

#RESEARCH

Air Pollution Boosts Alzheimer's Disease Risk

"Residential air pollution can negatively affect our brain, even decades before we actually develop Alzheimer's disease. This points to a sensitive time period for both exposure and opportunity, because that is the time when prevention strategies and interventions are most effective."



A new study has found that adults exposed to high levels of air pollution were at an increased risk of developing Alzheimer's disease. In a study of 1,113 participants between the ages of 45-75 from the Emory Healthy Brain Study, all of whom were from the Atlanta metropolitan area, the researchers found positive biomarkers of Alzheimer's disease, specifically amyloid plaques, in the cerebrospinal fluid of participants, who were exposed to ambient and traffic-related air pollution at their homes. This study, which appears in *Environmental Health Perspectives*, was the largest of its kind and adds to the growing body of evidence that suggests air pollution directly contributes to degeneration in the brain.

Pollution and Your Brain

Together, our recent studies represent both ends of the spectrum. In our previous study, we showed associations between residential exposure to air pollution and Alzheimer's-related changes in the brain in an autopsy cohort, and now, we found similar results in a study of living adults, who were, on average, 15 years younger and cognitively healthy," says Anke Fuels, the study's lead author and an assistant professor in the Epidemiology department at Emory University's Rollins School of Public Health. "This is important because it shows that residential air pollution can negatively affect our brain, even decades before we actually develop Alzheimer's disease. This points to a sensitive time

How to reduce Air Pollution Exposure

- Limit time and avoid physical activity outside on days when your local air quality index reports that air quality is poor. If you must be outside on poor air quality days, consider wearing a mask, such as an N95 mask. Do other things known to help reduce Alzheimer's risk, including these tips from the Centers for Disease Control and Prevention.
- Practice eating a healthy diet.
- Engage in regular physical activity.
- Prevent/manage high blood pressure and blood sugar.
- Quit smoking and avoid excessive alcohol consumption.
- Get plenty of sleep.



Vanishing Tigers! Why?

Unfortunately, for last two decades, there is competition amongst the wildlife managers to grow tiger, leopard-like ferocious animals, irrespective of the limitations of the reserve. This all is being done under pressure of the tiger/lion/leopard tourism lobbies. Most of the governments have turned Nelson's eye towards this gross mis-management. It is no management, rather ill-management and needs be corrected back at top priority. The surplus animals must be shifted to the deficit areas.



Monsoon is welcome in most of India but in Rajasthan, a drought-prone state, it has special importance. From this point of view, year 2024 has been very special to Rajasthanis, especially to denizens of Udaipur, the city of lakes and a known tourist destination at world level for its scenic beauty.

When Udaipureans were busy celebrating the great monsoon, there came sad news of attacking and killing a woman in Jhadol township falling under the tribal belt, by a leopard. The forest department had hardly geared up to assess the situation to take preventive measures to stop such incidences that another such mauling and killing got reported from Gogunda tehsil area, also by a leopard. Certainly, it was a different leopard because both the places are situated at quite a distance from each other. The forest officials rushed to this new location, and before they could make arrangements to capture the killer animal, another killing, in almost the same fashion, took place in same area, at a bit distance from this 2nd case.

The entire Gogunda region, but for the township of Gogunda, is inhabited by tribals. There was a hue and cry in the region. The forest officers were under attack by both media and people. Cages were planted at different locations with baits to attract the killer but all went in vain. The killer cleverly continued attacking and killing women, children and old people.

It is also mentionable that in January this year, a tiger, coded as STR 2903, had ventured outside the Sariska Tiger Reserve into neighbouring Haryana state's villages falling under its Rewadi district. Its rescue operation by the Sariska management did not succeed. On the contrary, a dedicated staffer, Hira Balaal, got seriously injured during attack by this tiger. Hira was so grievously hurt that till date (9 months post the attack), he has not recovered enough to join duty. This tiger, after some



Mukundara Hills Tiger Reserve Tigress, MT2 with two cubs, that vanished unnoticed.

