



## Revitalise your tea: embrace holy basil leaf (tulsi pata)

In the world of tea lovers and wellness enthusiasts, there is a secret ingredient that has been quietly making waves. Holy Basil Leaf, affectionately known as Tulsi Pata, is the game-changer your daily tea has been waiting for. With its captivating history, delightful aroma, and a host of potential health benefits, Holy Basil Leaf is the hidden gem that can transform your ordinary tea into a wellness ritual.

### Nutritional bounty of holy basil leaf

Tulsi Pata boasts a rich nutritional profile, offering essential vitamins and minerals. It is a source of vitamin K, vital for blood clotting and bone health. Additionally, it provides vitamin A, an antioxidant important for vision and skin health. This herb contains minerals such as calcium, which supports bone strength, and iron, essential for blood oxygenation. Its antioxidant compounds, including flavonoids and polyphenols, contribute to its potential health benefits, making it a valuable addition to a balanced diet.

As the exploration of Tulsi tea concludes, one is invited to embark on a journey of wellness and tranquility with every sip. The profound benefits of Holy Basil, carefully steeped in this aromatic infusion, serve as a reminder of the remarkable synergy between nature and well-being. Embracing the tradition and wisdom encapsulated within this herbal elixir, each cup of Tulsi tea can be a source of rejuvenation and balance in one's life. Here's to ongoing wellness and the timeless marvel of Holy Basil.

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# Key considerations for regulating artificial intelligence in healthcare

### STAR HEALTH DESK

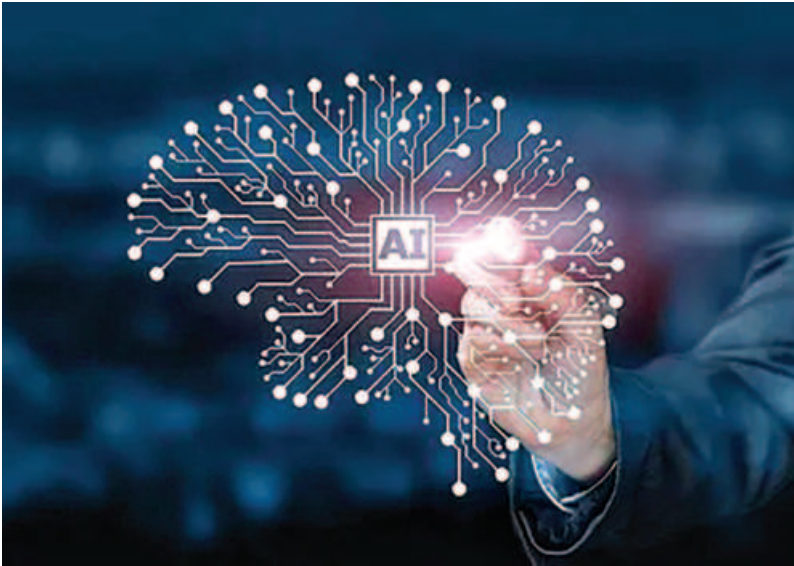
The World Health Organisation (WHO) has released a new publication listing key regulatory considerations for artificial intelligence (AI) in health. The publication emphasises the importance of establishing AI systems' safety and effectiveness, rapidly making appropriate systems available to those who need them, and fostering dialogue among stakeholders, including developers, regulators, manufacturers, health workers, and patients.

WHO recognises the potential of AI in enhancing health outcomes by strengthening clinical trials, improving medical diagnosis, treatment, self-care, and person-centred care, and supplementing health care professionals' knowledge, skills, and competencies. For example, AI could be beneficial in settings with a lack of medical specialists, e.g., in interpreting retinal scans and radiology images, among many others.

However, AI technologies, including large language models, are being rapidly deployed, sometimes without a full understanding of how they may perform, which could either benefit or harm end-users, including healthcare professionals and patients. When using health data, AI systems could have access to sensitive personal information, necessitating robust legal and regulatory frameworks for safeguarding privacy, security, and integrity, which this publication aims to help set up and maintain.

In response to growing country needs to responsibly manage the rapid rise of AI health technologies, the publication outlines six areas for regulation of AI for health.

- To foster trust, the publication stresses the importance of transparency and documentation, such as documenting the entire product lifecycle and tracking



development processes.

- For risk management, issues like 'intended use', 'continuous learning', human interventions, training models, and cybersecurity threats must all be comprehensively addressed, with models made as simple as possible.

- Externally validating data and being clear about the intended use of AI helps assure safety and facilitate regulation.

- A commitment to data quality, such as through rigorously evaluating systems pre-release, is vital to ensuring systems do not amplify biases and errors.

- Understanding the scope of jurisdiction and consent requirements in service of privacy and data protection is key to addressing the difficulties presented by significant, complex regulations like the General Data Protection Regulation (GDPR) in Europe and the Health Insurance Portability and Accountability Act (HIPAA) in the United States of America.

- Fostering collaboration between regulatory bodies, patients, healthcare professionals, industry

representatives, and government partners can help ensure products and services stay compliant with regulation throughout their lifecycles.

AI systems are complex and depend not only on the code they are built with but also on the data they are trained on, which comes from clinical settings and user interactions, for example. Better regulation can help manage the risks of AI amplifying biases in training data.

