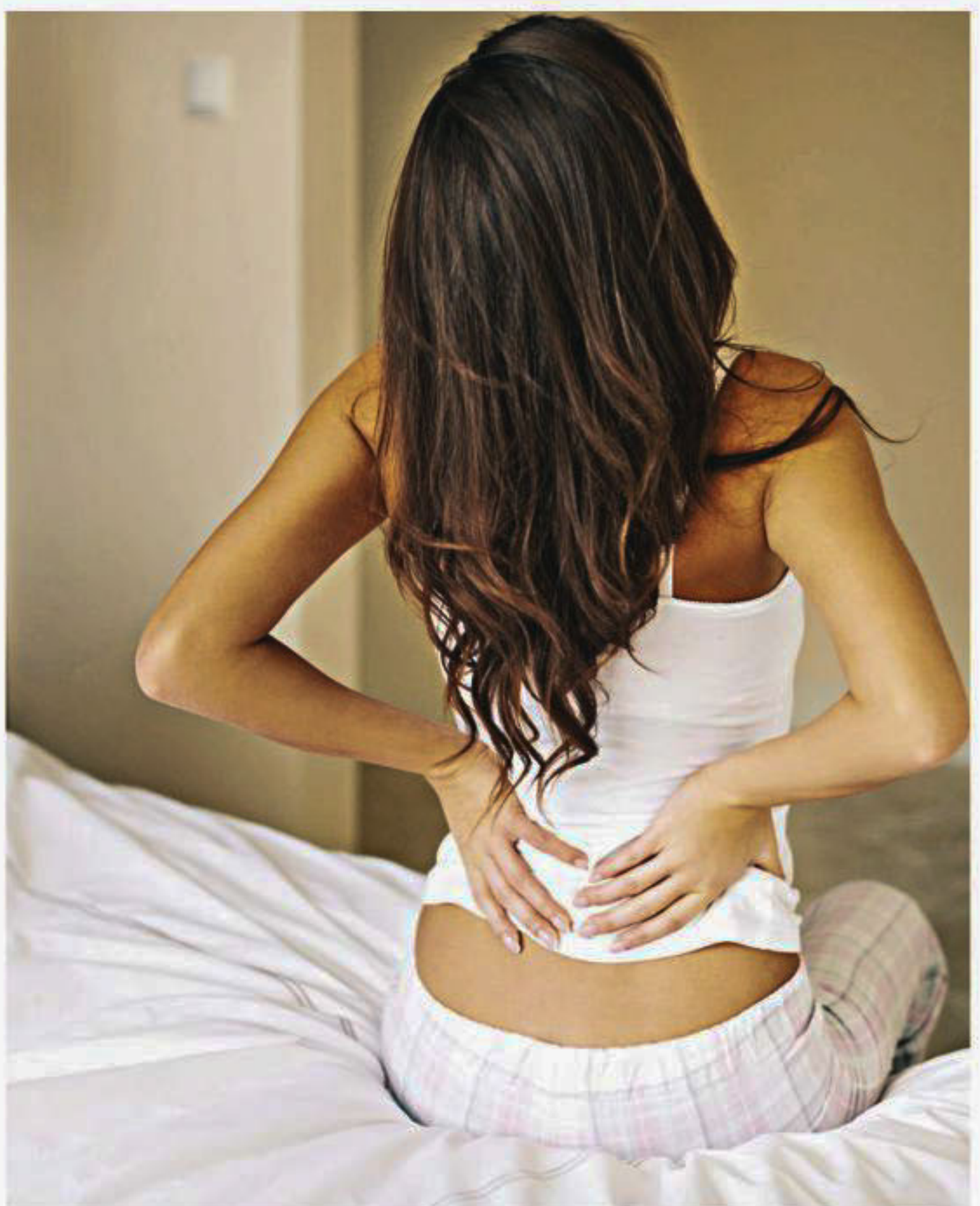


Chronic lower back pain: commonest cause for loss of working hours

DR JAGODISH CHANDRA GHOSH
 Back pain is very common. Now a days. Nine out of ten adults experience it at some point of their lives. The back of human being is designed to provide a great deal of strength, protecting the highly sensitive spinal cord and nerve roots, yet highly flexible and provide mobility in all direction. Back is also under continuous stress in normal daily activities and in risk of micro-injuries in excessively prolonged activities. There are a lot of reasons for back pain, although there are some serious underlying causes of it - in majority of the cases (80%-90%) cause of low back pain is nonspecific, with no identifiable cause.



