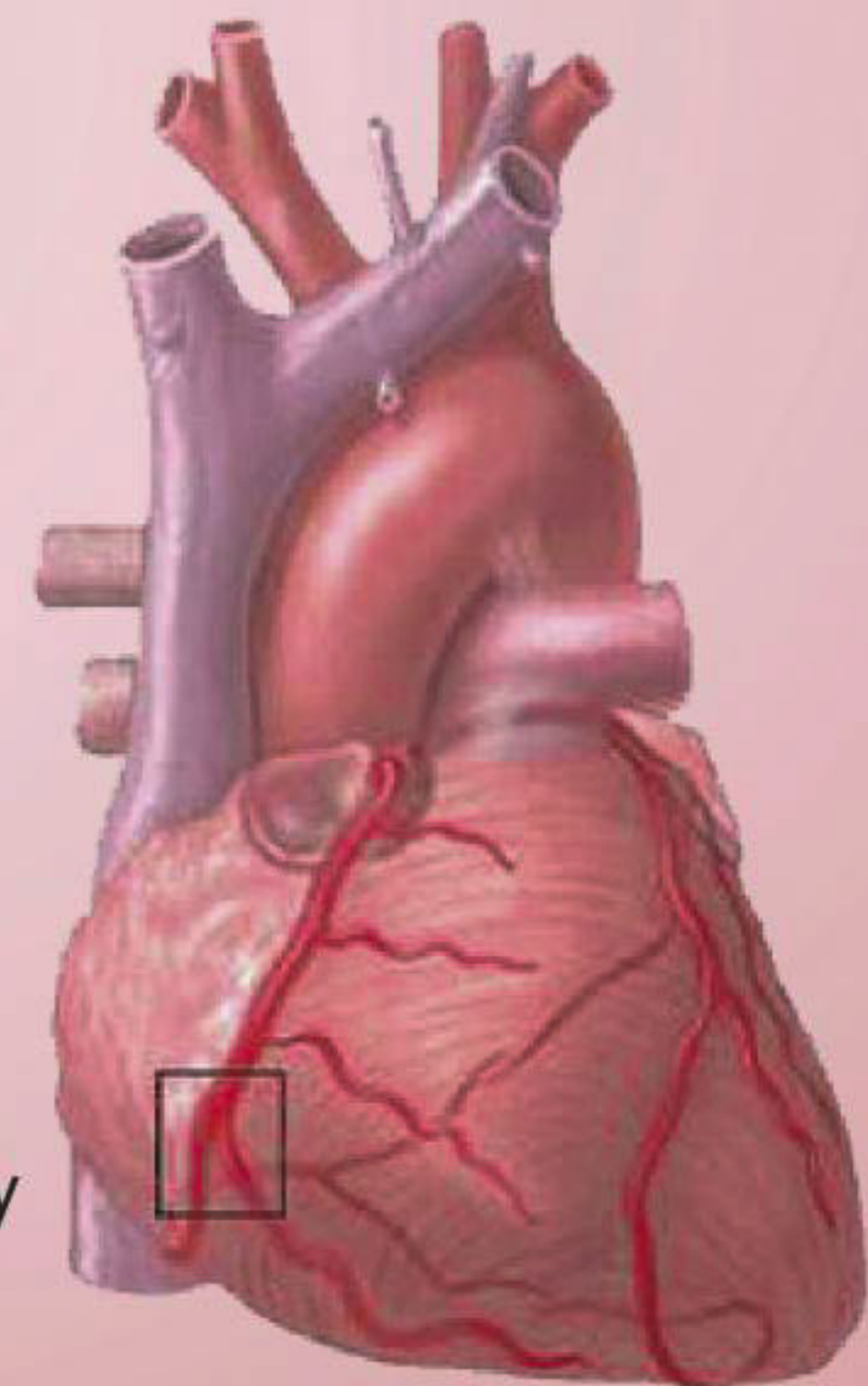
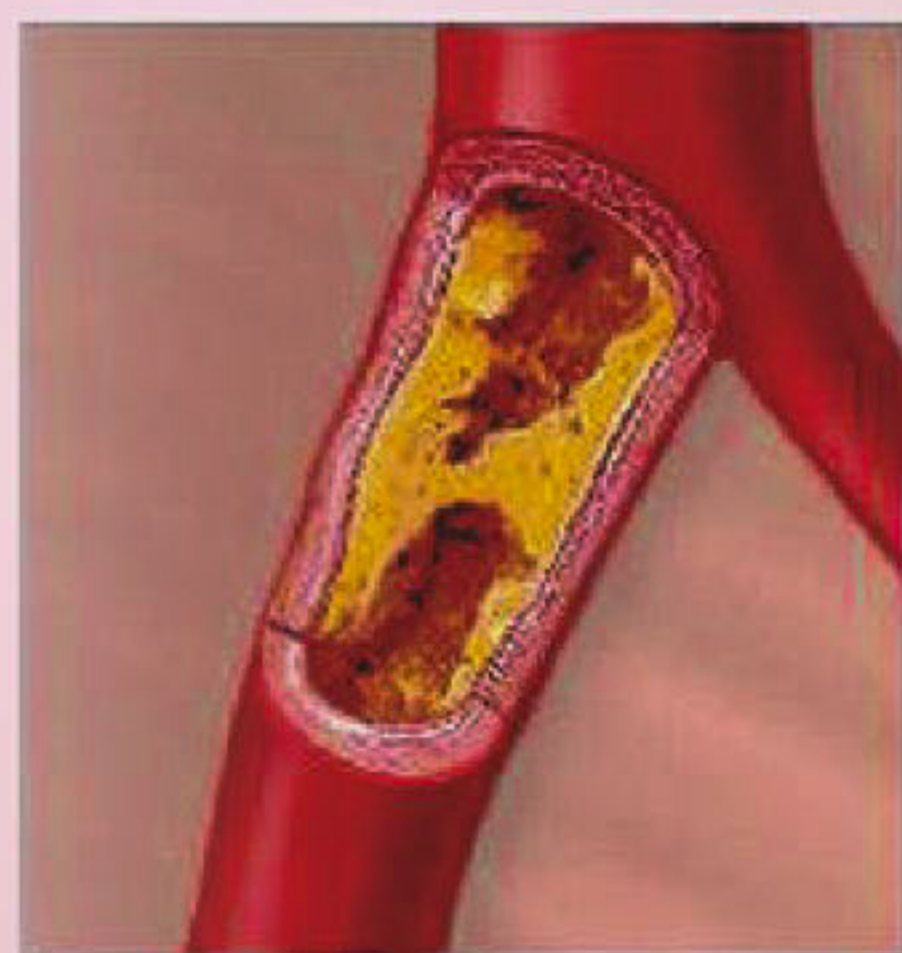
Symptoms

Most people with high Cholesterol don't have any symptoms until Cholesterol-related atherosclerosis causes significant narrowing of the arteries leading to their hearts or brains. The result can be heart-related chest pain (angina) or other symptoms of coronary artery disease, as well as symptoms of decreased blood supply to the brain (transient ischemic attacks or stroke)

Prevention

You may help to prevent high Cholesterol by staying on a healthy diet and exercising daily. Avoid processed foods, especially those that contain saturated fats. Instead eat more fresh fruits and vegetables, whole-grain breads and cereals, and low-fat dairy products

Hypercholesterolemia or widely known as HIGH CHOLESTEROL



Blockage In Right Coronary Artery

