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**CGSI Managing Committee: Year 2019 – 2020**

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<tr>
<th>Trustees</th>
<th>President</th>
<th>Vice-President</th>
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<td>Mr. S. D. Puri, Mr. Nooruddin Sevwala, Mr. Conrad Saldanha</td>
<td>Prof. N. M. Rajadhyaksha</td>
<td>Dr. Shirish Waghuldhe</td>
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**Chairman**
Dr. Sitaram Dixit  
**Vice-Chairman**
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**Director (Legal)**
Mr. Rajesh Kothari  
**Joint Secretary (Projects)**
Mr. B. V. Desai  
**Office Administration & Co-ordination:** Ms. Anindita Kovoor  

**Committee Members:** Mr. Raj Talreja and Ms. Navneet Chahal  
**Co-opted Members:** Ms. Jamna Vardhachary (Editor: Keemat), Mr. Anil Karandikar and Mr. Arvind Basutkar

**Invitees:** Mr. Shirish Kamdar (Pune), Dr. Anita Kini, Mr. Rajeev Singhal, Mr. Rajiv Kakade and Mr. Yogesh Vyas CA (Financial & Accounts Advisor)

*Aathma* is neither born nor does it ever die, nor will it ever cease to be, Primeval, unborn, eternal, it does not decay, it is not killed when the body is slain. Death is certain for all who take birth. Birth is just as certain for all who die! The Bhagavad Gita (2.20/27)

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**DEMISE – SHRI. VILAS PANDURANG WAGH**  
8th September 1940 – 2nd October 2019  

A BSc., LLB., Shri. Vilas Wagh, joined Bank of India in 1961 as a Manager. In 1963 he joined the Indian Army under emergency commission and served for 5 years before retiring in 1967 as a Major. He rejoined Bank of India and retired in 1994 as Assistant General Manager Ahmedabad Branch. Post retirement from Bank of India he worked with a financial company for couple of years. Apart from CGSI, Shri. Vilas Wagh was actively involved in other social causes like Mohalla Committee and Dignity foundation.

The Managing Committee deeply regrets the unexpected loss of Shri. Vilas Wagh, the Hon. Treasurer of CGSI for the past 8 years until his sudden peaceful early morning demise. During his tenure, he efficiently streamlined CGSI accounting procedures in line with our requirements in making a weak treasury into a robust one. CGSI, Managing Committee will miss Shri. Vilas Wagh’s advice and guidance for a long time.

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CGSI Toll Free Consumer Help Line: 1800 22 22 62 & Email: mah.helpline@gmail.com
The only good news from the world of economics is that an Indian has won the Nobel prize, apart from that, it is all bad news. Cars, housing, banks, underwear... every sector is struggling, but which industry has suffered the biggest collapse? Answer: Firecrackers. There is a difference, of course. Other industries are victims of a declining economy, while firecrackers are deliberately being phased out to protect the environment and incidentally to protect child labor, though there are laws in place to protect them. Whatever the reason, the impact has been huge. Is the ban on firecrackers justified? Has it made a difference? What happens next?

To understand things better, let us look at the issues involved. In 2017, the Supreme Court banned the sale of firecrackers in Delhi-NCR during Diwali. In October 2018 it slightly relaxed the conditions but extended the ban to the entire country. The ban remains in place today. The goal was to replace conventional crackers with environmentally friendly ones that produce less noise and fewer pollutants. The 2018 judgement was made two weeks before Diwali and took effect immediately, meaning that existing stocks could no longer be sold. Joined firecrackers (series crackers or ladis) are banned. Online sales are banned. You can burst crackers only during specified times.

Unhappy Diwali
India’s firecracker business used to generate wholesale revenues of Rs 6,000 crores per year and employ 5-6 lakh people. A once-sparking industry has been snuffed out. In Sivakasi, heart of the industry, nearly 1400 factories have been closed for a year. The Supreme Court judgement also covered manufacturing. Most crackers contain barium nitrate and aluminum. The former produces colored light, the latter basically produces noise. Both emit toxic fumes and both materials have been banned, but alternatives are not yet available. CSIR (Council of Scientific and Industrial Research) and other research organizations have tested several possible replacements, but there are doubts about cost, practicability and safety and even after the new materials are tested and approved, manufacturers will need time to adjust their ‘recipes’ and production methods.

Another issue is Chinese competition. Last year, smuggled (illegal) Chinese imports accounted for one third of the market. This year the figure will be even higher. The new restrictions will increase costs, making Indian manufacturers even less competitive. Some experts also warn of safety issues. Many Chinese crackers contain potassium perchlorate, which is friction-sensitive and hence potentially dangerous. Its use in India is restricted to two or three specific products, with strict licensing.

Green crackers, e-crackers
The court wants ecofriendly or ‘green’ crackers. So, do we – but what they are, nobody knows. The term has not been defined either by the Supreme Court or by the Petroleum and Explosives Safety Organization, which is the licensing and regulating authority. Manufacturers say that even if they receive clear technical guidelines, it will take several years to develop green products that can be mass-produced. The Ministry of Science and Technology is more optimistic. Government labs are testing various types of green crackers, with names like SWAS (safe water releaser), SAFAL (safe minimal aluminum) and STAR (safe thermite cracker). Their emissions are said to be less harmful, with 25-30% less particulate matter and 50% less Sulphur dioxide than conventional crackers, but even if the science is solid, these products are still under development; commercial production is a long way off. E-crackers are an even stranger option. These are battery-operated crackers which produce sound and light, and can be set off with a remote. At least two government research organizations are working on it, but some of us – especially children – want the real thing.

Quieter, cleaner
Ultimately, the Supreme Court judgement aims to fight pollution. Reducing crackers will reduce pollution of course, but by how much? There are many other factors: burning of crop stubble, vehicle exhaust, pollution from factories, dust from construction etc. In fact, the court recognized that crackers are not the only source of pollution, and even noted the need to strike a balance between the right to health and the right to do business. There are practical issues as well. We are only allowed to use “low polluting” green crackers that are within permitted decibel limits and emission norms, but the police – who were ordered to enforce this – have neither the equipment nor the technical guidelines to do so. The Court’s intentions are noble. But it will take the industry (manufacturers, traders, regulatory agencies) time to re-organize. We also need to see whether the ban will be strictly enforced. Controlling common citizens is one thing. What about firecrackers at weddings, religious ceremonies and political celebrations? What happens next?

The industry association was planning to protest, but that fizzled out, because manufacturers and traders have either closed or moved to new businesses. There was some media coverage last year, but this year, press and TV have been mostly silent – nobody is bothered about old news. Perhaps there will be academic studies on the impacts of the cracker ban. It is an interesting subject: production is super-concentrated (essentially, one single town in Tamil Nadu) but usage is country-wide and the ban coincides with other changes that will also reduce pollution: a housing slump means less construction and less dust; an auto slump means fewer vehicles and less exhaust. This makes it harder to measure the effects of each factor separately.

For us growing up, Diwali was all about crackers. We loved the noise and nobody worried about pollution. Our children will experience a very different kind of Diwali and that may not be a bad thing after all, it is Deepawali, not Dhamakawali.

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<td>Mr. Dinesh Bhandare (Joint Secretary – CGSI) addressing consumers during TRAI Program at Caliber Col Vangani</td>
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<td>Adv. Vishwanath Mannadadi (Moderator), Adv. Anand Patwardhan (Treasurer – CFBP) &amp; Dr. Sitaram Dixit (Chairman – CGSI), during a panel discussion on “Awareness, Challenges &amp; Rights of Consumers” Rotary Centre, Juhu, Mumbai</td>
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Letters to the Editor / CGSI

Photos in Keemat: Our Society’s Journal Keemat is really a very good magazine and I have been regularly reading it. It contains nice articles and useful information. I have one suggestion, which I had mailed you earlier, which appears to have been over looked i.e., to always give brief description for all photos published. This is because we do not have any idea about the people or events in the pictures appearing in our magazine. Hope, you will do the needful. I shall appreciate if you will please acknowledge and let me have your comments. Thanking you. Yours truly,

Hasmukh Vora, CGSI – Life Member

In the article ‘Milk for Life’ (September-October 2019), a lot of useful information is provided. May I add as follows.

Lactose Intolerance
US and Finnish scientists had discovered a gene that is responsible for lactose intolerance in adults. All babies are born with the ability to synthesize lactase, an enzyme required to digest the natural sugar (lactose) found in milk. However, this ability is lost in early childhood in a large population who then become “lactose intolerant”. Such individuals are unable to eat sufficient quantities of dairy products, an important source of calcium. This discovery nearly 20 years ago, was the first step in more accurate diagnosis and understanding of the condition. More than 10 million cases are identified in India on an average every year. There is no cure for lactose intolerance but most people are able to control the symptoms by making changes in their diet. The symptoms are flatulence (gas), bloating, diarrhoea and abdominal cramps. Home ‘remedies’ suggested include “try active-culture yoghurts (dahi), cheese is all right and take soya milk”. Peanut butter replaces dairy butter which those with milk allergies may still need to avoid. Taking commercially available enzyme formulations (tablets & liquids) help in managing the symptoms. Lactose intolerance usually is genetic (inherited). In many people of African or Asian descent (especially East Asian) the body begins making less lactase around age 5. Infantile colic is often caused by lactose intolerance. Hence, mother’s milk till the baby reaches two years (see Keemat, July-August 2019).

A British geo-scientist, with knowledge of chemistry, who had successfully fought against five bouts of breast cancer by dramatically altering her diet, views milk as an implicating factor in the aetiology of the disease. “No species other than man succumbed from another species”, she avers. Milk is a bio accumulator of toxic chemicals, including carcinogens such as dioxins and polychlorinated benzenes (PCBs) from the environment, is her theory. She quotes: “In the People’s Republic of China, breast cancer rates are of the order of 1 in 100,000 compared with European rates approaching 1 in 10. It is not the low fat, high soya diet, but the fact that the Chinese don’t eat dairy produce”. (more data cited in Intl. J. of Dairy Sci., 104-115, 2007).

