राष्ट्रदुत

#SWEET-TOOTH

Why Chocolate Feels So Good?

During the moments it is in the mouth, the chocolate sensation arises from the way the chocolate is lubricated, either from ingredients in the chocolate itself or from saliva or a combination of the two.



the scientific journal ACS Ap-

plied Materials and Interface -

did not investigate the ques-

tion of how chocolate tastes.

Instead, the investigation fo-

Tests were conducted using

a luxury brand of dark choco-

late on an artificial 3D tongue-

like surface that was designed

at the University of Leeds. The

researchers used analytical

techniques from a field of en-

gineering called tribology to

conduct the study, which in-

Tribology is about how sur-

faces and fluids interact, the

them and the role of lubrica-

tion: in this case, saliva or liq-

uids from the chocolate. Those

mechanisms are all happening

in the mouth when chocolate

tact with the tongue, it releas-

es a fatty film that coats the

tongue and other surfaces in

the mouth. It is this fatty film

that makes the chocolate feel

smooth throughout the entire

Dr SiavashSoltanahmadi

from the School of Food Sci-

ence and Nutrition at Leeds

and the lead researcher in the

standing of the physical mech-

anisms that happen as people

eat chocolate, we believe that a

next generation of chocolate

can be developed that offers

the feel and sensation of high-

fat chocolate yet is a healthier

possibility that manufacturers

can intelligently design dark

chocolate to reduce the overall

can be produced in a gradient-

layered architecture with fat

covering the surface of choco-

lates and particles to offer the

sought after self-indulging ex-

perience without adding too

much fat inside the body of

sales in the UK is forecast to

grow over the next five years.

according to research from the

business intelligence agencv

MINTEL. Sales are expected to

grow 13% between 2022 and

The researchers believe the

physical techniques used in

the study could be applied to

stuffs that undergo a phase

change, where a substance is

liquid, such as ice-cream, mar-

garine or cheese.

transformed from a solid to a

the investigation of other food

2027 to reach £6.6 billion.

Revenue from chocolate

the chocolate."

"We believe dark chocolate

"Our research opens the

study, said: "With the under

time it is in the mouth.

When chocolate is in con-

evels of friction between

cluded in situ imaging.

cused on its feel and texture.

coded the physical process that takes place in the mouth when a piece of chocolate is eaten. as it changes from a solid into a smooth emulsion that many people find totally

By analysing each of the steps, the interdisciplinary research team at the University of Leeds hope it will lead to the development of a new generation of luxury chocolates that will have the same feel and texture but will be health-

During the moments it is in the mouth, the chocolate sensation arises from the way the chocolate is lubricated either from ingredients in the chocolate itself or from saliva or a combination of the two.

Fat plays a key function alpiece of chocolate is in contact with the tongue. After that,



solid cocoa particles are released and they become important in terms of the tactile sensation, so fat deeper inside the chocolate plays a rather limited role and could be reduced without having an impact on the feel or sensation of choco-

Anwesha Sarkar, Professor of Colloids and Surfaces in the School of Food Science and Nutrition at Leeds, said: "Lubrication science gives mechanistic insights into how food actually feels in the mouth. You can use that knowledge to design food with better taste. texture or health benefits.

"If a chocolate has 5% fat or 50% fat it will still form droplets in the mouth and that gives you the chocolate sensation. However, it is the location of the fat in the make-up of the chocolate which matters in each stage of lubrication, and that has been rarely researched.

"We are showing that the fat layer needs to be on the outer layer of the chocolate, this matters the most, followed by effective coating of the cocoa particles by fat, these help to make chocolate feel so good."

This project received fund ing from the European Re search Council under the European Union's Horizon 2020 research and innovation pro-The study – published in





The prices vary according to proximity to bigger cities. The maximum numbers of paid old age homes are in Kerala. Not a single old age home is similar to the next one. Some of them are hovels where people are provided rudimentary material and are expected to make do till death prevails. These are the ones I call the railway platform homes. One waits for the 'train of the final journey'. It is not always a matter of finances. Some very expensive places which seem to provide all necessary amenities do not give the emotional support that is essential for a pleasant survival.

