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Soap Dodger: Meet the Doctor Who Says We Have Been Showering Wrong


‘As I gradually used less and less, I started to need less and less’...

James Hamblin on cutting out soap and deodorant. When James Hamblin tells people, he has not used soap in the shower for five years, they tend not to hold back in expressing their disgust. “It’s one of the few remaining things for which we feel fine telling someone that they’re gross”, he says. “It’s amazing to me, honestly”.

Yet despite people’s “clearly moralizing judgments”, Hamblin is no hygiene slouch. Even pre-pandemic, he made a point of washing his hands with soap. He is, after all, a doctor who lectures at the Yale School of Public Health and a medical writer and podcaster for the US magazine the Atlantic. At 37, he looks so youthful that his girlfriend put it, he smelled plastered with deodorant, suddenly went a day without it. “It smells like pine trees or lavender, but I also became less oily, and I got fewer patches of eczema. I didn’t just accept all smells”, he says. “Now, if someone smells sweaty or of anything less than soap, perfume or cologne, we think of that as being unclean”.

Hamblin started to notice that he smelled less pleasant when stressed. He interviewed a researcher who could train dogs to sniff out cancer in humans, while lovers he spoke to told him they thought the way their partner smelled naturally was good. He writes: “The hundreds of subtle volatile chemical signals we emit may play roles in communicating with other people (and other species) in ways we’re just beginning to understand”.

Hamblin also highlights the bare-faced cheek behind the rise of the skincare industry, as soap progressed from a multipurpose, often homemade product to a seemingly infinite parade of near-identical concoctions advertised for different problems, genders and occasions, at wildly different prices. Once hooked on daily soaps that remove our natural oils, we needed moisturizers and hair conditioners to replace them. In the 50s, the industry further cashed in by highlighting the drying effects of soap and offering milder detergents. Today, Hamblin writes, we have come full circle; many people seek products that are “as close as possible to nothing at all”. He writes about a fellow journalist – and soap dodger – Maya Dusenbery, who had been prescribed every acne treatment going. The only one that worked? Nothing at all.

She had tried astringents, to dry out the skin; oral and topical antibiotics; the pill; and isotretinoin, a drug that has been linked to side-effects such as suicidal thoughts and inflammatory bowel disease. Not only were these ineffective, but she also developed rheumatoid arthritis – an agonizing autoimmune condition. When she started taking immune-suppressing medication for that, her hair started falling out.

Enough was enough: Dusenbery stopped taking any medication for her skin. After an extremely oily few months, it settled. Now, the only things that touch her face are a microfiber cloth and water. Thanks to her adoption of a more holistic approach to her rheumatoid arthritis, in consultation with a specialist, this has gone into remission, too.

On the subject of antibiotics, Hamblin writes that they have commonly been prescribed for acne; he says they “seem to play a part in causing and exacerbating autoimmune disease” and that “antibiotic overuse is likely to be a bigger threat to biomes than hygiene”.

Perhaps as a result of experiences such as Dusenbery’s, microbiologists, dermatologists and skincare companies are striving to create new medicines for skin conditions, along with mainstream beauty products that contain live bacteria or ingredients that could feed our microbiomes. There is even the prospect of bespoke products from beauty behemoths such as L’Oreal that are tailored to our own skin microbiomes, which are as unique as our fingerprints. But we are certainly not there yet – and we should be wary, says Hamblin, of “anyone who’s out there right now selling a single microbe, or who tells you that you have a certain [microbial] imbalance you need to get corrected medically”.

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Transforming education

The new National Education Policy, announced recently, has been approved by the Union Cabinet and awaits discussion in Parliament. (Usually, discussion comes first, followed by approval, but these are difficult times.) Many experts have welcomed the policy, but will it really transform India’s education system?

Before commenting, we must remember that the policy is not a binding document or a law. It is not even a detailed plan of action. It is only a vision statement, with very ambitious goals, and ideas on how to achieve these goals over the next 15-20 years. For implementation to begin, budgets must be allocated, syllabi and teaching materials developed, and numerous laws and regulations governing education must be amended or rewritten. We all agree that our education system is broken. Will the new policy succeed where previous efforts have failed? Even if the ideas are good, do we have the budget and the political will? (Everything in India, even onion prices, quickly becomes political.) Implementation will have to be done mainly by state governments – will they cooperate with each other, and with the center?

The policy covers every part of the system: medium of instruction, teaching methods, choice of subjects, exams, teacher training, administration and accreditation of colleges, regulatory agencies... Let us look at three components that relate to children: pre-school education, multi-disciplinarity and examinations.

Starting early
Perhaps the best feature of the new policy is its emphasis on preschool, ages 3 to 6. These years are critical in child development, but for many children, “serious” education begins only in Class 1. Fortunately, we have a vast network of facilities already in place; urban, rural, formal, informal, public, private. In many states, three-quarters of children, at age 3, are enrolled in anganwadis, pre-schools or daycare centers. Of course, there are challenges. Anganwadis focus on health and nutrition, not education, so massive staff training programs will be needed, along with upgraded facilities and specialized teaching materials. But at least we do not have to start from scratch.

The new PCM: Physics Chemistry Music
There are only two types of students: the “good” ones who study science, and the rest. The new policy wants to eliminate this divide, and allow children to study whatever subjects they like. Even in classes 11 and 12, science students will be able to study history, painting, or wherever their heart leads them. The policy states: Students will be given increased flexibility and choice of subjects … so that they can design their own paths of study and life plans.

Educationists like the idea; multi-disciplinarily and flexible subject choices are good. But not all parents are convinced. We know that many children are forced into careers they are not interested in, or have no talent for. Today’s children are much better informed than the previous generation. But how many 14-year old’s are mature enough to decide whether they should drop a particular subject and thus rule out a potential career option? Perhaps they want to drop it because they failed the last exam, because they dislike the teacher, or because their friends have dropped it! Of course, the final decision will be with parents. But it will be a tussle to make the child agree – this generation is not compliant like the earlier one was. The new policy will also increase the scope for vocational education – mostly technical but also arts-related. Vocational education will start in schools from Class 6 and will include internships to allow students to get practical experience. Again, excellent in theory, but difficult in practice. Proper vocational training requires equipment and facilities. And even final year engineering students struggle to find good internships, so what about Class 8 students?

Exam culture
High-stakes, high-stress exams that could determine your entire future... this is a problem not just in India but in many Asian countries. The new policy aims to change this exam culture, with more periodic tests rather than one-time, and exams that test your understanding and analytical ability, not your memory power. The idea is excellent, but the statements in the policy (below, in italics) do not inspire confidence.

The policy says students’ report cards will be completely redesigned... The progress card will be a holistic, 360-degree, multidimensional report that reflects in great detail the progress as well as the uniqueness of each learner in the cognitive, affective, and psychomotor domains. It will include self-assessment and peer assessment, and progress of the child in project-based and inquiry-based learning, quizzes, role plays, group work, portfolios, etc., along with teacher assessment. These are very nice and modern, but just words.

The policy suggests various ways to reduce the stress of Board exams in Classes 10 and 12. Student who do poorly can take the exam again, to improve their marks. We can assume that many students will take the second chance. Given the logistics involved, is this idea practical? Board exams will also be made ‘easier’, in the sense that they will test primarily core capacities/competencies rather than months of coaching and memorization; any student who has been going to and making a basic effort in a school class will be able to pass and do well in the corresponding subject Board Exam without much additional effort. Does that mean everyone can stop doing homework, or that everyone can make the merit list? For university entrance, the National Testing Agency will develop a common all-India aptitude test as well as specialized tests for each subject (universities can also have their exams if they choose). These exams shall test conceptual understanding and the ability to apply knowledge and shall aim to eliminate the need for taking coaching for these exams. Again, style rather than substance.

Conclusion
Education is everything. Parents know this, and are willing to spend heavily on education. The government has also done its best, with schools in the most remote areas, midday meals to ensure attendance, scholarship programs for girls, and much more. But even today, more than half of India’s schools have no functional toilets. Lakhs of teachers’ posts are vacant; 8% of government schools have only a single teacher. Salaries are sometimes delayed for months. Teachers are underpaid, uncommitted and often absent. These problems have to be addressed first, but they are not part of the policy. The education policy is a vision statement. It perfectly summarizes its goal in the introduction: It is critical that children not only learn, but more importantly learn how to learn. It remains to be seen whether the buzzwords throughout the document – core competency, foundational pillars, holistic development – will translate into actions that create a better future for our children. We hope so.
Food is Medicine
Shruti Dalmia, Life Member CGSI

Dinner is laid on the table. Daadi eats everything. Mummy, Papa eat everything. I am Ronav and I am 5 years old, but I do not get to eat the food made for the rest of my family. Mummy says I have food allergies and Asthma and my Food must be different. I eat gluten free, dairy free and organic. I also eat a lot of round colorful pills and syrups which Mumma calls my vitamins.

Today a friend has sent a cake to our home, but I cannot eat it. My heart bleeds as I watch the rest of my family eat it. My eyes meet my Mom’s eyes; she knows what I am feeling. We hurriedly move away from here to go to bed. This is a story to which many will instantly feel connected today............Why?

Because food allergies, breathing issues and constipation has become the new normal in kids. In our little kids! Many, such parents struggle to understand, why is my child suffering?

The answer to this question lies in multiple factors but one of the major contributor is the element called “TOXIC LOAD ON OUR BODY”.

What is TOXIC LOAD ON OUR BODY?

When we input unwanted heavy metals and chemicals into our body, knowingly or unknowingly, through various mediums including food, water, creams, lotions, soaps, etc., we are inputting toxic load into our body.

God has thankfully designed the human body with a lymphatic system (Our liver, kidney, thyroid, and various lymph nodes) which are constantly working to flush these unwanted chemicals out, but when input is becoming more than the ability of the body to flush out, disease is born.

Today, we are living in a world where cancer, diabetes, blood pressure, food allergies, asthma, digestive disorders like IBS, Crohn’s disease, obesity, heart disease are some of the biggest health problems that are being faced by people.

What is alarming is the rate at which there is a rise in these, not just in adults, but also in children. Our little innocent children. OK, so we get it. We now know what the problem is.

WHAT IS THE SOLUTION?

Solution starts with first UNDERSTANDING OUR BODY.

Good health depends on what we put into our body and how well our body absorbs nutrients from it.

God has made the human body in such a way that it can SELF HEAL and SELF REPAIR. At any given point in time, our body is doing either of the below two activities apart from digestion and assimilation:

1. Detoxing – Removing the unwanted matter inside us

HEALING STARTS ONLY WHEN THE BODY IS NOT BUSY DETOXING.

It is therefore important to reduce the toxic load on our body so that our body gets a chance to work on healing as well! The other important part of the human body that needs to be understood is the digestive system. Our digestive system, the gut, is filled with bacteria! Yes, you heard it right!

