Job stress to blame for early aging

London: A stressful job could make you old and sick before time, as a new study suggests that people with high stress work tend to have shorter telomeres, which has been associated with several diseases.

Telomeres, located at the ends of chromosomes, serve as a type of protective cap to the rope strands and their shortening has been linked to Parkinson’s disease, type 2 diabetes, cardiovascular disease and cancer. The research led by Kirsti Ahola of the Finnish Institute of Occupational Health measured the length of DNA sections called telomeres and how the lengths varied in association with job stress.

The study found that people suffering from the most job stress tended to have shorter telomeres. Telomeres assure that the genetic instructions carried by genes on the chromosomes are accurately translated so cells get the right messages. They shorten with age, oxidation and chemical insults.

Often, when telomeres reach a critically short length, the cell dies in a process called apoptosis, according to NBC News.

Some cells do not die, but rather become what scientists call ‘senescent’—they start making genetic errors and causing damage. Ahola and her team analyzed blood cells called leukocytes, which are critical to immune function, in 2,911 people between ages 30 and 64. They found that workers who experienced severe exhaustion from job stress had significantly shorter leukocyte telomeres than their relatively stress-free counterparts.
WAYS TO DEFEAT STRESS

Life in the modern workplace is full of stress. The difference between those who are successful and those who aren’t is not whether or not you suffer from stress, but how you deal with it when you do.

Here are nine scientifically proven strategies for defeating stress whenever it strikes:

1. **Have self-compassion:** Self-compassion is, in essence, cutting yourself some slack. It’s being willing to be kind to your mistakes or failures with kindness and understanding — without harsh criticism or defensiveness. A dose of self-compassion when things are at their most difficult can reduce your stress and improve your performance by making it easier for you to learn from your mistakes, she suggested.

2. **Think about the ‘big picture’:** Thinking big about the work you do can be very energizing in the face of stress and challenges, because you are linking one particular task to a greater meaning or purpose. So when staying that extra hour at work at the end of an exhausting day is thought of as “hobbling my career” rather than “answering emails.”

3. **Simplify routines:** Having to make so many decisions is a powerful and pervasive cause of stress. Every time you make a decision, you create a state of mental tension that is, in fact, stressful.

   The solution is to reduce the number of decisions you need to make, by utilizing routines. Have a routine for preparing for your day in the morning, and packing up to go home at night. Simple routines can dramatically reduce your experience of stress.

   Take five or ten minutes to do something you find interesting. She points out to recent research that showed that interest doesn’t just keep you going despite fatigue, it actually replenishes your energy. And then that replenished energy flows into whatever you do next.

   Add where and when to your to-do list. Nearly 50% of studies, on everything from diet and exercise to negotiation and time management, have shown that deciding in advance where and when you will complete a task can double or triple your chances of actually doing it.

   When you think about what you are doing in terms of learning and improving, accepting that you may make some mistakes along the way, you experience far less stress, and you stay motivated despite the setbacks that might occur. Or think about the progress that you’ve already made: it can be enormously helpful to take a moment and reflect on what you’ve accomplished so far before turning your attention to the challenges that remain ahead, she stated.

   Know whether optimism or defensive pessimism works for you: some people think of their jobs as opportunities for achievement and accomplishment — they have what psychologists call a promotion focus. Others, who define a job well is about security, about not losing the positions they’ve worked so hard for. This prevention focus places the emphasis on avoiding danger, fulfilling responsibilities, and doing what feels you ought to do.

   Promotion motivation feels like eagerness — the desire to really go for it — and this eagerness is sustained and enhanced by optimism. Believing that everything is going to work out great is essential for promotion-focused performance.

   Prevention motivation, on the other hand, feels like vigilance — the need to keep danger at bay — and it is sustained by optimism, but by a kind of defensive pessimism.

4. **The strategies are presented by Heidi Grant Halvorson, a motivational psychologist, in her latest book.**
**Stress on Indian diagnostic values**

Normal reference value for vascular ageing among Indians much higher than Caucasians

| Source: The Hindu, September 6, 2011, Page No. 7 |

**Special Correspondent**

**CHENNAI:** Even as the Indian Council of Medical Research is getting set to launch a country-wide study to arrive at Indian diagnostic reference values, here are the results of a study involving over 8,000 participants that underline the urgency of such a task.

The results of the first phase of Sri Ramchandra University's PURSE-HIS project, conducted between April 2008 and June 2011, clearly demonstrate the fact that a different set of reference or ‘normal’ values will have to be narrowed down for the Indian ethnic group.

There is undoubtedly a need for a different set of reference values for the Indian population, S Thanikachalam, who led the project at SRU, said.

"For instance, one-third of the population has conditions conducive to the development of a vascular illness – stroke, heart attack, peripheral vascular disease, among others."

In fact, the study showed that the normal reference value for vascular ageing among Indians was much higher than in the Caucasian population. Kamal Mary McIntier, senior researcher, University of Cambridge, said the ageing was advanced by at least 10 years, in comparison with the Caucasian population.

"Thereby, the vascular age of a 50-year-old in India would be comparable only to that of a 40-year-old in, say, the United Kingdom."

Prof. McIntier and John Ronald Cockroft of Cardiff University, who were in Chennai to explore the possibilities of further collaboration on the study, were treated to a full-fledged presentation on the results.

S Ramakrishnan, director, Vellore Institute of Technology, who was also involved in the study, explains that this increases the risk of a vascular accident, and that this is a much earlier age than other ethnic groups.

Vascular thickness increases stiffness of the blood vessels, leading to atherosclerosis, Dr Thanikachalam added.