Maneka Gandhi, animal rights activist and politician, writes in ‘Firstpost’ (January 25, 2016) on “Milky Matters” as follows: An amino acid present in milk due to natural mutation occurred in European dairy herds causes major health problems ranging from Type-1 diabetes, cancer such as leukemia, osteoporosis and arthritis, heart disease, mental health conditions (depression and schizophrenia), autism and a host of other ailments. “The majority of cows in India carry this gene due to cross-breeding aimed at increasing milk productivity under ‘Operation Flood’ programme launched in 1970”, she adds.

There is a growing anti-milk movement questioning “should we be drinking milk?” No adult mammals are conditioned to consume dairy products, especially from another animal, is the argument. Consumption of dairy foods in the UK has dropped by 30% over the last 20 years, with soya, rice and nut milks enjoying a surge in popularity. (‘Independent’, April 22, 2015). Ragi (finger millet, nachni) recipes are a rich source of calcium for children (e.g., ragi sattva or pudding, see Keemat, July 2002).

Milk and AD
Presenile dementia occurs in Alzheimer’s disease (AD). It is a degenerative disorder of unknown aetiology that begins in persons aged 40 to 60 and progress to death in 5 to 10 years. Aluminum (Al) has been linked to AD as elevated levels of the element are observed in AD brain tissue. Al accumulation may trigger AD or enhance the susceptibility of an individual to further biochemical damage and so increase chances of developing AD. For info bits on AD, read Keemat, December 2004 (pp. 13-14). A Prime Minister launches it in 1996, a high-profile senior bureaucrat endorses it in 1997, and a grand master models for it immediately thereafter. It is ‘Memory Plus’ a brain tonic developed and patented by a national laboratory in India based on Brahmi (Bacopa monnieri (Linn.) Wettst.), a small creeping herb commonly growing in marshy places throughout India (Keemat, February 1998). No clinical study on humans in support of the memory enhancing claim of bacosides (the constituents of the plant) had been done at that time. Pills made from Ginkgo biloba (a traditional Chinese medicine) are the modern dosage forms like the Indian ‘Memory Plus’ marketed as “Brain Boosters”. A survey on ‘Memory Tonics’ was published in Keemat, May 1998). It is believed that everyone over 50 has some degree of memory impairment; about 1% of the population would suffer from AD. Cognitive enhancing drugs (allopathic and ayurvedic) have been shown to perform well. Politicians forgetful of their election promises would find ‘Memory Plus’ highly beneficial. September marked the 8th “World Alzheimer’s Month”, September 21 being “World Alzheimer’s Day 2019”.

To end with a joke: An old man visits his doctor and after a thorough examination, the doctor tells him: “I have good news and bad news, what would you hear first”?

Patient: “Well, give me the bad news first”.

Doctor: “You have cancer, I estimate you have about 2 years left”.

Patient: “OH NO, that’s awful! In 2 years, I will be dead, what kind of good news you probably can tell me after this shock treatment?”

Doctor: “You also have Alzheimer’s. In about three months, you are likely to forget everything I told you”.

Tailpiece
Two elderslies relaxing in a park: First one asks, “At your age, what would you rather have, Parkinson’s or Alzheimer’s?”

His companion answers, “Parkinson’s – better to spill half an ounce of scotch than to forget where you keep the bottle”.

Cheers, have a happy 2020!

Narendra Wagle, Past President (CGSI)

I found your article in ‘Keemat’ Journal of September – October 2019 issue on “Vegetarian – Why to be or Why not to be?” was very informative and interesting.

In this regard, I am sending herewith the book “Vegetarianism - The Scientific & Spiritual Basis” authored by me. If appropriate, you may publish the review of the book in Keemat for the benefit of the readers. The book has also been translated and published in other languages also.

Jashwant B. Mehta

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Keemat: November – December 2019
FDA instructs restaurants to display trans-fat chart

STAFF REPORTER / Mumbai

In an attempt to reduce the trans fat content in the food products, the Food and Drug Administration (FDA) on Thursday instructed all the eateries and restaurants to display the level of trans fats in their food substances and cooking oil.

FDA official said they have asked the restaurant and eateries across the city to prepare a chart of transfat substances which they have to display outside their premises. “We had taken a seminar on amount of trans-fats to be used in food products. Food establishments like bakeries, sweet shops and other food outlets were encouraged to use healthier fat/oil options, thereby reducing the trans-fat content in the foods,” said an official.

Shalish Adhav, joint commissioner, FDA said the food establishments which use trans-fat free fats/oils and do not have industrial trans-fat more than 0.2 per 100g of the food in compliance with the regulations on Claims and Advertisements, 2015 can display ‘Trans Fat Free’ logo in their outlets and on their food products.”

The use of the ‘Trans Fat Free’ logo is voluntary. It will be the responsibility of the Food Business Operators to comply with the requirements as specified in the Food Safety and Standards (Advertising and Claims) Regulations, 2018, in cases wherein a claim to this effect is made,” said Adhav.

Restaurants and eateries owners across the city have welcomed this move saying they will follow the order of FDA and soon they will display the chart outside their premises with a ‘Trans Fat Free’ logo. “It is the great move taken by the FDA as it will help us to know about the side effects on using industrial trans-fats used in food products. We will make complete chart of trans fats used in our food products and will display it,” said Nilesh Mishra, owner of Bajrang Hotel.

The Food Safety and Standards Authority of India (FSSAI), in order to strengthen its fight against trans-fats and limiting its percentage in food products, has decided to put forth a regulation through an amendment in the Food Safety and Standards (Prohibition and Restriction on Sales) Regulations, 2019. According to experts, trans-fats are considered to be the worst type of fats.

Industrial trans-fats

Industrial trans-fats are toxic compounds which led to cardiovascular and other related diseases. They are formed during hydrogenation of vegetable oils and other processes such as heating of oil at high temperature. Industrial trans-fats are largely present in partially hydrogenated fats such as margarine and bakery shortenings (used in the preparation of bakery products) and in vanaspati (used in the preparation of sweets and deep-fried foods).

Three men talking in a Communist Country Jail.

One of them asks others, “So what did you do?”

The first one answers: “Well, I arrived late at the factory and so they accused me of slowing down the Revolution and victory of the Proletariat”

The second one answers: “Well, I arrived early at the factory and so they accused me of wanting to be favored and promoted over my fellow workers”

Then they turn to the one who asked the question: “How about you, then?”

“Well, I arrived at the factory right on time and so they accused me of having a watch from the Capitalist West”.

Alcohol is a perfect solvent: It dissolves marriages, families and careers.
Hookah more toxic than other forms of smoking tobacco

Hookah more toxic than other forms of smoking tobacco, claims a new study. While the popularity of hookah (tobacco pipe) has increased in recent years, researchers say it may be more dangerous than other forms of smoking tobacco. Using a custom-built testing device, the researchers analyzed emissions during a typical hookah session and found that one draw from a pipe contained as many noxious substances as a cigarette.

Hookah’s smoke, which is directly inhaled, has many toxic and harmful chemicals, like nicotine that can lead to tobacco addiction, irritating carbonyl compounds, and benzene, a known carcinogen”, said study lead author Veronique Perraud from University of California, USA. “Due to the greater volume inhaled in every puff and the longer duration of a smoking session, the hookah often delivers a higher dose of those chemicals to the smoker”, Perraud said. It also produced large quantity of carbon monoxide, mainly from the burning of charcoal to heat the tobacco or herbal mixture in its bowl.

The study, published in journal Aerosol Science and Technology, also referred to several cases of carbon monoxide intoxication. In addition to testing ordinary tobacco, the group also studied a nicotine-free herbal mixture, marketed as a healthier alternative, and discovered that it produced even higher levels of toxic gases.

The study is the first to characterize ultra-fine particles (with a diameter smaller than 100 nanometers) in the inhaled smoke. The researchers measured the chemical composition of gases and solids emitted during a hookah session in real time. “Through our technique of testing emissions in the beginning, midpoint and end of a smoking session, we were able to show that a smoker is exposed to a higher quantity of ultra-fine particles during the first 10 minutes compared with the rest of the session”, she said. According to the study, these miniscule particles can pose significant health risks by making their way deep into the pulmonary system and by readily crossing the blood-brain barrier.

Irregular sleep can result in impulsive behavior

Children and youth who do not sleep enough and use screens more than recommended are more likely to act impulsively and make poorer decisions, says a recent study. “Impulsive behavior is associated with numerous mental health and addiction problems, including eating disorders, behavioral addictions, and substance abuse”, says said Dr Michelle Guerrero, lead author and postdoctoral fellow at the CHEO Research Institute and the University of Ottawa, Canada. “This study shows the importance of especially paying attention to sleep and recreational screen time, and reinforces the Canadian 24-Hour Movement Guidelines for Children and Youth”, adds Dr Guerrero. “When kids follow these recommendations, they are more likely to make better decisions and act less rashly than those who do not meet the guidelines”, he says. The Canadian 24-Hour Movement Guidelines for Children and Youth recommend 10 to 11 hours of sleep a night and no more than two hours of recreational screen time a day.

The paper published in the journal — Pediatrics — analyzed data for 4,524 children from the first set of data of a large longitudinal population study called the Adolescent Brain Cognitive Development (ABCD) Study, which will follow participants for 10 years. In addition to sleep and screen time, the ABCD Study also captures data related to physical activity.

Physical activity is a third pillar of the Canadian 24-Hour Movement Guidelines, which recommend at least 60 minutes of moderate to vigorous physical activity daily. The ABCD Study allowed Guerrero and her team to look at the three pillars of the movement guidelines against eight measures of impulsivity, such as one’s tendency to seek out thrilling experiences, to set desired goals, and reinforcing the Canadian 24-Hour Movement Guidelines for Children and Youth recommend 10 to 11 hours of sleep a night and no more than two hours of

Life was good at the Smiths. It was just another day. Suddenly, one could hear loud shouts from inside the house. The wife was shouting at Marty, her husband. Marty was in trouble. He forgot his wedding anniversary. His wife was extremely angry. She told him “Tomorrow morning, I expect to find a gift in the driveway that goes from 0 to 200 in 6 seconds & IT BETTER BE THERE!”

