CONSUMER GUIDANCE SOCIETY OF INDIA
CGSI
ग्राहक सेवा सुरक्षा संतोष

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Keemat

The Consumer's Voice — Value for Price, People and the Environment

July — August, 2023 **"58 Years in the Service of Consumers"** **Vol 52 — No. 4**

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CGSI throws weight behind key consumer issues

ASHUTOSH SHUKLA / MUMBAI

The Consumer Guidance Society of India (CGSI) is reportedly working on a 'Right to Repair Bill' that it plans to present to the Centre. The Bill aims to ensure consumers' right to repair products at even non-authorised centres and shops without infringing the product warranty.

The CGSI previously received widespread publicity during Covid for outing 40% of the sanitisers in the market to be of substandard quality, with many roadside sellers selling coloured water instead.

The body is also simultaneously working on a writ petition and a public interest litigation (PIL) aimed at ensuring that citizens get records of incoming calls and minimise the challenges they face during mergers of banks and branches, such as the change in IFSC code or account numbers.

"Now if someone has opted for auto-pay for his electricity and other bills, or he is to get money from shares or other sources of income, they do not get it. They get stopped and a person who is out for say five months may come back home to no electricity or no money coming in. We want that banks should do these things at their end so that consumers do not face unnecessary harassment," said Dr M S Kamath, general secretary of CGSI. The body is also looking for ways to help consumers from the threats they face from digital transactions.

These initiatives are among the latest in CGSI's long history of consumer movement to ensure that rights of citizens are secured. CGSI was established in 1966 in response to a tragedy wherein 40 people suffered dropsy and glaucoma after consuming groundnut oil adulterated with toxic argemone oil and the culprits escaped without punishment. The 1960s were also the times of exploitation of consumers by manufacturers and service providers with no strong consumer voice. "This outrage energised nine women to organise a movement to fight and protect consumer rights by establishing CGSI," said CGSI chairman Dr Sitaram Dixit.

Before the Consumer Protection Act, 1986 came into effect in India, CGSI took up issues where consumer safety was at stake or they were cheated. In 1977, CGSI began testing to check the quality of supplies in the market, including pressure stoves, gas cylinders, geysers, electrical appliances and fittings, eventually leading to the Household Electrical Appliances (Quality Control) Order, informed Dixit. The body also came up with testing kits that would enable lay consumers to check the quality of milk.

CGSI received the National Award for Consumer Protection in 1991 and has represented many government bodies. It also informs and educates consumers by conducting seminars, events, workshops, and monthly magazine 'Keemat'.

To inculcate awareness among children and rural folks, the body encouraged Maharashtra Education Board to introduce consumer education in school curriculum.

The voluntary nature of the body and the Covid has proved to be challenging for CGSI, slashing its budget for publicity. "Since we are a voluntary body, it becomes difficult to talk to the press and inform them about our work. We are short of volunteers but have things lined up. Many activities are ongoing now too," said Kamath.

1966
CGSI established

It came into being after 40 people suffered dropsy and glaucoma due to consumption of adulterated groundnut oil

1960s
A tumultuous time for consumer interests as there was no strong voice in support of buyers

CGSI was a pioneer even before Consumer Protection Act, 1986, came into effect

1977 Played a key role in implementation of Household Electrical Appliances (Quality Control) Order

CGSI also devised testing kits to check milk quality

1991 It received National Award for Consumer Protection

We all know, that as per Indian "Panchang" system, each year has a specific name with each name having a meaning.

There are "60" names of years "Samvatsars", with each name repeating after 60 year cycles with the year typically beginning around "mid-April".

The year 2019-20 was named 'Vikari', that lived up to its name as an a 'illness' year!'

The year 2020-21 was named 'Sharvari', meaning 'darkness', and it did push the world into a dark phase!

'Plava' year (2021-22). 'Plava' means, 'that which ferries us across'. The 'Varaha Samhita' says, this will ferry the world across unbearable difficulties and reach us to a state of glory taking us from 'darkness to light!'

The year 2022-23 is named 'Shubhkrut', meaning which 'creates auspiciousness' and we can now look forward and expect to have a better future in 'Shobakrut' (2023-24).

How our 'Rishis' and 'Munis' could accurately predict when modern day gadgets and 'equipment's were non-existent'.

Think about it!

Confused about College?

Editor – Ms. Jamna Vardachary

College admissions have begun, and as usual, people are stressed. What will the cut-off be? What if my child does not get his college of choice? We have all suffered, first as children and later as parents; and yet, nothing has changed. We must start thinking differently, and the first step is to agree that marks are not everything; you can succeed in life even if you do not succeed in Class 12.

Of course, 12th standard marks are important, but a poor result is not the end of the world. Today's job market is very different from 20 years ago. There are new industries, new types of jobs, and new working arrangements. Companies are looking for people with specific skills and experience, not just general academic performance. You still need a basic qualification (10th, 12th or degree depending on the job), but detailed marksheet is less important.

Marks versus merit

First, let's ask ourselves a basic question: should a child's worth be measured solely by exam results? Someone who does poorly in academics may have other skills – in business, sports, or music for example. They may have soft skills (e.g., communication, networking), which can be even more important than academics.

Parents are used to the current system. We refuse to acknowledge something that we should know from our own experience. There is very little correlation between a teenager's 12th standard results and where the teenager ends up 20 years later. A tiny minority, graduating from elite colleges, will definitely do well. But for everyone else, marks seem to matter very little. Compare an 80-percenter versus a 50-percenter. It is impossible to predict which one will be richer or more famous; and most important, which one will be happier. As a parent, all you can do is to identify what skills the child has, and help her choose a career accordingly. This sounds obvious, but very few people actually follow this principle.

New options

Parents may be reluctant – usually for sound practical reasons – to focus on anything beyond academics; but even under the current system, there are numerous options for students who don't enjoy what they are doing. Short-term courses are available on almost any subject: coding, electric vehicle maintenance, green investing, dance therapy… You want to upgrade skills in your discipline, or enter a completely different field, or perhaps you only want one more certificate in your CV. Whatever your goal, you will find something either online or at a convenient location.

If you want to take the education-is-irrelevant argument to its extreme, recollect a famous short story, "The Verger", by Somerset Maugham.

A hard-working worker was offered the job of the verger at a small church. He had always been an excellent worker; but he was illiterate, and this was unacceptable to management. Sadly, he started for his home and felt like a smoke, but there were no cigarette shops nearby. He saw an opportunity and took it; He opened a cigarette kiosk. He found he had a knack for business. The single kiosk expanded to a large chain, and he became a millionaire and famous. In one interview he was asked - You achieved all this despite being illiterate. Just imagine, what you would have been if you could read and write? The man answered: That's easy, a verger at my church. There is a lesson in this for all students and parents.

Top ten

Educationists often complain in private (but rarely in public) about another problem – college rankings. Top ten colleges, Top eco-friendly campuses, best cutting-edge educational institutions and so on. In some cases, these rankings are helpful, providing information on new colleges or emerging disciplines; but the majority are fairly dubious. Most are no better than advertorials published in the education supplements of newspapers; institutions can purchase high rankings or favorable reviews. Every city has a few good colleges and we know which they are, whether or not they appear in the rankings list; for others, take rankings with a big pinch of salt.

Why do experts tell us to ignore these rankings? Apart from the possibility of corruption and fraud, there are many other concerns. Rankings are based primarily on two types of information: data submitted by the college, and interviews conducted with the college's administrators, students and alumni. This leaves plenty of room for misrepresentation or exaggeration. The weightages given to different criteria are not always transparent, and the criteria themselves are often vague or subjective – for example, things like campus ambience or personality development. Even the numbers on job placement are often manipulated.

Dear students (and parents): if you made the merit list or cracked NEET, congratulations; but if you missed out, or even if you had to wait for the third list at a small local college, remember that only 10-12% of Indians have a Bachelor's degree. If you have a degree – any subject, any college – you are already in an elite group, and you meet the eligibility requirements for almost any job, even the IAS. So don't dwell on the past. Look ahead – the future is full of opportunity.

Consumer court directs leading retail store to pay ₹7,000 compensation to customer

Sukhpreet Singh, Ludhiana (Courtesy Hindustan Times)

The District Consumer Disputes Redressal Commission has ordered a retail company to pay ₹7,000 as compensation to a man for charging him ₹8 for a carry bag in addition to the cost of the purchased product. The commission, headed by president Sanjeev Batra and member Monika Bhagat, announced the decision in favor of complainant, Inder Gupta.