We are housing within us trillions of varieties of Microorganisms that help us break down food, digest it and assimilate nutrients from them. Having a healthy mix called diversity of bacteria in our gut is vital for good health. Here is a short video to understand the importance of the gut bacteria.

https://www.gutmicrobiotaforhealth.com/a-video-to-understand-the-importance-of-gut-bacteria/

Everything on our planet needs the sunlight to flourish and we are no exceptions. A daily exposure to sunlight can do wonders for our health and us.

STEPS FOR HEALING:

I: REDUCING TOXIC LOAD ON OUR BODY:

There are many factors contributuing to the toxic load on our body:

1. Clean and fresh air to breathe
2. Pure and mineral rich content of water we drink
3. Pure and nutrient rich content of the food we eat
4. Other sources – Avoid use of chemical personal use and home use products such as soaps, creams, lotions, detergents, medications - injected or eaten, etc., all get absorbed and add to the load

We may have to move to the mountains to get better quality of air and water so for now, what is not in our immediate control, we can shelf it. But eating good quality food, rich in nutrients is in our hands and let us understand how we can take this step.

FOOD ADULTERATION:

It is not untrue to say that almost everything that we are eating today, has some amount of adulteration in it. Its very difficult to find clean food. From our fruits, vegetables, spices, and other common kitchen ingredients, everything has been fiddled with at some stage of growing, ripening or processing. But thankfully, with growing awareness this is changing and can be changed.

GETTING CLEAN FOOD TO EAT IS OUR MOST BASIC RIGHT TO LIFE! SO ARISE! WAKE UP! LET US ALL TAKE STEPS TO STOP FOOD ADULTERATION! FOR US. FOR OUR ELDERS. FOR OUR LITTLE CHILDREN.

As parents, it is our responsibility to leave behind for our kids, the bare minimum human requirement to live a healthy life – clean food! Here is a list of food adulteration tests that you can do, in the comfort of your home, to find out if your food source is clean or not.


STAGES OF: FOOD ADULTERATION V/S EDUCATION: WHAT IS GOOD FOOD

There are 3 stages during which Food Adulteration occurs usually:

I. At Growing Stage
II. At Ripening Stage
III. At Processing and Packaging Stage

1. AT GROWING STAGE:

The most critical and vital factor for getting high nutrition food is our soil health.
**Signs of Good Soil Health:**

1. **Soil brimming with life** – Presence of earthworms and trillions of different kinds of bacteria, fungi and other kind of microorganisms in soil is a strong indicator of good soil health. These little creatures fill our soils with bioavailable nutrients such as nitrogen, phosphorus, carbon and much more which is vital to the healthy nutrient rich growth of our food. They also wiggle their way in soil to create lots of tunnels thereby oxygenating our soils! God’s creation is amazing! How these little creatures are vital to soil health.

2. **Soil with rich organic manure** – Periodically mixing soil with organic manure using cow dung and biodegradable plant waste, makes the soil rich in nutrients. This manure becomes food for all the micro organisms in soil and the excretions made by these little workers becomes food for the plants growing in the soil. When the soil is rich in bioavailable nutrients, the roots of the plant absorb it and this nutrition staright away comes into our fruits, vegetables, grains, spices, etc.

The question arises, why not provide the nutrients to plants using chemical fertilizers?

It’s a good question, but this short cut is just not the same.

First – they are chemicals! They are not bioavailable. Same as how food cannot be replaced by pills completely!

Second – Humans study the soil and replace the major 2-3 nutrients required by the plant to flourish, but the trillions of micro organisms in soil provide a wide variety of macro and micro nutrients which may not be possible to diceper at a lab or even understand completely.

Third – Use of urea, and other fertilizers make our soil dead. All life in soil ceses to exist. Fertilizers are food for the plant, yes, but not for the micro-organisms. When micro-organisms cease to exist, oxygenation in soil also ends. The multiple micro nutrients which these organisms provide also vanish. It seems our ancestors had it all figured out better than us! So, the next time you visit a farm, you know now how to check the soil health, just by some simple observations.

**GOOD SOIL HEALTH DETERMINES THE NUTRIENT VALUE IN OUR FOOD.**

Ever wondered how our Grandparents aged gracefully? Without becoming a patient who has to be taken care of constantly. One reason was the Nutrient content in their food was much higher as compared to what is available in our food today.

We can understand high nutrient content in our food with an example. One apple eaten by our grandparents had more zinc, phosphorus and other bio available nutrients as compared to one apple eaten by us today, because the soil was nutrient rich in their times (when the whole world was organic) as compared to the chemical fertilizer laden lifeless soil of our generation.

**Use of Desi variety of seeds (Heirloom seeds):**

As growers have shifted away from heirloom seeds to use hybrid and GMO seeds, we see a drastic decline in crop diversity. Keeping heirlooms alive means increased diversity, which in turn increases resilience. When you only grow one crop variety it only takes one problem to wipe out the entire crop. Planting multiple varieties helps to ensure your crops survival.

A diverse source of food is also better for our health. You may have heard that you should always try to eat different types of vegetables but we must also try to eat different varieties in the same vegetable. The purple, yellow, green, and multi colored heirloom tomatoes all have different nutrients than the couple of red varieties offered at the grocery store. The same is true for other crops as well.

The last great thing about heirlooms is that they allow farmers independence. Because heirlooms can be saved from year to year growers do not have to rely on big companies to supply seeds to their farms each year. They are financially independent. While most Hybrid/ GMO seeds have to be bought by the farmer from the seed companies, year on year, which adds to their financial load.

If we all grow and eat the same food, seeds which have been engineered in a lab to have the exact same genes, what will that food do to our genetics?

Biodiversity is crucial, not just for health, but for our survival! So make that conscious switch to Heirloom Food Produce slowly. Next time ask your Organic Farmer if he can provide any Heirloom Seed Produce. It’s not easy to find it, as farmers say consumer want the hybrid variety as our pallets have gotten used to the taste of hybrid food, but if we consciously demand heirloom food produce, maybe more and more farmers will restart growing it.

Here is the story of a farmer working towards saving heirloom seeds for the next generation: https://youtu.be/ZsuzS0bYLbA

Heirloom Seed Produce looks different. No two tomatoes are the same. All will be different shapes, sizes and colors. This is one of the easiest ways to recognize heirloom seed produce.

**Food for thought** – When we eat food that has fought the battle of survival and survived, what do you think that food is going to help our bodies do?

We should avoid food that is grown in sterile environments such as hydroponic farming. Food grown in sterile environments may be rich in nutrients, yes, but its genes may not help strengthen our genes to fight the battles with variety of bacteria and virus attacks that constantly happen on our bodies.

**Use of Herbal Pesticides:**

Rampant use of harmful chemical fertilizers for pest management on crops, fruits and vegetables, add to the toxic load of our body when we eat the same pesticides laden food. Ideal solution is to use traditional herbal pesticides to manage pests.

Heirloom Seeds have stood the test of time and fought the battle with a variety of pests over thousands of years, and still survived and that is why are a better option than Lab developed Seeds, which need more pest management than heirloom seeds

II. **AT RIPENING STAGE:**

Most fruits and vegetables are ripended using chemicals today as against the correct procedure of natural or traditional ripening methodologies. (See Chart)

**Tips to recognize Artificially Ripened Fruit:**

‘If fruit has not been ripened using chemicals, its pulp would always be watery and not dry as in the case when fruit is ripened using chemicals like carbide’ – Shared by a Farmer

The Skin of Fruit is not plastic like how our skin is not plastic. The fruit, just as how our skin absorbs lotions and oils, absorbs this entire chemical and we eat the same chemical laden food.
Chart illustrating the most consumed fruits in India – Current v/s Ideal ripening procedures below.

<table>
<thead>
<tr>
<th>S. NO</th>
<th>FRUITS</th>
<th>CURRENT COMMON CHEMICAL RIPENING PROCESS</th>
<th>IDEAL ORGANIC RIPENING PROCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Banana</td>
<td>Calcium Carbide Ethylene Gas</td>
<td>Smoking Bananas in a Traditional Bhatti by directing Smoke from Burnt Leaves.</td>
</tr>
<tr>
<td>2</td>
<td>Mango</td>
<td>Calcium Carbide Ethylene Gas</td>
<td>Leave on the Tree till a small depression forms on the Stem, Pack in Rice Straw and Ship</td>
</tr>
<tr>
<td>3</td>
<td>Papaya</td>
<td>Calcium Carbide Ethylene Gas</td>
<td>On the Tree, Post that in Straw/Brown paper bag</td>
</tr>
<tr>
<td>4</td>
<td>Apple</td>
<td>Waxed Skin Ethylene Gas</td>
<td>On the Tree</td>
</tr>
<tr>
<td>5</td>
<td>Oranges</td>
<td>Ethylene Gas</td>
<td>On the Tree</td>
</tr>
<tr>
<td>6</td>
<td>Sapota</td>
<td>Ethylene Gas</td>
<td>On the Tree</td>
</tr>
</tbody>
</table>

What are we doing? Obviously there is going to be disease and cancer! God help us!

Many Vegetables are injected to grow abnormally fast. Or dipped in color to make it look bright green. And we are eating all of that!

### III. AT PROCESSING STAGE:

Food Processing has two important Factors:
1. **Method used to Process Food**
2. **Adulteration during Processing**

**Method Used to Process Food:**

Food processing is a science. It is very important to not expose food to high heat during processing. Exposing food to heat above 120°F or 49°C may kill enzymes. Additionally, vitamins and minerals get denaturalized or destroyed during the heating process, making our food devoid of nutrient value.

**Top Consumed Processed Foods:**

**Wheat** – almost 60% of our every meal is usually wheat. So, it is very important we understand how wheat is processed.

Traditionally wheat was soaked, sun dried and ground at home using a stone hand chakki.

**Food for thought:** Ever wondered why grains and legumes last longer than fruits and vegetables? This is because all grains naturally contain an outer layer of a compound called phytic acid. While it is good to protect and increase the shelf life of the grain or legume, it is not good if we eat it, as phytic acid can actually prevent the absorption of certain nutrients and minerals such as iron, calcium, manganese and zinc. Soaking grains and legumes in water dissolves this layer of phytic acid. Throwing away that water will make our food fit for consumption.

That is why our Grandmothers always told us to soak our Rice and Dals for a few hours before cooking!

How many of us are actually soaking our wheat, which contributes to almost 60% of our total food intake? Our grandmothers did it. But not many of us are following these traditional principles of food processing, which could be the reason for the sudden surge in calcium deficiency - osteoporosis cases in the country.

Today, wheat is cross bred in labs so many times that it is just not the same wheat our grandparents ate. Parents today are all so busy running to meet both ends, that no one has time to soak, dry and hand grind the wheat grains.