The next morning Marty got up early and left for work. When his wife woke up, she looked out the window and sure enough there was a box gift-wrapped in the middle of the driveway. Confused, the wife put on her robe and ran out to the driveway, brought the box back in the house. She opened it and found a brand-new bathroom scale. Do you know where Marty is. He is missing since Friday.
Activated Charcoal – A Magic Fad or A Tragic Dud?
Dr. Sitaram Dixit, Chairman – Consumer Guidance Society of India (CGSI)

The latest fashion in marketing is by adding activated charcoal to consumer products. We find charcoal all over the place from pharmaceuticals drugs (health capsules) and food supplements (including pizza and ice-creams) to toothpaste to whiten the teeth, remove bad breath and skin creams to clear acne or brighten skin.

Activated Charcoal / Carbon

Activated charcoal is like the ones we use in a traditional tandoor to cook food, except that this is extremely porous. We will find activated charcoal available world-wide in different names like carbon, activated carbon, animal charcoal, vegetable carbon, carbon active, animal carbon, medicinal carbon or medicinal charcoal, active vegetable charcoal, lamp black, gas black, etc. We get common charcoal from coal, wood, coconut shell, peat or petroleum.

Ordinary commercial charcoal has limited ability to adsorb substances due to the existence of tarry materials, blocking the pure carbon skeleton. On removing these blockages, the surface area increases literally by millions of times over, providing equally many sites for adsorption of molecules of other substances. Thus, elemental carbon becomes activated carbon i.e., its amorphous form.

Heating regular charcoal without the presence of any oxygen makes it develop lots of “pores/internal spaces” expanding its surface area effectively activating it to “trap” chemicals. One gram of activated carbon has a surface area of over several thousand square yards. Obtaining activated carbon from coconut shell is comparatively superior to ones prepared from other sources mainly because of its macro-porous structure, that renders it more effective for adsorption and removal of colors and odors.

Activated Carbon: Traditional & Modern Uses

Most of us are aware of the industrial use of activated carbon in chemical industry (decolorization, deodorization, purification, filtration, remove chemicals, treating organic pollutants, etc.), food industry, petrochemicals, brewing, gold recovery, solvent recovery, composite fibers, cigarette, waste disposals, respirators and air conditioning systems, deodorizers, etc.

Using activated charcoal to treat poisonings, decrease flatulence (intestinal gas), reduce cholesterol levels, avert hangover and cholestasis (bile flow problems) in women during pregnancy is a common knowledge in pharmaceutical treatment.

In clinical medicine, practitioner’s feed charcoal orally to patients who consume poison or lethal drug overdose, where in activated charcoal performs the important role of sucking and binding the ingested toxins and prevent its absorption into the bloodstream prior to its clinically pumping out of the stomach, acting as an effective antioxidant in reducing food poisoning effects for medical professionals. Medical doctors sometimes use activated charcoal to disinfect wounds and treat specific poison bites. Short-term consumption of activated charcoal under medical supervision is safe for adults even though side effects like black constipated stools, blockage or slackening of the intestinal tract, dehydration and regurgitation into the lungs also exist.

Is “activated charcoal” beneficial in modern day products and does science support such claims? Let us discuss!

Charcoal in Dentifrices (Toothpastes)

Dentifrices are tooth-cleaning preparations containing a fine powder abrasive, a little surfactant, some flavoring and sweetening agent with an antimicrobial active and a fluoride salt. Specialized toothpastes sometimes contain protein-coagulating chemicals that affect tooth tubules desensitizing them to acids and temperature change.

The incident light reflecting from tooth dentin, primarily determines color. Tooth enamel thickness, absorption/scattering of light falling on it are also responsible. Likewise, tooth stain could be either inherent, external or both. Dentin is inherently yellow and using too much of activated charcoal containing toothpaste could make teeth look yellower or stained than earlier.

The American Dental Association informs that activated charcoal is excessively abrasive and capable to erode tooth enamel. Enamel is the outer layer of our teeth and once gone it is forever gone, making dentin the underneath layer visible. Activated charcoal binds with most toxins present in the tooth surface and in the oral cavity. On rinsing the mouth with clean water all of it comes out together with the rinsed activated charcoal giving a feeling of spotless clean and smooth teeth.

Some advertisement claims say, that brushing with the activated charcoal toothpaste makes teeth up to three shades lighter, change the mouth pH making it inhabitable for infection causing bacterial organisms to thrive and grow, making mouth safe and clean. However, not much published scientific studies exist on charcoal.
Use for whitening, although, one experimenter said in a dentistry conference, that “fine charcoal powder” could embed in small holes or cracks present in the teeth and darken it.

Smoking damages teeth, building up plaque and bacteria, leading to other oral health issues apart from teeth discoloration. Activated charcoal containing dentifrices that claim to be a cavity-blocker germ killer, primarily targets teeth whitening to help smokers get a whiter healthier smile effectively camouflaging tooth discoloration, counteracting aging and other oral health issues.

Many people believe that charcoal containing toothpaste with its teeth whitening effects is a cost-effective product, however most dentists advise that one should use activated charcoal having toothpaste with caution and brush teeth one time in a week only and not for longer extended times. Activated charcoal is an abrasive agent and indiscriminate everyday use could erode tooth enamel, lead to gum tissue recession and bleeding causing teeth to become overly sensitive.

Some people believe that using activated charcoal toothpaste remineralize teeth whereas for some it demineralizes it reducing calcium levels. Nevertheless, both these views are false as activated charcoal binds typically to organic compounds and not minerals.

Washing away charcoal is easy, as it does not stick on to any kind of surface however; it only works on easy to bind tea or coffee surface stains and not on yellow teeth because of using antibiotics, drugs or other physiological reasons.

**Charcoal in Cosmetic Creams, Foods & Health Capsules**

Similarly, activated-charcoal face washes and creams promoted by cosmetic product manufacturers often advertise and claim to clearing up skin and acne by eliminating toxins from skin pores, remove bacteria, dirt and other micro-particles to achieve flawless complexion without any concrete published scientific evidence, to prove that it works.

Honestly, human body does not metabolize charcoal and clinical consumption of activated charcoal only removes toxins (not effective against cyanide, alcohol, caustic alkalis and mineral acid poisons, boric acids, does not absorb oil or sebum) that are present in a person's stomach. It does not purify human blood that body organs' viz., kidneys and liver efficiently carry out by filtering out impurities.

It will not be wrong to say that there is no true health benefit in popping a typical 250-milligram charcoal supplement pills to reduce gas or bloating or detoxify anything by eating a pinch of activated charcoal powder in an ice-cream smoothie.

Factually, most advertisement claims about activated charcoal are either an utter unmitigated gimmickry or blatant lies. These products may look cool, probably without having enough stuffs to help or hurt and buying them is only waste of our money.

We all like to use fresh mint or anise after meals believing it to help our digestion, soothe the stomach and freshen our breath. Is there a clinical study proof that this works? Probably no, however we enjoy the feeling even though there is a general lack of scientific proof supporting its popular use. Activated charcoal use, too in cosmetic applications is only a magic health fad that one can avoid.

The best and easy way to avoid gas and bloating will be to stay away from sugar-free products, avoiding artificial sweeteners (sorbitol and mannitol), altogether skip carbonated colas, stick to eating wholesome plant-based vegetarian food and swish our mouth with clean water after drinking beverages (tea/coffee) that stains teeth.
Combating Mosquitoes with an Engineered Fungus

Dr. Francis Collins, (Courtesy: NIH Support – National Institute of Allergy and Infectious Diseases)

Almost everywhere humans live on this planet, mosquitoes carry microbes that cause potentially deadly diseases, from West Nile virus to malaria. While chemical insecticides offer a line of defense, mosquito populations often grow resistant to them. So, it’s intriguing to learn that we may now have another ally in this important fight: a genetically engineered fungus! Reporting in the journal Science, an international research team supported by NIH describes how this new approach might be used to combat malaria [1]. A fungus called Metarhizium pingshaense is a natural enemy of the mosquito, but, by itself, it kills mosquitoes too slowly to control transmission of malaria. To make this fungus even more efficient, researchers engineered it to carry a gene encoding a toxin, derived from a spider, that is deadly to insects. Tests of the souped-up fungus in a unique contained facility designed to simulate a West African village found it safely and rapidly killed insecticide-resistant mosquitoes, reducing their numbers by more than 99 percent within 45 days.

Mosquitoes are the deadliest animals in the world. More than 3.2 billion people—about half of all humans—are at risk for malaria, and more than 400,000 die each year from the disease. Other mosquito-borne illnesses, including Zika and dengue viruses, sicken millions more each year. By combining existing insect control strategies with the latest technical innovation, it should be possible to lower those numbers. In the latest study, Raymond St. Leger and Brian Lovett, University of Maryland, College Park, teamed with Abdoulaye Diabate and colleagues from Institut de Recherche en Sciences de la Santé/Cente Muraz, Burkina Faso, West Africa. The researchers employed a strategy that’s been in use around the world for more than 100 years to control agricultural pests. The approach involves the fungal species Metarhizium, which kills a variety of insects. Earlier studies had shown that spores from a specific Metarhizium strain could make a big enough dent in a mosquito population to raise the possibility of using the fungus to reduce infective bites among humans [2]. But killing off the mosquitoes required very large quantities of fungal spores and usually took a couple of weeks.

