

New research found that people who ate a 30-gram serving of nuts each day showed a 20-percent reduced risk of dying from any cause over three decades, compared to those who didn't eat the tasty snacks.

Unhealthy foods that are actually healthy

Dieticians have instructed you to give up on these foodstuffs if you want to lose weight, yet the temptation makes you want to eat it.

We give you five such unhealthy foods you may incorporate in your diet in a healthy moderation, Times of India said.

Butter

We are not instructing you load up on butter, but according to experts, naturally occurring saturated fats, like those found in butter, may actually be good to include in your diet in moderation when compared with processed fats like those found in margarine.

Cheese

Just like butter, cheese is also high in saturated fat and calorie content. But, it is also rich in nutrients like calcium, vitamin A, B12, riboflavin, zinc and phosphorus. It also contains conjugated linoleic acid (CLA), a good fat, according to latest discoveries, found in animal protein and dairy that has been linked to cancer prevention.

Chocolate and whole milk

A glass of chocolate and whole milk has the perfect carbs to protein ratio and is a good post-workout recovery drink. It also replenishes bone-building calcium and sodium to restore electrolyte balance. Go with dark chocolate, if you are still unsure.



Coffee

It not only improves concentration and stamina, but a recent research has revealed that it helps prevent diseases like diabetes and Alzheimer's. Just don't overdo it; 3-5 cups are optimum as it may have some side-effects like insomnia, jitters and anxiety.

Bananas

Although labeled as fattening, bananas sometimes play a healthy role when you are trying to shed pounds. They are rich in potassium and provide antioxidants, vitamin C and fiber. Banana eaters also experience a shift in dopamine, a neurotransmitter responsible for elevating your mood.

LED-equipped carpet lights the way

Philips has achieved a new milestone in its quest to integrate energy-efficient LEDs into all surfaces.

We've seen the company install LEDs on ceilings and walls, and now they are putting them in floors, Inhabitat wrote.

Philips has partnered with Desso, a global leader in the design and manufacture of carpets, to patent the world's first LED-lit luminous carpets.

This new material could completely change the way we interact with indoor environments: guiding people around buildings, including safety exits and routes, enhancing the ambience and atmosphere of the interior of buildings, and helping to de-clutter spaces by making information visible only when needed.



Humans spend a lot of time indoors under the harsh glare of energy-wasting artificial lighting. Too much time in this environment can be harmful to our eyes and put us in a bad mood.

Philips' work in LED lighting has helped demonstrate that we no longer need to limit our vision of illumination to lamps and ceiling fixtures. Lighting rooms in new, unexpected ways can help reduce stress and move us more efficiently through our environments.

According to the designers, this patented LED carpeting technology can replace existing signage by providing engaging floor coverings that talk directly to our senses and to our eyes' natural inclination to seek out light, whilst going hand-in-hand with our tendency to look at the floor when walking.

"This light transmissive carpet solution is designed to engage directly with people's senses and the eyes' natural inclination to seek out light. The technology takes advantage of people's tendency to be guided by the floor when moving through and interacting with space. It brings information, direction, inspiration and safety via the carpet you walk on," said Ed Huijbers, marketing and sales director, at Philips Lighting.

Philips and Desso have agreed to work exclusively together in developing the markets in Europe, the Middle East and Africa.

Iranian method facilitates study of cognitive diseases



Iranian researchers from Islamic Azad University's Tehran Branch have succeeded in monitoring changes in the structure of proteins inside brain cells and the interactions of proteins by using iron oxide nanoparticles.

The progress of cognitive diseases that do not have any known definite treatment can be prevented if a treatment is designed and optimized for cognitive diseases such as Alzheimer's, based on controlling metabolism processes of iron oxide in brain cells, Fars News Agency reported.

The research, conducted in associa-

tion with researchers from the Institute of Biochemistry and Biophysics of Tehran University, showed that microtubules can create a magnetic field around themselves due to their dynamic properties and electrical charge. Therefore, they can play a role in the transference of electrical signals in brain cells (neurons).

It can be said that the protein plays an important role in the transference and probably in saving data in the brain. Malfunction in the performance of microtubules is one of the reasons for the appearance of cognitive diseases such as Alzheimer's.

Iron oxide nanoparticles were first produced in this research. Then, microtubule protein was extracted from the brain of a newly-died sheep and its activity was studied through turbidimetry method.

Next, the researchers studied the interaction between nanoparticles and microtubule and tau protein (a protein effective in the structural and functional stability of microtubules).

Results of the research showed that iron oxide magnetic nanoparticles and microtubules existing in the neurons can have magnetic interactions, which is es-

essential for the transference and conservation of brain data.

