



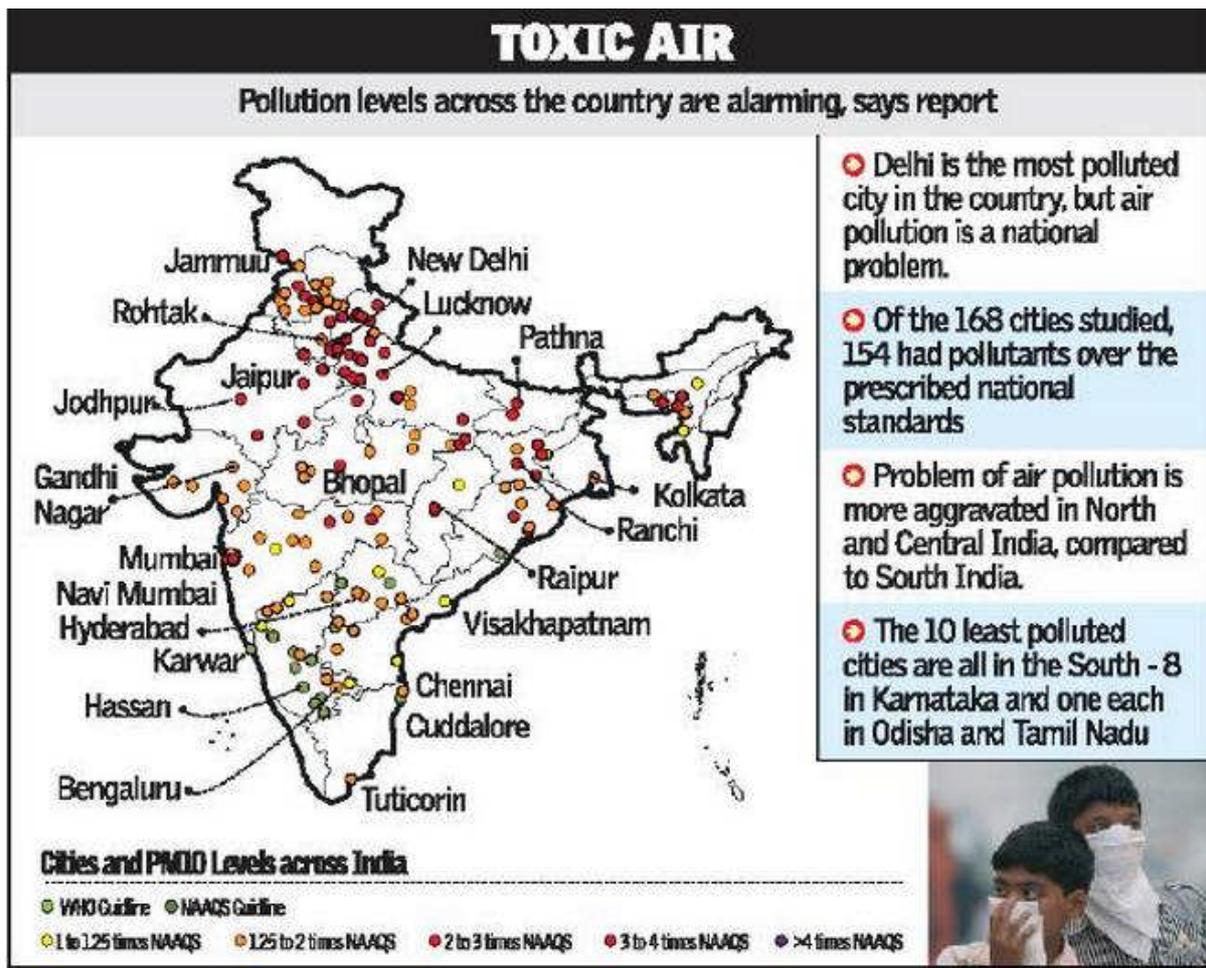
DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY
Thursday 20170112

Air pollution

Air pollution a national problem (The Hindu: 20170112)

<http://www.thehindu.com/news/cities/Delhi/Air-pollution-a-national-problem/article17026779.ece>



Source: Airpocalypse, Greenpeace

A Greenpeace report shows 90% of cities studied had pollution levels over prescribed standards

Delhi's toxic air may be making news every few months. But pollution levels across the country are alarming too. A new report released here on Wednesday shows that over 90 per cent of the cities studied had pollution levels higher than the prescribed standards.

According to an analysis of 2015 data for 168 cities by Greenpeace India, 154 were found to have an average particulate matter level higher than the national standard. None of the cities studied had air quality matching the standard prescribed by the World Health Organisation. Hasan in Karnataka came closest to the standard.

Using data from various State pollution control boards, accessed from their websites and through RTI queries, the report ranked the cities based on the annual average of PM10, which are all particles less than 10 microns in diameter. These include the very harmful fine particles, PM2.5.

Top five

Unsurprisingly, Delhi was found to be the most polluted city, with the annual average for PM10 being 268 micrograms per cubic metre, or over four times the 60 micrograms/cubic metre limit prescribed in the National Ambient Air Quality Standards of the Central Pollution Control Board.

Ghaziabad, Allahabad and Bareilly in Uttar Pradesh and Faridabad in Haryana followed closely, making for the worst five cities in terms of PM10 levels, the annual average concentrations being four times or more than the standard.