According to advocate Harsharanjit Kaur, who represented the prosecution, the incident took place on January 1, 2020, when Inder Gupta visited the Lifestyle store in MBD Mall on Ferozepur Road. He purchased a pair of trousers and a T-shirt for ₹4,407. However, at the time of billing, the cashier added an additional charge of ₹8 for the paper carry bag used to carry the purchased items.

The defendant, in its response, raised objections and claimed that the complaint was false, alleging that it was an attempt to defame their reputation. They argued that the complainant had been informed about the charge of the carry bag before the delivery of the products, and his consent was obtained.

Kaur argued that it was the seller's responsibility to provide the carry bag to the customer free of charge. The complainant refused to pay for the bag, considering it the duty of the seller. It was alleged that the store officials misbehaved with the complainant when he protested against the charge. Consequently, the complainant filed a case against the retail store on January 24, 2020.

The complainant requested a refund of ₹8 charged for the carry bag along with compensation of ₹50,000 for the physical and mental pain and torture he had suffered, in addition to litigation expenses of ₹21,000.

Citing the case of Big Bazaar (Future Retail Limited) versus Ashok Kumar, the commission ruled that if a shopkeeper intends to deviate from the practice of providing free carry bags to customers, they must prominently notify the consumers in advance, allowing them to make an informed decision about patronizing the retail outlet. Failing to provide such notice and disclosing the carry bag charge only at the payment counter was deemed unfair and deceptive, causing harassment and embarrassment to the consumer.

After considering the arguments from both sides, the District Consumer Disputes Redressal Commission has ordered the retail company to refund the complainant ₹8 within 30 days. Additionally, a composite compensation of ₹7,000 has been awarded to the complainant.

Erratic internet service amounts to mental trauma

Courtesy: Times News Network

VADODARA: Vexed at the internet connection frequently conking off when you need it the most? The exasperation is a fit case of 'mental trauma' that needs to be compensated by the service provider. This was the unambiguous observation by the consumer commission in Vadodara which ordered a private broadband service provider to pay Rs 3,000 to a customer for mental harassment.

The case was filed by Mohammed Zubair Saiyad, an advocate who had sued the company in 2019 in the Vadodara District Consumer Disputes Redressal Commission (additional). Saiyad, a resident of Tandalja, availed internet services of You Broadband in November 2018. He chose the 20 Mbps scheme with a validity of 360 days. Saiyad said he was promised good speed and services. Being an advocate Saiyad has to constantly use the internet for online applications, remain updated about court hearing dates, and for non-agriculture (NA) process.

However, within a month of buying the service, the internet speed slowed down and got disconnected several times. Saiyad stated in his complaint that the company cited reasons like cable problems, technical faults, or maintenance for the internet connectivity issues. An employee of the telecom company came to solve the problem but he couldn't do anything.

Saiyad finally filed a complaint in the consumer forum for a deficiency in services. A notice was issued to the company but no one turned up in the commission to present its side. The commission observed that Saiyad had paid money and even carried a warranty card for the services.

Saiyad produced the text messages he got from the telecom firm about internet services being "temporarily down" and the service being unavailable due to damage to the fiber cable. "It is natural that if the complainant had bought internet services by paying money and if he doesn't get proper service, it will cause him mental trauma,' the commission observed. Observing that there was a deficiency on the part of the company in providing internet service to the complainant, the forum ordered You Broadband to give Rs 3,000 to Saiyad for causing him mental harassment along with Rs 2,000 towards the legal costs.

Protein

Rajni Chetan (Holistic Nutritionist) M.Sc. (Dietetics & Food Service Management), CNCC (Community Nutrition & Child Care)

Protein is an important and essential part of a healthy diet. There are 3 macronutrients that provide our body with the energy and raw materials to function: carbohydrates, proteins and fats. So, it is a macronutrient required by our body.

Proteins contain amino acids – the building blocks that make our muscles, bone, skin, hair, blood and virtually every other organ, so they are crucial and required throughout our life span for growth, body building repair and maintenance. The primary functions of proteins are tissue growth and maintenance. They can also be used as source of energy by our body.

It makes up the enzymes, antibodies, hormones, transmit signals to coordinate biological processes between different tissues and organs, hemoglobin that carries oxygen in your blood is also a protein. More than 10,000 different proteins are there in your body. All the basic functions of life depend on proteins. Thus, no form of life exists without proteins.

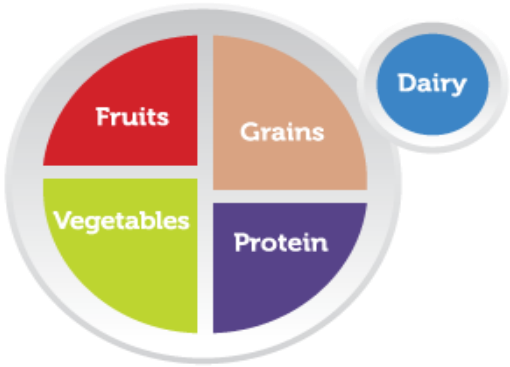
Protein is made from twenty – plus basic building blocks called amino acids. Amino acids are like letters of alphabets and proteins are like words. Since we do not store amino acids, our bodies need 9 essential amino acids from our food and rest our bodies can make. The nutritional value of protein is measured by the quantity of essential amino acids it contains.

Different foods contain different amounts of essential amino acids. Because foods contain a lot more than protein, it is important to pay attention to what else is coming with it i.e., fats and carbs. That is why Healthy Eating Plate encourages to choose healthy proteins.

Generally animal products such as chicken, fish, egg, meat and dairy products have all the essential amino acids and are known as 'complete' protein.

Soya products, quinoa and rajgira (seeds of leafy green vegetable called amaranth) also have all the essential amino acids.

Animal based foods (meat, poultry, fish, eggs and dairy foods) tend to be good sources of complete protein, while plant-based foods (grains, nuts, beans, lentils, dals, seeds, fruits and vegetables) usually lack



Your Healthy Eating Plate

at least one or more of the 9 essential amino acids and are therefore considered 'incomplete' proteins.

If you are pure vegetarian you need to choose a variety of protein sources from a combination of different plant foods every day to make sure you get adequate mix of all essential amino acids in your diet.

When you eat wide variety of plant foods then you get all the amino acids needed to make complete proteins.

Sources of protein

- Dairy products – milk, yogurt, paneer, and dairy products
- Seeds and nuts – almonds, peanuts, walnuts, cashews, sesame seeds, sunflower seeds, chia, flax seeds, pumpkin seeds etc.
- Legumes and beans – All beans, lentils, dals, chickpeas, Kidney beans, peas, split peas, tofu, mushrooms etc.
- Poultry, lean meats, fish and sea food, eggs etc.

Whole grains and cereal based products are also source of protein but not high in protein as meat and meat alternative foods, but Quinoa is a super grain which is rich in protein, fiber and minerals.

As cereals like rice and wheat are poor in amino acid Lysine but rich in methionine amino acid, on the other hand pulses are poor in methionine and rich in lysine, but when combined in the same meal the quality of protein improves.

Important point to keep in mind is even small quantity of animal proteins like curd, buttermilk, paneer with vegetable protein in a meal greatly improves protein quality. Milk is the only animal food used by both vegetarians and non-vegetarians.

Milk contains protein of very high quality and is rich in lysine amino acid. Hence, even a small amount of milk added to a basic Indian diet of dal-roti/ dal-rice greatly enhances the protein quality of the whole diet. Vegetarians have plenty of options to mix and match in their diets.

Plants based sources of protein is a win-win for your health and the health of the planet. Vegetables and fruits contain very small level of protein, but broccoli, corn, sweet potato, asparagus, mushrooms, Brussels sprouts, guava, avocado, oranges, apricots have better protein quantities.

Next question that comes to our mind is how much protein we need daily. Well, the requirement of protein is different for children, teenagers, women and men. The national Academy of Medicine recommends that adults need about 0.8 to 1g of protein per kg of their ideal body weight per day.

Generally, people who are physically active such as athletes, weight trainers (gym goers), pregnant ladies, lactating women, or people who are undergoing some kind of treatment for cancer or dialysis would need higher than 1 gm per kg body weight, but then a qualified dietician or doctor must prescribe this.