However, if nanoparticles accumulate in the brain due to the malfunction of iron metabolism in brain cells and the improper conservation of iron in a protein called ferritin, the above-mentioned interaction may be damaged. Nanoparticles connect with microtubules and tau protein, which results in the instability of microtubular polymers.

A part of the results of the research have been published in Journal of Biological Inorganic Chemistry, vol. 18, issue 3, pp. 357-369.

Most waterproof material developed

US engineers have created the "most waterproof material ever" inspired by nasturtium leaves and butterfly wings.

According to BBC, the new "super-hydrophobic" surface could keep clothes dry and stop aircraft engines icing over, they say.

The lotus leaf was thought to be the gold standard for staying dry in nature, but now a team from MIT in Boston says they have surpassed it.

Adding tiny ridges to a silicon surface made water bounce off it 40 percent faster than the previous 'limit'.

Similar ridges are found in nature on the wings of the Morpho butterfly and the veins of nasturtium leaves.

Wide applications

By applying these patterns to metals, fabrics and ceramics, scientists hope to inspire a new generation of

moisture-resistant products from tents to wind turbines.

"We believe these are the most super-hydrophobic surfaces yet," said Prof. Kripa Varanasi, whose work is published in Nature journal.

"For years, industry has been copying the lotus. They should start thinking about copying butterflies and nasturtiums. I'm looking forward to working with the fabrics industry to develop new clothing that stays dry longer. What will be the next Gore-Tex?"

Adding macroscopic textures makes droplets bounce off faster by splitting them into pieces.

The faster raindrops bounce off an anorak, the drier it stays.

The quicker they roll off a power line, the less chance of it corroding or freezing.

Following this principle, the scientists filmed droplets hitting different

water-resistant surfaces and measured how long they 'stuck'.

On lotus leaves, each drop landed in a perfect 'pancake', then quickly springs back in a single symmetrical droplet.

The "lotus effect" has inspired industrial fabrics, paints and roof tiles, which mimic the nanostructures on the plant's leaves.

Their secret is their high "contact angle"—only a tiny area of the droplet ever touches the material surface.

To go one better than the lotus, Varanasi and his team shifted their focus from contact angle to a new paradigm—contact time.

How it works

They designed larger (macroscopic) structures that actually increase the area of liquid touching the surface, but make the droplets bounce

off faster—by shattering each one into asymmetric pieces.

When they applied these ridges to aluminum and copper oxides, they repelled water 40 percent faster than the lotus leaf, as did the nasturtiums and the Morpho wings.

At super-cooled temperatures, water bounced off these metals before it had time to freeze, which is a useful property in aircraft engines.

"Applying these textures to turbine blades in power stations and wind farms could significantly boost efficiency," Prof. Varanasi believes.

"The key challenge is durability. Most super-hydrophobic materials are fragile polymers; they don't stand up to abrasion, or high temperatures.

"But combining our textures with stronger materials, such as metals and ceramics, we can overcome these durability challenges."

Adhesive, flexible dataSTICKIES



USB-based drives can be inconvenient to use, as the positioning and insertion of the drive in the USB slot needs to be done precisely.

According to IdeaConnection, when the slots are at the rear of a device, as is the case for many desktop computers, this task becomes even more troublesome.

dataSTICKIES solve this problem by carrying data like a stack of sticky-back notes. Each of the dataSTICKIES can be simply peeled from the stack and stuck anywhere on the optical data transfer surface (ODTS), which is a panel that can be attached to the front surface of devices like computer screens, televisions and music systems. The special conductive adhesive that sticks the dataSTICKIES to the ODTS is the medium that transfers the data. This special low-tack, pressure-sensitive adhesive is capable of being reused without leaving marks like a repositionable note. When the dataSTICKIES are being read by the device, their edges light up.

The dataSTICKIES themselves are made of graphene. This ground-breaking new material is a flat mono-layer of carbon atoms tightly packed into a two-dimensional honeycomb lattice with a minimum thickness of one atom.

Eyes-On Glasses let doctors see through skin



X-ray glasses have a flimsy reputation. They were relegated to the pages of science fiction or the discount bins at Mario's magic shop.

However, a new pair of medical specs could truly allow users to see beneath the skin, Discovery News wrote.

Evena Medical, a Silicon Valley-based imaging technology firm, has created the Eyes-On Glasses, allowing doctors to look under patients' skin to find hard-to-locate veins for IV treatments.

The head-mounted display is equipped with vascular imaging technology, which nurses and medical professionals normally have to cart around as a standalone device. By integrating that tech into the glasses, the hands-free system projects overlays of digital content onto the user's field of vision.

"Studies have shown that up to 40 percent of IV starts require multiple attempts to locate and access a vein, which not only wastes valuable nursing time but also delays therapy and causes patient discomfort and dissatisfaction," said Frank Ball, Evena Medical president and CEO, said in a statement.