While air quality in North and Central India saw dangerous levels of particulate matter, South India appeared to have comparatively cleaner air. All 10 of the least polluted cities were in the South and the East: eight in Karnataka and one each in Odisha and Tamil Nadu.

“Due to the Himalayas and the cooler weather as well as big industrial clusters, the levels of pollution are higher in the North. Southern India has the benefit of the mixing of sea breeze. However, pollution is a national-level problem and has to be treated as such,” said Sunil Dahiya, one of the authors of the report and a campaigner with Greenpeace India.

The main culprit

Looking at the sources of pollution, the report found that fossil fuels were the biggest contributors to the particulate matter. “Whether it is in the transport sector or industries, the uncontrolled burning of fossil fuels is the main cause of air pollution,” said Mr. Dahiya.

Chennai, for instance, though on the coast, had an average PM10 level of 81 micrograms per cubic metre. A diesel-powered public transport system and power plant were to be blamed for the air pollution.

Though the report has looked at average city levels of PM10, some of the cities, like Delhi, have many more monitoring stations than the others. In the report, Greenpeace recommended setting up more monitoring stations in order to get a better picture of pollution levels.

Heart’ emoji

Face with tears of joy’ is the most popular emoji, says study (The Hindu: 20170112)

<http://www.thehindu.com/sci-tech/technology/internet/%E2%80%98Face-with-tears-of-joy%E2%80%99-is-the-most-popular-emoji-says-study/article17025261.ece>

The study analysed 427 million messages.

People worldwide love the ‘face with tears of joy’ emoji, except the romantic French who prefer the ‘heart’ emoji, according to a new study that analysed 427 million messages from nearly four million smartphone users in 212 countries and regions.

Researchers at the University of Michigan (U-M) in the U.S. and Peking University in China analysed whether emoji use was universal or differed based on user location and culture.

They used a popular input method app — Kika Emoji Keyboard — made available in 60 languages. The team’s results are believed to be the first large-scale analysis of emoji usage.

“Emojis are everywhere. They are becoming the ubiquitous language that bridges everyone across different cultures,” said Wei Ai, a doctoral student at the U-M School of Information and one of the lead authors of the study.

Ai and colleagues found that face with tears emoji is the most popular emoji, comprising 15.4 per cent of the total symbols in the study. Heart emoji and heart eyes emoji are the second- and third-most used ones.

According to the findings, the French love using an emoji the most, with nearly 20 per cent of messages including at least one symbol, followed by Russians and Americans.

In line with perceptions of the culture, the romantic French embrace icons associated with hearts, while users from other countries prefer emojis related to faces.

The researchers also explored other cultural preferences in using emojis. Countries with high levels of individualism, like Australia, France and the Czech Republic, overwhelmingly use more happy emojis.

People in long-term orientation societies who tend to have values that centre on the future — French, Hungarians and Ukrainians — are less likely to use negative emojis than those living in societies with low long-term orientation like Mexico, Colombia, Peru and Israel.

Contrary to their perceptions as high-indulgent cultures, countries like Mexico, Colombia, Chile and Argentina do not use more positive emojis expressing happiness, researchers said.

The study found that they are more likely to use negative symbols, in comparison to cultures known for restraint and self-discipline, like Turkey, France and Russia.

“Our report shows that users from different countries can have various preferences to use emojis,” said Qiaozhu Mei, associate professor at the U-M School of Information.

Pollution

Greenpeace clears the air, Delhi most polluted in India (Hindustan Times: 20170112)

<http://www.htsyndication.com/htsportal/article/Greenpeace-clears-the-air,-Delhi-most-polluted-in-India/18220650>

Posted On: 2017-01-12 Posted By: Ritam Halder Health & Lifestyle Hindustan Times Newspapers

There are virtually no places in India complying with World Health Organization and National Ambient Air Quality (NAAQ) standards, and most cities are critically polluted, a Greenpeace India report released on Wednesday said. Titled 'Airpocalypse', the report assessed air quality in 168 cities across 24 states. Except for a few places in southern India, which complied with NAAQ standards, the entire country is experiencing a public health crisis due to high air pollution levels. "The top 20 most polluted cities have PM10 levels between 268 micro g/m³ and 168 micro g/m³ for the year 2015. While Delhi tops the list with 268 micro g/m³, it is followed closely by Ghaziabad, Allahabad and Bareilly in Uttar Pradesh, Faridaba...

Heart Attack

Link between strokes, pollution? AIIMS to find out (The Indian Express: 20170112)

<http://indianexpress.com/article/lifestyle/health/link-between-stroke-pollution-aiims-to-find-out-4470137/>

The research gained significance after a recent AIIMS study revealed that the average age for onset of stroke in the capital is 55 years, much lower than the 70 years worldwide.

Written by Kaunain Sheriff M | New Delhi | Published: January 12, 2017 5:31 am

AIIMS, Research on pollution and Stroke, correlation between stroke and pollution, pollution and stroke relations, pollution and stroke study, latest news, India news, National news The study is examining if rise in pollution can trigger a stroke

IN THE first such study on impact of pollution on neurological disorders in the country, doctors at AIIMS have examined at least 800 patients, who suffered a brain stroke, to find out if there is any “statistically significant” correlation between the disorder and the capital’s rising pollution levels. The research has been going on for two years, and AIIMS officials said it will take at least three more years to ascertain the correlation between stroke — the second most common medical emergency that leads to disability — and rise in pollution levels.