Soon after exercise it is recommended that you have a high-quality protein (such as glass of milk, egg or yoghurt) with a carbohydrate meal to help maintain your body's protein balance. But if you are an athlete or sports person then the protein requirement will increase.

Protein dense meal is essential to repair muscles and avoid muscle loss post workout. Since muscles are 80 % protein, a high intake of protein improves muscle mass and strength.

The average sedentary man should eat about 56 grams of proteins per day and the average woman should eat about 46 grams. However, with high protein diets one should increase the water intake as it is necessary to eliminate nitrogen through urine.

The best way to avoid hunger pangs and avoid binge eating is to have proteins in all your meals. As it reduces the Ghrelin (hunger hormone) and boosts peptide YY hormone that makes you feel full. So, it helps you in weight loss.

Having plenty of protein in the diet balances your blood sugar levels by preventing insulin spikes. These insulin spikes are responsible for sudden cravings for sweets, yo-yo moods and midday slumps.

A very high-protein diet can strain the kidneys and liver. Studies say that consuming more than double the requirement of protein for a prolonged period can pose a risk to vital organs to metabolize the waste from the body's system.

Consuming more protein than 2.0g/kg body weight does not improve strength gains compared to intake of 1.4 – 1.8g/kg body weight. It results in increased protein oxidation, urea formation and excessive production of urine and can increase risk for dehydration. So, increase the water intake necessary to eliminate nitrogen through the urine.

Any protein you eat on top of your daily requirement will either be excreted from the body as a waste, or stored as fat. Although high - protein diets claim to help you lose weight, but if one exceeds the total calorie requirement than it is stored by the body in the form of fat, thereby defeating the purpose of losing weight.

Symptoms of protein deficiency

- Hair loss, brittle nails, weakness and fatigue.
- Anxiety and mood swings
- Loss of muscle mass, muscle cramps
- Bloating or fluid retention
- Increased appetite
- Skin pigmentation
- Falling ill more often (lower immunity)
- Slow growth in children

Anemia (the blood's inability to supply enough oxygen to the cells due to low hemoglobin levels.)

Sarcopenia – Also known as muscle loss, it is a common condition that affects 10% of adults who are over 50 years old. With ageing you start to lose muscle mass and function. Any loss of muscle lessens strength and mobility. But healthy diet and regular exercise can reverse sarcopenia.

These days Protein powder has gained popularity as a supplement for daily use, being added to smoothies, baked goods and hot cereals. However, its health benefits remain a question. It is not suitable for everyone and should only be used in specific conditions.

People with delayed recovery from injury, weakness, with specific requirement such as athletes who need more protein to handle their workouts. Or those who do not consume enough protein in their diet. These powders can be made from either plants or meats, though dairy based like whey is most used.

However, one should remember protein powders do not replace a well-balanced diet and should be considered as a supplement, not a replacement.

Protein powders are processed food, so it is always

better to get your protein from natural whole food sources. Having excess protein levels will strain your organs such as kidneys and liver and may also lead to dehydration, high levels of blood sugars and digestive issues.

Most individuals do not require protein powder.

Some suggestions to increase protein intake for vegetarians

Take small steps to improve your nutrition every day and you can begin this by substituting to eat this protein rich atta instead of regular wheat flour.

Just making a small change can lead to big difference in your health.

All you need to do is to mix the right set of grains and grind in the flour mill or chakki. Make chapattis, parantha and eat it any time of the day.

Ingredients

1. Wheat – 8 kg.
2. Ragi – 1 kg
3. Jowar (sorghum) – 1 kg
4. Barley – 1 kg
5. Brown chickpeas – 1 kg
6. Soybean – 500 gm.
7. Kulith (horse gram) – 500gm

One normal chappati (35gm) made from this mix atta will give you around 4.35 gm of protein along with 30 mg. of calcium, 1.6mg of iron and 4.3 gm of fiber. You can also add dry drumstick leaves powder while kneading dough to increase its protein content as drum stick leaves are very rich in protein.

So, eat wide variety of foods – especially whole, unprocessed foods to achieve good health. Increasing plant-based diet improves your gut microbiome which improves your immunity, and keeps your body happy and healthy.

A quarrel broke out between a man and a woman while traveling for dinner at a restaurant.
They quarreled almost all the way and just before they arrived, the wife said to the husband: "You are very lucky to have me, no other normal woman will want you!".
The frustrated husband decided to prove to his wife that she was wrong and find women who would be interested in him already during dinner. The hostess who led them to the table smiled at the husband endlessly, laughed at his jokes and even offered to take his coat, so of course as soon as she left, he turned to his wife with a triumphant look on her face.
"Don't get too excited, it's just her job and she's married too."
"How do you know?"
"Because I saw a ring on her finger."
A short time later the husband had to go to the bathroom, and on his way back he collided with the chair of a woman sitting alone at a nearby table. He apologized, ordered her a drink at his expense, talked to her for a few moments and sat down with his wife again.
"Just so you know, she invited me to sit down for a drink with her!"
"Don't get too excited, she's probably half blind."
"How do you know?"
"Because I saw her enter the restaurant with a walking stick."
After a few minutes a waitress went to the table and as she took the order from the couple it was obvious that she was staring at her husband and flirting with him.
"Here! You, see?!" He said to his wife after the waitress left, "There are normal women who want me!"
"Don't be an idiot, she has corona."
"How do you know?"
"Because if she's interested in you then she has no sense of taste!"

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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Consumer Protection Workshop 2023

The Legal Aid Committee of NMIMS Navi Mumbai spreads legal awareness and provides free legal assistance to socially and economically disadvantaged people who cannot access the legal system. Our group organized a Consumer Protection Guest Lecture for young law students to enlighten them about consumer rights and responsibilities.

NMIMS Navi Mumbai hosted a Consumer Protection awareness session on April 6, 2023. The seminar attracted legal students. The seminar speaker was

Adv. Santosh Pyarelal Shukla (Joint Secretary CGSI) who highlighted about the importance of consumer law in India and made us aware about the advertising deception and consumer rights and obligations. on the fast-changing culture, economy, and technology, he emphasized current difficulties and helped us comprehend the gap between the Consumer Act's execution and the laws aimed to protect consumers from misconduct in this complicated situation.

Dr. Keshab Nandy, our mentor, launched the event by underlining advocate's significance in society and people's lives. He politely handed over the mic to our guest speaker who had underline the importance of Consumer Protection Act. To start the conversation the speaker asked the student "whether the if the consumer is a king or a queen". After getting mixed responses from the audience, he explained about the Consumer Protection Act 2019, which protects consumers from unfair trade practices and promotes market fairness.

He advised purchasers to understand goods quality, quantity, and price and throw the light on some advertisers and the way they use deceptive and misleading claims to entice consumers to purchase their products. He gave a descriptive analysis about the advertisement Fair and lovely and says "I promote values of inclusivity and respect for diversity. It is essential to acknowledge that every skin color is beautiful, and no one should be made to feel inferior based on their complexion. I can provide information on the harmful effects of skin lightening products and the importance of promoting positive body image and self-acceptance." other examples of some of the advertisements was also explained by him and how they make fools of the innocent audience.

He also stated the fact that the people don't apply common sense while purchasing any of the products and are driven by the advertisements they see on day-to-day basics which are most common. Further it was highlighted that people buy items without thinking and are swayed by marketing on essentials, one such example is the Mountain Dew which promotes Gender stereotyping, misdescribed product daredevils' stunts which is not possible for reasonable person to do that.

Discussion about awareness program of Consumer Protection Act 2019 rights and duties took place. Further he explained consumers can sue for product or service injury and get fast resolution and buyers should report suspicious behavior. The speaker advised customers to know their rights and take legal action if they are violated. He advised companies to be ethical and fair. He advised young lawyers to file consumer court applications and sue when required.

The speaker answered several fascinating queries.

Our legal aid team was urged to enhance consumer rights awareness activities so everyone learns their rights and duties. The Seminar empowered the young customers. Students applauded the seminar thereafter. The workshop was concluded by our faculty mentor, Simran ma'am with a gracious thank-you note addressed to Advocate Santosh Shukla, the apex, Shivam Singh (Convener) and Avantika Singh (Co- Convener), and the whole Legal Aid Committee.