Most atta mills run machines to grind wheat.

Chart illustrating methods of processing wheat and the output generated per hour:

<table>
<thead>
<tr>
<th>S. No</th>
<th>Type of Machine Used for Grinding Wheat</th>
<th>RPM (Rotation Per Minute)</th>
<th>WHEAT ATTA OUTPUT PER HOUR (Approximate figures)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Traditional stone hand grinder (Also called Chakki)</td>
<td>Around 80</td>
<td>15 kg/ Hour</td>
</tr>
<tr>
<td>2.</td>
<td>Electric stone grinder machines</td>
<td>500-700</td>
<td>200 K /Hour</td>
</tr>
<tr>
<td>3.</td>
<td>Large scale grinders used by most big brands</td>
<td>Around 12,000</td>
<td>5-8,000 kg / Hour</td>
</tr>
</tbody>
</table>

From the above chart, we can see the huge difference in the quantity output per hour. If any machine is churning out that much wheat flour per hour, the tremendous amount of heat that is generated by those high-speed grinders is burning away almost any natural nutrients in the wheat flour. Plus it is still full of phytic acid, which is slowly leeching out the calcium and minerals from our body.

And 60% of our meal and our children’s meal is this nutrient devoid, phytic acid rich atta!

Wake up consumers! Understand your food better! Go back to our traditional ways to find answers to our health problems.

Just by making one small shift, soaking and drying your wheat grain and using a Low RPM stone grinder machine, which runs at the same speed as the Hand Chakki, almost 60% of our food can be made nutrient rich.

Put that effort, make the shift! Care for the health of your body and that of your family and children.

**Go for Stone Grinders**

A wheat grain has three layers- Bran, Germ and Endosperm. Commercial mills usually split the wheat grain to remove the germ and bran layers of wheat during manufacturing and try to use only the endosperm of the wheat grain. This is done to increase the shelf life of the flour. These mills not just remove the high nutrient rich
parts of the wheat grain but further process the flour with chemical processes like bleaching, adding preservatives, etc., which makes the flour toxic for us by the time it reaches us for consumption.

The solution is just to go back to the basics. Yes, stone grinders are the key. They grind the entire grain so that you get the wholesome wheat flour with the magical ingredients of bran and germ.

Food for thought: If every society/ home installed their own Atta Chakki, it would do wonders for the health of all!

**Adulteration in Wheat:**

- Wheat flour is often adulterated with pebble straw, dust, weed seeds and damaged grains. Careful Visual examination can help you distinguish between grains and adulterants.
- Do not pick the flour if you notice more wheat bran than wheat itself. To test the adulteration, you can simply sprinkle some flour in a glass of water and check if the bran floats on the top.
- Wheat flour is often diluted with Boric powder, chalk powder and sometimes *Maida*.

**SPICES:** India is one of the top producers and consumers of spices such as cardamom, clove, black pepper, cumin, coriander, nutmeg, mustard seeds, cinnamon, fenugreek, turmeric, saffron and many more.

Spices act as strong detoxifiers and have great medicinal value, which is slowly being acknowledged, not just by India, but also by the rest of the world now. Which makes it even more important to understand how spices are processed and how they are adulterated.

Traditionally spices were bought whole and crushed using a special grinding stone called Amikallu by the women in the house itself. The low heat grinding ensured the nutrients remain intact and the process eliminated chance of adulteration.

Today, buying ready, processed spices, has greatly increased the chance of adulteration.

The best way to safeguard ourselves from adulterated spices is to buy whole spices and then grind them ourselves at home. Buy whole spices from farmers that you know are growing it the organic way. Buy local.

Many other common kitchen ingredients are adulterated like milk, jaggery, sugar, tea, coffee, at some stage of processing.

We have spoken extensively about the impact on health by use of adulterated in Kitchen ingredients. The other factor contributing to bad health is the highly processed ready to eat foods like canned foods, frozen foods, processed foods like breads, chips, jams, sugary drinks, etc. They are convenient yes, but they are not the best food choices and we all know it.

Natural foods like Fruits and vegetables are “alive” foods as they all get spoilt very soon, maybe within a week if not consumed. It is best to stick to as much “alive” food as we can. It is what our bodies require to flourish.

It is truly sad that almost all food today has become so toxic, that the toxins are flowing down and showing in our kids. There has come a time when we must wake up, and take charge of our health and of the world we are leaving behind for our kids!

**Common adulterations during processing of spices:**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>SPICES</th>
<th>ADULTERATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Black Pepper Powder</td>
<td>Addition of papaya seeds, starch and sawdust</td>
</tr>
<tr>
<td>2</td>
<td>Turmeric Powder</td>
<td>Addition of lead chromate, metanil yellow, chalk powder or yellow soap stone powder and starch. Substitution with other rhizomes e.g., arrow root.</td>
</tr>
<tr>
<td>3</td>
<td>Chilies Powder</td>
<td>Addition of brick powder, salt powder or talc powder, artificial colors or dyes, color, grit, sand, dirt, filth, saw dust, dried tomato skin</td>
</tr>
<tr>
<td>4</td>
<td>Asafoedita (Hing)</td>
<td>Addition of soap stone or other earthy material, starch, foreign resin</td>
</tr>
<tr>
<td>5</td>
<td>Coriander Powder</td>
<td>Addition of animal dung powder, seed removed coriander</td>
</tr>
<tr>
<td>6</td>
<td>Oregano</td>
<td>Addition of other similar herbs and plant leaves</td>
</tr>
<tr>
<td>7</td>
<td>Curry Powder</td>
<td>Addition of starch powder and sawdust</td>
</tr>
<tr>
<td>8</td>
<td>Cinnamon</td>
<td>Substitution with cassia</td>
</tr>
<tr>
<td>9</td>
<td>Cumin</td>
<td>Addition of grass seeds colored with charcoal, immature fennel</td>
</tr>
<tr>
<td>10</td>
<td>Saffron</td>
<td>Addition of colored dried tendrils of maize cob, sandalwood dust, tartrazine, coconut threads</td>
</tr>
<tr>
<td>11</td>
<td>Cardamom</td>
<td>Substitution with deoiled cardamom, artificial colorant (e.g. ‘apple green’, malachite green)</td>
</tr>
</tbody>
</table>

Let us all UNITE and START with tiny steps, one at a time as below:

1. Educate yourself and your children about good food choices.
2. Analyze your own kitchen ingredients.
3. Raise Questions. Write to Brands. Question your Farmer and local food store. Question your every food source on Purity and Processes adopted. When many consumers will question, change will have to happen.
4. Connect with local organic farmers, ask questions, visit their farms once in a way and observe the farming practices being used, make it a family outing.
5. Try to make a conscious switch to healthier food choices with your local organic farmers. Try to increase intake of natural foods that are “Alive” with shorter shelf lives.
6. If space and time permits, try growing and processing your own food as much as possible.

When we all stand together and demand clean food, nothing can stop us from getting what we want, because we are the consumer, and the power stands in the hands of the consumer.

So, ARISE! EDUCATE! TAKE ACTION!

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**Belly fat may lead to multiple heart attacks**

LONDON: Heart patients, please take note. Researchers have found that heart attack survivors who carry excess fat around their waist are at increased risk of another heart attack. “Abdominal obesity not only increases your risk for a first heart attack or stroke, but also the risk for recurrent events after the first misfortune,” said study author Hanieh Mohammadi from the Karolinska Institute in Sweden. Prior studies have shown that abdominal obesity is an important risk factor for having a first heart attack. But until now, the association between abdominal obesity and the risk of a subsequent heart attack or stroke was unknown. —IANS
What Is Herd Immunity?
WebMD Medical Reference Reviewed by Arefa Cassoobhoy, MD, MPH

With the rising number of cases of COVID-19 around the world, health officials continue to work to find the best way to protect the public from the disease. You may have heard health officials mention herd immunity as a possible way to contain the spread of COVID-19. Here’s what you need to know about herd immunity and how it may help slow the spread of the new coronavirus.

Herd Immunity
Herd immunity, or community immunity, is when a large part of the population of an area is immune to a specific disease. If enough people are resistant to the cause of a disease, such as a virus or bacteria, it has nowhere to go. While not every single individual may be immune, the group (as a whole) has protection. This is because there are fewer high-risk people overall. The infection rates drop, and the disease peter’s out. Herd immunity protects at-risk populations. These include babies and those whose immune systems are weak and can’t get resistance on their own.

How Do You Achieve Herd Immunity?
There are two ways this can happen. You can develop resistance naturally. When your body is exposed to a virus or bacteria, it makes antibodies to fight off the infection. When you recover, your body keeps these antibodies. Your body will defend against another infection. This is what stopped the Zika virus outbreak in Brazil. Two years after the outbreak began, 63% of the population had had exposure to the virus. Researchers think the community reached the right level for herd immunity.

Registrar cannot direct housing society to issue NOC to its member: High Court

Mumbai. The Bombay prime courtroom ultimate week stayed an order handed via a deputy registrar of co-operative societies within the town, directing a co-operative housing society at Dindoshi to factor no-objection certificate to considered one of its participants for development and alter of consumer of his premises.

“In my prima-facie opinion the Deputy Registrar of Cooperative Societies ex-facie didn’t have any jurisdiction and authority to factor this type of path to the petitioner society to factor a NOC as contained within the order,” stated justice Girish Kulkarni whilst staying order issued via the deputy registrar, P ward.

Performing on a grievance lodged via the member, the deputy registrar had on July 9, 2019 directed Shree Raghunandan co-operative housing society to factor vital NOCs to the member for registrar having factor such instructions as contained within the impugned order, stated justice Kulkarni.

The order used to be purportedly handed beneath Segment 79(2)(a) of the Maharashtra Co-operative Societies (MCS) Act, 1960, however justice Kulkarni opined that the deputy registrar had no energy to factor this type of path. In my prima facie opinion, it is obviously a dispute between a member and the society, which will require adjudication ahead of every other discussion board, stated the pass judgement on.

The pass judgement on stated segment 79(2)(a) offers with compliances to be made via co-operative societies and confers energy at the deputy registrar to factor vital orders to make sure the statutory compliances like submitting of returns and so forth.

“T’s tough to conceive that the character of the grievance as made via respondent no. 3 (member) ahead of the Deputy Registrar having factor Segment 79(2)(a) for issuance of inter-alia fireplace NOC and a NOC for enhancements can in any respect fall throughout the purview of this provision,” stated justice Kulkarni.

The pass judgement on added that to learn such broad powers to factor such instructions as contained within the impugned order beneath Segment 79(2)(a) would quantity to studying one thing into the supply which the legislature has no longer supplied for and if truth be told if this is the case construed would quantity to one thing opposite to the statutory scheme of the MCS Act 1960.