Here’s where things turned innovative. To boost the fungus’s potency, St. Leger and colleagues used genetic engineering to add a toxin derived from the Australian Blue Mountains funnel-web spider. The toxin came with a major advantage: the U.S. Environmental Protection Agency (EPA) already has approved its use as a safe-and-effective insecticidal protein. Besides giving the engineered fungus that ability to produce a spider toxin, the researchers added another clever element. They didn’t want the fungus to produce the toxin all the time—only after it comes in contact with a mosquito’s hemolymph, the insect equivalent of blood. So, they needed to insert a control switch, and the researchers knew just where to find the needed part. Once inside a mosquito, the fungus naturally produces a structural protein called collagen that shields it from the insect’s immune system. A genetic switch that turns “on” when it detects an insect’s hemolymph controls that collagen production. To ensure that the spider toxin was produced just the right time, the researchers hotwired their Metarhizium to begin producing it under the control of this same genetic switch.

The next step was to test this modified organism in a more natural, but controlled, environment. The researchers spent more than a year in Burkina Faso building a specialized facility called a MosquitoSphere. It’s similar to a very large greenhouse, but with mosquito netting instead of glass. The MosquitoSphere has six separate compartments, four of which contain West African huts, along with native plants and breeding sites for mosquitoes. The researchers hung a black cotton sheet, previously soaked in sesame oil, on the wall of a hut in each of three chambers. In one hut, the sesame oil contained genetically engineered fungal spores. In the second hut, the oil contained natural fungal spores. In the third hut, there were no spores at all. Then, they released 1,000 adult male and 500 adult female mosquitoes into each chamber and watched what happened over the next 45 days. In the hut without spores, the mosquitoes established a stable population of almost 1,400. In the chamber with the natural spores, 450 mosquitoes survived. But, in the chamber with the engineered fungus, the researchers counted just 13 survivors—too few to sustain a viable population.

The researchers say they suspect the fungus would be relatively easy to contain in nature. It’s sticky and not easily airborne. The spores are also extremely sensitive to sunlight, making it difficult for them to travel far. Importantly, the fungus didn’t harm other beneficial insects, including honeybees. Caution is warranted before considering the release of a genetically engineered organism into the wild. In the meantime, the genetically engineered fungus also will serve as a platform for continued technology development. The system can be readily adapted to target mosquitoes or other insects, perhaps using different natural toxins if insects might grow resistant to Metarhizium just as they have to traditional insecticides. Interestingly, the researchers note that the engineered fungi appear to make mosquitoes sensitive to chemical insecticides again, suggesting that the two types of insect-killers might be used successfully in combination.

**FEELING UNSAFE AT SCHOOL CAN HURT YOUR GRADES**

Good grades depend on how safe a student feels at school, new research suggests. High-schoolers who feel less safe have decreased learning potential, found the study by Carolyn Cote-Lussier of the University of Ottawa, Canada. The research used data from the Québec Longitudinal Study of Child Development—an ongoing study that began in 1998 with 2,120 five-month-olds—and found that being a victim of school violence and feeling unsafe both contribute to symptoms of depression, which are detrimental to learning potential. The findings were published in Journal of Adolescent Health.

**Images: iStock**

**Woman gets ₹15L payout in medical negligence case**

MUMBAI: The Maharashtra State Consumer Disputes Redressal Commission directed the Navi Mumbai Municipal Corporation Hospital in Vashi and Sushrut Hospital in Chembur to pay ₹15 lakh compensation to a woman whose husband died nine years ago owing to "medical negligence".

In a recent order, the state consumer commission said that while the Vashi hospital could not recognise the illness of her husband, the Chembur hospital did not provide proper treatment to him. The patient, Datta Sherkhane, 40, was treated for malaria instead of myocarditis (a heart ailment) at Vashi in 2010, his wife Swati alleged. She later shifted her husband to the Chembur hospital, where Swati claimed that there was a delay in treatment, leading to her husband’s death.

In 2011, she moved the commission seeking compensation on the account of "medical negligence" in treatment of her husband. In her complaint, she said, she took her husband to the civic hospital as he was feeling uneasy and feverish, where he was provided anti-malaria drugs.

But after returning home, he developed chest pain, headache and nausea. Sherkhane was admitted to the hospital where medical tests were carried out on him, she said in her petition to the commission.

After perusal of details and argument placed on record, the commission found the two hospitals and their staff guilty of "negligence of duty" and directed them to pay a compensation of ₹15 lakh to Swati.

Keemat: November – December 2019
BORN ALONE, DIE ALONE, LIVE ALONE TOO?
Narendra Wagle, Life Member, Past President CGI (2004-06)

Loneliness is the feeling of being unwanted. According to Mother Teresa, it is “the most terrible form of poverty”. Jenova Chen, a Chinese video game designer says, “Loneliness is definitely part of the journey of life”. Aaye Bhi Akela, Jaaye Bhi Akela, Talat Mahmood sings in a Hindi movie. A recent (March 2019) article in “Yogakshema” (LIC house magazine) titled “Alone but Not Lonely” narrates the fears of the elderly in the present social scenario.

Senior Citizen and the Law

The MWPS (Maintenance and Welfare of Parents and Senior Citizens) Act, 2007, defines a senior citizen as any person who has attained the age of ‘60 years and above’. The income tax department has adopted this criterion. In some contexts (Indian Railways, for example), women are treated as senior citizens if they are 55 years of age and above. The ‘grey’ population in India is roughly 9 per cent, the ratio residing in urban and rural areas is 70:30. This figure is expected to rise to 16 per cent in the next 20 years because of improvement in dietetic and medical parameters. However, although psychologists advise one to grey gracefully, it is seldom possible in the prevailing circumstances.

Yes, there are problems for the elderly. These relate to health which range from heart ailments, hypertension, functioning of the digestive system, decline in vision and hearing faculties, joint aches and pains (osteoarthritis and osteoarthritis), poor mobility, low reflexes, and dementia. According to a survey for the U.N., 62 per cent of the elderly in India lack long-term, palliative care. The breakup of the close family network (parivar) is one of the biggest factors which aggravates the feeling of a solitary life.

Retirement Homes

Reports in the media tell stories of the moving out of senior citizens to “Old People’s or Old Age” homes now termed as “Retirement Residence” or “Assisted Living Facility”; some are labelled ‘Silver’ township. The model could be Ownership or Rental. These assure support of necessities such as food, housekeeping and laundry, medical aid including an ambulance in case of emergency, a wheelchair for the immobile and a caretaker to help in basic tasks like eating, bathing, dressing, also local conveyance to the bank, doctor, buying essentials such as medicines, and for some leisure. All these at a substantial price, though. In the developed countries, there are “subsidized senior citizens complex” which may have a lengthy waiting list of communities in this group because of adherence to strict eligibility criteria.

The need for retirement homes has arisen due to emigration of the children to overseas destinations for lucrative employment and better lifestyle. Even within the country for relocation or alternate job. In any event, after the parents see them off with a broad smile it is realized that they are unwittingly left behind in an environment of loneliness and despair. The only contact that remains is the phone or video call at the most. Most oldies (parents or in-laws) are invited as baby-sitters by a working couple if an ayah or nanny is not preferred. (Nanny replaces the grandmother or Nani, grandfather or dada).

“Elder Orphans”

This is the term for older adults aging alone. The children are unable to care because of their busy lives. Their ‘business’, apart from job or profession demands, encompasses attachment to the computer and cell phone (“working from home” or “playing video games” symptom). Whether in India or abroad, true companionship is lacking. In the latter situation, new surroundings make it difficult for the elderly to adapt and adjust, adverse weather conditions and expensive healthcare (in case required) dissuade moving out to unfamiliar pastures.

The stress and anxiety of a lonely life commonly leads to fatigue and lack of sleep. Elders then suffer from nervous breakdown and “middle age” clumsiness, butterfingers or involuntarily dropping things (Multiple Sclerosis’) or falling and injuring themselves. Further on, it may lead to serious diseases such as Parkinson’s or Alzheimer’s. All factors compounded to a “Empty Nest Syndrome”.

Make Way for Tomorrow

This is the title of a 1937 American drama movie which portrays the story of a devoted couple disowned by their five children and face the harsh realities of growing older. None of them will take both parents, hence the couple splits up and each life with a different child. The gist of the tale is “Remember, Today is the Tomorrow you worried about Yesterday”. In 2003, the Hindi drama/romance film Baghban (gardener), based on the same plot, asks the question: “If a man helps you walk the first steps of life, why can’t you help in walking his last steps?” A gardener plants a tree and nurses it in the hope that he would be able to relax in its shade and enjoy the fruits in future.

In our life “make happiness a priority”. Happiness begins within; it is subjective well being governed by health, some wealth and a nutritional diet. Dale Carnegie, the famous American writer and lecturer, states: “Happiness doesn’t depend upon who you are or what you have; it depends solely upon what you think”. Looking back, the past seems like a dream, the future is now the reality.

I’m Fine, Thanks

The United Nations General Assembly voted in 1990 to designate October 1 as the International Day of Older Persons.

To observe this “World Day” routine, a senior scientist wrote the following lines to a chemical journal.

There’s nothing the matter with me, I’m as healthy as one can be. I may have arthritis in both my knees, and when I talk, I talk with wheeze. My pulse is weak and my blood is thin, but I’m good for the shape I’m in.

Old age is golden, or so it is said, but I sometimes wonder when crawling to bed, With my stick in the corner, and teeth in a cup, my ears in the drawer and eyes folded up.

Ere sleep come o’er me I say to myself, “I wonder what else I could lay on the shelf?”

I get up each morning and dust off my wits, pick up the paper and read the Obits. If my name isn’t there, I know I’m not dead, So I get a good breakfast and return to bed.

I may need Viagra to help me to sin, but I’m good for the shape I’m in.

A king is responsible for the wrong doing of his subjects, a preceptor for the wrong doings of the king, a husband for his wife’s faults and a teacher for the disciple's fault.