Wildlife officers and staff personnel from Sariska-Ranthambore-Tiger Reserves were deputed to tackle the situation, under guidance of senior wildlife officers, here. Even police and military troops were pressed into service.

Four leopards got captured in the cages from different locations falling under Gogunda, albeit attacks and killings kept on ascending by leopard/leopards. Expert shooter was called in from Hyderabad to kill the culprit animal, and lastly, one leopard, hopefully the real culprit, got shot by a police party on duty here. Overall, six casualties at Gogunda and one at Jhadol took place in a span of just twenty days.

The forest officials had hardly sought relief after elimination of this beast that on 3rd November, a shepherd boy was attacked and killed by a tiger on the periphery of Ranthambore Tiger Reserve, and again, another villager was killed by a different tiger of this reserve on the succeeding 6th Nov.

People, much agitated by these killings, not only blocked traffic on the main road connecting the village to Sawai Madhopur but also attacked the tiger and killed it. Debates concerning such conflicts have been going on since long. In fact, every such fateful incidence of human killing by a wild animal was debated and suggestions were made by the experts to curb these incidences but the repetition of such cases has seen no decline, why? Primarily, protection and development of wildlife is jurisdiction of the forest department.

The same way, several times, wild animals including large carnivores like tiger, leopard, wolf, hyena, caracal break into human settlements for food, water, prey etc. Undoubtedly, these are encroachments in other's domain, which pave ways for such conflicts, which result in injuries and killings on both sides. Several wild animals fall victim to poachers and are even poisoned, electrocuted by villagers, enraged by crop raiding and damage to their livestock. One does not require any rocket science to understand this phenomenon, but certainly, solution to evade such problems needs a well-thought out management plan for all such wildlife reserves/forests.

At selected sensitive places, masonry walls can be constructed but this being a costly affair, low voltage electric fencing can be a good substitute. Of course, development of adequate waterholes and fodder areas within core reserve areas can be an effective solution to put a check on herbivores raiding agricultural crops during drought periods.

Populations of all kinds of animals should be checked from multiplying to cross over the carrying capacity of the reserve. Unfortunately, for last two

#WILD BUT GAME



Tiger-leopard heads seized by forest personnel.



Man-eater Panther shot at Gogunda on 18.10.24.

decades, there is competition amongst the wildlife managers to grow tiger, leopard-like ferocious animals, irrespective of the limitations of the reserve. This all is being done under pressure of the tiger/lion/leopard tourism lobbies. Most of the governments have turned Nelson's eye towards this gross mis-management. It is no management, rather ill-management, and needs to be corrected back, at top priority. The surplus animals must be shifted to the deficit areas.

Above these all measures and corrections stands creation and scientific management of the Buffer Zones around all the reserves. Of course, around several wildlife reserves, especially those taken under umbrella of National Project for tigers/elephants, buffer zones have been created. But unfortunately, these are being treated and managed as extensions of the core areas and development works to lure that wild animals are being carried out in core areas. Consequently, over some time, these animal-free areas do get some wild creatures, including large carnivores. And this no man's land loses relevance.

I am saddened to mention that senior IFS officers, trained at the prestigious Wildlife Institute of India, too, have conveniently ignored this important thumb rule of wildlife management, succumbing to pressures from the wildlife tourism lobbies and their powerful beneficiaries - the politicians. Nature conservation is right of every human being and looking to this important role of forest officials, prestigious Indian Forest Service was formed by our ancestors, along with IAS, IPS. A forest officer has to learn to say a 'no,' instead of compromising on the basic principles of forestry.

In 1972, the tiger population in the country had reduced to just 1800+ animals. The visionary

Prime Minister brought not only the *Wildlife Protection Act* but also launched "Project Tiger" at National level in April 1973 itself. Initially, merely nine wildlife reserves were chosen for inclusion in this scheme, pan India. Ranthambore was one of these 9s. In November 2024, the 56th Reserve from Chhattisgarh has been taken under umbrella of this special scheme and the country can boast to have risen the tiger population to 3682 (as per data, year 2023).