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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Keemat: September – October 2020
All of us want good health, free from infections, illnesses and ailments until our peaceful death as this daily prayer aptly put it.

An individual’s need for food and water, was, is and will always be the priority requirement, although without doubt personal hygiene is a close second. Personal hygiene includes brushing our teeth, eating wholesome food, excreting digested food, cleaning our body and bathing. Bathing or washing our body is one important means to maintain a disease free good health, by removing dirt, grime, sweat, sebaceous glands secretions, body odors, etc., boosting one’s self-confidence, even though physical and emotional well-being could depend on the person’s cultural upbringing also influencing its frequency and regularity. Hygiene has an important role in healthy living! According to WHO (World Health Organization) unfortunately only 39% of the world’s population enjoys hygienic sanitation services to keep themselves neat and clean having some access to water, soaps and shampoos.

THE HISTORY OF BATHING

The world’s foremost civilization, namely, the Vedic Indian civilization gives ample importance to regular early morning bathing by proposing many procedures and protocols one needs to routinely follow to maintain personal hygiene, avoid diseases and improve spiritual health. Ancient Greeks recognizing the benefits of regular bathing made use of public baths in ancient towns, by building bathhubs, handwash basins and foot bowls. The Romans who believed that cleanliness is a crucial aspect for health and fitness went a step ahead than Greeks by building “Thermae” (i.e., elaborate public bathhouses) in towns and cities declaring public bathing as a leisure activity to relax, recover, socialize and do business. Ancient Chinese mixed herbal drugs, flowers or herbs for therapeutic treatment into hot bath water to restore exhausted levels of Yin, (i.e., cool, watery calming energy) in Chinese medicine. Other traditional bathing rituals include the Turkish Hamam, Japanese Onsens, Russian Banyas, etc.

During the Ottoman rule, every town in Turkey had at least one Hamam to offer the luxury experience to people, to relax in a steam room first followed by body massage, brushing and bathing in cold water. The Russian Banyas also give emphasis on steam exfoliation followed by a dip in a cold-water pool to improve blood circulation, increase the immune system thereby relieving tension and exhaustion. Japanese Onsens were traditional outdoor public baths using natural hot water having high mineral content from geothermically heated springs having powers to heal aches, pains, skin ailments and diabetes. In England during, Victorian times, medical practitioners advised patients to take cold water baths as a painkiller, for treating insomnia and improving poor health. Charles Darwin claims total cure from vomiting and general sickness on using the Malvern Water Cure, which involves daily scrubbing and soaking the body in the cleanest local spring water. Lady Cleopatra, bathed in asses’ milk, for skin-softening.

Incidentally, today some athletes advocate ice-cold water baths, to recover and repair body cells and drain lactic acid built up that happens during intense exercise. Bathing, thus has a detailed history and for centuries people are submerging themselves in hot or cold water either for personal hygiene or leisure and enjoying the experience. Modern science today scientifically proves that regularly bathing in water regardless of its temperature ensures optimal health relaxing body and mind.

BATHING IN HINDU TRADITION & CULTURE

Hindu religious books, the Vedas, Upanishads, Sutras, etc., talks of taking a “bath” as the most important daily ritual for all persons to maintain good personal hygiene. It further advises that saints should bathe three times a day, married people two times and a bachelor at least once daily to clean, refresh and to relax the mind.

Indian tradition strongly believes that all should bathe at dawn i.e., the transitory period between darkness and daybreak, viz., 2 ghatikas (1 ghatika = 24 minutes) or 48 minutes before sunrise or at dawn when the sky appears red. The time before dawn comprising of 3 ghatikas (72 minutes) is the Brahmanamuhurtha or Pratha Kaal (time). According to religious traditions during Brahmanamurt, a person is mentally stable and bathing during this period, imbibles Sanskars (subconscious subtle impressions) of holiness, chastity and purity as deities have powerful positives waves several times more active, helping the person absorb Chaitanya (Divine consciousness). A person who is holy, chaste and pure viz., Sanskari, is able to acquire the three Shaktis (Divine Energy) of Sankalp (resolve), Ichha (will) and Kriya (Physical performance of deeds) helping one absorb the energy of knowledge (Dnyan-Shakti) and becoming one with God’s Chaitanya.

Bathing gets rid of negative Rajasik-Tamasik predominant energy components, enveloping a person, making every human cell in the body conducive in absorbing Sattvik (Sattva-predominant) waves or Chaitanya easily from the atmosphere. Bathing stabilizes a person’s external environment, increases strength, radiance, bestows longevity and expels offensive components that brushing of the teeth and evacuation of feces generates. An early morning bath before sunrise, purifies the conscious and subconscious minds helping a person absorb the Sattvik waves getting rid of nightmares. One basic reason to have a bath before performing puja (Ritualistic worship), is to quickly become introverted and conducive with the atmosphere enabling one to absorb positive waves of the deity.

The physical human body is majorly composed of water. When practicing the yogic Matsyasana (fish posture) the intention of the yogi is to become one with water thereby controlling the water present in our body. Tantra allies‘ water with the sense of taste, trusting that bathing sharpens human chemoreception. It also tells us that bathing before sex increases pleasure. During sleep at night the nine holes present in a human fill up with dirty waste products that the early morning bath effectively removes all this enabling the body to do its daily duties afresh. A cold-water bath refreshes and releases negative ions strengthening a person’s psychic forces (It was therefore customary for Indians to wash their feet and hands before entering any homes in olden times) having beneficial physical, mental and spiritual effects, eventually giving strength, sensitivity, longevity, effulgence, purity, knowledge, determination giving one peace. It removes unhappiness, lamentation, degradation and impure thoughts and is therefore highly glorified in the scriptures. In short, bathing counters all the ill effects of sin, giving a joy of liberation in addition to personal privacy.

In Hindu tradition, water stands for rejuvenation and prosperity – the male-female principle. Lord Vishnu is the lord of water and his consort Lakshmi the head of prosperity. Bathing in a river therefore activates the forces of Vishnu and Lakshmi in our life. The Lakshmi Tantra, advice us that one should bathe the body with natural running water combining it with breath control; then...
apply fragrances and ointments that will making a person suitable for spirituality by destroying both inner and outer dirt. The following Hindu Puranic tale highlights the illusory character of water or the “Maya” that encompasses human life and death.

Narada the celestial bard once asked Lord Vishnu to explain the illusive creative power or the meaning of “Maya” of the gods. Vishnu said, that he cannot explain it and Narada must experience it to understand. “I cannot believe in Maya, if you cannot explain the power you use to create it”, argued Narada.

Vishnu realized that if ignorant human beings like Narada did not believe in Maya that gods employed, then their fate will become uncertain. So, Lord Vishnu left his abode taking Narada for a walk through a desert. Vishnu feigning thirsty sat under a tree and asked Narada to get some water in a pitcher from an oasis, telling that he will clarify the mystery of Maya on his return with the water.

Narada approached the oasis and finding a well beside a house, knocked at the door. An attractive girl opened the door and smilingly called for her parents, who then requested Narada to have some food and take rest for a while before taking the pitcher of water. After some more years, Narada agreed, even though the beautiful girl’s eyes did remind him of his promise to Lord Vishnu. As night fell soon, the girl’s parents counselled him to stay and spend the night. Narada awoke, in the morning and saw the beautiful girl bathing by the well; when her parents presented her hand in marriage to him. Narada very excited readily agreed forgetting all about the pitcher of water he had promised to bring for Lord Vishnu.

Nearly fourteen years passed by and during this period the couple had a boy and a girl. Narada’s parent-in-laws died and he inherited all their property. After some more years, came heavy rains with floods washing away his house. Narada waded through the floodwaters by placing his children on his shoulders and holding his wife by hand. He tried hard to grab hold of his wife, pulled away by the strong water currents and in the process lost hold of his two children. Soon, his entire family vanished in the gushing flood waters with Narada losing his consciousness. When he awoke, he was in Lord Vishnu’s lap under a tree. Vishnu’s eyes reminded him of his beloved wife.

“Narada, where is the water you promised to bring to quench my thirst?” inquired Lord Vishnu. Horror-struck Narada blurted out, “Do you mean to say that everything I experienced did not occur?” Lord Vishnu only smiled enigmatically. Probably, Lord Vishnu was teaching Narada “Maya”, the illusory character of life and death on earth, symbolically interwoven by water the story’s central lifeline.

TYPES OF BATHING

Most regions in India are hot and dusty; therefore, bathing is necessary to get rid of body dirt and grime. Many ancient Hindu texts symbolically highlight the therapeutic significance of Snanam (bathing) and over centuries it has become a routine in daily life, public congregations and festivals like the Kumbha and Magha Mela near holy river banks.

Hinduism prescribes many kinds of Snanam.

- **Nitya Snanam**: Normal way of bathing daily while at home.
- **Vaaruna Snanam**: Normal bathing in warm or hot water.
- **Malaharsha Snanam**: Oil or herbal bath.
- **Aagneya Snanam**: After the normal bath, apply Viboothi (Holy ash offerings in Shiva Temples) all over the body continuously chanting the name in praise of the almighty Lord Shiva. “ॐ नमः शिवाय।”
- **Dhivya Snanam**: When there is bright sunshine along good rain, saints take bath in the rainwater – a rare occurrence.
- **Mantra Snanam**: On certain auspicious occasions such as Birthday etc. Storing water in a designated vessel and sanctifying it by continuously praising the Name (Japa) of God (known as Ishta Devatha), offer Pujas (special Vedic prayers), etc., and take bath with this holy water.
- **Prokshana Snanam**: While performing Sandhya Vandhan (Praising the Sun God and Goddess Gayathri) a Nitya Karma (daily duty) and other Homam (Hawan), dipping holy grass (known as Dharba) in water and sprinkling the water on the head while reciting the following Rigvedic mantra.