राजा राष्ट्रकूटं भूके राज्ञ: पापं पुरोहितः।
भर्तर च स्त्रीकृतं पापं शिष्यपापंगुरुस्तथा।

A king is responsible for the wrong doing of his subjects, a preceptor for the wrong doings of the king, a husband for his wife’s faults and a teacher for the disciple's fault.
The right way to invest in NPS
Vivina Vishwanathan, vivina.v@hitlive.com (Courtesy: Hindustan Times)

Have you considered investing your money in National Pension Scheme (NPS)? If you have, was it to fulfil your retirement needs or was it to save additional tax on ₹50,000 every year? If your reason to invest in NPS is tax benefit, then your investment approach is incorrect. The dangling carrot of tax benefit should not be looked at in isolation. Here is what you should know about NPS and how you should use it to build your retirement kitty effectively:

UNDERSTANDING NPS
Before you put your money in any investment instrument, it is important to understand it. Firstly, know that NPS is a defined contribution pension plan. Your money will be pooled in a pension fund. You can make an annual contribution till you turn 60 years of age and the minimum age requirement to invest is 18 years. If you invest in NPS, you can avail a deduction of ₹1.5 lakh under section 80C and also an additional deduction benefit of ₹50,000 under section 80O. If you are in the highest tax bracket, it means a savings of ₹15,600 a year.

Managed by Pension Fund Regulatory and Development Authority (PFRDA), NPS is not like a public provident fund (PPF) account where everyone just has one option—you invest and get a predetermined interest rate. In case of NPS, you have to make a choice. There are two accounts—tier 1 account, the pension account, which gives tax benefit and is mandatory to open for NPS, and tier 2 account, an optional account with withdrawal flexibility. Once you open an NPS account, you have to contribute a minimum of ₹1,000 in tier 1 account. NPS gives you options in the form of fund manager and the type of investment choice. There are eight pension fund managers to choose from such as HDFC Pension Management Co. Ltd, Reliance Capital Pension Fund Ltd and UTI Retirement Solutions Ltd. In terms of investment choice, you can opt for either active choice or auto choice. In active choice, you can create your portfolio with equity, corporate bonds and government securities. If you opt for auto choice, the fund manager will create a portfolio with the same option, but the percentage of investment in each asset class will be pre-decided. At any point, the maximum investment shouldn’t be more than 75%. “For equity, till two years ago, PFRDA had limited the choice as there was a condition that you could invest only in Nifty stocks. Then they amended the guidelines and included broad-based stocks. As there is a Nifty hangover, in most portfolios, there is a Nifty bias,” said Sandip Shrikhande, CEO, Kotak Pension Fund.

HOW TO USE NPS IN YOUR PORTFOLIO?
Firstly, don’t look at NPS in isolation only for tax benefit. “People who put only ₹50,000 to save tax, if you continue investing for 20 years, the corpus is not going to grow significantly to meet your entire retirement needs,” said Shrikhande. You should instead link the NPS investment to your retirement plan. “Using NPS is a means to build a retirement fund. However, if you are in your 30s, simply using NPS will not work because the asset allocation changes. Someone in 30s will be fairly aggressive. Now, if you have a cap on how much you can invest in a particular asset class to restrict yourself, you can’t be flexible. So, it would be better to have a basket of mutual funds to choose from. For someone who is younger, it is restrictive. Look at it as an add-on product for tax saving” said Priya Sunder, director and co-founder, Peakalpha Investments. Consider using NPS as one of the retirement investments tools, but don’t depend on it entirely.

Things to know before using credit cards
htmetro@hindustantimes.com

If you use your credit card wisely, it can turn into a useful tool for your money management. However, many consider credit card as a bad financial product to have in your wallet. If you are new to use a credit card or if you are considering opting for one, here are three basic things you should know.

MAKE USE OF YOUR CARD’S GRACE PERIOD
All credit cards come with a grace period to pay the bill. Grace period is the time given to you to pay back the money you spent using the credit card, without paying an interest. Usually credit cards come with 50 days grace period. For instance, if your billing cycle starts on the 11th of every month, your due date will be 50 days—which is 30th of the next month. Hence, if you make a purchase at the 11th of the month you will get the entire 50 days’ grace period to pay the bill. Paying bills on or before the due date means you don’t have to pay any interest, also when you are disciplined with your credit card bill payment, you will see a positive impact on your credit score and credit history.

DON’T WITHDRAW CASH USING A CREDIT CARD
One of the most expensive ways to use your credit card is to withdraw cash from the automated teller machine (ATM). Don’t use your credit card like your debit card. Here your interest rate kicks in as soon as you withdraw money from the ATM. Unlike when you swipe your card and get a grace period, the ATM withdrawal doesn’t have a grace period. Hence, avoid using credit cards for cash withdrawals. Usually the limit on ATM withdrawals is lower than the credit card limit.

READ ALL THE CHARGES
Usually all credit cards have charges such as annual fee, joining fee and late payment charges. Most credit cards have similar structure. However, the charges can differ based on added services. Hence, you should compare the fees and understand the cost of the credit card before opting for one, also you should check the reward points and the value of it as it varies across the credit card platform. Some credit card companies waive off credit card fees completely too. You can also negotiate with the bank to bring down the cost. When you start using a credit card make sure to not go overboard on spending, also remember that if you don’t pay your bills on time, the interest rate is around 22-48% per annum, which is the highest in the market.

Husband decides to take the doctor’s advice, goes home, slams the door and seeing his wife growls, “From now on you’re taking orders from me. I want my supper right now and after you get it, go upstairs and lay out my clothes. Tonight, I am going out with the boys. You are going to stay at home where you belong. Another thing, you know who is going to tie my bow tie?” “I certainly do”, says his wife calmly. “The Undertaker!”

Pun: A man who leaps off a cliff, jumps to a conclusion.
Recently, a Mumbai-based businessman was cheated of ₹1.86 crore in a subscriber identity module (SIM) swap fraud. The Bandra-Kurla Complex cyber police's call center has confirmed the incident. If you are wondering what SIM swap fraud is, here it is.

WHAT IS SIM SWAP?
The Simple meaning of the word swap is exchanging one thing for another. Ritesh Bhatia, a cyber-security expert says, "Say you have a 3G SIM card and want to upgrade to a 4G SIM card. What you do in such a case is that you swap your 3G SIM card for 4G SIM card. The Handover to the service provider deactivates your old SIM and gives you a new SIM, which activates within a few hours. Our mobile phones are loaded with information, right from your contact lists, photos, emails, and Short Message Services (SMSs) to financial details such as Automated Teller Machine (ATM) withdrawals alerts and one-time passwords (OTPs) sent by banks for net banking transactions. Fraudsters use SIM swap technique to steal your financial information, right from your contact lists, photos, emails, and Short Message Services (SMSs) to financial details such as Automated Teller Machine (ATM) withdrawals alerts and one-time passwords (OTPs) sent by banks for net banking transactions.

Fraudsters send you a harmless looking Trojan or malware and get access to your basic bank account basic details and your mobile number. Then they call you and pose as you service provider agents and ask for your details. You'd be surprised to know how many unsuspecting victims easily give away the details without a second thought. The fraudsters approach the service provider (posing as you, with fake papers), request to swap the SIM. After verification, the service provider deactivates the old SIM, which is in your mobile. The fraudsters get a new active mobile SIM card.

WHAT YOU SHOULD KNOW
There are two parts to this fraud. To deal with the first step is to follow the basic online security hygiene against phishing. Remember, phishing is a kind of e-mail fraud technique in which the fraudster sends out genuine-looking emails or website links to gather your personal and financial information. As far as step two goes, don't give away your details to anyone whatsoever. If you see no service, go out from the service provider that there was a SIM swap request and you visit the branch with KYC to figure out what's the real issue, the fraudster has stolen your money from your bank account.

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HOW DOES THIS WORK?
There are two steps to this fraud, SIM swap and net banking fraud. Mayur Joshi, CEO, Indiaforensic.com, a company engaged in the prevention, detection, and investigation of frauds, says, “Fraudsters seduce you in a harmless looking Trojan or malware and get access to your basic bank account basic details and your mobile number. Then they call you and pose as you service provider agents and ask for your details”. You'd be surprised to know how many unsuspecting victims easily give away the details without a second thought. The fraudsters approach the service provider (posing as you, with fake papers), request to swap the SIM. After verification, the service provider deactivates the old SIM, which is in your mobile. The fraudsters get a new active mobile SIM card. And, since your SIM card has no network. Joshi says, “Then all your financial SMSs, OTP alerts, and other financial alerts or transaction confirmations are sent to the new active card and it falls into the hands of fraudsters”. Imagine the number of financial agents out there who have your KYC documents and mobile number. “This is a two-step fraud where the fraudsters first get your bank details through phishing emails or malware or Trojans and then they block your SIM through the SIM swap technique”, Joshi said. By the time your SIM shows no service, and you find out from the service provider that there was a SIM swap request and you visit the branch with KYC to figure out what's the real issue, the fraudster has stolen your money from your bank account.

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Online Shopping Tips
Dr. Sitaram Dixit, Chairman – Consumer Guidance Society of India (CGSI)

Globally people are becoming online shoppers and all of us have experience with e-commerce either good, bad or both. Online shopping ends up in us buying items we really want without being able to see and feel them in person that probably is either rubbish, cheap looking and ill-fitting stuffs as we all fall a victim to false advertisement and fake reviews.

In case someone has had a negative experience with online shopping and want to learn how to prevent that from happening in the future, just continue reading on what to do to shop online wisely and safely.

1. Buy ONLY from trusted sites: The first important thing one should consider while purchasing goods is not the product by itself, but the website from which we wish to buy. The website should be reliable, with good online reputation and safe payment options. So, before purchasing any product at least do a little bit (more so if possible) of research about the website and its trust factor.

   a) First, browse through the website and look for information about the seller, their contact information and address, services they provide, their privacy policy and terms of service. If any or all that information is missing or appears suspicious, avoid this website.
   
   b) A secure and safe e-commerce site will be SSL-certified and the URL address will start from https:// and NOT http://.
   
   c) Any website not offering a secure payment system, such as PayPal, Visa, Master Card, etc., is unsafe and suspicious.
   
   d) Search for customer feedback of the company or do a Google search using keywords like “product quality review”, “customer service review” and “refund/return policy review” in concurrence with the website’s name. Get opinion about the website from friends and colleagues.