“We have examined at least 800 patients. We cannot objectively state the findings of the research with such a small number. To ascertain the correlation between stroke and pollution, we need to have more subjects. In the next three years, the number of subjects would be more...,” said Dr Professor Kameshwar Prasad, head of the Department of Neurology at AIIMS.

The research gained significance after a recent AIIMS study revealed that the average age for onset of stroke in the capital is 55 years, much lower than the 70 years worldwide. Even more alarming is the fact that 15 per cent of stroke cases in the capital are witnessed in people under 40, and 25 per cent in people under 45. While the research had concluded hypertension, diabetes and alcohol consumption as triggers for stroke, which happens when poor blood flow to the brain results in cell deaths, the present study is examining if rise in pollution can trigger it too.

Connecting the dots

According to principal investigators conducting the research, the investigation will be done in four phases. In the first phase — the “hazardous period” — investigators are examining pollution levels in the area where a patient resides, the week he suffered a stroke. The pollutants under examination are PM 10, PM 2.5, ozone and Nox levels.

In the last three phases — termed “control period”— investigators are examining pollution levels during the week before the onset of stroke; the pollution levels two weeks after the onset of stroke; and three weeks after the onset of stroke. According to investigators, if the same patient who suffered stroke when pollution levels were high remained normal when pollution levels were low, then the condition is termed “discordant”.

It would then be proved that there is a statistically significant correlation between the onset of stroke and rise in pollution levels. “However, if it is found that pollution levels were high even during the time he remained normal, then the impact of pollutants are not statistically significant on the onset of stroke. This is the basis of the investigation,” Dr Rao said.

This is the first ever research in India that is studying the effects of pollutants on neurological disorders.

Alzheimer's-related memory

Could a chicory compound reduce Alzheimer's-related memory loss (Medical News Today: 20170112)

<http://www.medicalnewstoday.com/articles/315183.php>

Memory loss is a key characteristic of Alzheimer's disease, which is a condition that affects more than 5.4 million people in the United States. In a new study, researchers report that a compound called chicoric acid, naturally present in chicory, may be effective in reducing Alzheimer's-related memory loss.

[Red chicory]

Researchers suggest that a compound found in chicory has the potential to reduce memory loss associated with Alzheimer's disease.

The study, recently published in The FASEB Journal, reveals that mice treated with chicoric acid displayed better memory in behavioral tests than rodents that did not receive the compound.

While further research is needed, study co-author Xuebo Liu, Ph.D., of the College of Food Science and Engineering at Northwest A&F University in China, and colleagues say that it is possible for chicoric acid to help maintain memory in patients with Alzheimer's and other neurodegenerative conditions.

Alzheimer's disease is the most common form of dementia, accounting for approximately 60-80 percent of all cases. It is estimated that every 66 seconds, somebody in the U.S. develops Alzheimer's disease, and it is currently the sixth leading cause of death in the country.

One of the earliest signs of Alzheimer's disease is memory loss. It is often mild in the early stages of the disease, with individuals potentially having problems recalling recent events, for example. In the later stages, a person may not recognize familiar faces, recall the names of loved ones, or recognize once familiar surroundings.

There is currently no way to halt Alzheimer's-related memory loss, though there are medications that might help to reduce its severity for a limited time. For example, cholinesterase inhibitors delay the worsening of memory and other cognitive symptoms for approximately 6-12 months in around 50 percent of patients who use them.

Now, Liu and colleagues suggest that chicoric acid has the potential to offer a more natural strategy to reduce memory impairment.

Assessing the effects of chicoric acid on memory in mice

Chicoric acid, also referred to as cichoric acid, is a chemical compound found in at least 63 types of plants and vegetables, including chicory, lettuce, and basil.

Previous studies have shown that chicoric acid has antioxidant properties, meaning that it can reduce or even prevent some types of cell damage caused by oxidative stress.

For their study, Liu and team set out to investigate whether chicoric acid might protect against memory impairment induced by lipopolysaccharides (LPS). These are molecules that have been linked to brain cell damage through oxidative stress and neuroinflammation.

The team used three groups of mice to reach their findings. One group was treated with LPS, one was treated with both LPS and chicoric acid, and one was a control group.

The memory and learning abilities of all groups were tested using two behavioral tests: the Y-maze, which assesses rodents' willingness to explore new surroundings, and the Morris water maze, which tests rodents' ability to recall and navigate their surroundings.

Chicoric acid 'a plausible therapeutic intervention' for Alzheimer's

The researchers found that mice treated with LPS took longer to complete the mazes than mice treated with both LPS and chicoric acid, suggesting that chicoric acid can reduce LPS-induced memory impairment.

The study also revealed that chicoric acid decreased the buildup of beta-amyloid proteins induced by LPS treatment. Beta-amyloid proteins are known to form "plaques" in brain cells that are considered a precursor to Alzheimer's.

Furthermore, the team found that chicoric acid reduced neuroinflammation triggered by treatment with LPS in both mouse brains and microglial cells.

According to the researchers, these results suggest that chicoric acid could be a "plausible therapeutic intervention for neuroinflammation-related diseases such as Alzheimer's disease."

While the current results are promising, further research is needed to determine the effects that chicoric acid may have on memory impairment for patients with Alzheimer's.