For example, it can be difficult for AI models to accurately represent the diversity of populations, leading to biases, inaccuracies, or even failure. To help mitigate these risks, regulations can be used to ensure that the attributes—such as gender, race, and ethnicity—of the people featured in the training data are reported and datasets are intentionally made representative.

The new WHO publication aims to outline key principles that governments and regulatory authorities can follow to develop new guidance or adapt existing guidance on AI at national or regional levels.

Source: World Health Organisation

### HAVE A NICE DAY

## The power of body language Part-I

DR RUBAUL MURSHED

Body language is a type of nonverbal communication. It mainly includes facial expressions, body posture, gestures, eye movement, touch, and the use of space. Body language and tone of voice could be more powerful assessment tools than words. It has the potential to reveal a fake smile or a lie. Children begin to learn a great deal by seeing and hearing these powerful skills. Even when standing still, a person's body is telling a story.

This language is officially known as kinesics. Our brain's visual cortex has areas dedicated to different body postures and expressions. The limbic brain is most responsible for value judgements, and it plays a vital role. Albert Mehrabian, a body language researcher, developed the '55/38/7' formula to break down components of face-to-face conversations. He found that communication is 55% nonverbal, 38% vocal, and 7% verbal. People born blind can express the same body language as sighted individuals.

Humans and animals convey information through conscious and subconscious body movements and facial expressions. Like many animals, humans puff out their chests when establishing territorial dominance. Some of the most common body language are raised eyebrows, head tilts, and crossed arms. The higher the surprise, the more the eyebrows are raised, signalling emphasis.

People are typically perceived as more attractive when they tilt their heads. Crossed arms' interpreting 'defensive attitude' is perhaps the most common body language gesture we encounter daily.

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## The link between high sugar intake and increased kidney stone risk urges dietary caution

Kidney stones, those painful crystalline formations in the urinary system, affect about 1 in 10 people worldwide. Besides genetics and environmental roles, added sugar intake can also play a role, according to a recent study published in Frontiers.

This study surveyed over 28,000 individuals and discovered a strong link between consuming more added sugar and a higher risk of kidney stones. Kidney stones, which can cause pain, blood in the urine, and nausea, are becoming more common. Family history, dehydration, high-protein diets, excessive salt and sugar intake, and obesity contribute to their formation.

While the health risks of added sugars in food and drinks are well documented, their role in kidney stone development is still being explored. This study analysed data from the US National Health and Nutrition Examination Survey, spanning 2007 to 2018.

It found that people who consumed more added sugar had a greater risk of kidney stones, even after accounting for factors like age, gender, and lifestyle. In simple terms, people who ate more added sugar were more likely to get kidney stones. Those who followed dietary guidelines and consumed less than 5% of their daily calories from added sugars had a lower risk compared to those who consumed 25% or more.



## Exercise prescriptions for child and adults



### DR MD FARUQUL ISLAM

Being physically active can improve brain health and functions, help in managing body weight, reduce the risk of many non-communicable diseases, for example, cardiovascular disease, musculoskeletal pain, and some arthritis, strengthen body bones and muscles, and improve our ability to continue our daily activities.

#### Immediate benefits of exercise:

Some benefits of physical activity for brain health happen right after a session, for instance.

- Improve the thinking process and cognition for children 6 to 13 years of age.
- Reduced short-term feelings of anxiety for adults.
- Help to keep your thinking, learning, and judgement skills sharp as you age.
- Reduce the risk of depression and anxiety.
- Help sleep better.

Types of Exercises Included: Exercise from moderate-to-vigorous physical activity, for example, running, fast walking, cycling, sports, and aerobic types of exercises.

#### How is human bone modelling and remodelling done?

Note only that exercises have a great effect on people, from children to older adults, as per Wolff's law, which indicates that bone strength increases and decreases as the functional forces on the bone increase and decrease. The densities and, to a much lesser extent, the shapes and sizes of the bones of a given human being are a function of the magnitude and direction of the mechanical stresses that act on the bones.

#### Does bone tissue change across the life span?

Yes, the bony tissue changes across the life span. In the childhood

stage of the immature bone, the fibres are randomly distributed, providing strength in multiple directions, but the overall strength of the bone is low or less, which makes it easily broken. In the adult stage, the bone becomes mature, mineralisation within the bone takes place, haversian canals are created and lined with bone, and the bony fibres are oriented in the primary load-bearing directions. Bone continues to reorganise throughout life to mend damage and repair wear on the bone. Peak bone mass occurs during the late third decade of life. Females have a lower peak bone mass and greater reductions in later life, especially after menopause.

#### Exercise prescriptions for children and adolescents to facilitate bone growth:

**Exercise mode:** Impact activities (gymnastics, plyometrics, and jumping); moderate-intensity resistance training; sports involving running and jumping

**Exercise intensity:** High-intensity exercise, including weight training, (60%)

**Exercise frequency:** At least 3 days per week

**Duration:** 10-20 min

#### Exercise prescription for adults to preserve bone health and prevent decay:

**Exercise mode:** Weight-bearing endurance activities (tennis, stair climbing, jogging); activities involving jumping (basketball, volleyball); resistance exercise

**Exercise intensity:** Moderate to high

**Exercise frequency:** 3-5 days per week; resistance training, 2 days per week

**Duration:** 30-60 min

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