2. Counterfeit Items – Beware: E-commerce websites have arrangements with many product sellers. Damaged or low-quality goods are also available in reliable websites. Pictures alone is sometimes misleading. See checklist below for things to look out.

   a) Beware of fake photos. Pictures looking too perfect are either edited or/and probably fake. Photos exhibiting the product from different angles help one estimate its dimensions (fitting in case of clothes) is much useful to take a call.
   
   b) Always check the size when buying any item. When buying clothes check the size guide (S, M, L, XL, 34, 8, etc.) Please note that size measurements change from country to country.
   
   c) When buying a specific brand item, look for the official seller. Question the seller if the product is authentic requesting proof of evidence if in doubt.
   
   d) Check all e-commerce site with third-party sellers, of all the other items they offer. E.g., if someone is selling a very expensive high-end makeup together with some cheap plastic goods, they are most likely a fake.

3. FAKE online reviews – watch out closely: Fake reviews are common with online marketplaces, sellers and retailers as product rating can grow or disrupt businesses. Learn to spot fakes.

   a) If the review is excellent, without much text or barely fulfilling the minimum text requirement, it is a fake. In any case it is not useful to us as buyers, as we get no information about the quality/efficiency of the product.
   
   b) Reviews repeating or rephrasing product descriptions, without telling anything new about the item, may as well be a fake.
   
   c) Check the reviewer’s page for their reviews of other items too. If the reviewer’s ratings are all excellent with most/all of them highlighting the same seller, it is a fake.

4. Be Careful of added costs: If the price is too good to believe, it is possibly false. Online shops most often conceal added costs (high delivery costs, import duties, taxes, membership fees, etc.) until the very last moment during the checkout and ordering process. Avoid misunderstandings.

   a) Read the item description completely, as the seller might try to deceive you on the title.
   
   b) Compare prices with other sites and/or sellers. If the item is on offer and too cheap, there may be a catch.
   
   c) Double check before paying money as certain sites may change the shipping cost, with additional taxes and duties after adding the shipping address to your order.
   
   d) Some companies will require us to pay membership fees/subscriptions to get an item with discounts or be eligible for free shipping. A one-off purchaser might end up paying cost significantly more unlike a regular buyer.

5. Beware of Identity Theft: When shopping online always it is better to keep all personal information safe to prevent scammers from gaining access to our bank account.

   a) Do not shop using public Wi-Fi. When using a public internet source, all our personal information including passwords are available to all the other users of said network. When shopping online using strong passwords or double verification option is advisable. Password should necessarily contain a mix of letters with capitals and lowercases, numbers and symbols. Changing passwords at least once a year is also essential.
   
   b) Synchronize the payment system with mobile phone or enable a fingerprint scanning or double verification.
   
   c) Avoid using personal or work email for online shopping. Instead, create a new shopping account so that even if someone hacks the shopping email our personal information would be safe.
   
   d) It is safer to use the credit card for setting up a shopping account or use an alternate bank account or debit card if you pay directly on a website, thereby protecting the main bank account from access by scammers.

The views expressed in ‘Keemat’ do not necessarily reflect those of CGSI, but rather are personal opinions of the author(s) concerned.

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A bachelor for many years, decides to get out there more and meet some new women. He did not have much experience, so he struck out many times. Eventually, one day, he meets a gorgeous woman in a bar. They talk, they connect, they end up leaving together. They get back to her place, and as she shows him around her apartment, he notices that her bedroom is full with teddy bears. Hundreds of small bears on a shelf all the way along the floor, medium sized ones on a shelf a little higher and huge bear on the top shelf along the wall. The man is kind of surprised that this woman would have a collection of teddy bears, especially one that is so extensive, but he decides not to mention this to her. After a night of passion, in the afterglow the man rolls over and asks, smiling, “Well, how was I?”

The woman says, “You can have any prize from the BOTTOM shelf.”

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Hindu Undivided Family - 1

There was a time when a Hindu Undivided Family (HUF) was useful as a tax-saving device. Now that it is possible to save tax on investible funds irrespective of the size, thanks to a liberal tax regime on financial assets such as shares, convertible debentures and MF schemes, the utility of HUF has become considerably diluted. However, that being said, the concept of an HUF nonetheless remains an integral part of the Indian tax planning environment and every taxpayer should know how he can use this tool to his advantage. But first, a little background.

India is the only country in the world where the unique institution of HUF exists. The origin of the HUF dates back to the Vedic era. It symbolises the practice of father, son and brother, each of whom being senior to the next, buying and selling jointly, and jointly sharing, not only estate, but also food and worship. The concept of HUF applies not only to members of the Hindu religion but also Jains, Sikhs and Indian Buddhists.

HUF is a body consisting of persons, male or female, who are Sapindas (DNA) of each other by birth, marriage or adoption. The tie of Sapindaship is a necessary and sufficient test being a member of an HUF.

There are two main schools of Hindu law. Dayabhaga exists in Bengal, Assam and some parts of Orissa while Mitakshara prevails in rest of the country. There are a few other schools like Marumkkatavani and Aliyasanta which are existing in some coastal parts of South and South-West India.

As per the Dayabhaga tradition, a person has any right in the ancestral property during the lifetime of his father and therefore, cannot demand partition. When a father is alive, he is assessed as an individual and not as an HUF. After the death of the father, the sons do not automatically become members of the joint family, unless they voluntarily decide to live as a joint family.

CWT v Gauri Shankar Bhard (1966) 68TR346(Cal). Therefore, if the father does not have any brother as a coparcener, income arising from ancestral property is taxable as the son’s individual income.

There are conflicting views as to whether a Dayabhaga Hindu can constitute an HUF with his children and his wife, since he has no right to the ancestral or separate property during his lifetime. One such view, which we agree is the essential characteristic of an HUF common to all schools of Hindu law, is ‘Sapindaship’ and the not holding of a joint family property. Therefore, any Hindu belongs to an HUF with his wife and children as sapindas.

We shall concentrate mainly on the Mitakshara School.

An HUF consists of coparceners, i.e., the sons, grandsons and great-grandsons of the holder of the joint property for the time being — three generations next to the holder in unbroken male descent. The fact that a member of a joint family is living apart from the other members does not affect the position in law. Female members were not coparceners and had no right to demand partition.

The wives and unmarried daughters have no right to maintenance out of their family property.

A coparcener maintains it is a duty of women’s to discharge maintenance out of their individual property.

The senior most male member of the family usually manages the affairs of the family as a Karta. However, the wife of a Karta has an equal share with all the coparceners. The composition of an HUF keeps fluctuating due to births, deaths, marriages and adoptions.

This male bias has now been changed in:

Hindu Succession (Amendment) Act, 2005

The Hindu Succession Act, 1956 has been amended w.e.f. 6.9.05, mainly Sec. 6. Accordingly —

A daughter of a coparcener shall, by birth become a coparcener in the HUF in her own right in the same manner as the son. She has the same rights as a coparcener property as she would have had if she had been a son.

A right is available only to daughters and not to other members of the family such as mother and wives and daughters-in-law.

Where a Hindu has died after 21.12.04, his interest in the property shall devolve by testamentary or intestate succession, as the case may be, under this Act and not by survivorship, and the coparcener property shall be deemed to have been divided as if a partition had taken place and —

1) The daughter is allotted the same share as is allotted to a son.

b) The share of a pre-deceased child, as they would have got had they been alive at the time of partition, shall be allotted to the surviving child of such pre-deceased child.

c) The same rule will be applicable to the share of a child of a pre-deceased child.

d) Widow of a pre-deceased son or a brother, even if she has remarried, is eligible to inherit the property and

e) No court shall recognise any right to proceed against a son, grandson or great grandson for the recovery of any debt due from his father, grandfather or great grandfather solely on the ground of pious obligation.

Birth of an HUF

An HUF is born on account of some specific situations or events. It always exists but may not possess any Jiva.

Assessment can be made for the first time as an HUF upon —

Inheritance by a person succeeding in property of a male or female ancestor;

A Hindu impressing his self-acquired property, either by gift or by marriage, with the character of a joint family property;

An individual can receive a gift or bequest from an outsider clearly indicating that the donee should hold the gifted property not as an absolute owner but as his HUF;

After the death of a male who has only daughters and no son, the wife and her daughters get equal share from the estate of the deceased male. They cannot form an HUF with this nucleus though the daughters are given coparcenary status. The assets received will be considered as their individual property.

It is not necessary that prior to such impressing there should exist some nucleus of ancestral or joint family property. The hotchpot may or may not exist.

The nucleus can be formed or increased by a member by gifting or blending. Blending implies a gift of only that part of the converted property, as other members of the family would be entitled to if the partition had taken place immediately after such blending. Upon blending, income arising from the property, less his/her own share, is clubbed in the hands of the donor. For gift, the entire income is clubbed. If subsequent partition takes place, property allotted to the house and minor children will be deemed to be assets transferred to them indirectly.

Therefore, any coparcener, including a Karta, will do well by taking the route of blend and not gift.

Where the income from converted property is clubbed with that of the individual, it is to be excluded from the income of the family. The same rule is applicable to wealth.

Next week we shall see the tax benefits associated with an HUF, the consequences of partitioning an HUF as also the process by which an HUF can come to an end.

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One dark night in Dublin, a fire started inside the local chemical plant. In the blink of an eye, it exploded into massive flames. The alarm went out to all the fire departments for miles around. When the firefighters appeared on the scene, the chemical company president rushed to the firefighter in charge and said, “All our secret formulas are in the vault in the centre of the plant. They must be saved. I will give 50,000 pounds to the fire station that brings them out intact.”

But the roaring flames held the firefighters off. Soon more fire departments had to be called in as the situation became desperate. As the firefighters arrived, the president shouted out that the offer was now 100,000 pounds to the fire station who could bring out the company’s secret files. But still, the firefighters could not get through.