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ॐ आपो इह छा मयोभवः। तत न उर्जः दधातान।
अहं रणाय शक्तिः। यो विश्वितमो रसः।
तस्य भाजयतेह न। उभारन्तः मातरः।
तस्मा अर्हते।माम व। यथे क्षयाय जिवघ्नः
अपि जनयथा च न। भृमुशः।
```

“Waters! You are health giving, give us energy, so that, we may look on great delight.
Give us a portion of the sap, the most beneficent you have, like mothers longing with love.
So gladly do we go with you, to the home for which you make us live. Waters! Give us progeny.
Gracious be divine waters for our protection, be here for our drink and stream on us bliss and happiness.
Sovereigns over precious things, and rulers over men, Waters! We seek healing balm of you.”

Within waters – so Soma has told me – all healing balms and Agni, benign to all.
O waters, teem with medicine to keep my body safe from harm, so that I long may see the sun.
Whatever sin is found in me, whatever evil I have wrought if I have lied or falsely sworn waters remove it far from me.
The waters this day I have sought, and to their moisture have we come O Agni, rich in milk, come you and with your splendor cover me”.

- **Gowna Snanam**: When someone is unwell having fever, etc., but must take a bath to fulfill religious duty/customs, then the person takes bath wetting his body except the head.
- **Kaapila Snanam**: When someone is seriously unwell and unable to bathe as described above, then the person takes a sponge or towel bath.
- **Kaamy Snanam**: For fulfilling a certain obligations and special purpose prayer. Taking bath at rivers Ganges, Temple ponds, Sea beaches or any other festival places.
- **Kriyaanga Snanam**: Bathing prior to participating in ceremonies for Pithrus (ancestors) or special Pujas, etc.
- **Kriya Snanam**: Bathing at auspicious rivers, ponds, etc.
- **Kshethra Ganga Snanam**: Taking a bath at temple lakes or ponds near an important shrine, etc.
WHY BATHING IN THE MORNING IS IMPORTANT

Bathing at the Brahmamuhurt or dawn is ideal, even today though it is inconvenient for most people. Alternately, bathing as early as possible after sunrise is preferable instead of bathing late in the afternoon. During morning hours, the atmosphere is full of positive Sattvik waves (Apa-tattva) that touch the physical body and freshly bathed is very sensitive to the absorption of waves from the atmosphere. Rajasik-Tamasik waves predominate the atmosphere in the afternoon and during bathing the body absorbs these negative waves making only the externally body clean even though the body continues to remain unclean internally.

In the morning Sattvik waves are high in the physical and subtle human bodies. Bathing increases it further and retains it for a longer period. However, at night Tamasik predominant waves are high and by bathing Sattvik in the physical and subtle bodies increases to a lower extent and retains for a shorter time. Individuals benefit to a lesser extent on bathing at night, compared to morning and therefore bathing in the morning is preferable.

According to Kurma Purana, without an early morning bath, a person remains impure, unfit for performing civilized daily activities. Sick persons alone can avoid bathing. Eating food without having a bath is as good as eating filth because the food is as impure as the person is. The Padma Purana states that anyone who does not have a morning bath is a sinner fit to suffer.

The Vedic culture believes bathing to a sacred act prior to meditation on the Lord or recitation of a prayer. The scriptures say that an early morning cold water bath can purify a sinner, washing away all external and internal contamination, any influence of sleep (waste products that fill the nine holes in the human body) and evil dreams, revitalizing the subtle body with strength, compassion, long life, purity and mental peace. Bathing removes unhappiness, dirge, squalor and bad thoughts and increases one’s determination and knowledge to enable the person to begin their routine in a fresh state.

The Garuda Purana praises bathing saying that water nourishes and sustains the human body and spirit, purifying and uplifting an individual from the ordinary to the mystical. It further says, that bathing in mountain water, spring water and collected rainwater in that order are highly beneficial having positive physical, mental and spiritual effects. Devout Hindus, even today invoke the river Keemat: September – October 2020

**Aatma Prokshana Snanam** (when a person is unable to carry out Kriya & Kshetra Ganga Snanam due to any reason.) Taking some holy water from the auspicious river, pond or lake on one’s right palm and drinking it remembering Lord Vishnu also sprinkling it on the head one becomes pure as if bathing. This mantra supports this quick bathing method to purify oneself, while taking the name of Lord Vishnu.

**Naimithiga Snanam:** Taking a bath before, during and after an Eclipse (Lunar/Solar) or after taking part in any untoward incidence like funeral.

**Vaaya Veeya Snanam:** For specific purposes. Bathe by feeling the wind when the Cow’s tail is swinging. This acts as a remedy for certain bad Omens.

**Ganapati Ch Yamuna Ch Govardan Sarvasva Krutu**

In this water, I invoke the presence of the divine goddesses from the rivers of the Ganga, Yamuna, Godavari, Saraswati, Narmada, Sindhu & Kaveri goddesses in the bathing water with a request to bless them while bathing. One can take a bath, either in warm water soaking luxuriously or take a quick cold yet refreshing shower.

**WARM OR COLD BATH?**

Today many different mental ailments and phobias exist, probably aggravated by stress, a challenging economy, social rejection, or ever-increasing responsibilities at home. Yale University, studies show that bathing can benefit persons suffering from mental illnesses, providing the physical warmth an embrace provides, lessening the feeling of loneliness and isolation. Another study suggests that just holding a hot or warm cup of coffee positively affects persons, making them more trusting and generous. Warm baths also promote mental focus, better sleep, stimulate blood circulation, ease migraine pain, so recommended before sleeping.

Medicinal benefits of bathing focus on two areas, viz., psychological relaxation and targeting specific conditions. A 2016 Loughborough University investigations by Dr. Steve Faulkner on the effect of a hot bath on blood sugar control (a measure of metabolic fitness) and on energy expended (calories burned) show that bathing results in burning around 140 calories as much as a half-hour walk. The overall peak blood sugar was about 10% lower after having food when participants took a hot water bath in comparison to when they exercised.

Bathing in a warm bath improves blood circulation, stimulates hormones endorphins giving a feeling of wellness, rallies respiratory functions helps one breathe better. It calms the nervous system, reduces tremors and inflammation alleviating chronic aches and pains. Warm water bath also moisturizes and hydrates body skin, making the individual simply feel good, bringing a sense of calm comfort.

A 2015 research paper from Finland, suggests that frequent saunas can reduce the risk of having a heart attack or stroke in men. The theory that passive heating improves cardiovascular function received additional boost when the University of Oregon published a study the following year showing that regular hot water baths can lower blood pressure. Moreover, certain studies further confirm that passive heating raises nitric oxide levels that dilate blood vessels and reduces blood pressure improving peripheral circulation in people with type 2 diabetes.

Philip Hooper of McKee Medical Center, Colorado, studies in 1999, says that people with type 2 diabetes show improvement in body weight, blood sugar control and reduced dependence on insulin establishing the true potential of how water bathing and passive heating as a therapeutic tool. A 2002 study by Neil Morris, a psychologist at Wolverhampton University, finds that daily bathing improves psychological wellness radically in a fortnight significantly lessening pessimistic feelings, about the future, increasing the hedonic tone and pleasure. Many other types of research also show that regular bathing reduces stress hormone cortisol levels and boosts the feel-good hormone serotonin.

Warm water bath lessens pain related with anal fissures, hemorrhoids and piles. It can also cause the sphincter to relax and help to heal wounds following surgery. Regular bathing improves the strength of the urinary system and progresses the natural birthing process. Bathing in hot water kills bacteria, improves...
immunity, recovers damaged cells, decrease the risk of necrosis and survival rate of some cancers. Regulating human body temperature through bathing is the most pleasant quickest way.

Experts say that the optimal bath time is about 10-20 minutes with water around 32-35°C that opens the skin pores, encourages sweating, releasing toxins. Temperature higher than 44°C, could increase blood pressure, scald body skin and strip away the protective acid mantle, thereby making skin tight, dry and itchy. During winter taking a hot water bath can surely warm one up and taking a cold-water bath in summer is undeniably the best way to cool off. Evidence shows that bathing, in cold or hot water has many health benefits without adverse effects, however, consulting a health professional in case of serious pre-existing health conditions or diseases is necessary.

Very-hot baths, however put the body under heat stress, disturbing the body's internal temperature regulation, to recalibrate and cool down to normal. Heat stress, according to Harvard Health, strains human heart and heart patients should avoid hot water bath and saunas. Persons who get urinary tract infections (UTI’s) frequently, should avoid bathing in bubble baths because the exposure to bacteria from the rectum can end up entering the urethra and therefore bathing for health benefits is not worth the pain of UTI’s. After bathing, pat (do not rub) the skin dry retaining some water on the skin, reducing any risk of dry skin occurs. Wash the towels and dry after each use as bacteria multiplies in moist towel spreading infections. Avoid the use of sponges and flannels.

Recent studies show that cold shower bath triggers the “blue spot” in the brain releasing hormone noradrenaline, alleviating depression. The hormone jolts positive vibes of energy improving mental alertness and deep breathing that improves blood flow to the brain and other important organs. Thus, both the hot and cold baths only have positive effects on mental, physical and emotional well-being. The choice of using a bath or a shower is individualistic although we presume that a shower uses less water than bathing.

WHEN YOU CANNOT AVOID A BATH

Chanakya, the world’s best-known scholar, says that it is very important for humans to wash or clean themselves up after an oil massage, attending a funeral, after a sexual intercourse, after a haircut or after touching a corpse or a person dealing with a dead body for personal wellbeing as this is a human’s greatest riches. After death, a body begins to disintegrate and loses its capacity to fight microbes and as the Pancha-tatva absorbs the human body, it releases the bacteria from the dead which spreads itself among the people attending the rites in a funeral ground and therefore one should bathe before entering our home or before touching someone. A couple after having intercourse or getting intimate, become distinctly impure and must clean up. Chanakya says that, this is critical for general cleanliness and wellbeing.

**OIL BATH**

Indian tradition promotes one habit strongly for human wellbeing i.e., to daily do abhyanga (applying coconut or sesame oil) after regular exercise, in the anulomai gati (direction of the hair) all over the body (or at least to the face, scalp, into the ears, feet) and take a warm water bath. Abhyanga keeps one’s skin healthy and young, calms Vaata Dosha, reduces premature aging, nurtures and reduces body weariness, clarifies the eyes, helps to get a sound sleep.

Modern science finds that Abhyanga statistically reduced subjective stress, blood pressure and heart rate and increased substantial muscle strength in a study on basketball players.

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However, the study also shows that not doing Abhyanga for a fortnight reduces muscle strength indicating the importance of regular Abhyanga every day after exercise.