limitation and work absence throughout the world. Most people who experiences activity limiting low back pain go on to have recurrent episodes. In addition to occupational factors there are many environmental and personal factors which influence the onset and course of low back pain. There is evidence that people suffering from stress, anxiety, depression, job

dissatisfaction, low level of social support in working environment are at increased risk of suffering from back pain. Low back pain has an enormous financial and social impact upon the suffering individual.

Risk factor of back pain
Age: As the age increases wear and tear on the back results in degenerative changes (like disc degeneration, spinal stenosis) which predisposes back pain. This means that people over the age of 30 years are at more risk of back pain.

Excess weight: Excess weight puts relatively more pressure on spine causing stress and microinjuries to spine. Accumulating effect results in pain and accelerates spinal degeneration.

Sedentary lifestyle: People who are not physically active or do not perform regular exercises will not be able to maintain efficiently strong back muscle to support the spine and are likely to suffer more commonly from back pain.

Occupational hazards: Occupations that require repetitive bending and lifting has a high incidence of back injury (e.g. construction workers), jobs that require prolonged hours of standing without a break (barber), sitting for a long time on a chair (e.g. software developer) that does not support

the back also increases the risk of back injury put these persons at greater risk.

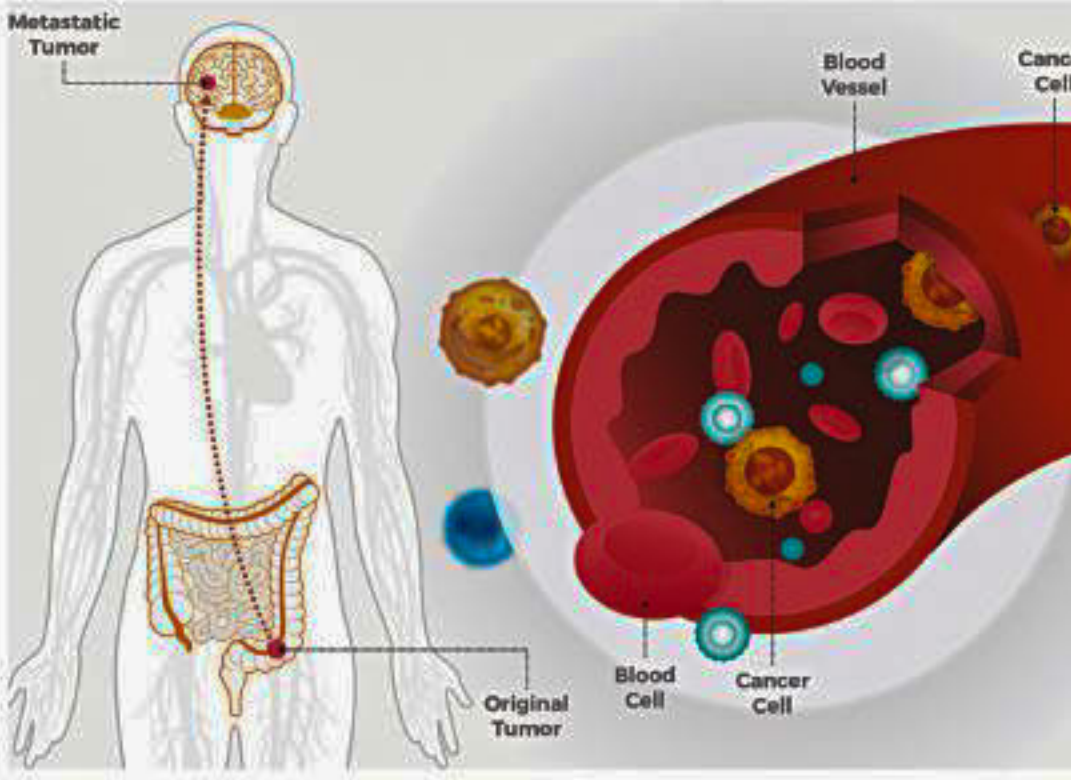
When back pain is associated with - gradual increase in intensity of pain or felt during sleep; pain radiates to lower limbs and accompanied with numbness and weakness in legs; difficulty in controlling bowel and bladder; constant progressive back pain at night; significant weight loss; patient suffering from cancer and back pain that is not relieved by means of simple measures within 2-3 weeks, it is essential to seek advice from a doctor.