About 20 per cent of the urban study participants were diabetic, which makes it four times prone to complications such as retinopathy, early heart attack, and limb amputation. The study also showed that the incidence in semi-urban areas, and rural areas was steadily increasing.

In fact, it was disturbing to find that the rural (12.02 per cent) and semi-urban (6.06 per cent) populations had higher impaired fasting glucose (pre-diabetic condition) than the urban group, Dr Thanikachalam said. The impaired glucose tolerance levels were also similarly high for suburban and rural populations, indicative of a large group of people who were likely to develop diabetes.

"We are exploring the possibilities of a collaboration to look at prevention too," Dr Thanikachalam said.

Similarly, warning bells have been sounded for rising pre-hypertension levels as well, readings between 110/75 and 140/90 mmHg. "India has to focus on pre-diabetes and pre-hypertension. Homeostasis levels, indicative of folate acid deficiency, were also alarming, and the Indians vascular, with all these factors coupled with high oxidative stress, which we have found the indicators are that dis ease is just around the corner," Dr Thanikachalam said.

**Siddha drugs**

A small number of the study's participants were treated for their diabetes with Siddha drugs, for six months, and it was found that the drugs were efficacious and safe.

"However, the Committee had suggested an increase in dosage, and formulation of opalsuie is incorporated in a larger study."

The second phase of the study is likely to probe the genetic angle of diabetes and vascular ageing, Dr Thanika chalam said. The project which was undertaken by the Department of Science and Technology, was funded by the technology development transfer wing of the Department of Science and Technology.
Stress drives pregnant women to premature deliveries

JANAN SAMPATH | DC
CHENNAI, SEPT. 94

Doctors in the city who are seeing an increase in the number of premature deliveries have found that the main reason behind it is prenatal stress.

"Stress in pregnant women results in them suffering from various lifestyle diseases, which causes the amniotic fluid to leak and trigger a preterm birth. Mostly working women suffer this problem due to improper diet, long working hours and lack of proper care at home," said Dr Gopinath, senior civil surgeon at the Government women and children hospital.

According to statistics, an estimated 30 per cent of the annual neonatal deaths are due to preterm births. "A lot of pregnant women suffer from lifestyle diseases like gestational diabetes and polycystic ovaries, which are mainly caused by the pressure of strain they undergo at home or the workplace," added the doctor. The secretion of stress hormones causes premature rupture in the membranes and abnormal levels of these hormones can result in an early delivery.

Prenatal stress leads to a leading paradigm for highlighting the early stress exposure that can have a lasting impact on the behaviour of the baby. "Too much stress does not affect the mother alone but it also has a lasting impact on the babies that are born ahead of the due date. Studies have shown that young adults whose mothers experienced extreme stress during pregnancy show signs of accelerated aging," says Dr Gopinath. The amniotic fluid leak can be avoided largely if pregnant women cut back on working hours and go for regular check-ups to receive proper medical guidance and timely treatment especially during the 3rd trimester.

NEED PROPER MEDICATION GUIDANCE

- Stress in pregnant women results in them suffering from various lifestyle diseases, which causes the amniotic fluid to leak and trigger a preterm birth.
- The amniotic fluid leak can be avoided largely if they cut back on working hours.
A-Z of Stress

A - Anxiety, apprehension, addiction, arguments, apathy, abuse
B - Boredom, backbiting, backache, blues, blahs
C - Colds, canker sores, claustrophobia, compulsiveness, crying spells, cynicism, clamming up, conflict, confusion
D - Dinking, drug, depression, diarrhea, divorce, distrust, defensiveness
E - Edginess, emptiness, explosive temper, excuses, evasiveness, exhaustion
F - Fear, forgetfulness, flu, fatigue, frustration, flushed face
G - Guilt, gas, grudges, gambling addictions, grief, gripping, grouchy
H - Hopelessness, heart attack, high blood pressure, headaches, hurried
I - Indigestion, insomnia, irritability, irrational thoughts, indecision, intolerance
J - Judgmental stance, joylessness, jitters, juggling various tasks
K - Know it all attitude, knots in stomach or back, keyed up, knee jerk reactions
L - Loneliness, lowered libido, lethargy, lashing out, lack of concentration
M - Muscle twitches, martyrdom, mood swings, marital conflict, melancholy
N - Nagging, negative attitude, nightmares, nervousness, needing to prove something
O - Ornery, out of touch, out of control, obligated, over-extended, overeater, overweight, overbearing, overachiever, oppositional, obsessive-compulsive
P - Panic, pounding heart, put-downs, poor judgment, pushing too hard, preoccupied
Q - Quiet, quick to take offense, questioning, queasy stomach, quivers, quarrelsome, qualms, quagmires of problem, quick tempered
R - Rudeness, rash behavior, resentment, righteous indignation
S - Sulking, stewing, spiritual void, self-recriminations, sleeplessness, stomach complaints
T - Temper tantrums, too much to do, tension, trouble setting priorities
U - Unhappiness, unforgiving spirit, uncertainty, unproductive approach to work, ulcers, unrealistic expectations
V - Volatile, vague aches and pains, values confusion, vacillating, vertigo, violence, vertigo
W - Weight gain/loss, whirling mind, worrying, wasting time, wallowing in self-pity
X - X-tra kg, x-travagent living, x-cessive debts, x-cessess in many areas
Y - Yelling, yawns, yes-buts, yowling, yearning for yesterday
Z - Zillions of things undone, zero energy, zero tolerance

Source: Stress management through ancient wisdom and modern science, Dr. Umesh Sharma, 200V5, Excell Books, New Delhi, P. No: 28, 102, 56-60