Abhyangsnan means bathing at dawn in lukewarm water, after Abhyanga or oil massage that provides momentum to the Chethana bestowing immortality to the body by stimulating body muscles and activating the Panchapranas (Five vital energies) expelling unwanted gas energy by burping, yawning, or as waves through the eyes, ears, nose and skin pores (reddening of the eyes and face is an indication of successful elimination). Rubbing oil during massage activates the Suryanadi (sun channel) makes the body radiant and vital, destroying Rajasik-Tamasik predominant waves at the Chaitanya level, increasing Sattvik enabling a person to progress from doing daily karma to Sadhana (spiritual practice).

Another daily practice that tradition promote is to do Uvdartana that is scrubbing the body with medicated powders (like turmeric, triphala (dried powder of three fruits)) along with an equal quantity of gram flour some friction on the body after, abhyanga and prior to bath (See Table). Modern scientific research on healthy volunteers shows that Uvdartana significantly reduces stress, body mass and weight, waist size, skinfold thickness and improves skin texture.

Sage Bharadwaj, mentions that one should bathe in Brahmamuhurt, i.e., early morning hours before sunrise at least 2 times a week using Ghee (Cow Milkfat) and/or oils of Coconut, Sesame, Mustard and Castor either singly or in combination (Tailams) or at least on, “Chaturdashi” (One day before full or new moon or 14th tithi) in order to give strength to body’s vital organs. Texts advise males to take bath on Wednesdays and Saturdays while females must take bath on Tuesdays and Fridays, forbidding all from taking an oil bath on holy auspicious days.

Thaila Snanam (oil bath) even though is beneficial, it does make one somnolent and drowsy. Ayurveda says, that “Vatha-Pitha-Kapha” the vital energies in our body, should always be in balance and having an oil bath upsets this balance and one feels sleepy.

However, the study also shows that not doing Abhyanga for a fortnight reduces muscle strength indicating the importance of

### Oil Bath on Diwali

Diwali falls on the dark fortnight on the 14th day of Ashwina month, (Ashwaja Krishna Chaturdashi), [Naraka Chaturdashi day]. If it is a Sunday, with Swathi star ruling, then scriptures advises a scented oil bath. Even though scriptures forbid taking oil bath on auspicious holy days, Diwali is an exception, due to Sri Krishna’s boon to Nakarsura, promising to celebrate his death by taking an oil bath. In addition to this, there is also the belief that bathing on Diwali day removes bad luck as Goddess Lakshmi is present in the oil and Mother Ganga even in warm water.

### How to take an Oil Bath?

- Smear oil and massage the body from head to toe during application. Massage and rub the head with more oil.
- Apply oil on the face, eyes and ears, nasal passage, hairy body parts, armpits, groin, anus, etc.
- Apply oil on other parts of your body, without squeezing excess oil from the head. Use fresh oil.
- Applying oil all over the body leave it for 30 - 45 minutes. Then wash the oil off with lukewarm water, starting from the head with Soapnut/Soapberries (Sapindus mukorossi) or better known as Reetha/Ritha.
- Having a bath in water-soaked with mango or gooseberry or turmeric leaves is beneficial.
- Strictly avoid sleeping during the day after having an oil bath.
- Consume only easily digestible foods like cereals, pulses, etc., and avoid traveling or driving a vehicle after an oil bath.

### OTHER HEALTH BENEFITS OF OIL BATH

- It clears oily substances from the skin facilitating to transfer internal body heat from to move outside, enhancing our
kavasam (auric field), strengthening our spirit’s anatomy attracting prosperity (positive people) and spiritual energy, repelling negative people and energies.

- It treats migraine, depression, stomach disorder, diabetes, jaundice, sexual disorder, other viral diseases and cancer.
- It helps in getting deep sleep increasing concentration in our daily activities.
- It improves the complexion, skin texture preventing dry skin build-up on elbows, knees, feet and hands and health of hair.
- It is extremely useful to remove dust particles from our eyes and improve vision.
- It reduces mental fatigue and physical stress and is good for the nerves.
- It calms strained muscles and increases the quality of a nursing mother’s breast milk.

The ancient Hindu texts had successfully merged science and grounded it into daily routine in the name of various spiritual practices, not only for hygienic reasons but also with a view to cures certain diseases. However, modern lifestyle today has largely made the concept of oil baths in India obsolete. Professionals in the skincare and healthcare sectors recommend cleaning the face, underarms and genitals once a day and not more often as unnecessary regular washing can remove essential natural oils present naturally on human skin leading to skin irritation. However, washing hands frequently is important as they encounter many potentially harmful bacteria.

World Bathing Day (WBD) on June 22 honors and celebrates all the diverse rituals and traditions associated with bathing, cleansing and rejuvenation. It also draws attention to an unfortunate fact that one third of the world population currently lack access to clean bathing water a critical health issue. Water related diseases kills around 1,000 children every day. Women and little girls spend over 200 million hours gathering water for survival. On WBD bathers across 50 countries or more share fun social media photographs raising awareness on the importance of water and to affirm people’s commitment to ensure that water is available to all for regular bathing.

Bathing is an essential holistic practice for good health that lifts mood, reduces stress and can wash away emotional and physical ailments. Professor Marc Cohen, Chairman – Bathe the World Foundation aptly put it right when he says, “Bathing is an enjoyable, peaceful, social, multicultural and multigenerational activity that spans cultures, as well as spiritual and religious traditions and plays a critical role in maintaining human health, comfort and dignity”. Adding essential oils to the bathwater, further enhances mood, relaxes uplifting energy. Bathing helps relieve muscle pain, stiffness and arthritis.

The marvels of Epsom salt (Magnesium Sulphate) water bathing is well known for over 100 years in soothing body, mind and soul. It relaxes the nervous system, cures skin problems, soothes back pain and aching limbs, eases muscle strain, colds and congestion, also drawing toxins from the body. Stress drains the body of magnesium increasing adrenaline levels. Epsom bath salt dissolved in warm water on absorbing through the skin replenishes magnesium levels in the body helping produce serotonin, within the brain creating a feeling of calm and relaxation. Magnesium also increases energy and stamina by encouraging the production of ATP (adenosine triphosphate), helping one to look and feel better. It also helps one to reduce irritability by lowering the effects of adrenaline creating a relaxed feeling, help muscles and nerves to function properly improving concentration and sleep.

Magnesium deficient persons, on soaking their body in Epsom salt bathwater absorb Mg that regulates enzymatic reactions viz., blood sugar levels, nerve and muscle, blood pressures, cell protein and bone formation. Epsom bath salt bathing regulates electrolytes in the body, ensuring proper functioning of the muscles, nerves and enzymes, improving blood circulation, helps flush harmful toxins from the cells, by a process called reverse osmosis relieving inflammation and pain, calm the nerves soothing the body, mind and soul for overall comfort and well-being!

Bathing is one important hygiene routines that we all instinctively follow since childhood, believing that it washes away our troubles. Warm water eases pain and aches, steam assuages cold and subconsciously comforts us reminding us of being in our mother’s womb. Most importantly having a bath gives us an opportunity to forget our hectic busy lives, by feeling good, giving precious minutes of peace and solitude and a sense of freedom.

<table>
<thead>
<tr>
<th>Udvartana Materials</th>
<th>Traditional Usage in Siddha &amp; Ayurveda</th>
<th>Scientifically Proven</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acacia concinna Seekakai (Indian Name)</td>
<td>Astringent</td>
<td>Micro bacterial activity against gram (-ve) bacteria.</td>
</tr>
<tr>
<td></td>
<td>Detergent</td>
<td>Anthelmintic activity in comparison to piperazine.</td>
</tr>
<tr>
<td>Smilax china Chopchini (Hindi) Kumarika (Bengali) Parangi pattai (Tamil)</td>
<td>Depurative (Purifying and detoxifying) Anti-viral Anti-fungal</td>
<td>Anti-noiception. Anti-hyperuricemic. Anti-inflammatory. Appreeciable activity in HaCaT (Cultured Human Keratinocyte) cell line against anti-psoriatic activity. Eliminates and/or Reduces, the granular layer in psoriatic lesions.</td>
</tr>
<tr>
<td>Vigna radiate Green Moong (Hindi) Pachaiayarav (Tamil)</td>
<td>Anti-septic Anti-microbial Anti-oxidant</td>
<td>Treats various skin diseases and gives glowing skin.</td>
</tr>
<tr>
<td>Catunaregam Spinose Mountain Pomegranate Mainphal (Hindi) Seru-karrai (Tamil)</td>
<td>Anti-oxidant Anti-inflammatory</td>
<td>An anti-inflammatory Agent.</td>
</tr>
<tr>
<td>Albizia Odoratiaaima Uelanthol Bark Powder Ceylon Rosewood Karu Vakai (Tamil) Kali Siris (Hindi)</td>
<td>Anti-helminthic</td>
<td>Cures skin ailments especially psoriasis.</td>
</tr>
<tr>
<td>Madhuca longifolia Mahua, Mahuwa (Hindi) Elupaipunnaku (Tamil)</td>
<td>Astringent Disinfectant Anti-helminthic</td>
<td>Excellent wound healing activity.</td>
</tr>
</tbody>
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Keemat: September – October 2020
Air Conditioning May Be Spreading COVID

By Brenda Goodman, MA, WebMD Health News, Reviewed by Michael W. Smith, MD

As COVID-19 cases rise rapidly, some scientists believe there could be an important, but overlooked factor in the spread of the virus in the region—air conditioning. Just as chilly winter temps create the perfect conditions for passing colds and flu—driving people indoors and into closer proximity for more hours of the day where it's easy to swap germs, researchers believe broiling heat could be having the same effect, sending people indoors where whirling air conditioners are running full blast.

"You go indoors for the cool, just as in the northeast and other cool places you go in for the warmth in winter, so you're less socially distanced," says Edward Nardell, MD, professor of environmental health and immunology and infectious diseases at Harvard's T.H. Chan School of Public Health. "You're more likely to be touching the same surfaces that have been contaminated by people speaking and coughing etc.," he says. And that's not the only problem.

Air conditioning is also risky because of the way air handlers work. When outdoor temperatures are extreme, HVAC systems adjust the mix of fresh air they pull in to save energy. That means the hotter it is outside, the more indoor air recirculates, which means, "You're breathing a higher percentage of the same air that other people are exhaling," Nardell says. If someone in the building is shedding the new coronavirus, it can build up in the recirculated air.

And this may seem obvious, but air conditioners have fans that blow the air around. That gives the smallest viral particles—aerosols—extra lift to say suspended in the air for longer. "The air currents that are produced by air conditioners and also fans and other air moving devices can carry particles further than they might otherwise go," he says. Air conditioners also remove moisture from the air, "and we know viruses prefer dry air," he says. In certain situations, that combination of factors may create the perfect conditions for contagion.

Emerging Evidence Points to Airborne Transmission

Studies of air conditioning come as more evidence emerges about airborne spread of COVID-19. In a commentary published this week in the journal Clinical Infectious Diseases, an international group of 239 scientists have appealed to "national and international bodies" including the World Health Organization, to recognize this potential for airborne spread.

"We're pushing because we need very clear, consistent messaging to the world," said Shelly Miller, PhD, a professor of mechanical engineering who studies indoor air quality at the University of Colorado at Boulder. Miller was one of the chief proponents of the commentary. "This virus is opportunistically airborne, you can get it by inhaling it," she says.

Miller and others believe that WHO and other public health agencies have a blind spot when it comes to airborne transmission. "Based on our assessments of outbreaks, air sampling, and animal studies and we have just as much evidence to show that airborne transmission is happening as is surface transmission, so we need clear guidance for how to address this," Miller says.