CTVS Surgeon Traveller

few days ago I saw a video in one of the groups in WhatsApp

telling a tale of an

abandoned old man.

This young couple

had gone to have a

darshan of the

Siddhi Vinayak when

they noticed him

wandering around as

if he was looking for someone. They

stopped him and asked what the

matter was. The old man was look-

ing for his family. He had come with

his daughter and son in law. They

had asked him to sign some sort of a

legal document and then sat him at

a nearby Dhaba for a meal. They had

left him there assuring him that

they would be back soon. That was

twelve hours ago. The young couple

brought the old man home. They

realised soon that it would be impos-

sible to keep the old man with them.

They lacked space and the where-

withal to support him. So they cre-

ated a video and put it on the social

media appealing to his family as

well as others to help the old man.

This is quite a common story and

each of us has faced a similar situa-

I remember Ramu Kaka. I was

about seven years old. A grey beard-

ed gentleman in very crumpled

clothes turned up at our door. He

asked for my father. Both my par-

ents went to the door to meet the old

man. The moment they saw him

they exchanged anxious looks. He

hand me downs of my father. Later

after some discussion Ramu kaka

was moved to a Dharmashala. He

was given a thick blanket and some

warm clothes. I am not sure but he

was probably given some money

too. My mother remained anxious

for a couple of days. She would look

furtively whenever the call bell

rang. Had Ramu kaka come back

was invited in and given a meal. He

tion at least once in our lives.

Destitute Relative

The ideal old age home is a myth

#ELDER-CARE

It was much later I realised that this was a destitute relative who foisted himself from time to time on some relative or other.

We, the classmates from medical

college, are all octogenarians now.

We have led successful lives and now reached a stage where our responsibilities are gradually becoming less and we are on the other hand a 'burden' to our offsprings. All of us are fortunate that youngsters have easily and smoothy taken over the mantle of 'burden' without any complaint or even unwillingness. In the last two years of Covid oppression the added work due to our incarceration in our homes has created more mundane jobs for them. Basic shopping for provisions and other daily needs nave been smilingly completed. Our spouses of more than fifty years have become more loving and caring after exhausting their energies in the disagreements of the past years. Whenever we friends gather together after the first few minutes of catching up there are only two topics that inevitably come up- the health bulletin and the future if we become decrepit or still worse are single. The topic of conversation therefore often veers to how to manage our dotage without adding to workload of the younger genera-

One friend laconically said that we should all go for Vanaprastha. Leave our homes and go and live in a one room thatched hut by the riverside. Sounds idyllic! How does one cope with creaking knees and backs that do not bend? Failing vision, even poorer digestion and a



weak plumbing which makes you head for the nearest washroom every half-hour does not help! Of course, one cannot talk about basic requirements like electricity, gas. mobility and mobiles in our jungle hut. Is this what we need in last few years of survival? All this for salva-Most of us pragmatics seek more

comfortable alternatives. We continue to stay in our homes and selfishly expect the youngsters to cope with us. Unfortunately this does not happen with all. Relationships deteriorate. Alternatives have to be sought. A separate establishment in a nearby house or flat is one option. The next generation is available and does the needful and yet the friction of day to day interaction is eliminated. However this too has its pitfalls. With limited and fixed incomes the cost of living has gone up. Daily help and caretakers are

hard to find and costly too. There is an inherent risk if it is a live-in retainer. Instances of murder and looting old people are reported in the newspapers quite frequently. Loneliness and depression are added factors when one of the partners dies. Living alone requires great mental strength and physical determination. Day to day tasks gradually take more time and energy which most of us sorely lack.