"These are provocative findings, but with the caveat that the LPS regime is not likely a model of long-term memory impairment. But the possibility remains that chicoric acid could prove to be a beneficial human nutraceutical for overall memory acuity."

Cutting salt intake

Cutting salt intake by 10 percent would be 'highly cost effective worldwide'((Medical News Today: 20170112)

<http://www.medicalnewstoday.com/articles/315170.php>

Reducing people's salt intake by 10 percent over 10 years through "soft regulation" strategies that combine food industry targets and public education would be extremely cost effective in nearly every country worldwide. This would be the case even without accounting for healthcare savings.

salt

Researchers say that the cost effectiveness of a national policy to reduce salt intake in most countries is around the same as that of many drugs used for the prevention of cardiovascular diseases.

So concludes a new British and American study led by Tufts University in Boston, MA, which was published in The BMJ. The team suggests that such a low-cost approach to salt reduction is a "best buy" for governments.

Consuming too much sodium contributes to high blood pressure and increases the risk of cardiovascular diseases, such as heart disease and stroke. Salt is the main source of sodium in the diet.

According to the World Health Organization (WHO), the majority of people consume too much salt - between 9-12 grams per day on average, which is around twice the recommended maximum level of 5 grams per day.

WHO estimates suggest that excess salt intake results in 1,648,000 annual deaths from heart diseases worldwide.

The researchers note that studies in a limited number of high-income countries find that national policies to reduce salt intake have been highly cost effective for reducing high blood pressure and cardiovascular disease.

The WHO suggest there is evidence that key salt reduction measures "generate an extra year of healthy life for a cost that falls below the average annual income or gross domestic product per person."

However, the researchers note that it is not clear whether this applies to most countries.

'Soft regulation' policy modeled on U.K. success

For their study, the researchers set out to measure the cost effectiveness of what they describe as a "soft regulation" national policy to reduce salt intake by 10 percent over 10 years in 183 countries.

The policy - which is modeled on the United Kingdom's recent program - combines "targeted industry agreements, government monitoring, and public education" to reduce people's salt intake.

To account for differences across countries, the researchers evaluated a range of scenarios with varying amounts of daily sodium reductions achieved over 10 years.

They also characterized (each by age and sex for the 183 countries): blood pressure levels, global sodium intakes, and the effects of sodium on blood pressure, as well as the effect of blood pressure on heart disease and stroke, and cardiovascular disease rates in 2010.

To assess the costs of implementing a sodium reduction policy in each country, they used the WHO Noncommunicable Diseases Costing Tool.

The researchers used comparative risk assessments to work out the country-specific impacts on disease burden in disability adjusted life years (DALYs), a measure of the years lost to ill health, disability, or early death.

They expressed the main result in terms of international dollars (I\$) per DALY saved over 10 years (from 2011-2020). I\$ are equivalent to the country's purchasing power of U.S. dollars.

As cost effective as many preventive drugs

The analysis shows that worldwide, a 10 percent reduction in salt intake over 10 years in each country would prevent 5.8 million DALYs per year from cardiovascular diseases. The cost associated with the policy intervention would be I\$1.13 per person over the 10 years.

Worldwide, the average cost effectiveness of the 10 year program was estimated to be approximately I\$204 per DALY saved.

The authors note that this figure is in the same ballpark as cost effectiveness ratios of many drugs for preventing cardiovascular diseases.

Across nine world regions, the team found that the estimated cost effectiveness of reducing salt intake was best in South Asia (I\$116 per DALY), and across the world's 30 most populated countries, it was best in Uzbekistan (I\$26.08 per DALY) and Myanmar (I\$33.30 per DALY).

To keep their cost effectiveness estimates on the conservative side, the researchers did not evaluate healthcare savings that might accrue from preventing ill health; they only evaluated program costs.

While acknowledging that the study has some limitations, the researchers are confident - especially in the light of previous studies in selected countries - of their findings and conclude that:

"A government 'soft regulation' strategy combining targeted industry agreements and public education to reduce dietary sodium is projected to be highly cost effective worldwide, even without accounting for potential healthcare savings."

Stem cell

Stem cell research offers new hope of restoring sight ((Medical News Today: 20170112)

<http://www.medicalnewstoday.com/articles/315135.php>

The number of individuals who lose their sight due to end-stage retinal degeneration is steadily rising and currently, it cannot be reversed. However, groundbreaking research using stem cell technology offers a light at the end of the tunnel.

[Close up of eye]

A groundbreaking stem cell procedure may one day restore sight to the blind.

End-stage retinal degeneration includes conditions such as age-related macular degeneration and retinitis pigmentosa. It is the most common cause of irreversible vision loss and blindness in older adults.

In these types of conditions, sight gradually worsens as the nuclear layer of light-sensitive photoreceptor cells in the eyes is degraded.

As the population of the United States begins to live longer, the prevalence of retinal degeneration slowly increases.

For example, the number of individuals affected by age-related macular degeneration between 2000-2010 jumped from 1.75 million to 2.07 million.

Although degeneration of the outer retinal layer cannot be reversed, one potential strategy that might eventually help to restore vision is cell replacement.

Stem cell-derived retinal tissue

Cell replacement technology is in its infancy but shows real promise. A group of scientists from the RIKEN Center for Developmental Biology in Japan, led by Masayo Takahashi and Michiko Mandai, is heavily involved in this innovative field of study.