In its latest press briefing, WHO experts responded to the communication, and said the agency would be publishing a scientific brief summarizing their view of the science shortly. "We acknowledge that there is emerging evidence in this field," said Benedetta Allegranzi, MD, WHO's technical lead for infection prevention and control, "We believe we have to be open to this evidence and understand its implications regarding the modes of transmission and the precautions that need to be taken," she said.

The Role of Air Conditioning

So far, there are just a few studies pointing to the role of air conditioning in the spread of COVID-19. They indicate more research in the area is needed. In July, Chinese scientists published a short study detailing the results of their investigation of a cluster of COVID-19 cases linked to the same restaurant. The 10 diners who fell ill were all sitting at tables on the same side of the room. The tables were spaced more than 3 feet apart, though, indicating that the virus probably wasn't being passed through larger droplets, which fall out of the air pretty quickly. Instead, they think "strong airflow" from a wall mounted air conditioner probably spread aerosols, or "micro-droplets", from a single infected, but asymptomatic person over the tables, infecting 3 different families.

In another study, which hasn't yet been peer reviewed, researchers swabbed three different HVAC units at the Oregon Health and Science University Hospital in Portland. Then they checked their samples for the presence of genetic material from the SARS-CoV-2 virus. They were positive in 1 out of every 4 samples taken. "We found it in multiple locations within the air handler," says study author Kevin Van Den Wymelenberg, PhD, a professor of architecture and director of the Institute for Health in the Built Environment at the University of Oregon in Eugene. A similar study, from the University of Nebraska Medical Center, detected genetic material from the virus in air samples collected from rooms of COVID-19 patients, even from more than 6 feet away.

Van Den Wymelenberg says their study can't prove that the remnants of the virus they picked up could have actually infected anyone. To know that, they would have had to try to grow their samples alongside cells in a petri dish and watch to see if those cells were infected. Those are expensive studies to perform and they require a specialized lab certified to handle highly contagious germs—called a biosafety level 3 lab. Those are less common, and they're all currently slammed with projects. But he says his study does show that genetic material from the virus is making it into the machinery of massive air handlers in hospitals, even ones that are using good filters, and he thinks that should make public health experts closely consider air conditioning as a vehicle for virus spread.

Steps for Safer Indoor Air

Miller says that the easiest thing to keep the virus from building up inside is to bring in more outdoor air. In homes, that means opening windows and doors regularly to let fresh air in. That's harder to do in commercial buildings. "What we've been recommending to minimize risk indoors is to provide 100% outside air, which you can't do if you're trying to heat or cool because it just costs way too much money," she said. Another strategy to reduce the risk of being indoors is to kill airborne viruses with special wall or ceiling mounted boxes that emit short-range UV radiation. This kind of UV light doesn't damage skin the way sunlight does, but still zaps harmful germs. These so-called upper-room germicidal systems have successfully controlled outbreaks of other airborne viruses, like tuberculosis, Nardell says.

Finally, you can invest in an air cleaner. Miller cautions that if you go this route, you need to do a fair amount of homework first, learning about things like a machine's clean air delivery rate, or CADR. "I purchased an air cleaner strictly to operate when and if somebody in my household gets sick so we can reduce the viral load in my house air," she says. Ionizing cleaners don't work, she says. Miller recommends checking the website of the Association of Home Appliance Manufacturers (AHAM) to find a good air cleaner.
A dog experiences the environment mostly through its nose and likewise a bat through its ears, but humans depend on sight using their sense of sight more than other senses. A black and white world will be quite dull with us only seeing shapes and detecting movements both although very important; but seeing color gives us many advantages, e.g., telling us what is ripe and what is rotten, or say what is the danger hiding behind the grass, etc..................

Why are there so many colors in the world?
Human eye sees only three colors as our eyes contain three types of color sensing cells called cones each sensing one color namely red, green and blue. The cones in our eyes responds rather broadly to the light that comes in, with some red light stimulating the green cones and to a lesser extent the blue cones, some blue light will stimulate the green cones and the red cones a little bit less and so some green light stimulating the blue and red cones. Colors of light that lie in between the colors the cones receive best stimulates two or more cones at the same time. We see light that stimulates red and green cones at the same time as yellow. Violet light stimulates the blue and the red cones.

How do you make a fluorescent light?
Some toys glow in the dark, fluorescent colors in clothing and highlighting markers seem to glow even when it is not dark because they contain chemical compounds called phosphors. A phosphor absorbs light of one color and stores the energy in the molecule (excited state) releasing it later as light and heat. Since losing some energy as heat, the light that comes out has lesser energy than the light that went in. Light with less energy is redder in color.

To make a fluorescent light, we start with light that has a lot of energy (light with shorter wavelength). If light has a lot of energy, it moves so far in the blue direction, past violet into the ultraviolet, which human eyes cannot see. A fluorescent bulb is a tube of glass that has a little bit of mercury in it and very little else (vacuum). When there is electricity the mercury vapor, gets excited emitting ultraviolet light, as well as some green, blue and a little bit of red light. Now, if we coat the inside of the tube with glow-in-the-dark phosphors it absorbs the ultraviolet light, emitting exactly the colors we require. Adding little bits of each color of phosphor can tune the light to be of any shade of white or any other color, even simulating sunlight or a bluer or redder light as desired. As mercury vapors emits mostly light and very little heat, fluorescent lights use less energy than incandescent lights (having tungsten filament that needs to heat up to glow) with the same brightness.

How do you make colored milk?
We can color milk by either adding or taking away something. Particles and droplets in the milk reflect (scatter) light that hits them, making milk white in color. Removing fat droplets from whole milk, makes it look slightly bluish like nonfat milk. When we add powdered cocoa, the cocoa particles absorb a good deal of the light that hits them, reflecting enough red and yellow to appear brown. The milk adds white reflections, resulting in a lighter shade of brown than that of the original cocoa powder. Adding red food color makes pink milk as the red dye absorbs green and blue light and since milk adds white, it gives us only pink. Due to fat droplets on the incident light, it is difficult to get deep, dark colors when adding dyes to milk, that even adding black Indian ink will only makes the milk gray and not black in color.

What makes disappearing ink disappear?
Common disappearing inks are based on an acid-base indicator called thymolphthalein (see figure), that absorbs visible light when alkaline and becomes colorless in a neutral or acidic solution.

In blue ink, adding sodium hydroxide (lye), a strong alkali, makes the solution basic (alkaline) and so will be blue. When the ink soaks into paper/cloth, the surface area in contact with the air increases, making it absorb carbon dioxide from the air. Carbon dioxide mixes with water forming carbonic acid, neutralizing the alkali, forming sodium carbonate. This solution is pH neutral and is no longer blue in color but colorless.

We can make it blue again by just adding an alkali or lye, such as baking soda or ammonia.

Why is butter yellow?
Cow milk contains a lot of carotenoid pigments in the butterfat that when skimmed off and churned into butter, that is yellow. Homemade butter is seldom as dark as yellow color butter we buy from a store. Commercial butter often has added carotenoid pigments to make it look richer for marketing purposes thereby matching the buyer’s idea of what butter should look like.

To extract carotenoid pigments, grate some carrots and add it to melon butter in a pan. Gently sauté the carrots in the butter and extract the carotenoid pigments. The oily liquid that floats to the top or clarified butter (Ghee), is a bit darker than usual. Cool the clarified butter and blend this into the homemade butter to get a deep yellow color as the marketed product.
Consumer's Crossword! (Answers to the clues are present interspersed in the current Keemat itself)

ACROSS
4. Bone ailment. (9)
13. Absorbs light. (8)
15. Increasing. (12)
17. Colorful pills. (8)
19. Methods. (9)
20. Germs. (9)
22. Group. (4)
23. Avoider. (6)
27. Auric cover. (7)
28. Premises. (6)
30. Sugar type. (7)
31. Color pigment. (10)
32. Before sunrise. (15)
33. Baths. (6)
34. Singer. (4)
39. Alkali. (3)
40. Viral disease. (3)
41. Kills for fun. (7)
45. A famous body. (3)
47. Moon. (4)
48. Grinding Stone. (8)
50. Dishes in labs. (5)
52. Not agreeing. (7)
53. Grinding stone. (6)
54. Oil glands. (9)
56. He claimed humans were monkeys. (6)
57. Indian thinker. (8)
58. Bathing houses. (7)
59. Avoiding (9)
63. Skin ailment. (6)
66. Donkeys. (5)
67. Unaffected. (6)
68. Oil seed. (6)
70. River. (6)

DOWN
1. Wages. (8)
3. Indian Ink. (6)
5. Medicinal oils. (7)
6. Liking. (5)
8. Droop. (6)
9. Three fruits. (8)
10. Repairing. (7)
11. A nutrient. (10)
12. New. (5)
14. Daily. (5)
16. Cold. (6)
18. Will. (5)
21. Extra. (10)

41. Stomach. (7)
45. Resolve. (7)
47. Provides practical experience. (10)
52. Manes. (7)
54. Human quality. (8)
55. Yogic posture. (10)
56. Ritha. (6)
57. Group. (9)
58. Harmful Microorganism (5)
62. Fertilizer. (4)
63. Kills for money. (7)
65. Detergent seed. (8)
66. Spice. (7)
68. Spread COVID. (7)
69. Sri Lankan tree. (8)
70. 24 Minutes. (7)
71. Crude communist ruler of USSR (6)
76. Viral ailment. (12)
77. Virus in Brazil. (4)
78. Its dry's skin. (10)
80. Incidents. (6)
81. Celestial Bird. (6)
83. Mumbai suburb. (8)
84. Hindu religious books. (10)
85. Everyone's duty. (8)
86. Bathing. (6)
87. Private parts. (8)
88. Bath salt. (5)
89. Religious. (6)
90. Fertilizer. (4)
91. Spread COVID. (7)
93. Sri Lankan tree. (8)
94. 24 Minutes. (7)
95. Cruel communist ruler of USSR (6)
96. Viral ailment. (12)
97. Irony. (7)
98. Illusion. (4)
99. Four times. (9)
100. Everyone's duty. (8)
**LAUGHTER THE BEST MEDICINE**

On the last night of his first buying trip to Paris, a young furniture importer from America met an attractive French girl in the hotel elevator. She spoke no English, however, and neither of them could understand a word the other was saying. So, the resourceful merchant devised a means of communication for the occasion. Taking out a pencil and a notebook, he drew a sketch of a taxi. The girl nodded aprovingly, and off they went for a ride in the Bois de Boulogne. A little later, he drew a picture of a table laden with food and wine bottles, and when she nodded her assent, they headed for a sumptuous meal at Maxim's. After dinner, she was delighted with a sketch he made of a dancing couple, so they danced the evening away at a popular Left Bank night club. Finally, the girl picked up the pencil and, with a knowing glance at her clever escort, she proceeded to make a crude drawing of what was clearly intended to be a four-poster bed. He stared at his charming companion in amazement. When he took her home, while he was kissing her goodnight on her doorstep, during the long ride back to his hotel, and even on his flight back the following afternoon, he still couldn’t figure out how she had known he was in the furniture business.

A prisoner in jail receives a letter from his wife: “Dear husband, I have decided to plant some lettuce in the back garden. When is the best time to plant them?”

The prisoner, knowing that the prison guards read all mail, replies in a letter: “Dear wife, whatever you do, do not touch the back of our garden.”

