

# Yeh A1, A2 kya hai?

With A2 milk being called a healthier choice and easier to digest than regular A1, experts discuss the difference and how much it matters



KURUSH DALAL

## PHORUM DALAL

THOSE of us who grew up in 1980s and 1990s, will remember drinking at least two glasses of milk every day of our childhood. We were told it is good for the bones, and can make us taller and stronger. Sometimes, it didn't agree with the gut. This was the only time mothers exempted young adult children from breaking the compulsory milk regime.

Adults are inherently lactose intolerant, says food historian and archaeologist Kurush Dalal. "But, Indians became a dominant gene pool who could digest it. Over time, we changed the biochemical property of milk by turning it into chaas, ghee and other products like mithai. With this, we managed to lessen the effect of raw lactose on our gut," he adds.

In the past few years, our relationship with milk has been influenced by lifestyle, quality of milk, veganism and even environmental and moral choices.

With gut earning the status of second brain and as the epicentre of well-being, A2 milk has been promoted as a gut-friendly choice of milk. This was amplified by numerous research papers that pitted A2 against A1—both protein elements responsible for lactose intolerance in the body. A2 is a type of milk protein. Around 39 per cent of protein in milk is Beta casein. A1 and A2 are genetic variants of this beta casein.

A1 milk, which is the most commonly used milk and is abundantly available, is obtained from cows of Western origin such as Bos Taurus, Holstein freisian or Jerseys and is known to yield a large quantity of milk. The A2 milk is obtained by the cows of Indian origin like Gir and Sahiwal. Although both are sourced from cows, the two milks vary in terms of the chemical composition.

"In the Indian context, all milk produced by buffaloes, native



NEERAJ MITTAL



The cows at Neeraj Mittal's farm in Lonavla are housed according to the life stage they are in—whether they are milking or non-milking. The calves are kept close to them. "We like to keep them in luxury and comfort. We even have a massaging unit," he says

cows, goats, sheep, and camels is A2. Even milk from the exotic cross breeds of Holstein Friesian and jersey's have a large portion of A2," says Kuldeep Sharma, dairy expert, Suruchi Consultants in Noida. "Experts claim that more than 90 per cent of the milk available in the market is A2 type. A2, under current context, is nothing more than a fad."

He points out that the growing interest in A2 milk has been bolstered by social media and extensive promotion of native cows. "Though 55 per cent of milk available in India is buffalo milk,



Neeraj Mittal's Mr Milk does not procure milk from third-party sources, and has a single source working model

which is A2, nobody is interested in calling as well as consuming that as A2. Perception is the only reality," says Sharma.

Incidentally, there is no scientific evidence that A2 is better than A1. The scientific panel of FSSAI is yet to find anything "special" in A2 milk. "Milk is the first food for life. If we could have digested it at a time when even our digestive system was not fully developed, what's the issue later? However,



Sheetal Bhatt, owner of Haritt Farms, launched GOD Café in Dadar this year to promote a menu revolving around A2 milk

in certain cases, there may be lactose intolerance so they may avoid it or take lactose-free milks," Sharma points out.

"A2 milk is the biggest con in India," Dalal says without mincing words. "There is no such thing as A1 or A2 in milk. After that one tall claim, what followed was a bunch of papers debunking this theory too," Dalal explains.

Proponents assert that A2 has several health benefits and is easier for people with milk intolerance to digest. "It [A2 milk] comes closest to mother's milk," says Neeraj Mittal of Pune's Mittal Happy Cows Dairy Farms, who launched his brand Mr Milk in Mumbai three months ago. Mr Milk does not procure milk from third-party sources, and has a single source working model. "Even people with lactose intolerance can have it. In India, adulteration of milk has created a concern in the last two decades. Usually, milk corporations collect milk from various milk farms and thus, adulteration cannot be controlled. Cows are sometimes injected with hormones to yield higher quantities too," says Mittal. The entry of single origin farms, like Mittal's, are focusing on the traceability of milk to its origin. "If we can source our food to origin, why not milk?" Single milk farms promise you purity, which is also a big concern for new mothers, con-

scious consumers and HNIs, he explains. On their Lonavala farm, spread across 85 acres, they breed Gir and Sahiwal. The cows are housed according to the life stage they are in—whether they are milking or non-milking. The calves are kept close to them. "We like to keep them in luxury. We have a massaging unit. Their fodder is recommended by experts."

At the centre of the debate is the quality of milk, with consumers having no scope to verify its authenticity. "Consumers are also taking pride in buying stories than the actual product. If you visit an automated plant, you will never find a place to put your hand inside the



tank. However, by simply using milking machines, if someone claims the untouched theory, that is just good storytelling. Whatever said, the milk from any FSSAI-registered known brand is hardly different

from the milk being sold by so many new players with or without farms. We must not forget that milk is a commodity and it will remain so," says Sharma.