For Cough Syrups, You may Need Doctor's Prescription

Sub-committee to study need of registered medical practitioners for sale of cough syrups

Teena.Thacker
@timesgroup.com

New Delhi: The government is considering whether cough syrups should be sold on the prescription of a registered medical practitioner (RMP) only. A sub-committee of experts has been constituted to examine the requirement of RMPs for the sale of various cough syrups in the country, people in the know told ET.

Cough syrups are widely available over the counter as of now.

The Drugs Technical Advisory Board (DTAB), India's apex drug advisory body, in its meeting last month was also considering a proposal for exempting dried Ivy leaf extract sugar free cough syrup from the requirements of a prescription.

However, after deliberating the matter, the DTAB recommended "that a sub-committee should be constituted to examine the requirement of RMP for sale of various cough syrups in the country," the minutes of the meeting said.

The sub-committee will also examine the proposal to exempt dried Ivy leaf extract cough syrup from the warning "to be sold by retail in the prescription of RMP only."

India-made cough syrups have been under the scanner in the recent past with many countries linking it with deaths of children in their countries.

Cough syrups, which are widely available in the country, are often also being abused. Earlier, the Narcotics Control Bureau (NCB) had also asked the Drug Controller General of India (DCGI) to "substantially reduce" the availability of codeine-based cough syrups, saying they are being used as narcotic drugs.

The NCB and various drug law enforcement agencies have been seizing pharmaceutical formulations such as Codeine-based cough syrups like Phesedyl and Corex.

India-made cough syrups have been under the scanner in the recent past

The NCB was of the view these formulations must be substantially reduced in order to identify and track their movement in the market.

According to the NCB, it was seen that pharmaceutical preparations including Codeine-based cough syrups, tramadol preparations, etc were being abused and the same are being seized by various drug law enforcement agencies.

The Border Security Force had earlier seized bottles of Phesedyl near the India-Bangladesh border. The bottles were to be smuggled into Bangladesh, where these cough syrups are banned and selling them is punishable.

The then drug controller had already taken up the matter with industry groups, including Indian Drug Manufacturers' Association, Federation of Pharma Entrepreneurs, FICCI, CII, and Indian Pharmaceutical Association.

Did you know this?

One of the 'basics of mathematics' is knowing whether the number is even or odd, divisible by 2 and by the sum of its numbers.

Look at this number! "2520".

It looks normal like any other numbers, but it is not so. It is a strange number rarely found among numbers; and has puzzled mathematical geniuses to this day!

The strange thing is that it is divisible by numbers from 1 to 10, both odd or even! It is difficult or even impossible to find a similar number!

Note we accept the number as divisible only if it divides without leaving any fractions after the division process!

See the practical application

- 2520 ÷ 1 = 2520
- 2520 ÷ 2 = 1260
- 2520 ÷ 3 = 840
- 2520 ÷ 4 = 630
- 2520 ÷ 5 = 504
- 2520 ÷ 6 = 420
- 2520 ÷ 7 = 360
- 2520 ÷ 8 = 315
- 2520 ÷ 9 = 280
- 2520 ÷ 10 = 252

Mathematicians are unable to finding a convincing mathematical relationship that makes this number divisible in this strange way.

Mathematicians further discover that this number is the product of the numbers: "7 x 30 x 12" that appears at the first glance to be three random numbers; but it is not so, making it surprising and more confusing is the fact that this number 2520 is a multiplication of:

Days of the week 7 x
Days of the month 30 x
Months of the year 12.

7 x 30 x 12 = 2520

MUTUAL FUND..... SAHI HAI? (Part – II)

Nandakumar Menon – Financial Director, CGSI

Every one of us want to grow our wealth and become rich. The only way to get to this goal is aiming for a goal-based investment strategy. Broadly speaking, the goals can be divided into three main thrust areas.

(1) Capital preservation;

(2) Generate Income and

(3) Capital appreciation.

In order to meet the above goal, the most often used avenues are:

(1) Capital preservation: Savings bank account or Public Provident Fund (PPF)

(2) Generate Income: Fixed deposits or Post Office Monthly Income Schemes

(3) Capital appreciation: Real estate or Gold.

We saw in Part I the history and structure of mutual funds in India. In this part, we will look at the how and why of investing through mutual funds. One of the easiest ways of investing for any kind of goals is the Mutual Fund way. Again, taking the three broad goals mentioned in the above paragraph, mutual funds have the following options which investors can choose:

(1) Capital preservation: Liquid schemes

(2) Generate income: Debt Funds

(3) Capital appreciation: Equity Funds

Then, there are Hybrid Funds which is a blend of all the three types of investments mentioned above.

Investments in mutual funds can be compared to opening of a bank account or Demat account – you follow required formalities and procedures and open an account. After that you can deposit or withdraw monies / shares as desired.

How to invest through mutual funds?

The first step to be taken is adhering to 'Know Your Client' (KYC) formalities. The process of KYC can be done through any mutual fund and it requires filling up of the requisite form and attaching the required documents. The KYC needs to be complied with once and is valid for all investments through all the mutual fund houses in India.

After adhering to KYC, one can invest in a mutual fund by purchasing 'units' of a desired scheme for which the requisite form needs to be filled up and submitted to the mutual fund or Registrar and Transfer Agent authorized 'Points of Acceptance' along with the required payment. The mutual fund, on initial scrutiny of the application, will issue an acknowledgement for the application which will be 'time stamped' i.e., it is an automated stamp mentioning the time of acceptance, date as also a control number.

In case of any query post the acceptance of application, this control number will help the mutual fund / R&T agent trace the application. The cut-off time for most mutual fund schemes is 3:00 PM for purchase transactions. This timing, however, is not applicable to liquid fund schemes. This means if you invest till 3:00 PM you will get NAV (Net Asset Value) applicable for the day.

In case you submit the application after the cut-off time, the mutual fund company will accept your application but the NAV applicable will be the next working day. Of late, SEBI has mandated that the NAV for all applications will be the date on which the clear funds are received by the mutual fund. It means, if you have submitted a cheque for purchase, the NAV will be on the day the cheque is cleared and funds are received by the mutual fund. Also, payments only up to Rs. 50000/- can be made in cash. Other payments must be made through cheques, demand drafts, NEFT or RTGS transfers.

On application, units are allotted based on NAV – Net Asset Value. NAV is nothing but the total value of all the assets held by the scheme / fund divided by the number of units under the scheme. It can be expressed by the following formula:

NAV = (Assets - Liabilities) / Total number of outstanding shares

NAV is calculated at the end of the trading day taking into account the value of the underlying assets less liabilities (if any) divided by the total number of units under the scheme.

For example: Investor wants to invest Rs.50000/- in a mutual fund scheme. The NAV of the scheme is Rs.25.000 on that date. The investor would be allotted 2000 units.

What happens to the money invested by you?

Once the cleared amounts are received by the mutual fund, the fund managers will invest the amounts based on the objective of the scheme/fund. Depending upon the objective of the scheme, money would be invested in liquid or debt or equity assets. The fund managers are generally backed up by a research team which will carry out in-detail study of the assets to be invested into and depending upon their recommendations, the fund managers deploy the money. In accordance with the SEBI Mutual

Fund Regulations, the entire process of investment by mutual fund is system driven and there is very little scope of manipulation. Say a mutual fund scheme aims to invest 50% of the money in equities, 30% in debts and 20% in liquids, the system is so tuned that it will not allow the fund manager to exceed these limits. As such, there is very little scope of error. When an investor wants to redeem his units, the fund manager will sell assets equivalent to the amount to be paid to the investor, receive the money and pay the investor. As per SEBI mandates, the redemption proceeds are generally paid after two days of acceptance of redemption – also referred to as T + 2 days where T is the date of acceptance.

What are the advantages of investing through mutual funds?

Investing through mutual funds have a lot of advantages for all categories of investors – individuals, HUF, companies, corporates, Trusts, etc. The main advantages of investing through mutual funds would be:

(a) Portfolio diversification – Since money of large number of investors are pooled together, it gives the fund managers the flexibility to invest in shares, etc. of diverse entities. The limitation which an individual would otherwise face will be avoided. Due to portfolio diversification, the chances of making losses on the investments diminishes to great extent.