A week or so later, he receives another letter from his wife. “Dear husband, you wouldn’t believe what happened. Some men came with shovels to the house and dug up the back garden.”

The prisoner writes back: “Dear wife, now is the best time to plant the lettuce.”

Sherlock Holmes and Dr Watson go on a camping trip. After a good dinner and a bottle of wine, they retire for the night, and go to sleep. Some hours later, Holmes wakes up and nudges his faithful friend. “Watson, look up at the sky and tell me what you see.”

“I see millions and millions of stars,” Holmes” replies Watson. “And what do you deduce from that?”

Watson ponders for a minute. “Well, astronomically, it tells me that there are millions of galaxies and potentially billions of planets. Astrologically, I observe that Saturn is in Leo. Horologically, I deduce that the time is approximately a quarter past three. Meteorologically, I suspect that we will have a beautiful day tomorrow. Theologically, I can see that God is all powerful and that we are a small and insignificant part of the universe.”

“But what does it tell you, Holmes?” Holmes is silent for a moment.

“Watson, you idiot!” he says. “Someone has stolen our tent!”

A man was going to bed when his wife told him that he'd left the light on in the shed. George opened the door to go turn off the light but saw there were people in the shed in the process of stealing things. He immediately phoned the police, who asked, “Is someone in your house?”

George said, “No,” and explained the situation. The police then explained that all patrols were busy, and that he should simply lock his door and an officer would be there when available.

George said, “Okay,” hung up, counted to 30, and phoned the police again: “Hello, I just called you a few seconds ago because there were people in my shed. Well, you don’t have to worry about them now because I've just shot them all.”

Then he hung up. Within five minutes three squad cars, an Armed Response unit, and an ambulance showed up. Of course, the police caught the burglars red-handed. One of the policemen said to George, “I thought you said that you’d shot them!”

George said, “I thought you said there was nobody available.”

**Jokes** are meant for amusement! It employs comedic vehicles like parody, satire and other material referencing, true people, organizations, regions, etc., making fun of them in ways that are obviously not true. Our intent is not to offend anyone! If you believe 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 butcher notices a dog in his shop. He shoos the dog away. But later the dog comes back again. So, the butcher goes over to the dog, and notices that the dog has a note in his mouth. He takes the note, and it reads “Can I have 12 sausages and a leg of lamb, please. The money is in the dog’s mouth.” The butcher looks inside and, lo and behold, there is a ten-pound note there. So, he takes the money, and puts the sausages and lamb in a bag, placing it in the dog’s mouth. The butcher is very impressed, and since it’s close to closing time, he decides to shut up shop and follow the dog. So off he goes. The dog is walking down the street, when he comes to a level crossing. The dog puts down the bag, jumps up and presses the button. Then he waits patiently, bag in mouth, for the lights to turn. They do, and he walks across the road, with the butcher following him all the way. The dog then comes to a bus stop, and starts looking at the timetable. The butcher is in awe at this stage. The dog checks out the times, and then sits on one of the seats provided. Along comes a bus. The dog walks around the front, looks at the number, and goes back to his seat. Another bus comes. Again, the dog goes and looks at the number, notices it’s the right bus, and climbs on. The butcher, by now open-mouthed, follows him onto the bus. The bus travels through the town and out into the suburbs, the dog looking at the scenery. Eventually he gets up, and moves to the front of the bus. He stands on two back paws and pushes the button to stop the bus. Then he gets off, his groceries still in his mouth. Well, dog and butcher are walking along the road and then the dog turns into a house. He walks up the path, and drops the groceries on the step. Then he walks back down the path, takes a big run, and throws himself - Whap! - against the door. He goes back down the path, runs up to the door and - Whap! - throws himself against it again. There’s no answer at the house, so the dog goes back down the path, jumps up on a narrow wall and walks along the perimeter of the garden. He gets to the window and beats his head against it again several times, walks back, jumps off and waits at the door. The butcher watches as a big guy opens the door and starts yelling at the dog and hitting it. The butcher runs up, and stops the guy. “What the hell are you doing? The dog is a genius. He could be on TV, for heaven’s sake!”, to which the guy responds: “Genius - you’ve got to be joking this is the second time this week that he’s forgotten his key!”

Two hunters are out in the woods when one of them collapses. He doesn’t seem to be breathing and his eyes are glazed. The other man pulls out his phone and calls emergency services.

He gasps to the operator: “My friend is dead! What can I do? The operator in a calm, soothing voice replies: “Take it easy. I can help. First, let’s make sure he’s dead.”

There is a silence, then a shot is heard.

Back on the phone, the hunter says, “OK, now what?”

Santa’s fiancée: Dear for our engagement, will you give me a RING?

Santa: Ya, sure, Give me your Telephone Number.

Alcohol and calculus don’t mix. .................Never drink and derive.
Testing for the novel coronavirus is the best way to estimate just how far and wide the dangerous disease has spread. It allows us to isolate people who have the virus, potentially even those who don’t exhibit any major symptoms of Covid-19 but carry it nevertheless. Mass testing also helps governments access if the lockdown of certain institutions or areas in a country is necessary.

As Dr. Anthony Volk from the University of Texas-San Antonio articulated very well in an interview with Healthline. “Testing makes the enemy visible”. This is very true, and research shows that countries that conduct the most testing are, on average, much better at controlling the virus spread and flattening the curve.

When it comes to the novel coronavirus, two main tests can be conducted - a diagnostic test for an active coronavirus infection, as well as an antibody test, which detects whether a person has had a Covid-19 infection in the past. When done correctly, one of these tests is highly accurate, whereas the other ones - less so. We distinguish between the available Covid-19 tests and their respective accuracy below.

**Diagnostic Covid-19 Tests**

Health professionals will conduct a diagnostic novel coronavirus test when a person exhibits symptoms of the disease or has been around a confirmed Covid-19 patient. There are two main types of diagnostic tests - the molecular real-time polymerase chain reaction (RT-PCR) test and the antigen test. Both tests are saliva swabs that are inserted deep into the nasopharyngeal cavity - the place where the back of your throat meets your nasal cavity.

Due to the sampling site, these tests can be quite uncomfortable, but oral or nasal swabs have been found to be less effective than the nasopharyngeal swabs due to a relatively lower quantity of the virus in the mouth and nose. Timing is also crucial when it comes to maximizing accuracy, doctors say, and ideally, a patient should be tested on the 8th day after exposure to the virus - the time when the virus multiplies the most and the fastest.

Conducting a test too late or too early may lead to false-negative results. The most widespread Covid-19 diagnostic test is the RT-PCR, a test that detects genetic material from the virus. It will take about 2-3 days to get the results from these tests, and when done correctly, PCR testing is nearly 100% accurate. Sometimes, however, false positive cases occur when a person has had Covid-19 in the past.

Unlike the PCR, antigen testing targets a specific protein type on the surface of the virus, and so it is much quicker but less accurate. You will typically receive the results of an antigen test just a few hours after testing, and if positive, it’s a reliable result. However, a negative antigen test result is less accurate and can have a 20-30% false negative chance, explaining why these tests are less common.

**Antibody Test**

Unlike diagnostic tests, antibody tests do not aim to detect active infection. This makes perfect sense if you understand what antibodies are - unique proteins that latch onto the pathogen (in our case, SARS-CoV-2) in the blood and tag it to make the pathogen visible to the immune system. Essentially, antibodies are a way for our bodies to recognize a ‘familiar’ illness and neutralize it much quicker the second or third time around. It takes time for our body to produce antibodies, from days to weeks, according to the US FDA. Thus, an antibody test, which is a blood test, can detect if you have recovered from a Covid-19 infection and developed the antibodies necessary to fight the virus in the future.

Theoretically, these tests should be able to target people who have developed immunity to the novel coronavirus and can safely go back to work while the rest of us stay in lockdown. However, there are several problems with antibody tests, and a positive Covid-19 antibody test isn’t considered to be definitive proof that a person is immune to the virus. There are several reasons for that.

1. False-positive results are a common occurrence, and antibody tests can come back positive if you’ve developed an immunity to a different kind of coronavirus, not necessarily Covid19.
2. Antibodies are just one of many ways the immune system can detect and fight illness, and scientists can’t definitively say whether Covid-19 is a disease that’s only superseded by antibodies.
3. The presence of antibodies doesn’t mean that you will be immune to a different strain of the virus or that you will not get sick again, so it doesn’t give you a green light to stop social distancing, wearing masks, or abiding by any Covid-19 rules.

**In summary**, the most reliable Covid-19 test is the PCR diagnostic test, whereas antigen and antibody tests are considered less accurate and useful. That said, it’s crucial to conduct the test properly to reach the best result and avoid getting tests from unauthorized sources or providers, and so you should avoid purchasing or conducting the test on your own.

(Continued from page 2)

There is a good chance we will never understand our microbiomes well enough to manipulate them confidently and to positive effect. “Maybe there are some things we can do, but ... it keeps coming back to this holistic sense of ‘everything matters’.

Microbiologists have found that hunter-gatherers and Amish people, who work together on farms from childhood, have optimally diverse microbiomes and minimal chances of contracting autoimmune conditions and associated inflammation.

Urban westerners who want to boost their more modest skin microbes would benefit from close contact with other people and animals, and from spending as much time as possible in nature, preferably getting dirty. But now that we are in a pandemic, much of that behavior is on hold. In fact, if the relative sterility of the world before Covid-19 (in which Hamblin’s book was written) was already compromising our microbial balance, lockdowns and social distancing could challenge it even more. “I don’t know when we’ll go back to handshaking and ways that we might have been sharing different sorts of microbes with one another”, says Hamblin.

Of course, reducing antibiotic use is key to microbiome success, along with resisting washing so frequently. Which brings us to bottoms – for this is what people visualize when they get grossed out over other people not soaping themselves. How can you get rid of unwanted residue down there with just your hand and water? “Dry toilet paper kind of creates that problem”, says Hamblin. “If you were gardening and had mud all over your hands, would you just use a dry paper towel? No, you'd at least get them wet and scrub them together. When people use bidets, they have less of an issue with that, or when people use disposable towelette things”. But the towelettes are expensive, wasteful and block drains, he admits, so "wetting toilet paper is fine”. This is his solution, which he shares to satisfy curiosity, rather than to preach or prescribe. And no, the paper does not fall apart when wet – “unless you’re trying to drown it”.

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