In earlier research, the researchers transplanted stem cell-derived retinal tissues into animals with end-stage retinal degeneration. They found that this tissue could be coerced into forming structured outer nuclear layers that included mature photoreceptors.

While this marked a huge step forward, the researchers did not demonstrate whether the transplantation of cells could restore vision. Their latest study set out to fill this gap in the study.

The first stage of the research involved reprogramming adult mouse skin cells to behave in a similar way to embryonic stem cells. These cell types are called induced pluripotent stem cells (iPSCs). Next, the iPSCs were converted into retinal tissue.

Once the iPSCs had been implanted into mice with end-stage retinal degeneration, they developed and formed photoreceptors. In turn, these photoreceptors directly contacted neighboring cells within the retina.

"We showed the establishment of host-graft synapses in a direct and confirmative way. No one has really shown transplanted stem cell-derived retinal cells responding to light in a straightforward approach as presented in this study, and we collected data to support that the signal is transmitted to host cells that send signals to the brain."

Michiko Mandai

Testing for restored vision

To test whether the animals' vision had been restored, the researchers placed the mice in cages consisting of two rooms. The floor of one of the rooms was electrified at random points in time. Preceding each electric shock, the team flashed a warning light. To avoid the shock, the mouse had to see the light flash and move to the adjoining room.

Going beyond expectations, the procedure managed to restore sight in almost half of the mice with end-stage retinal degeneration. Such significant success was due to the researchers' choice of cells. Previous work has used retinal cells rather than the differential retinal tissue used in this study. Takahashi explains:

"The photoreceptors in the 3-D structure can develop to form more mature, organized morphology, and therefore may respond better to light. From our data, the post-transplantation retina can respond to light already at 1 month in mice, but since the human retina takes a longer time to mature, it may take 5-6 months for the transplanted retina to start responding to light."

Takahashi and colleagues are now extending their investigation to make these findings more applicable to patients. They are already investigating whether human iPSC-derived retinal tissue can restore visual function in animals with end-stage retinal degeneration.

There is still much work to be done, as Takahashi is well aware: "It is still a developing-stage therapy, and one cannot expect to restore practical vision at the moment. We will start from the stage of seeing a light or large figure, but hope to restore more substantial vision in the future."

As the team continues to test new avenues for iPSC-derived retinal tissue, the ability to restore lost sight inches closer.

Learn how scientists restored key parts of vision in blind mice for the first time.

Alzheimer's disease

What are the Stages of Alzheimer's Disease? ((Medical News Today: 20170112)

<http://www.medicalnewstoday.com/articles/315123.php>

Alzheimer's disease is a progressive degenerative disorder that becomes worse over time. It involves a gradual loss of memory, as well as changes in behavior, thinking, and language skills.

Alzheimer's disease is the most common form of dementia. It affects more than 5 million people in the United States.

Although every person experiences Alzheimer's differently, the way in which the disease progresses can be grouped into a series of stages.

It is important to make sure that someone with dementia lives well with the condition and that their needs are met, rather than focusing on what stage they might be in.

Contents of this article:

How quickly does Alzheimer's disease progress?

Stages of Alzheimer's disease

Outlook

How quickly does Alzheimer's disease progress?

Alzheimer's seems to develop slowly compared with other types of dementia, but the rate of progression varies between individuals.

Older person walks their dog in a park

In comparison to other types of dementia, Alzheimer's may develop slower. Regular exercise and staying active may help to maintain abilities for a longer time.

The average life expectancy for a person with this disease is 8-10 years after diagnosis, but people can live with Alzheimer's for 20 years or more.

Several factors can affect disease progression.

These include:

Age: People with Alzheimer's symptoms that develop before age 65 years may have faster progression

Genes: A person's genes may affect progression rate

Physical health: People with poorly managed heart conditions or diabetes, who have had several strokes, or have repeated infections, may deteriorate quicker

Keeping active, being involved in activities, and getting regular exercise may help the individual to maintain their abilities for longer.

Other important factors include:

Maintaining a healthy diet

Getting enough sleep

Taking all prescribed medication correctly

Quitting smoking

Not drinking too much alcohol

Going to regular checkups

If a person with Alzheimer's disease experiences a sudden change in abilities or behavior, they could have another health problem or an infection. It is important to seek advice from a doctor as soon as possible.

Stages of Alzheimer's disease

Looking at Alzheimer's in stages can give a clearer idea of the changes that could occur.

Stages are a rough guide. The symptoms a person has, and when they appear, will vary. There are several different ways of mapping Alzheimer's disease. Some people refer to seven stages, while others refer to just three.

This article, however, will look at five stages of Alzheimer's disease:

Preclinical Alzheimer's disease

Mild cognitive impairment due to Alzheimer's disease

Mild dementia due to Alzheimer's disease

Moderate dementia due to Alzheimer's disease

Severe dementia due to Alzheimer's disease

The dementia noted in stages 3 to 5 describes the set of symptoms that affect memory, thinking, problem-solving or language, and they are severe enough to affect daily life.

The average time between the onset of Alzheimer's symptoms and reaching a diagnosis is approximately 2.8 years

Stage 1: Preclinical Alzheimer's disease

The functional changes that are associated with Alzheimer's are thought to begin years, or even decades, before diagnosis.