From the distance, a lone siren was heard as another fire truck came into sight. It was the nearby rural township volunteer fire brigade, composed mainly of old men over 65. To everyone’s amazement, that little run-down fire engine roared right past all the newer sleek engines that were parked outside the plant. Without even slowing down it drove straight into the middle of the inferno.

Outside, the other firefighters watched as the old timers jumped off right in the middle of the fire and fought it back on all sides. It was a performance and effort never seen before. Within a short time, the old timers had extinguished the fire and had saved the secret formulas. The grateful chemical company president announced that for such a superhuman feat he was upping the reward to 200,000 pounds and walked over to personally thank each of the brave firefighters.

The local TV station caught the thank you on film and asked the chief, “What are you going to do with all that money?”

“Well”, says Paddy, the 70-year-old fire chief, “the first thing we’re going to do is fix the brakes on that bloody fire truck”.

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**Hindu Undivided Family**

**Tax Benefits**

HUF is a separate unit of assessment, distinct from all its members. It has the same rights to claim all the exemptions, deductions and rebates as an individual has. The HUF can hold property for the future benefit of a child who is yet to be born or of a person yet to be chosen through marriage or adoption. Any sum received as a member of an HUF out of the income or wealth of the family shall be tax neutral provided he himself has not gifted or bequeathed his property into the property of the HUF. Any distribution of capital assets to the members on the partition of HUF is not to be regarded as transfer.

**Deduction u/s 80C**

HUFs and AOPs are debarred from investing in PPF and from 1996. No new accounts can be opened or post-maturity continuation availed of. Similarly HUFs cannot make fresh investments in RBI Savings Bonds, Post Office NSC, etc. Fortunately, the ITA provisions have not been correspondingly changed. Therefore, contributions made in the name of any member of HUF by applying the HUF funds are eligible for 80C deduction.

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**Miscellaneous**

- Income from immoveable property is taxable in the hands of the holder of the estate and not in the hands of the HUF. Though the immoveable estate belongs to the family, income arising therefrom belongs to the holder of the estate who is the senior most male member of the family CIT v Sardar Virendra Singh Balia (1982) 135 ITR 892 (MP).
- As ‘stridhan’ is absolute property of a woman; income arising therefrom is not taxable as income of HUF (or her husband).
- Where a Karta of an HUF joins a partnership firm as a partner with the help of the funds belonging to the HUF, the income by way of interest on capital and working partner’s salary from such a partnership would be income of HUF and not of the Karta in his individual capacity.

This income being share of profits from the firm is fully exempt u/s 10 (2A).

Next time, in the concluding part of the series, we shall look into some court decisions related to various aspects of an HUF as also some peripheral issues such as partition of an HUF as also the law related to gift to an HUF and applicability of clubbing provisions if any.

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Hindu Undivided Family - III

_LAST__ week, we examined how an HUF can be partitioned and how it can be exiled. We also briefly dwelled on the tax benefits associated with an HUF. In the third and concluding part of our series on HUF, we shall look at some of the court decisions/case laws on various aspects of an HUF including its constitution and partition.

Unfortunately, many provisions are ambiguous. Understandably decisions taken by different courts are contradictory in nature, confounding the confusion further. However, the following case laws provide some guidance, though these are not the last word.

**CONSTITUTION**

Minimum 2 Members: C. Krishna Prasad v CIT (1974) 97 ITR 433: A family consisting of a single individual is a contradiction in terms. An individual, who has obtained a share in partition of a joint family or has inherited ancestral property has potentiality of creating a joint family but not until he/she marries. Thereafter, the person can create joint family out of the corpus received and accretion thereto provided he has kept a separate track of the same.

Ancestral Property: Girdhari Lal v CIT (2004) 269 ITR 550 (All): On the death of a Hindu male, even his self-acquired property becomes ancestral property to the hands of his sons. This is because under the Hindu law the property which a person inherits from father, grandfather and great grand father is ancestral property. Hence even if the property of the deceased was the self acquired, it becomes HUF property.

Junior Member as Karta: Champa Kumari Singh v Revenue (1962) 46 ITR 81 (Cal): Where the senior most coparcener is not capable of managing the affairs or is unwilling to take on the mantle for any reason, the next senior coparcener can take the reins of Karta.

Marrying a Non-Hindu: CWT v R. Sidhanan (1976) 104 ITR 436 (SC): When a coparcener gets married to a non-Hindu (or even a Hindu) under the provisions of Sec 19 of the Special Marriage Act, he shall be deemed to have severed and separated from the family. On this deemed partition he/she will cease to be a coparcener after the marriage but acquire a sui generis right to a share in the HUF properties. The severance of interest cannot be construed as a ‘partition’, for it does not cause a severance among the other members, inter se.

No circumstances, other than unchastity, murder, lunacy, etc., can disinherit a person from his share in the HUF. He can be paid his share of the HUF and this will not be treated as a partial partition.

Later when a child is born, he and the child can constitute an HUF if and only if the son remains a Hindu. For this purpose, any child, legitimate or illegitimate, whose parent is a Hindu, Buddhist, Jain or Sikh by religion and who is brought up as a member of the tribe, group or community to which such a parent belongs or belonged is treated as a Hindu.

Unborn Child: T.S. Srinivasan v CIT (1990) 60 ITR 366 (SC): Under the Hindu law a son conceived in his mother’s womb has the same rights and privileges of a son actually in existence for inheritance, partition, survivorship and the right to impeach an alienation made by his father. In this case, the father claimed the benefit of HUF from the FY in which the son was conceived. The Department recognised the family from the FY when the son was born.

Born Child: CIT v Jitendra Kumar (HUF) (2006) 265 CTR 181 (All): A minor received some amount on partition of HUF and it was invested in a firm. Share of profit and interest received by the minor till his marriage is required to be treated as his income (clubbable in the hands of his father until he attains majority) and after his marriage it can be assessed as his HUF income.

**PARTITION OF HUF**

Compensation to Non-member: Ashok Saha v CIT (2005) 273 ITR 165 (Del): The sale price the absolute owner of the property, it was who threw the property into his HUF. When the property was transferred consequent upon a partition suit by the owners, any amount paid to settle the claims of his father who had no right, title or interest in the property could not be regarded as ‘expenditure incurred wholly or exclusively in connection with such transfer’. The amount could not be regarded as payment for any relinquished right and would not be covered by provisions of capital gains. The amount paid was not deductible.

Only Karta Can Effect Partition: CIT v S P Gopalas (1979) 116 ITR 477 (MP): A Karta has a right as patria potestas and can have a total partition even against the wishes of other coparceners. Any other coparcener can demand partition only by getting a court order.

Cost of Acquisition: CIT v Shanthi Chandran (2003) 127 Taxman 475 (Mad): In a partition, consideration for the partition is the mutual relinquishment of the rights of the parties in the joint family properties in which each has a share. The family settlement in this context is analogous to the cost of acquisition of property and not the amounts mentioned in family settlement deed.

**Oral Partition is Valid:** CWT v N. R. Srinivasan (2003) 259 ITR 40 (Mad): Where the physical partition of property was not possible and income of the property was partitioned amongst the members of the HUF, it shall constitute a valid partition. The partition is a mere agreement to divide the properties and therefore does not require registration unless the division is through a written instrument. If the partition is oral, a memorandum of the partition can be executed recording the oral partition that took place earlier. Such a memorandum does not have to be registered. Thus, an oral partition of joint family property among members of HUF is permissible.

**Reunion after Partition:** nCIT v A.M. Vyalagpur Chettiar and Another (1995) 215 ITR 836: The conditions precedent for a valid reunion under Hindu Law are —

1. Reunion is possible only among the persons who were, before a partition in fact members of an HUF.
2. The reunion must be effected by the parties or some of them who had made the partition; and
3. There must be a junction of the estate and the reunion of property because a reunion is intended to bring about a fusion in interest and in the estate among the divided members of an estate.

HUF Expenses: CIT v Muthappa Chettiar (1997) 90 Taxman 98 (Mad): The HUF is obliged to provide for education and maintenance of its members. Therefore, any provision settled for such purpose should not be considered as a gift.

This concludes our discussions on the general subject of the HUF. While at one time, the entity of HUF was a useful tax saving mechanism, over time, the utility of HUF has become considerably diluted. However, that being said, the concept of an HUF nonetheless remains an integral part of the Indian tax planning environment and every taxpayer should know how he can use this tool to his advantage.

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Consumer’s Crossword! (Answers to the clues are present interspersed in the current Keemat itself)

Keemat: November – December 2019

Designed by Dr. Sitaram Dixit, Chairman CGSI

1. Til (6) 4. Size (2)
8. Ineffective against
   Sebum (8)
11. Student (8)
12. Purifies blood (7)
14. Old (4)
16. Bulging (8)
18. Milk Product (7)
19. Brand name (5)
21. Return (6)
23. Gritty (8)
25. Unsound (6)
26. Mixing (8)
27. Viral disease (6)
28. Mountain top (5)
30. Pictures (6)
33. Liver problem (11)
34. Opinions (7)
35. Milk product (4)
36. Sole (8)
39. CPU Program (7)
41. You get cash (3)
43. Unmarried (8)
44. Ideal (5)
45. Habits (7)
46. Confidential (6)
49. Dead (8)
51. Viral disease (4)
52. Bang (4)
54. Ideal (5)
55. Habits (7)
56. Confidential (6)
59. Disturb (7)
61. Nanny (4)
63. Purse (6)
65. Movement (8)
66. Boost memory (6)
67. An ailment (11)
68. Heirs (11)
69. Method (9)
70. Confirmation (12)
71. Tooth layer (6)
72. Wonder (9)
74. Ranking (6)
75. Joining (8)
77. Vehicle (9)
81. Sweeteners (8)
83. Extra (10)
84. Indian Millet (6)
85. Harmful (11)
86. Dangerous (6)
88. Ill due to ‘AF’ (9)
90. Social Scientist (9)
93. Oven (7)
94. Remove (5)
95. Gas? (10)
96. Boost memory (6)
97. An ailment (11)
98. Heirs (11)
99. Method (9)
100. You get cash (3)
101. Unmarried (8)
102. Sensuous (10)
103. Advisor (9)
104. Dead (8)
105. Return (6)
106. To get cash (3)
107. Unmarried (8)
108. Sensuous (10)
109. Advisor (9)
110. Dead (8)