Milk becomes dubious when it is adulterated beyond permitted levels, and cows are pumped with chemically-induced hormones to produce more milk, says Sheetal Bhatt, owner of Haritt Farms. "We rear Gir Cow to produce A2 milk that has up to 90 per cent protein and only 5-8 per cent fats. The SNF level of our milk is 8.9 compared to A1 strains that barely reach 7.4 with additives. No water is added to thin this milk," says Bhatt, who opened GOD Café in Dadar to promote a menu revolving around A2 milk. On her farm, milking is done by hand. "We feed our cows four times a day as per body weight, and add Ayurvedic herbs like ashwagandha, jeshimadh, arjunsal, shatavari, jivanti, and vardhara to their fodder. Non-intrusive care includes promoting natural mating without artificial insemination, no administration of calcium or allopathy medicines," she explains.

Explaining the effect of A1 and

A2 milk on the body, Karishma Chawla, nutritionist and lifestyle educator, says, "A2 is easier to digest than A1 and prevents bloating, gas, by virtue of being free of BCM-7, which is a bio active amino peptide that is released by digestive enzymes from Albeta casein, unlike the case of A1 which causes gastro discomfort."

For those who are not lactose intolerant, both A2 and A1 are fine to consume, thinks Chawla. She also adds that dairy is a common gut irritant food by itself, and if one is intolerant, the problem will persist. "Dairy can also spike insulin and causes

**Though 55 per cent of milk in India is buffalo milk, which is A2, nobody is interested in calling as well as consuming that as A2. Perception is the only reality**

**Kuldeep Sharma, dairy expert**

Continued on page 00

To get to the crux of the milk debate, I say just one thing: depend on bio-individuality [one person's food is another's poison]. Today, we understand the human anatomy better. The hot topic is Gut Microbiome Test. It helps determine if bacterial cells are functioning well in the organ," says nutritionist Karishma Chawla.



## DOODH MEIN KUCH KALA HAI

The reasons for giving up dairy are varied: body intolerance, environment, ethics and lifestyle choice. Author of Reversing Diabetes in 21 Days, Dr Nandita Shah, says, "No animal consumes its mother's milk after infancy. The reasons that we should not consume cow's milk is—we are neither calves nor infants. We do not need milk or other dairy either for protein or for calcium. We get plenty of fibre from plants, which keeps a digestive tract clean and constipation-free," she says, adding, "In order to digest dairy, we need an enzyme in our stomach called rennet. This is present in the stomach of infants, and most of us do not have this enzyme anymore. Therefore, most of us cannot digest milk and are lactose intolerant. This can cause indigestion."

### Continued from page 00

inflammation like acne in some with hormonal imbalances. That is why we give plant-based milk such as almond and coconut milk. To get to the crux of the milk debate, I say just one thing: depend on bio-individuality [one person's food is another's poison]. Today, we understand the human anatomy better. The hot topic is Gut Microbiome Test. It helps determine if bacterial cells are functioning well in the organ," says Chawla.

Dalal leaves us with a parting thought: "Milk cannot be bad if it is meant to nourish even a newborn. For vegetarians, it is the only source of B12 complex. If you say milk is morally bad to consume, then that's a separate and sustainable argument. But milk per se being bad is a theory that doesn't hold. Pop a lactose intolerant pill if needed, and enjoy it!"

# Happy gut, healthy you

In her new book, a gastroenterologist and British cook explores the process of digestion and how the food we eat influences the way we feel

## PRUTHA BHOSLE

BRITISH cook and winner of the BBC's MasterChef competition in 2017, Dr Saliha Mahmood-Ahmed had plans of writing a book on digestive health and happiness right from her medical student days. The lack of focus on food and nutrition in medical teaching was a source of irritation for her. "Being an avid gastronome, it bothered me. As I became a doctor, I realised that my patients wanted to talk about food and eating. This cemented my desire to write a book," she tells us.

Her new book titled, Foodology: A Food-lover's Guide to Digestive Health and Happiness, has come at a time when eating right is key to leading a healthy life. This is not a book about dieting in the conventional sense, nor is it a didactic manual on how to make each and every food decision in life. It is an unapologetic celebration of what she believes to be the most amazing organ of the body, that will enhance the way you cook and eat. Dr Saliha has drawn on latest science and her own experiences, as both a doctor and a cook, to write this book. "Quite often, we conceptualise eating 'healthily' and eating for 'pleasure' as two separate entities. I wanted to use science and my culinary prowess to bridge this gap. You can eat good food that tastes amazing and nourishes the mind and body without harming your health. Equally, once in a while, it is okay to eat indulgent food as well. It's about finding an equilibrium that works for you," she adds.

While she is born and brought up in the UK, Dr Saliha hails from a large Kashmiri-Pakistani family. "Food was central to family life. It featured in celebration, as well as in sadness and mourning. My mother worked as a full-time doctor and still managed to put freshly cooked food on the table daily. That just shows how deeply ingrained the desire to feed her family well was. As a mother, I find myself in the same position now."