This long phase is known as the preclinical stage of Alzheimer's disease. During this stage, there will not be any noticeable clinical symptoms.

Although there are no noticeable symptoms in the preclinical stage, imaging technologies can spot deposits of a protein called amyloid beta.

In people with Alzheimer's disease, this protein clumps together and forms plaques. These protein clumps may block cell-to-cell signaling and activate immune system cells that trigger inflammation and destroy disabled cells.

There are other biological markers, or biomarkers, that show an increased risk of disease, as well as genetic tests that can detect if a person does have an increased risk.

Using imaging technology to locate amyloid beta clumps, biomarker detection, and genetic testing could all be important in the future as new Alzheimer's treatments are developed.

Researchers are studying this preclinical stage to work out which factors can predict the risk of progression from normal cognition to stage 2 of Alzheimer's progression, which involves mild cognitive impairment.

Researchers are also hoping that their studies will help people with Alzheimer's get treated at a much earlier stage.

Disease-modifying therapies may be most effective in the more initial stages of Alzheimer disease, and they could slow disease progression.

Stage 2: Mild cognitive impairment due to Alzheimer's disease

Mild cognitive impairment occurs between the cognitive decline that is expected as a normal part of aging, and the most severe decline of dementia.

red string on a finger to remember

Mild cognitive impairment may involve forgetting appointments, a loss of awareness of steps to complete a task, and showing poor judgement in decisions.

A person with mild cognitive impairment may notice subtle changes in their thinking and their ability to remember things. They may exhibit memory lapses when it comes to recent conversations they have had, recent events, or appointments they have been to.

However, changes to memory and thinking at this stage are not serious enough to cause problems with day-to-day life or usual activities.

As people age, it is normal for forgetfulness to increase slightly, or for individuals to take longer to think of a word or remember a name. If the problem is more severe, it could be a sign of mild cognitive impairment.

Symptoms of mild cognitive impairment include:

Forgetting things more often

Forgetting appointments, conversations, or recent events

Inability to make decisions or feeling overwhelmed when doing so

Becoming increasingly unable to judge the time or sequence of steps to complete a task

Being more impulsive or showing increasingly poor judgment

Friends and family noticing the above changes

People with mild cognitive impairment might also experience depression, irritability, aggression, apathy, and anxiety.

Not everyone with mild cognitive impairment will develop dementia. Research suggests that around 10-15 percent of older adults with mild cognitive impairment will develop dementia each year.

There are currently no drugs or therapies specifically approved that are able to treat mild cognitive impairment.

However, studies are underway to identify treatments that may help to improve symptoms, or prevent or delay their progression to dementia.

Stage 3: Mild dementia due to Alzheimer's disease

The mild dementia stage is the typical point at which doctors would diagnose Alzheimer's disease.

In addition to friends and family noticing that the person is having problems with their memory and thinking, these problems may also begin to affect daily life.

Symptoms of mild dementia due to Alzheimer's disease include:

Difficulty remembering newly learned information

Asking the same question repeatedly

Trouble problem-solving and completing tasks

Reduced motivation to complete tasks

Experiencing a lapse in judgment

Becoming withdrawn or uncharacteristically irritable or angry

Having difficulty finding the correct words to describe an object or idea

Getting lost or misplacing items

Stage 4: Moderate dementia due to Alzheimer's disease

During the stage of moderate dementia due to Alzheimer's disease, the person becomes increasingly confused and forgetful. They may need help with daily tasks and assistance with looking after themselves.

Symptoms of moderate dementia due to Alzheimer's disease include:

Losing track of location and forgetting the way, even in familiar places

Wandering in search of surroundings that feel more familiar

Failing to recall the day of the week or season

Confusing family members and close friends, or mistaking strangers for family

Forgetting personal information such as address, phone number, what schools they went to

Repeating favorite memories or making up stories to fill in the gaps they have in their memory

Needing help with making decisions of what to wear for the weather or season

Needing assistance with bathing and grooming

Occasionally losing control of bladder or bowel

Becoming unduly suspicious of friends and family

Seeing or hearing things that are not there

Becoming restless or agitated

Displaying aggressive or physical outbursts

Stage 5: Severe dementia due to Alzheimer's disease Older man being comforted by his wife

At stage 5, a person may need complete care and assistance for day-to-day activities.

During this stage, the person's mental functioning continues to decline. Movement and physical capabilities can worsen significantly.

Symptoms of severe dementia due to Alzheimer's disease include:

Inability to speak and communicate coherently

Needing complete assistance with personal care, eating, dressing, and using the bathroom

Failure to walk without help, unable to sit, or hold head up

Rigid muscles and abnormal reflexes

Loss of the ability to swallow, inability to control bladder and bowel movements

A person with severe Alzheimer's disease has a high chance of dying from pneumonia. Pneumonia is a common cause of death in those with Alzheimer's because as the person loses the ability to swallow, food and beverages can enter the lungs and cause infection.

Other common causes of death among people with Alzheimer's disease can include dehydration, malnutrition, and other infections.

Antibiotics

Treating injured kid's brain with antibiotics ups cognitive problems (New Kerala: 20170112)

<http://www.newkerala.com/news/fullnews-220766.html>

Treating kids below four-year-old suffering from brain trauma with antibiotics can have a negative effect on their brain that has not yet developed, warns a study.