The non-specific back pain is usually transient in nature and might need a short period of rest and simple analgesic for relief. In all such cases it is essential to prevent its recurrence by a policy that can reduce or prevent the initiating cause of it. A programmed back muscle strengthening exercise play a great role in preventing the recurrences.

Chronic back pain seems to be a biopsychosocial condition. Even though biological aspects like structural or anatomical causes have a great role, but also the psychological and social factors also play an important role which cannot be ignored.

The writer is a Professor of Orthopaedics. Email: drghoshjc@gmail.com

DIAGNOSTICS



Predicting metastasis from primary tumour size

A new mathematical model uses the size of a cancer patient's initial, primary tumour to predict whether undetectable secondary tumours are already present. Stefano Avanzini and Tibor Antal of the University of Edinburgh, U.K., present the model in PLOS Computational Biology.

The new model opens up the possibility of quantifying the potential dangers of delays in surgery, which are most critical for smaller tumours that are about to start metastasising.

As cancer grows, cells can spread from the initial tumour site to other parts of the body and establish secondary tumours called metastases. The presence of metastases is associated with a poorer prognosis and calls for additional treatment. However, very small, early stage metastases cannot be detected by current screening technologies.

Avanzini and Antal hypothesised that knowing the size of the primary tumour could help predict the chances that undetectable metastases are already present at surgery. To explore this possibility, they developed a mathematical model of a growing tumour that has an increasing chance to initiate metastases by releasing single "seed" cells, and each of these seed cells has a chance to develop into a secondary tumour.

HEALTH bulletin



Majority of adolescents worldwide are not sufficiently active physically

The first ever global trends for adolescent insufficient physical activity show that urgent action is needed to increase physical activity levels in girls and boys aged 11 to 17 years. The study, published in The Lancet Child & Adolescent Health journal and produced by researchers from the World Health Organisation (WHO), finds that more than 80% of school-going adolescents globally did not meet current recommendations of at least one hour of physical activity per day - including 85% of girls and 78% of boys. The study - which is based on data reported by 1.6 million 11 to 17-year-old students - finds that across all 146 countries studied between 2001-2016 girls were less active than boys in all but four (Tonga, Samoa, Afghanistan and Zambia). The countries showing the greatest decreases in boys being insufficiently active were Bangladesh (from 73% to 63%), Singapore (78% to 70%), Thailand (78% to 70%), Benin (79% to 71%), Ireland (71% to 64%), and the USA (71% to 64%). The authors note that if these trends continue, the global target of a 15% relative reduction in insufficient physical activity - which would lead to a global prevalence of less than 70% by 2030 - will not be achieved. This target was agreed to by all countries at the World Health Assembly in 2018.

Health problems in old age

DR ZUBAIR KHALED HUQ
 Growing older is no longer something to be feared of. Thanks to the miracles of modern medicine, it is possible to live a happier, fuller life over a longer period of time. Entering one's twilight years also puts them at risk for tons of old age health problems. Whether you are looking for yourself or a loved one, it is important to know what to expect. Here are some of the most common old age health problems senior citizens encounter.

Obesity: In and of itself, obesity is a major threat to one's health. But when combined with old age, the risk of obesity-related death only increases. Extra weight can put extra strain on the internal organs like the heart and lungs. The more restricted an organ is, the less it is able to function.

Arthritis: Aside from obesity, arthritis is the most common of the old age health problems. Arthritis is so much more than a dull, aching pain that flares up. Think of arthritis as the slow breakdown of cartilage and bone. Part of this is natural, occurring slowly over time. Factors like diet and vitamin deficiencies can speed up the rate at which osteoporosis develops.

Cancer: Perhaps no ailment on this list is as prevalent and fatal as cancer. With dozens of different variations, from brain to breast to lung and throat, cancer is responsible for millions of deaths per year. And believe it or not, advancing age is one of the biggest cancer risks out there. With a naturally weakened system, it does not take much to become ill.