(b) Better liquidity – People invest their money so that when needed, the investments would come of help. By investing through mutual funds, the ease of liquidity increases manifold and investors can make best use of their returns.

(c) Reduces risks – Since large number of investors are involved, the risks are spread and reduced considerably.

(d) Low transaction cost - Due to the large value of transactions, the costs get drastically reduced due to advantage of large-scale operations.

(e) Expert management - A mutual fund is good for investors who do not have the time or skills to do the research and asset allocation. A learned fund manager takes care of it all and makes decisions on what to do with your investment. A fund manager's reputation and track record in fund management should be a criterion for you to choose a mutual fund. The expense ratio, as mandated by SEBI from time to time, includes the fees of the fund manager and investors need not pay them separately.

(f) Ease of investing – Investments in mutual funds can be of small denominations – in some cases even as low as Rs.100/- p.m. Investors have the option to invest either one time or in instalments (Systematic Investment Plan – SIP). One can invest as and when one has disposable money. In short, one can invest varying amounts at fixed or varying intervals.

(g) Choice of schemes - There are several types of mutual funds available catering to investors across all walks of life. Irrespective of what the income is, one must make it a habit to set aside some amount (however small) towards investments. It is easy to find a mutual fund that matches one's income, time horizon, investment goals and risk appetite.

(h) Transparency and safety - There is a general notion that mutual funds are not as safe as bank products. This is a myth as fund houses are strictly under the purview of statutory government bodies like SEBI. Mutual funds are mandated to make all types of relevant disclosures to ensure that investors take an informed decision to invest.

One can easily verify the credentials of the fund house and the asset manager from SEBI. They also have an impartial grievance redressal platform that works in the interest of investors.

(i) Tax efficient - You can invest in tax-saving mutual funds called ELSS which qualifies for tax deduction up to Rs 1.5 lakh per annum under Section 80C of the Income Tax Act, 1961. Though a 10% tax on Long-Term Capital Gains (LTCG) above Rs 1 lakh is applicable, they have consistently delivered higher returns than other tax-saving instruments in recent years.

(j) Automated payments - One can opt for paperless automation with the fund house or agent by submitting a SIP mandate, where one instructs the bank to automatically deduct SIP amounts when it's due. Timely email and SMS notifications make sure one stays on track with mutual fund investments.

Undoubtedly, there are various advantages of investing through mutual funds. At the same time, there are a few disadvantages of investing also. They main disadvantages would be

(a) Cost of managing the fund - The salary of the market analysts and fund manager comes from the investors along with the operational costs of the fund. Total fund management charges are one of the first parameters to consider when choosing a mutual fund. Higher management fees do not guarantee better fund performance.

(b) Exit load – One has to pay exit load as fees charged by AMCs when exiting a mutual fund. It discourages investors from redeeming investments for some time. This indirectly works like a lock-in period that fund houses use to maintain stability of funds. It also helps the fund manager garner the required funds to purchase the appropriate securities at the right price and time.

(c) Dilution – While diversification averages your risks of loss, it can also dilute your profits. Hence, you should not invest in many mutual funds at a time. It is clear from the above that the advantages of investing through mutual funds far overrides the

disadvantages, making it a safe and rewarding avenue of investment. A word of caution. No one should consider investments in mutual funds to be

1. Get Rich Quick investments
2. Risk-free avenues of investments
3. Assured returns investments
4. A universal solution to all financial problems

Increasing your wealth is like planting a tree – the longer the time given, the greater is the growth.

That is why it is suggested that one should begin investing as soon as possible. The earlier the better.

While it is important to stay invested for a long term, it is equally important to start early.

X starts investing at the age of 28	Y starts investing at the age of 38
Invests Rs.1000 per month till the age of 58	Invests Rs. 1500 per month till the age of 58
Total investment at 58 years is Rs. 3.60 lakhs	Total investment at 58 years is Rs. 3.60 lakhs
At 58, X's investment becomes Rs.20.79 lakhs *	At 58 Y's investment becomes Rs. 10.56 lakhs *
* Assumed rate of return is 10% p.a. for both the investors	
X's investments would have appreciated to almost double of Y's.	
The difference was solely due to the fact that X started investing 10 years before Y	

Modes of investing in mutual funds

There are 3 modes of investing in mutual funds.

1. Systematic Investment Plan (SIP) - Investor invests a fixed amount of money at regular intervals (say monthly) for a pre decided period. This helps investors average out the cost of investments and overcome short term market fluctuations. Helps investors avoid risk associated with timing the market. Of late, mutual funds have facilitated a variant in SIP – step up SIP where investor can increase the amount of monthly SIP. Say that the initial SIP was for 1000 per month. After a year, the investor could increase it by a fixed amount (say Rs.200) or a percentage of his ongoing SIP (say 20%). This provides a faster means of achieving one's goals.

2. Switch facility – Investor can move money from one scheme of a mutual fund to another fund of the same mutual fund. This ensures that there are no glitches in investing like cheque dishonored, insufficient funds, signature mismatch, etc.

Even at the time of redemption, mutual funds give investors a novel method of redeeming their units – Systematic Withdrawal Plan (SWP). SWP helps investors determine and plan a regular cashflow from their investments at pre-determined intervals to meet his requirements. Mutual Funds also offer partial withdrawal facility where investor can withdraw some part of the investment. This withdrawal could be in terms of fixed amount or part of the outstanding units in their folio.

Investment in Mutual Funds can be done through two streams (called 'option') – (a) Regular Plan and (b) Direct Plan.

Under the direct plan, there is no distributor / broker involved and hence the NAV is higher than regular plan. In case investor is confident of choosing the correct mutual fund scheme and carrying out all the subsequent service requirements, they should opt for Direct plan. Almost all the corporates that invest in mutual funds take the direct plan route.

If investor has not time and resources to study the schemes and carry out the subsequent service requirements, they should opt for Regular plan where the applications are routed through their distributor/broker. In this case, the NAV is slightly reduced since the brokerage payment to the distributor/broker is made by the Mutual Fund.

While receiving the dividends from any mutual fund scheme, the investor can choose from any one of the following three options:

1. Income Distribution cum Capital Withdrawal (IDCW) – Investors will receive the income distribution from the mutual fund scheme. In short, this is the dividend that one gets from the investment.

2. Reinvestment of Income Distribution – Investor will notionally receive the income distribution and then the same is reinvested back in units of the same scheme.

3. Growth option – where no income distribution is paid out but the NAV of the units keeps increasing.

The choice is solely dependent on the requirement of the investor. In case a regular cash flow is required, IDCW would be a good option. In case there is no such requirement, reinvestment could be considered. In case one needs to grow capital, growth option would be suitable.

Points to remember while investing in mutual funds:

1. Identify goal for investment
2. Estimate risk taking capacity
3. Identify and evaluate the mutual fund and fund manager
4. Decide between Income Distribution and growth options

5. Track the performance of the mutual fund scheme and take appropriate decision to stop, hold or redeem the units.
6. Remember – Lower the risks, lower the returns. The greatest risk one can take is not taking any risk at all.

Investors get a hoard of services from mutual funds without any extra charges. These include:

a. Buying / switching / redeeming through on-line and mobile apps
b. Switching between schemes / plans
c. Performance communication - emails & SMS.
d. Corporate action communication through emails & SMS (e.g., dividend declaration, payment, etc.)
e. Receipt and progress of all service requests through SMS and emails
f. On line KYC process through eKYC
g. Toll free telephone numbers for information, queries and complaints
h. Investor education initiative from time to time
i. Periodical intimation of scheme performance, portfolio disclosures through fact sheets.

How to evaluate the performance of a mutual fund scheme?

All mutual fund schemes are marked against a comparable index. For example, equity schemes would be made comparable to the performance of any one of the equity indices like BSE 100, Nifty 50, Nifty Midcap, etc. The performance is said to be good if the scheme has beaten the comparable index over period – say 1 year, 3 years, 5 years, 10 years, etc. From the periodic fact sheet of the mutual fund, it is very simple to gauge the performance of any scheme in comparison to the barometer index. One has to remember that NAV of a scheme could be impacted due to various reasons. Underperformance of the scheme, large scale redemptions being the prime reasons.

In these two parts, we have tried to give readers a peek into mutual funds. In the next edition, we will talk about the myths of investing in mutual funds. We will deal with some of the major misconceptions around investing through mutual fund.