[NK Health] While there are no drugs available to treat these injuries, scientists have shown that certain antibiotics -- which inhibit the brain's inflammatory response -- can improve outcomes for adult animal models that have suffered a blow to the head.

According to Drexel University researchers in the US, when newborn rats administered immediately after a head injury, the FDA-approved antibiotic, minocycline, exacerbated cognitive deficits.

The study has appeared in the journal *Experimental Neurology*.

Those under age four, who experience brain trauma, can suffer lifelong problems with memory, attention and other executive functions.

"The developing brain is not the same as the fully mature brain," said lead author Ramesh Raghupathi.

"This study suggests that acute interventions targeting the inflammatory cascade may not be a viable strategy for treating traumatic brain injury in infants and young children," Raghupathi added.

The drug minocycline works by decreasing the activation of microglia -- the primary immune cells in the brain and spinal cord that protect against foreign pathogens.

They treated the newborn rats with minocycline -- one dose every day for three days -- they saw that their brain activity did not improve. When the researchers increased the dosage to nine days instead of three, the animal models showed significant memory problems and other behavioural deficits.

The findings indicated that the antibiotic had an adverse effect on the neonate rats, because microglia plays an important role during early brain development. These cells clear out dead neurons and debris to make a path for surviving neurons to function normally.

By targeting the microglia in the pediatric animal model, the antibiotics seemed to prevent the brain from undergoing its natural maturation process.

Vitamin C

Has Cancer found its bane in Vitamin C (New Kerala: 20170112)

<http://www.newkerala.com/news/fullnews-220716.html>

US researchers have found that giving Vitamin C intravenously can produce super-high concentration in the blood, which has ability to attack cancer cells.

[NK Health] The findings, published recently in the journal Redox Biology, revealed that vitamin C breaks down easily, generating hydrogen peroxide, a so-called reactive oxygen species that can damage tissue and DNA.

Researchers from University of Iowa Health Care in the US also showed that tumor cells are much less capable of removing the damaging hydrogen peroxide than normal cells.

They also found that giving vitamin C intravenously--and bypassing normal gut metabolism and excretion pathways--creates blood levels that are 100 - 500 times higher than levels seen with oral ingestion.

"In this paper we demonstrate that cancer cells are much less efficient in removing hydrogen peroxide than normal cells. Thus, cancer cells are much more prone to damage and death from a high amount of hydrogen peroxide," said Garry Buettner.

"This explains how the very, very high levels of vitamin C used in our clinical trials do not affect normal tissue, but can be damaging to tumor tissue," Buettner added.

They examined how high-dose vitamin C (also known as ascorbate) kills cancer cells.

The team tested the approach in clinical trials for pancreatic cancer and lung cancer that combine high-dose, intravenous vitamin C with standard chemotherapy or radiation.

The new study shows that an enzyme called catalase is the central route for removing hydrogen peroxide generated by decomposing vitamin C.

The researchers discovered that cells with lower amounts of catalase activity were more susceptible to damage and death when they were exposed to high amounts of vitamin C.

"Our results suggest that cancers with low levels of catalase are likely to be the most responsive to high-dose vitamin C therapy, whereas cancers with relatively high levels of catalase may be the least responsive," he explained.

Health (Dainik Gagan: 20170112)

http://epaper.jagran.com/ePaperArticle/12-jan-2017-edition-National-page_14-1198-13410-262.html

भारत की स्वास्थ्य असमानता पर 'डिफिकल्ट डायलॉग'

■ जागरण ब्यूरो, नई दिल्ली

दक्षिण एशिया के अहम मुद्दों पर आयोजित होने वाला 'डिफिकल्ट डायलॉग' सम्मेलन इस बार भारत में स्वास्थ्य असमानता पर आयोजित होगा। इस दौरान खास तौर पर सबको स्वास्थ्य सेवा (यूनिवर्सल हेल्थकेयर) मुहैया करवाने पर विचार किया जाएगा। यूनिवर्सिटी कॉलेज लंदन के अलावा केंद्रीय स्वास्थ्य मंत्रालय और गोवा विश्वविद्यालय इसमें मुख्य साझेदार होंगे।

'डिफिकल्ट डायलॉग' की संस्थापक सुरीना नरुला ने दैनिक जागरण से कहा, 'भारत में तेजी से विकास हो रहा है। मगर यह बेहद जरूरी है कि ढाँचागत सुविधाओं को मजबूत करने के साथ ही आम लोगों के स्वास्थ्य और शिक्षा पर भी उतना ही ध्यान दिया जाए। इस सम्मेलन के दौरान सरकारी एजेंसियां, अंतरराष्ट्रीय विशेषज्ञ और

दक्षिण एशिया के अहम मुद्दों पर होने वाले सम्मेलन में होगा विचार



सिविल सोसाइटी स्वास्थ्य असमानता पर चर्चा करेंगे।' 10 से 12 फरवरी के दौरान गोवा में आयोजित हो रहे इस सम्मेलन में यूनिवर्सल हेल्थ केयर की राह में आ रही समस्याओं पर भी विचार किया जाएगा।