Alzheimer's disease: The body slowly breaking down is one thing, but the mind breaking down is another issue entirely. There is no way around it, Alzheimer's disease is terrifying. Unfortunately, there is no cure for Alzheimer's at the time of writing. But check-ups and regular mental stimulation such as crossword puzzles and reading are great ways to keep the mind strong and healthy.

Diabetes: Generally speaking, diabetes and obesity go hand-in-hand. Typically, diabetes is caused by poor diet and a sedentary lifestyle. However, certain types of diabetes can be hereditary. Life with diabetes is entirely manageable, but that does not mean it is any less of a health concern. Those with diabetes are at an increased risk of illness, and may even need limb amputations if they are not careful.

Depression: Old age health problems are not always physical;

they can be mental as well. Depression among seniors is a serious concern that can lead to premature death.

Oral decay: As we get older, our mouths become dryer, making it easier for bacteria to grow on our gums and teeth. This can make it much more difficult to prevent cavities, tooth decay and even gum diseases like gingivitis. You can keep your healthy smile at an older age by brushing vigorously on a regular basis.

Respiratory disease: A weakened immune system means it is easier to catch all sorts of respiratory illnesses. Something as simple as breathing can become difficult when you have asthma or bronchitis. If that were not bad enough, respiratory illnesses put seniors at an increased risk of pneumonia and influenza.

The writer is a gerontologist and a public health specialist. E-mail: zubairkhaledjoy@gmail.com



New partnership to help prevent childhood overweight and obesity

Novo Nordisk and UNICEF announced a new partnership to help prevent childhood overweight and obesity worldwide with an initial focus on interventions in Latin America and the Caribbean.

The partnership - announced on World Children's Day, the 30th anniversary of the Child Rights Convention - aims to enhance knowledge among decision-makers on successful policies to prevent childhood overweight and obesity in middle-income countries; build awareness of the impact of overweight and obesity on children and their rights and advocate for the need to make systemic changes to address this growing epidemic and drive and strengthen multi-sector interventions in Latin America and the Caribbean with specific focus on Mexico and Colombia.

Thyrocare Bangladesh Ltd got CAP accreditation

A celebratory event took place recently at the American Chamber of Commerce as Thyrocare Bangladesh Limited became the first and only digitised lab in Bangladesh to achieve the accreditation by the College of American Pathologists (CAP), the gold standard for accreditation globally. Thyrocare Bangladesh Limited is also celebrating its 5th year anniversary in Bangladesh serving over 10,000 customers across Dhaka, Chattogram, Cumilla, Mymensingh, Narayanganj, Rajshahi, Gazipur and Barishal.

In addition, to the celebration of the 5th year anniversary and CAP accreditation, one of the key highlights was the award ceremony of "Thyrocare Niaz Murshed Leadership Scholarship Award" for promoting and inspiring future leaders. Eleven winners between 15-18 years of age with exemplary leadership qualification from local school and colleges were awarded a prize money of BDT 1 lakh and one-year mentorship sponsored by Thyrocare.



Leptospirosis

Leptospirosis is a type of bacterial infection spread by animals. It's caused by a strain of bacteria called leptospira.

In 90% of cases, leptospirosis only causes mild flu-like symptoms, such as a headache, chills and muscle pain.

Symptoms of leptospirosis

The symptoms of leptospirosis usually develop suddenly around 7 to 14 days after exposure to the leptospira bacteria.

About 90% of leptospirosis infections only cause mild symptoms, including:

- A high temperature (fever) that is usually between 38C and 40C (100.4-104-F)
- Chills
- Sudden headaches
- Nausea and vomiting
- Loss of appetite
- Muscle pain, particularly affecting the muscles in the calves and lower back
- Conjunctivitis (irritation and redness of the eyes)
- Cough
- A short-lived rash

These symptoms usually resolve within five to seven days. However, in about 10% of cases people go on to experience more serious symptoms.

How is leptospirosis treated?

Leptospirosis is treated with a course of antibiotics. For mild forms of leptospirosis, antibiotic tablets that can be taken at home are usually used for about a week. Most people with more severe leptospirosis will be admitted to hospital so their body's functions can be supported while the underlying infection is treated with injections of antibiotics.

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