Dear friends! Up to which table do you know?

- At least Up to 10, awesome!
- You have crossed the mountain! ☺
- Don't worry for the rest of the tables!
- From 10th to 99th, any table, very easy!
- How to write Table of any two-digit number?

For example, Table of *87*
First write down *table of 8 then
write down table of 7 beside it* see calculations

08	07	(08+7)	87
16	14	(16+1)	174
24	21	(24+2)	261
32	28	(32+2)	348
40	35	(40+3)	435
48	42	(48+4)	522
56	49	(56+4)	609
64	56	(64+5)	696
72	63	(72+6)	783
80	70	(80+7)	870
88	77	(88+7)	957

Now table of 38

03	08	(3+0)	38
06	16	(6+1)	76
09	24	(9+2)	114
12	32	(12+3)	152
15	40	(15+4)	190
18	48	(18+4)	228
21	56	(21+5)	266
24	64	(24+6)	304
27	72	(27+7)	342
30	80	(30+8)	380
33	88	(33+8)	418
36	96	(36+9)	456

Now table of 92

09	02	(09+0)	92
18	04	(18+0)	184
27	06	(27+0)	276
36	08	(36+0)	368
45	10	(45+1)	460
54	12	(54+1)	552
63	14	(63+1)	644
72	16	(72+1)	736
81	18	(81+1)	828
90	20	(90+2)	920
99	22	(99+1)	1012
108	24	(108+2)	1104

This way one can make Tables from 10 to 99

This is our Vedic Mathematics!

Did you know

a b c d is not used in spelling from 1 to 9

d is first used in hundred

a b c is not used in spelling from 1 to 9

a is first used in thousand

b c is not used from 1 to 99,99,999

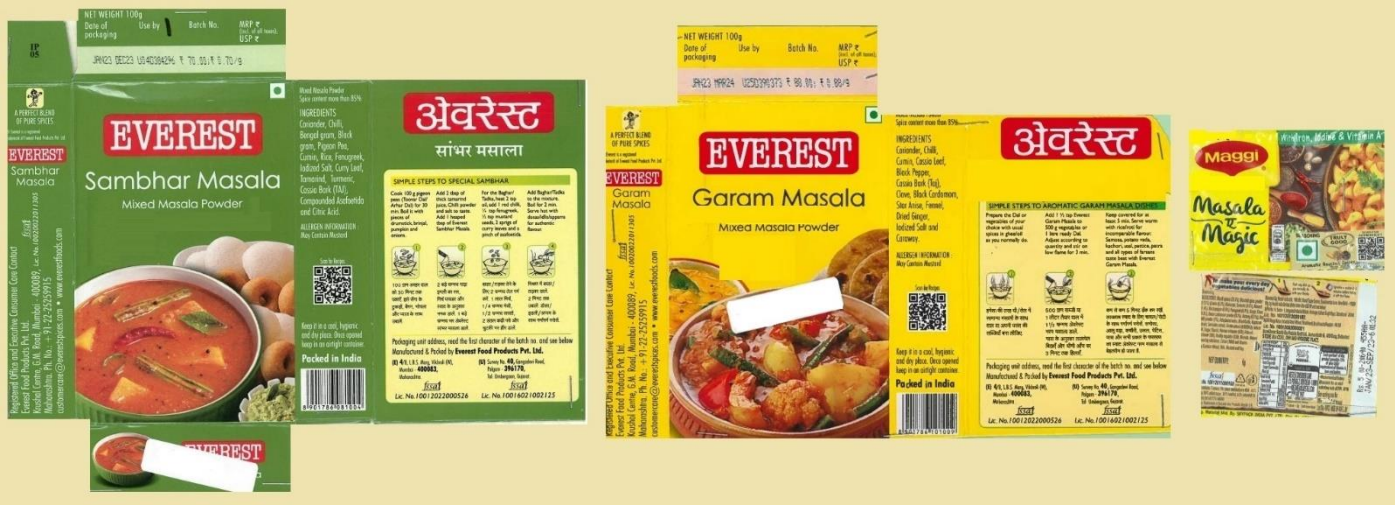
c is first used in crore

b is not used from 1 to 999,999,999

b is first used in billion

Public Health Alert Concerning Recalled Everest and Maggi Brand Spices Because Of Possible Health Risk

(Courtesy: US Food & Drug Administration)



Audience: Consumers who have recently purchased the following spices sold at retail stores in GA, NC, OH, MD, TN, TX, MS, FL, VA, NJ, and NY:

- Everest Garam Masala, 100 grams, coded U25D390373, with UPC: 8 901786 101009
- Everest Sambhar Masala, 100 grams, coded U04D384296, with UPC: 8 901786 081004
- Maggi Masala ae Magic, 6 grams, 20640 455AA

Product

- Everest Garam Masala, Everest Sambhar Masala, and Maggi Masala ae Magic, distributed by Amin Trading Agency LLC, Edison, NJ, with the lot numbers referenced above.
- Amin Trading Agency LLC purchased these spices, not labeled for distribution in the United States, at retail stores in India, and imported and subsequently distributed in the United States.

Purpose

The US Food and Drug Administration (FDA) is advising consumers not to purchase or eat Everest Garam Masala, Everest Sambhar Masala, and Maggi Masala ae Magic spices with the lot numbers referenced above because they have the potential to be contaminated with *Salmonella*.

Summary of Problem and Scope

The FDA analyzed samples of the three products, Everest Garam Masala, Everest Sambhar Masala, and Maggi Masala ae Magic, and the results showed the products were contaminated with *Salmonella*. The products were manufactured in India and are not labeled for distribution in the United States. All three products were imported to the United States and the products were distributed to retail stores in GA, NC, OH, MD, TN, TX, MS, FL, VA, NJ, and NY starting on March 16, 2023. Amin Trading LLC initiated a recall on June 1, 2023, after test results showed the products were contaminated with *Salmonella*. All remaining product on hand with the recalling firm was destroyed under FDA supervision. Additional details regarding the recall can be found in the FDA's Enforcement Report. The FDA has contacted the manufacturer of Maggi Masala ae Magic and they are investigating the situation. The foreign manufacturer of the two products, Everest Garam Masala and Everest Sambhar Masala, has been contacted and has issued a press release.

FDA Actions

The FDA is issuing this alert to warn consumers about the potential health risks associated with these products. The FDA is continuing its efforts to ensure these products are removed from the market. Additionally, the FDA has subjected the products to "Detention without physical examination of food products due to the presence of *salmonella*" under Import Alert #99-19.

Symptoms of Salmonella: *Salmonella* is a group of bacteria that can cause gastrointestinal illness and fever called salmonellosis. Most people infected with Salmonella will begin to develop symptoms 12 to 72 hours after infection. The illness, salmonellosis, usually lasts four to seven days and most people recover without treatment. Most people with salmonellosis develop diarrhea, fever, and abdominal cramps. More severe cases of salmonellosis may include a high fever, aches, headaches, lethargy, a rash, blood in the urine or stool, and in some cases may become fatal. Children younger than five, the elderly, and people with weakened immune systems are more likely to have severe salmonellosis infections.

The Eye of the Beholder: How Lighting Affects Our Color Perception

By Megan King, Courtesy: National Institute of Standards & Technology (NIST), USA

If you've ever tried on clothing at a store only to have it look completely different at home, you know how much our eyes depend on lighting to help us see colors. We also all interpret colors a little differently, even with the same lighting. How our eyes see color under different conditions can affect such things as how health professionals read medical imaging scans. NIST researchers Yoshi Ohno and Jane Li study how LED lights affect our perception of color. Their research could someday inspire new international standards for the color quality of the lighting we use every day.

The Science of Color

On a recent Friday afternoon, I visited the lighting lab at NIST's campus in Gaithersburg, Maryland. Yoshi started by taking me on a tour of the space. With fluffy rugs and colorful artwork on the walls, it's much nicer than any other government office I've worked in or visited! On the ceiling, the lab features a lighting fixture that can be changed with the press of a button on a remote. The room simulates how lighting would look in a typical living room.