In 1973, Sariska also got birth in this scheme and flourished nicely, but unfortunately, lost all its tigers by the year 2004. This was result of gross mis-management by the authorities, then looking after the reserve. The inquiries revealed that this annihilation of tigers was caused by poachers. Of course, some infamous smugglers like Sansarchand were kingpins behind these poachings, but in many cases, it was villagers, living within and on the periphery of the reserve. The villagers got entangled in this crime to get rid of the tigers killing their domestic cattle.

In 2008, tigers were reintroduced in to Sariska, to repopulate it with its flagship species. This experiment, done for the 1st time ever in the World, was hailed by the entire wildlife lover community for its great success. I feel pride to be a key person at Sariska in meeting this challenge of establishing this wild population in its new home. Several steps were taken to ensure protection of this species from the professional poachers as well as the aggrieved villagers. But within few months of my super annuation from here in 2010, the male tiger, the 1st from the reintroduced population, got killed by villagers by poisoning, giving severe jolt to the ambitious programme. Ranthambore, too, is facing this problem.

In 2013, Mukundara Hills Tiger Reserve came into existence. Five tigers were introduced there from



Buy Nothing Day

When was the last time you went a whole day without buying anything? In this day and age, is it actually possible to buy nothing for twenty four hours? Supporters of 'Buy Nothing Day' think it is. And what's more, they think we should all try it. At its core, Buy Nothing Day is a protest against the consumerism, that the organizers felt, was necessary in our world, governed by the need to 'have things.' The day is all about drawing attention to the issue of overconsumption.



Hira Balaal, forest personnel, Sariska, seriously injured by tiger ST-2303, during rescue operation.



Infamous poacher, Sansarchand, in custody at Sariska HQs.

Ranthambore and one male had reached there on its own from Ranthambore. One tigress littered there, but today, it is reduced to just one pair.

In 2022, Ramgarh Vishdhari Tiger Reserve came into existence in the South East of Rajasthan, comprising areas from Bundli, Kota and Bhilwada districts. Here, two tigers were introduced in 2022, where one already existed since 2020. The introduced tigress littered three cubs, of which one died and two got missed out and the tigress too died in mysterious circumstances, as it was untraceable for quite some time, and ultimately, its more than a month-old carcass was recovered. The missing tigress and the cubs hit headlines of several newspapers and TV Channels. How an emerging tiger reserve, surviving with few tigers, can afford to miss its only tigress, supporting three cubs?

It was also accepted by the reserve authorities that the radio collar of the tigress was not functional for long. It is highly callous approach towards protection of these rare animals. Alike Project Tiger, the Government of Rajasthan also launched an ambitious *Leopard Project*, few years back. Today, nobody knows as to what is the outcome of that project. Certainly, it can't be deemed to be a successful one. The recent Udaipur conflict at this level is testament to it, which resulted into chaos persisting for almost a month, claiming several human lives and trapping of 4-5 leopards, shooting down one.

The governments must show will to live lost effectiveness in the interest of the people at large, casting aside petty interests. Tigers vanishing from our reserves, where and why? is a question that embarrasses me even as a retired forest officer. How officers in chair and the governments can afford to ignore this cry of nature?

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Tiger Cubs are charming but most prone to accidents.

#FITNESS

Get More Exercise Each Day

There are simple steps to sneak more exercise into your daily schedule.



Exercise is essential for our overall health. It can boost our mood, relieve stress, increase energy, improve sleep quality and lower our risk of health conditions like diabetes, cardiovascular disease and high blood pressure. But if exercise is so important, then why is it so dang hard to do each day? Here are seven tricks that actually work to help you get more exercise day-to-day. And no, going to the gym and doing a hardcore weight workout isn't required. Here's our secret sauce for getting more active each and every day, one step at a time.

Set A Routine

OK, so, this isn't really a secret. Creating a regular habit of working out would be ideal, duh! It's creating that habit that's the tricky part. Here's where we can help.

One of the most efficient ways to build a habit is through the Cue-Routine-Reward system. MIT researchers discovered the power of the neurological loop at the core of every habit. This habit loop, later coined by Charles Duhigg in his 2012 book, *The Power of Habit*, consists of three parts, a cue, a routine and a reward. This system can apply to building any habit, from drinking more water to waking up earlier. And it can certainly apply to creating a workout habit.