In the book, Dr Saliha offers 50 new, simple, delicious and mostly vegetarian recipes to help everyone explore their gut health and find their own gastronomic happiness.



Miso date and dark chocolate cookies



Asparagus, green pea and Tahini ceasar with sourdough and olive oil croutons

But does she have a favourite, we ask. "It is very hard to pin down a favourite recipe because they are all close to my heart. I am particularly fond of the recipes that feature in the chapter on 'Umami'. They are really very moreish and always leave me craving more. I love the addictive miso date and dark chocolate cookies and always have a batch at home."

Explaining how certain foods make our mouths water, Dr Saliha says that gastronomic happiness is significant in everyone's lives. "Food is central to 21st century life. We have to decide what to

eat for breakfast, lunch, dinner and snacks in between each day. And this is the reason why fostering a healthy relationship with food and finding gastronomic happiness is so important. If you are harbouring negative emotions, facing food so many times is a highly stressful experience. Additionally, we know that what we eat has a huge impact on our long term health and risk of developing certain diseases, making food choices highly critical."

So, how does the gut really work? And, how can one keep it happy? "The gut is a very complex piece of



PIC COURTESY/ MANJIT RIYAT

Food is central to 21st century life. We have to decide what to eat for breakfast, lunch, dinner and snacks each day. And this is the reason why fostering a healthy relationship with food and finding gastronomic happiness is so important

Dr Saliha Mahmood-Ahmed

machinery. It is home to literally trillions of bugs. What we eat influences the composition of gut bugs and certain patterns of gut bugs are considered healthier than others in terms of disease prevention. We are discovering the links between the food we eat and how it influences gut bugs in a lot more detail now. It is a fascinating and evolving body of research with huge potential for the future," she explains, adding, "All I want to say to my readers is—love food in all its magnificent shapes and forms, and cook, cook and cook some more."

prutha.bhosle@mid-day.com

## SHARIF'S KEEMA SPAGHETTI

SERVES: FOUR PEOPLE (GENEROUSLY)

### INGREDIENTS

- > 1 tablespoon olive oil
- > 1 white onion, finely diced
- > 500g lamb mince, not too lean
- > 1 tablespoon minced garlic
- > 1 teaspoon dried oregano
- > ½ teaspoon turmeric
- > 1 heaped teaspoon garam masala
- > 1 teaspoon crushed cumin seeds
- > 1 teaspoon red chilli powder
- > 1 teaspoon hot paprika
- > 3 ripe tomatoes, diced
- > 1 beef stock cube, dissolved in 500ml boiling water
- > 200g carrots, diced
- > 200g frozen peas, defrosted
- > 350g dried spaghetti
- > 250g potatoes (skin on), diced
- > Vegetable oil, to fry the potatoes
- > Salt to taste
- > 1 tablespoon grated parmesan (optional)
- > Bottle of tomato ketchup (mandatory)

### METHOD

Place a large non-stick saucepan over a medium heat. Add olive oil to the pan, followed by onion, allowing it to soften and take on a gentle golden hue. Add minced lamb and, using a wooden spoon, break it into smaller chunks. Crank up the heat to the highest setting and brown the

mince off. You want it to release its own fat and fry off rather than stew in its own juices. Resist the temptation to keep stirring; the mince needs time to brown on each side.

When the mince looks sufficiently brown, turn the heat down to medium and add garlic, oregano, turmeric, garam masala, cumin seeds, chilli powder and paprika. You want the spices to release their aroma but not burn, which is why turning the heat down a bit is necessary. Add the tomatoes, followed by the beef stock. Allow the mixture to simmer over a medium-low heat for around 30-45 minutes, or until most of the water has evaporated and a rich, fatty, slightly moist, spiced mince remains. Taste the mixture and add salt; the stock cube you added previously is full of umami notes [or should I say commercial MSG] and will season the mince, so be cautious of adding too much salt at this stage. Add the carrots and peas to the mince and allow them to cook through for a further 5 minutes. The idea is that they retain their colour but lose their crunch and soften slightly. Be wary of the mixture becoming too dry and catching at this stage. Just add a few splashes of water from the kettle if things in the saucepan start looking too dry.



Once prepared, remove the mince from the heat and set aside.

Boil the spaghetti in heavily salted water and according to manufacturer's instructions, to achieve an 'al dente' consistency. This usually takes around 6-8 minutes. Drain the pasta, keeping a little aside.

Shallow fry the potatoes in vegetable oil until the potato chunks are nice and golden. This takes approximately 5-7 minutes. Drain on kitchen paper.

Assemble the dish by tossing the pasta into the minced lamb with about half a cupful of pasta water to moisten everything. Stir really well to combine. You want every bit of the spaghetti to be coated. Tip the tumbling cascades of spiced spaghetti on to a large serving platter and top with the chunks of fried potato and, if you wish, some grated Parmesan. Serve with ketchup (this condiment is mandatory).