In the west, older people living with adult children is rare. The only alternative that remains is to go and live in old age homes. Leaving emotions apart this is considered a practical and optimal solution. It may not be moving from one home to another but it is at least a room with creature comforts. The rooms may have TV and Internet. Regular meals and activities are hopefully a constant. Help on call and new people to interact with are an added comfort. On paper all this looks per-

As per the website dadadadi.org there are 728 old age homes as of July 2020 in India. Information about 547 is available. 325 homes are free of cost while 95 are on pay and stay basis. The information about

ailing vision, even poorer digestion and a weak plumbing which makes you head for the nearest washroom every half-hour does not help! Of course, one cannot talk about basic requirements like electricity, gas, mobility and mobiles in our jungle hut. Is this what we need in last few years of survival? All this for salvation!

dences despite inconveniences.

aged more for easy management rather than the need of the inmates. It is much easier to keep an eye on all if they are in one room. These institutions are always on the lookout for funds. Just the other day the star duo of Sonu Nigam and Shaan participated in Kaun Banega Crorepati to donate funds to such a charitable old age home.

Nothing is Perfect

These businesses like old age

people large sums of money.

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nitially it all seems first rate but

after some time this too becomes

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the rest is scanty. The cost ranges

from 23 lakhs for a one bedroom

unit to 58 lakhs for a three bedroom

unit. The prices vary according to

proximity to bigger cities. The max-

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emotional support that is essential

In India the situation is more

dire. Old peoples home are either

for charity or for business. The

charitable homes far outnumber

the other variety. They are usually

created by some business tycoon to

show to the world how caring and

philanthropic they are. The short

always make the organisers cut cor-

ners. A crowded dormitory instead

of a single room is the norm.

Possessions are discouraged as they

increase clutter. A single suitcase of

clothing, a family photo and a small

memento are all that may be per-

mitted. A sort of community living

is expected with specific hours of

rising and complying with a sched-

ule of regular eating, exercising

and sitting together. It is encour-

the final iournev'.

for a pleasant survival.

regimented. Individual preferences

These businesses like old age homes are charging the old people large sums of money Initially it all seems first rate but after some time this too becomes regimented Individual preferences are either ignored or rejected. There are some institutions that have been found deficient in their services and promises. Evidently there is no

ideal situation for old people. I am aware of some religious institutions who have permitted older age people to construct small homes within the premises with a condition that after the death of the incumbent the house is passed on to the institution. These homes are then rented out to other people on nominal charges. Nothing is perfect. Old people who have sufficient

assets tend to stay in their resi-

kind of set up is only possible for the moneyed people. So what is the best way to live in our last days? My submission is that nothing is perfect. But reasonable comfort levels can be achieved only if we maintain good health and

Recently some enterprising people

have seen this as an opportunity to

provide care and assistance on

charge. They provide weekly med-

ical check-up at home and escorts to

hospitals as and when required. A

twice weekly driver is provided

after paying a specific fee. Even

domestic staff and caretakers are

selected and send to help out at

additional cost. Often two live-in

people are needed to take care of

that you are being given care in

your own home. The rules of living

seems a very sensible proposition

are your own to make. On paper it

but often there are glitches. The

caretaker maybe too casual. The

driver may not be available at the

time and day of your choosing. This

st one old person. The emphasis is



Horror Movie Turn Fear Into Fun

Horror film is particularly suited to generating curiosity and a sense of discovery because it usually involves the existence of a "monster'



behind a good scare in our favourite horror movies, according to film expert Jason works, and where it came from.

ror films?

a winding mountain pass. Films

were often about things that

encouraged visceral astonish-

Q. How did Psycho change the

A. Earlier in the 20th century

when films were shown in dou-

ment and excitement.

arrived.