NIST researcher Yoshi Ohno's lab has different types of lighting so he can study how our eyes perceive color in different types of lighting conditions. (Credit: R. Wilson/NIST)

Yoshi explained to me that warm colors (orangish and reddish colors) and cool colors (bluish or greenish colors) create different lighting effects. It's especially pronounced when you look at skin. He clicked the remote, and a harsh, bright light came over us. I looked in the mirror at my washed-out face. He clicked the remote again, and a pleasant, orange hue began to illuminate the room. He had me look at my face in the mirror. Much better. (As a nearly middle-aged person with an increasingly complex skin-care routine as I age, I'm happy this scientific advancement in lighting exists!)

The way in which colors of objects appear under a particular light is 'color rendering'. Interestingly, Yoshi explained, that people who live in colder climates generally prefer warmer-colored lighting and people who live in warmer climates prefer cooler-colored lighting. I guess everything is a balance!

Eyes on the Colorful Prize

NIST researcher Jane Li (back) tests my color perception in different lighting conditions in her lab. Credit: R. Wilson/NIST

I'm not just here for a tour though. I've signed up to be a participant in an experiment on how different types of lighting conditions affect our perception of colors. NIST employees, interns, and even family and friends of our employees sign up to participate. The only requirement is to be an adult with normal color vision (glasses or contacts are fine). Jane then showed me to the booth where my color perception would be put to the test. First, I had to pass a test of my color vision and an additional test to check that the blue light filter on my glasses wouldn't impact my color vision. I passed both with, flying colors.

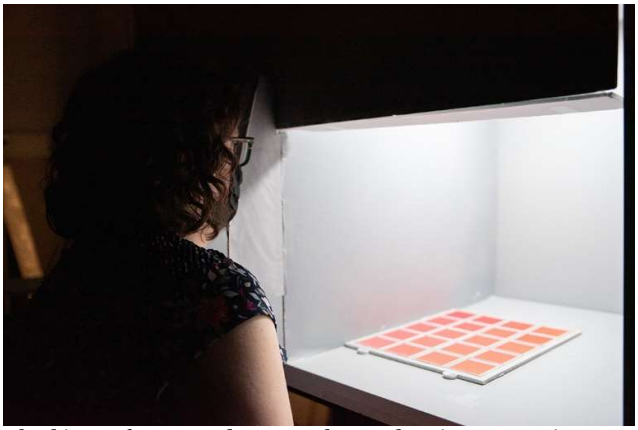
The room was dark so as not to interfere with my vision. I sat in a chair in front of a viewing booth divided in half. I had to put my nose directly up against the cardboard center line of the booth (while wearing a mask for cleanliness). The two sides of the booth had the same background color (gray) but different lighting levels.

After a period of adaptation, the brightness I perceived on the two sides gradually converged.

After adapting my eyes to the gray background, Jane placed one square sample of a certain color on the one side of the booth (with less light). The other side had more light, and she placed a board with 20 similar color samples there. I had less than 10 seconds to identify the closest match from the 20 samples. The time limit prevented my eyes from adapting to the sample color other than gray. She switched colors, and we started again.

We did this for several rounds in different types of lighting. I stared at the gray background for a few minutes in between rounds to reset my eyes. I felt pressure to choose a color match quickly. It was like when the eye doctor asks "A" or "B" or "1" or "2" during your eye exam. But it was also a fun challenge.

I told Jane that yellow was a particularly challenging color for me to match. The yellows all looked like the tiniest bit of difference in shades of a highlighter to me. That may be one way my color perception is different from others'.



I had just a few seconds to match up colors in an experiment to test my color perception under different lighting conditions. Credit: R. Wilson/NIST

The second round was easier. We used just one side of the booth, and Jane handed me the same square and coordinating color card with 20 shades of that color. I had to match them up without a time limit. This was much more enjoyable — like matching paint colors to a sample at the home improvement store. I felt like my answers were closer to "right" than in the speed round.

But Jane explained to me after the experiment that there is no "right" answer, but there are answers they expect you to give based on the lighting in any given round. Jane said my answers were fairly close to what she expected.

I'm one of 20 adults who will do the same experiment over the course of the month. I asked Jane how they figure out the demographic breakdown of their participants. Jane said in her previous research, she found no real difference in color perception based on gender. Some other studies have shown women can outperform men in distinguishing subtle color differences. Jane explained that there is some difference in color perception based on age, and the international standard for lighting is based on the eyes of a 32-year-old. While I'm a bit older than that at 39, I'm still close enough to the target demographic to offer useful data!

Setting the Standard for Modern Lighting

One of the measurements used to test lighting is the Color Rendering Index (CRI), which measures how light affects the appearance of colors in relation to an incandescent lamp or daylight. If a light has a high CRI, the colors you look at under that light should look close to how they appear under an incandescent bulb or outside. The challenge, Yoshi explained, is that the CRI doesn't match up to what people perceive.

NIST postdoctoral researcher Jane Li will use the results of the color perception study to create statistical models that could influence future international standards for lighting. Credit: R. Wilson/NIST

When Yoshi showed me my face under that harsh lighting, that was a 95 on the CRI. The much more flattering lighting was only a 70 on the CRI. This is not necessarily surprising, as the standard was set 50 years ago before LED lighting was invented.

This has been the focus of Yoshi's research — understanding the gap between the standards and people's perception and updating those international standards to match what people see.

Jane will use the results of the study to create statistical models that could influence future international standards for lighting. Organizations such as the American National Standards Institute (ANSI) and the International Commission on Illumination (CIE) publish standards on everything from the color range of white light that is acceptable for your home to the methods of evaluating color rendering (like CRI) that are suitable for various lighting uses.

I'm glad to know I may play a very small part in updating lighting standards to fit our modern preferences and today's lighting technology. NIST's research is probably already reflected in your home or workplace's lights, and this research may help illuminate everyone's path toward better lighting in the years to come.

Scientific Tit-bits

Dr. Sitaram Dixit, Chairman CGSI

Why does hydrogen peroxide bubble up when we put it on our cut or in our mouth?

Hydrogen peroxide is H2O2 i.e., water (H2O) with an extra oxygen atom attached to it. Catalysts in our blood viz., peroxidases and catalases break it into water and oxygen. Catalase is an enzyme in our body that speed up chemical reactions very effectively, in each second, a molecule of catalase can break down 40 million molecules of hydrogen peroxide.

Our cells produce hydrogen peroxide as an undesirable side effect of breathing in oxygen. Since hydrogen peroxide is dangerous to human cells, our body produce catalase to quickly break it down and prevent damage. Damaged skin exposes the cells that produce catalase and adding hydrogen peroxide, the catalase in the cells breaks down, forming and bubbles of oxygen.

Using excess hydrogen peroxide on damaged skin kills germs, present therein as the catalase present cannot keep up, with the reaction destroying the bacteria. However, some skin cells also get damaged, which is why the peroxide stings a little. Today, we do not recommend peroxide as a disinfectant for wounds since better alternatives are available as suggested by medical doctors.

Other organisms also breathe oxygen, and so need their own catalase enzymes. Adding dried yeast to a cup of hydrogen peroxide generates vigorous bubbles producing oxygen.

Why people use H2O2 for mouth rinse?

Hydrogen peroxide kills germs causing gum disease helps remove food particles, bacteria from between teeth also reacting with foul smelling molecules that bacteria produce freshening breath.

Brushing our teeth removes the bacteria sticking to our tooth surfaces, also reaching down into the space between the tooth and the gum. However, it is not very good at getting deep below the gum line where, flossing helps in scraping off the biofilm that the bacteria use to glue themselves to the teeth.

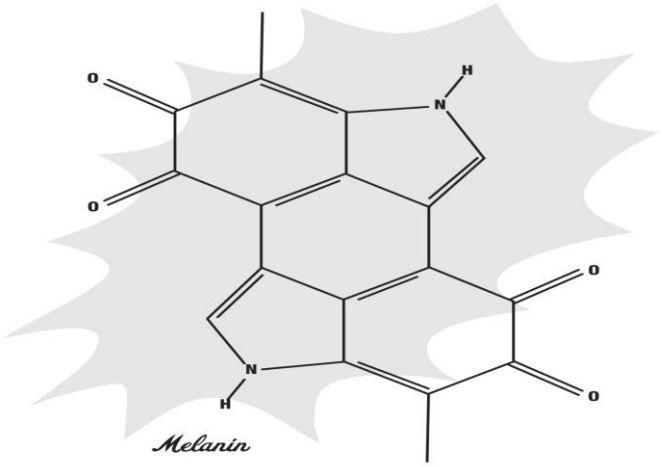
Hydrogen peroxide reacts with the catalase enzymes that the germs produce, causing it to split into water and oxygen. The bubbles of oxygen carry the bacteria and food particles up and out of the gums for us to spit out. Excess hydrogen peroxide in a mouthful overwhelms the bacteria's ability to break down, killing it and since peroxide works by oxidizing the bacterial cell walls and its contents, it is unable to develop resistance, unlike antibiotics, which work by targeting specific functions in germs and bacteria.