Start Small

A lot of people assume that they need to run themselves ragged in the gym to get more fit, but that's really not true. All you need is about 30 minutes a day. The US Department of Health and Human Services recommends a minimum of 150 minutes of moderate aerobic activity a week, that breaks down to a little more than 20 minutes each day. They also recommend strength-training that works the major muscle groups at least two times a week. Thirty minutes is an ideal place to



Get Active At Work

Your workday doesn't have to be totally sedentary. Rather than using your full lunch hour to eat, take some time to go to the gym, speed walk around the office or run errands. You can also break up the drudgery of the day by taking a walk during one-on-one meetings instead of sitting at a desk or conference room, anything to get up and get moving. Try to get up often to stretch your legs. Rather than emailing or Zooming co-workers, get up and talk to them in person, if you can, use the stairs rather than the elevator, get up and refill your water every 50 or so often.

start to fulfill your weekly needs. You can also start with low-impact activity. A brisk walk in the evening is a more-than-sufficient workout. You can also refer to this guide for the best workouts for beginners.

Habit Stack

Habit stacking, popularized by James Clear in his book, *Atomic Habits*, is a way to create small yet healthy habits. This term might be new to you, but it's really straightforward, you 'stack' the new behaviour (exercising) onto a habit you already have to help you remember to do it. This will cause the combo to become a habit.

Do Exercises You Actually Like

This is a big one. If you hate exercising, it might be because you aren't doing workouts you enjoy. Very few people actually enjoy running around in circles for miles. So, don't. Branch out and try different kinds of workouts until you find the one you genuinely enjoy. Biking, surfing, paddle boarding, yoga, hiking, skiing, rock climbing, kayaking and ice skating are all fun activities that get your heart rate up. This will require you to go out of your comfort zone and to be patient as you try things out, but it'll be worth it when working out no longer feels like a chore.

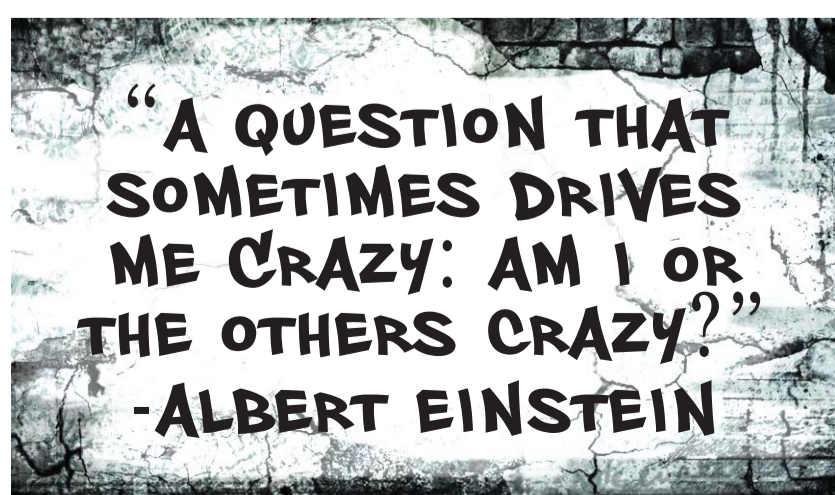
Get Active While Watching TV

There's no shame in catching up on your favourite show while hitting the gym. Not only does the entertainment keep mind off the burn in legs, but it pushes you to stay longer.