A scholar and experimental filmmaker, Middleton is an associate professor of English and the director of the film and media studies program at the University of Rochester. He studies both documentary and horror films. Middleton is also a featured expert in the new AMC documentary Eli Roth's History of Horror, a seven-part series that also includes commentary by such luminaries of the genre as Stephen King, Jamie Lee



Here, Middleton explains what makes horror movies work on us and what makes them so

Q. How do horror movies make fear fun?

A. It's been called the paradox of horror-people seek out, for the sake of pleasure, an experience which they'd do everything they could to avoid in real life.

Horror is a particularly apt genre for generating the forms of curiosity and discovery that are part of narrative pleasure in general-but horror does it in very distinctive ways. Most forms of narrative pose questions that a viewer or reader wants to know the answers to. Something happens, and you wonder what the effect will be-or you see the effect and wonder what caused it. Suspense and detective genres certainly do this, and there are a lot of overlaps between suspense thrillers and horror films.

But horror film is particularly suited to generating curiosity and a sense of discovery because it usually involves the existence of a "monster"-some kind of being or supernatural elemen that defies our understanding of

the world. We spend the first ences see Psycho from the begin part of these films seeking to ning so that the violent murder understand the nature of the that occurs halfway through the threat. Our curiosity isn't only movie would have the impact he about what's happening, but also meant it to have It's almost like a contract about what this thing is, how it between the director and the

Once the nature of the monviewer. You agree to his terms: ster has been determined, the show up for the movie on time second set of questions has to do and be ready to be scared. And with how the monster will be he delivers the goods in defeated. And there's a whole exchange for that. If you do what new form of curiosity that goes you're supposed to do, you get along with that this new form of group experi ence, an entertaining kind of Q. What are the roots of hor collective fear and terror.

The modern horror film is Q. So how do horror movies often traced back to Alfred

Hitchcock's Psycho. Psycho and A. The narrative structure emu many of the horror films that lates the collective experience of followed it are specifically a roller coaster-the long, steady designed to offer audiences a colbuild-up of the story is like the climb up the hill by the roller lective experience of terror and coaster, and then a sudden

In many ways, it goes back to shocking drop off the precipice. Many horror films follow tha the way films were designed to be experienced before cinema structure, and in the shocking was primarily a narrative-based moments, the whole theatre car form. In their first decade or so. collectively scream, grab hold of films were much more about each other, and then laugh and showing off the capacities of the re-enter the story for a while. It's new technology, thrilling audia kind of plotting that emulates the repeated build and release ences with such visual spectacles as mounting the camera on that you get with amusement the roof of a train going through park rides.

Horror films also reveal a lot about the particular political and social anxieties of a given era. Different versions of mon strosity and threat resonate profoundly in different historical

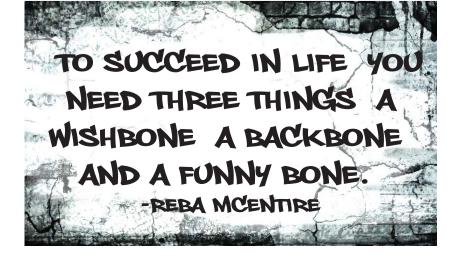
Q. What's something most people don't realize about horror

ble features with cartoons or newsreels preceding them-it was common for people to walk into A. Through various cinematic devices, many films encourage theatres during the middle of movies. They came in when it audiences to identify with one was convenient for them and main character-usually a white stayed until the screening was male protagonist. But in horror films, viewer identification back to the point when they'd tends to be more interesting.

But Hitchcock was adaman When John Carpenter's that nobody would be admitted Halloweencame out, many critto Psycho after the start time. It ics says it played into misogyny was key to him that the audi-



THE WALL



BABY BLUES



By Rick Kirkman & Jerry Scott

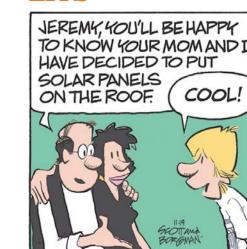
WHAT YEAR?

I HAVEN'T SEEN

ONE OF THOSE

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KINDERGARTEN



ZITS