What happens when we swallow H2O2?

Although the human body produces hydrogen peroxide as a byproduct of cellular metabolism (breathing) and has catalase enzymes to break it down, swallowing large amounts of peroxide can overwhelm the ability of the catalase to work and thereby allowing it to damage our cells. Swallowing H2O2 results in sore throat and an upset stomach. Moreover, the peroxide would continue to break down as the body produces more catalase enzyme, producing more bubbles of oxygen gas in our stomach, cause one to burp.

How does H2O2 bleach our hair?

Hydrogen peroxide oxidizes the eumelanin and pheomelanin pigments in hair by itself and, lighten it. However, when combined with ammonia the scales on the hair shaft breaks down the melanosomes of melanin particles, bleaching it better. Melanin's come in many forms, but most are like the molecule shown.



Like any dye or pigment, the ability to absorb a particular color comes from the alternating single and double bonds. When a molecule has single and double bonds right next to one another, the electrons that form the bonds usually spread out over to both the locations, as if being "one and a half" bonds. This is important, because in a dye these "delocalized" electrons resonate with the light, at a frequency that depends on how many bonds they can cover. If there are lots of delocalized electrons in a molecule, the light they absorb will have a long wavelength, like red or infrared. If there are only a few, the wavelength will be shorter, like blue or ultraviolet.

Reacting the molecule with H2O2 causes oxygen atoms to attach to the molecule usually turning one or more of the double bonds into single bonds. This makes the molecule no longer absorb light in the same way but in either a different color or it loses its color altogether.

LAUGHTER THE BEST MEDICINE

Jokes are meant for amusement! It employs comedic vehicles like parody, satire, other material referencing, true people, organizations, religions, regions, country, sexuality, etc., making fun of them in ways that are obviously not true. Some jokes might be offensive to some readers as every individual's sense of humor is different. Our intent is not to offend or cause damage to anyone reading or understanding these jokes. If you trust that jokes could offend you, please do not read them! Despite this warning, if on reading you find, the jokes not to your liking, ignore and move on! Please be aware that they are simply just JOKES!

A doctor was addressing a large audience on modern nutrition. "The rubbish we put into our stomachs should have killed most of us sitting here, years ago. Red meat is full of steroids and dye. Soft drinks corrode our stomach lining. Chinese food is all MSG. High trans-fat diets can be disastrous, and none of us realize the long-term harm caused by the germs in our drinking water. There is one thing that is the most dangerous of all and most of us have, or will eat it. Can anyone here tell me what food it is that causes the most grief and suffering for years after eating?"
After, some minutes silence, a 70-year-old man in the front row raised his hand, saying "Wedding Cake?"

Josh strolling along the street, saw his friend Michael striding anxiously with lots of bags in his hands. "Hey Michael, is everything all right? You seem jumpy".
Michael set the bags on the ground and said, "Yeah, I was just now at the state-of-the-art supermarket that they launched in the industrial part of the city".
"Oh? What is it like there? I heard it is remarkable".
"Kind of..." Michael replied. Josh was amazed when Michael described the grocery store with enthusiasm – emphasizing the atmosphere of naturalness and genuineness. You could hear cows mooing and smell the barn in the milk section. In the egg aisle, chickens were cackling and the chicken coop was in the air, and it was even better in the vegetable section - you could literally hear the farmers and smell the fields!
"Wow, that sounds incredible!" Josh exclaimed.
"Well, yes, in principle", said Michael with a grimace, "but I'm never going there again to buy toilet paper".

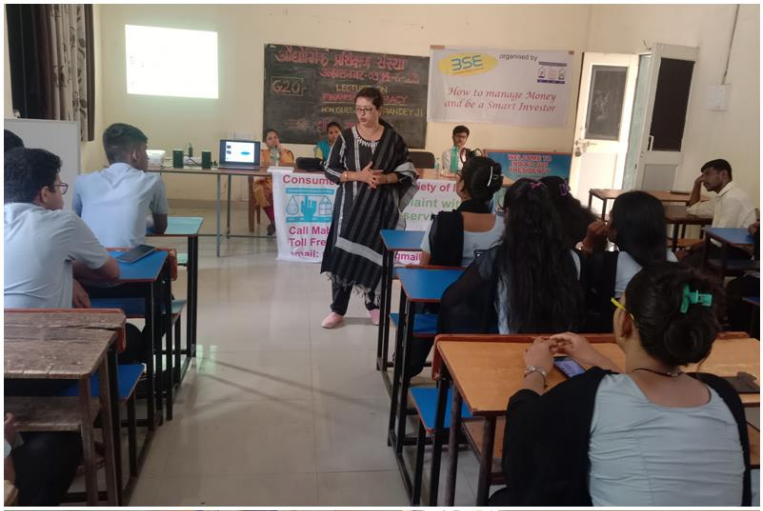
A new business was opening and one of the owner's friends wanted to send him flowers for the occasion. They arrived at the new business site and the owner read the card, which said: "Rest in Peace".
The owner was angry and called the florist to complain. After he had told the florist of the obvious mistake and how angry he was, the florist replied: "Sir, I am sorry for the mistake, but rather than getting angry, you should imagine this - somewhere, there is a funeral taking place today, and they have flowers with a note saying: "Congratulations on your new location!"

A 7-year-old sitting on a park is eating a big chocolate bar. The man sitting next to him looks over and says, "Eating that many chocolate bars is bad for you".
The boy looks over and responds, "My great grandfather lived to be one hundred and five".
The man replies, "And he ate that much chocolate?"
"No" says the boy, "he minded his own business".

What did the baby corn say to the mother corn?
Where's popcorn?

A man was lying on his deathbed, waiting for his final moment to come. He was calm, especially seeing there was a priest to give him his last rites and prepare him for his journey. Wanting to ensure that the entire process was complete, the priest commands the man, "Denounce the devil! You must let him know that you are opposed to his evil ways and shows him that you think very, very little of it".
Unmoved by the priest's vigor, the man simply lay on his bed, stared into space saying nothing. The priest repeats, "Denounce the devil now! You cannot have long left and need to show him whose side you are on". Once again, the man did not react. The priest, now puzzled by the man's complete nonchalance toward what he was saying, asks, "Why do you refuse denounce the devil and his evil?"
The dying man replies, "To be honest, after the life I have led, I am not sure where I am heading. With that in mind, I do not think I ought to be aggravating anybody, should I?"

Jenny was sitting reading her favorite magazine when suddenly an ad pops for an all-expenses-paid cruise for the low price of $500. She excitedly goes to Jack, her husband, and shows him the ad. "Look Jack", she says, "it's in two days and only $500!"
"I'll be honest with you", said her husband, "I have too much work for a cruise. How about you go and have a good time?" His wife is a bit disappointed but decides she will have a good time anyway.
The next day, Jack is in his office when his co-worker, who is also his lover, comes to him excitedly. "Look Jack", she says, "there is this cruise tomorrow that is on sale! Only $500!"
"I'm really not into cruises, to be honest". says Jack.
"Here's $500, why don't you go, have a good time?"
She agrees to do just so, and as it turns out, both his wife and his lover ended up going on the same cruise.
A few days later, his wife comes back from the cruise. As she tells him how much fun she had, she shows him photos she took. While looking them over, Jack notices that his lover Brenda is in some of the photos in the background.
He points to her and asks his wife: "Who's she?"
"Oh, her". sniffs his wife disdainfully, "I call her the cruise-slut, as she slept with half of the men there".
The next day, Jack goes to the office and gets the same excited story accompanied by photos from his lover Brenda. Once again, he sees a familiar face in some of the photos - his wife. He then points to his wife and asks Brenda: "Who is she?"
"Oh, her!" says Brenda, "She's such a nice woman, with all the men on board, she never left her husband's side for a second!"



Photos from some Consumer Education Programs

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