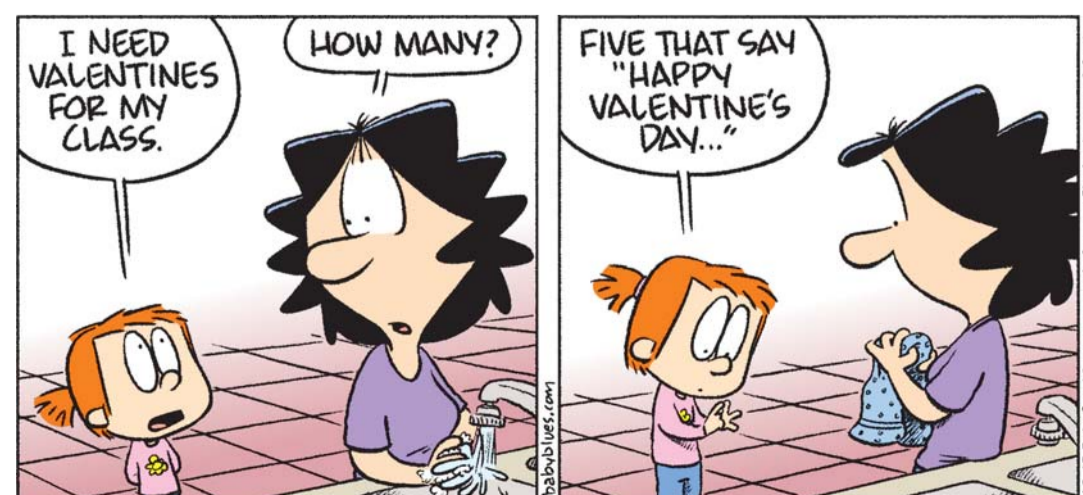
Make It Social

Exercise doesn't need to be solitary. In fact, having a workout partner can keep you motivated and hold you accountable in your routine. If you don't have one buddy to join you, sign up for a workout class. The structure of working out in a group can push you to work harder while also introducing you to new people.

THE WALL

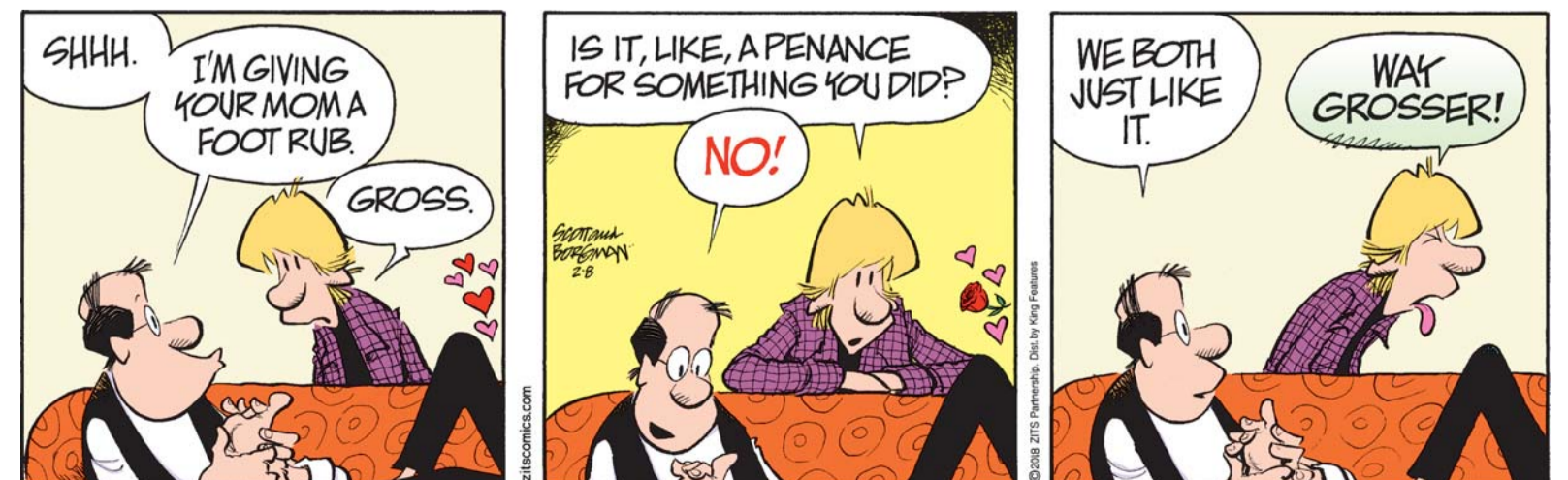


BABY BLUES



By Rick Kirkman & Jerry Scott

ZITS



By Jerry Scott & Jim Borgman