भारत में आबादी का बड़ा हिस्सा हर साल सिर्फ इलाज पर हुए खर्च की वजह से ही गरीबी रेखा के नीचे चला जाता है। इस स्थिति को कैसे समाप्त किया जा सकता है। इसी तरह परिवार के अंदर भी महिलाओं का स्वास्थ्य सबसे उपेक्षित होता है। इसलिए स्वास्थ्य सेवा में लैंगिक असमानता पर चर्चा होगी। इन विषयों पर चर्चा के आधार पर आगे के रास्ते के लिए प्रस्ताव पेश किया जाएगा।

नरुला इस बात पर खास तौर से जोर देती हैं कि भारत में स्वास्थ्य और शिक्षा अब तक चुनावी मुद्दा नहीं बन पाए हैं। लोगों को ये सुविधाएं तब तक नहीं मिलेंगी, जब तक वे इन मुद्दों को उठाएंगे नहीं। राजनीतिक दल भले ही जाति और धर्म को मुद्दा बनाने की कोशिश करें, लेकिन अगर लोग अस्पताल और इलाज की मांग करने लगे तो यह स्थिति बदल सकती है।

Arthritis (Dainik Gagan: 20170112)

http://epaper.jagran.com/ePaperArticle/12-jan-2017-edition-National-page_14-1198-13304-262.html

तेज चलने से दूर होगी गठिया की समस्या

गठिया से निजात पाना है तो अभी से टहलना शुरू कर दीजिए। नए अध्ययन का दावा है कि सप्ताह में महज 45 मिनट तेज गति से टहलना



भी गठिया पीड़ितों के लिए फायदेमंद हो सकता है। इससे घुटनों की समस्या से निजात मिल सकती है। अमेरिकी शोधकर्ताओं के अनुसार, हर सप्ताह 150 मिनट तक हल्के व्यायाम की सलाह दी जाती है। इससे कई गंभीर बीमारियों और असमय मौत से भी बचाव हो सकता है। इसी वजह से अमेरिका में दस बुजुर्गों में सिर्फ एक गठिया से पीड़ित होता है।

अगर कोई व्यक्ति जितने समय व्यायाम करने की सलाह दी जाती है उसमें से एक तिहाई समय भी व्यायाम करता है तो वो भी फायदेमंद होता है। इसको परखने के लिए हमने कुछ लोगों के समूह पर इसका परीक्षण किया। इनसे हल्के व्यायाम जैसे तेज गति से चलना आदि करवाए गए। नार्थवेस्टर्न यूनिवर्सिटी के प्रोफेसर डोरोथी डनलप ने कहा, 'कुछ भी नहीं करने की अपेक्षा कम व्यायाम भी बेहतर है। गठिया से पीड़ित उन लोगों को आराम मिला जिन्होंने न्यूनतम 45 मिनट तक सक्रिय रहे।' -ग्रेट

खाने के समय में बदलाव से कम होगा मोटापा

मोटापे से पीड़ित लोग वजन कम करने के लिए न जाने क्या-क्या उपाय करते हैं। ऐसे लोगों के लिए यह अध्ययन मोटापे से निजात पाने की नई उम्मीद हो सकता है। इसका दावा है कि महज खाने के समय में बदलाव से मोटापा दूर करने में मदद मिल सकती है।



शोधकर्ताओं ने कहा कि खाने के समय में बदलाव जैसे दिन में अंतिम बार खाना दोपहर में ही कर लेने से वजन घट सकता है। खानपान का समय सीमित किए जाने से वसा और कार्बोहाइड्रेट की खपत पैटर्न में बदलाव आता है। इससे वजन कम होने में मदद मिल सकती है। अलबामा यूनिवर्सिटी की एसोसिएट प्रोफेसर कर्टनी पीटरसन ने बताया कि अध्ययन में ज्यादा मोटे लोगों के एक समूह पर भोजन करने के समय में बदलाव को आजमाया गया। इन लोगों ने चार दिन तक दोपहर के भोजन के बाद अगले दिन सुबह नाश्ता किया। इसके बाद इस बदलाव के प्रभाव की जांच की गई। इसके आधार पर यह निष्कर्ष निकाला गया। -आइएनएस

Dementia

Get off that couch to beat dementia: Experts to older folks (The Times of India: 20170112)

<http://epaperbeta.timesofindia.com/Article.aspx?eid=31808&articlexml=Get-off-that-couch-to-beat-dementia-Experts-12012017019051>

Sedentary older adults with no genetic risk factors for dementia may be just as likely to develop the disease as those who are genetically predisposed, researchers, including one of Indian origin, have warned.

The study, which followed more than 1,600 Canadians over five years, sheds new light on the relationship between genes, lifestyle risk factors and dementia.

Researchers also found out that while the carriers of a variant of the 'apolipoprotein E' genotype are more likely to develop dementia, inactivity dramatically increases the risk for non-carriers. "The important message here is that being inactive may completely negate the protective effects of a healthy set of genes," said Jennifer Heisz, assistant professor at McMaster University, Canada.

"Given that most individuals are not at genetic risk, physical exercise may be an effective prevention strategy," she added. About 47.5 million people worldwide suffer from dementia. The number is expected to surge to 115.4 million by 2050, the researchers said. With no known cure, there is an urgent need to explore, identify and change lifestyle factors that can reduce dementia risk, they added.

"This research shows that exercise can mitigate the risk of dementia for people with the variant of the apolipoprotein genotype. However, more research is needed to determine the implications from a public health perspective," said Parminder Raina from McMaster.