DOWN
2. End? (6)
3. At least (7)
5. Division (9)
6. Hiding? (12)
7. Say sorry (9)
9. Not listed (9)
10. Toothpaste (11)
13. Whistle (5)
15. Study about children (10)
17. Harmful (5)
20. Not legal (12)
22. A Plant? (6)
24. Associate (11)
28. Co-workers (10)
29. Car brand (7)
31. People (8)
32. Book (5)
37. Eve’s Property (8)
38. Present in teeth (7)
40. Insect all over (10)
42. False (4)
43. Outright (7)
44. Purifies blood (5)
47. Govt. Experts (5)
48. Rabbit (4)
50. Unpaid worker (9)
53. Request? (8)
57. Nicotine (10)
58. Cleans breath (5)
60. No control? (14)
62. Alike Blood (9)
64. Milk Sugar (7)
66. Fawn (6)
67. Jinn (5)
68. Rich in calcium (4)
69. Method (9)
73. Sweetener (8)
76. Petroleum (4)
78. No dairy foods? (7)
79. Compulsory (9)
80. Hide (7)
82. Fine (5)
87. Tobacco pipe (6)
89. Drink (5)
91. Kid (5)
92. Exchange (4)
Abe and Esther are flying to Australia for a two-week vacation to celebrate their 40th anniversary. Suddenly, over the public address system, the Captain announces, “Ladies and Gentlemen, I am afraid I have some very bad news. Our engines have ceased functioning and we will attempt an emergency landing.”

“Luckily, I see an uncharted island below us and we should be able to land on the beach. However, odds are that we may never be rescued and will have to live on the island for the rest of our lives!”

Thanks to the skill of the flight crew, the plane lands safely on the island. An hour later Abe turns to his wife and asks, “Esther, did we pay our $5,000 PBS pledge check yet?”

“No, sweetieheart,” she responds.

Abe, still shaken from the crash landing, then asks, “Esther, did we pay our American Express card yet?”

“Oh, no! I’m sorry. I forgot to send the check”, she says.

“One last thing, Esther. Did you remember to send checks for the Visa and MasterCard this month?” he asks.

“Forgive me, Abie”, begged Esther. “I didn’t send that one, either”.

Abe grabs her and gives her the biggest kiss in 40 years. Esther pulls away and asks him, “What was that for?”

Abe answers, “Our problems are over, there’s no way they will fail to find us now!”

A man goes to his priest and asks him: “Father, do you think it’s fair for one man to profit from another man’s trouble?”

“Of course not!” says the priest. “Even the bible says it is wrong!”

“You’re sure?” asks the man.

“Completely!” Answers the priest.

“So…” says the man, “how about giving back the money you took from me?”

A guy heard about this amazing new weight loss company; all his friends tell him there’s nothing like it for losing a quick 5 pound. He calls the company and orders their 5-day, lbs. weight loss program. The next day, there’s a knock on the door and there stands before him a voluptuous, athletic, 19-year-old woman dressed in nothing but a pair of running shoes and a sign around her neck. She introduces herself as a representative of the weight loss company. The sign reads, “If you catch me, you can have me.”

Without a second thought, he takes after her. A few miles later, puffing and puffing, he finally gives up. The same girl shows up for the next four days and the same thing happens. On the fifth day, he weighs himself and is delighted to find he has lost 15 lbs. as promised. He calls the company and orders their 5-day/10-pound program. The next day there’s a knock at the door and there stands the most stunning, beautiful, sexy woman he has ever seen in his life. She is wearing nothing but running shoes and a sign around her neck that reads, “If you catch me you can have me.”

Well, he’s out the door after her like a shot. This girl is in excellent shape and he does his best, but no such luck. So, for the next four days, the same routine happens with him gradually getting in better and better shape.

Much to his delight on the fifth day when he weighs himself, he discovers that he has lost another 10 lbs. as promised. He decides to go for broke and calls the company to order the 7-day/25 lbs. program. Are you sure?” asks the representative on the phone.

“This is our most rigorous program.”

“Absolutely”, he replies, “I haven’t felt this good in years”.

The next day there’s a knock at the door; and when he opens it, he finds a huge muscular guy standing there, wearing nothing but dark pink running shoes and a bold sign around his neck that reads, “If I catch you, you are mine”.

A young man asks his father, the secret to his marriage’s success. His father had this to say: “Well, we sleep in separate beds, drive in separate cars, eat separately, take vacations separately… In short, we do everything to stay together…”

A mathematician, an accountant and an economist apply for the same job. The interviewer calls in the mathematician and asks:

“What does two plus two equal to?”

The mathematician replies: “Four”.

The interviewer asks: “Four, exactly?”

The mathematician looks at the interviewer incredulously and says: “Yes, four, exactly”.

The interviewer calls the accountant and asks the same question.

The accountant says: “On average, four - give or take ten percent, but on average, four”.

The interviewer calls the economist and poses the same question.

The economist gets up, locks the door, closes the shade, leans close to the interviewer and whispers: “What do you want it to equal?”

Wife comes in with a brand-new bag, looked expensive.

Husband: “Honey I see a new Gucci bag, where’d you get it?”

Wife: “My boss and I bought a lottery ticket together and won! I bought the bag with my half of the winnings”.

Next day wife comes home with new, fancy sunglasses.

Husband: “Wow those are elegant sunglasses you have on today. Where did you get them?”

Wife: “My boss and I spent some of our leftover winnings on another ticket and won again! Used half of the winnings to treat myself again”.

The 3rd day wife drives home in new Ferrari

Husband: “Let me guess, you and your boss won the lottery again?”

Wife: “Yes!! Isn’t our luck just so unbelievable right now? All this winning has wiped me out mentally. Could you do me a huge favor and fill the bath for me so I can relax”?

Husband: “Anything for you, dear”.

Wife comes up to see the bathtub filled with only an inch of water.

Wife: “Honey how is this going to work… You need to fill it with way more water than this”.

Husband: “We don’t want to get your lottery ticket wet, do we?”

A couple were golfing one day on a very exclusive golf course, lined with million dollar houses. On the third tee the husband said “Honey, be very careful when you drive the ball. Don’t knock out any windows. It’ll cost us a fortune to fix!” The wife teed up and put it right through the window of the biggest house on the course. The husband cringed and said “I told you to watch out for the houses! The wife teed up and put it right through the window of the biggest house on the course. The husband cringed and said “I told you to watch out for the houses!”

They walked up, knocked on the door and heard a voice say “Come on in.” They opened the door and saw glass all over the floor and a broken bottle lying on its side in the foyer. A man on the couch said “Are you the people that broke my window?”

“Uh, yeah. Sorry about that”. the husband replied.

“No, actually I want to thank you. I’m a genie that was trapped in a bottle for a thousand years in that bottle. You’ve released me! I’m allowed to grant three wishes and I’ll give you each one wish and keep the last one for myself”.

“Wow, great!” the husband said. “I want a million dollars a year for the rest of my life!”

“No problem. It’s the least I could do. And you, what do you want?”

The genie said, looking at the wife. “I want a house in every country in the world!” she said.

“Consider it done!” the genie replied.

“What’s your wish genie, now that you’re free?” asks the husband.

“Well, since I’ve been trapped in that bottle, I haven’t had a woman in a thousand years. My wish is to sleep with your wife”. The husband looked at the wife and said “Well, we did get a lot of money and all those houses honey. I guess I don’t care”. The genie took the wife upstairs and was with her for two hours. Afterwards, the genie rolled over, looked at the wife, and said “How old is your husband anyway?”

“35” she replies.

“35!………………… and he still believes in genies? That’s amazing!”

Keemat: November – December 2019
HOW THE STUDY WAS DONE
To assess Mumbai’s air quality, the study selected an 80km x 80km domain. This domain was further segregated into 1km grids, to study the spatial variations in PM2.5 emissions and the pollution loads. To build the emissions and pollution maps for the city, data in all forms – numbers, maps, images, reports, journal articles, and oral communications – were used and source-wise percentage share of PM2.5 concentration was developed for 2018. “With the introduction of 20 cities in 2017 and 30 more in 2019, the three-year-old APnA programme is a culmination of research and learning of 20 years,” said Sarath GuttiKunda, leader author, founder and director, Urbanemissions.info.

SMALL POLLUTANTS IN AIR IS 5 TIMES THE 'WHO' LIMIT

PM2.5 CONCENTRATION: SOURCE-WISE PERCENTAGE SHARE IN 2018

TOTAL PM2.5 EMISSIONS BY SECTOR 2018 AND 2030 FOR MUMBAI

ANNUAL PM2.5 CONCENTRATIONS (IN G/M3)

(Highest in two decades)

PARTICULATE MATTER
In the air around is suspended particulate matter (PM) of different sizes. Many of these are a complex mixture of dust, pollen, soot and smoke and they are hazardous.

PM 2.5: The smaller kind, with a diameter not more than 2.5 micrometers. These are “fine particles” that can stay in the air for days or weeks and are small enough to invade even the narrowest of airways leading into the body. PM2.5 or lesser are the most toxic pollutant particles that are carried to lower airways of the lungs and deposited in alveolar wall causing serious health ailments.

TOTAL ESTIMATED EMISSIONS FOR OTHER POLLUTANTS IN 2018 IN MUMBAI (UNITS – TONNES/YEAR)
CUT THE NOISE OF RUMOURS BEFORE INVESTING.

Don’t believe in rumours (also called ‘tips’) that promise amazing returns. These rumours, which spread via the internet on SMS, often come from dubious sources. So, acting on such information can lead to financial losses.

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