

# NUTRILICIOUS

*Water is food , water is life.*

*leave no one behind.....*

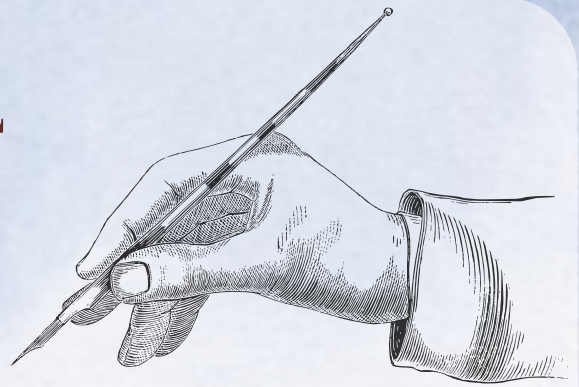
**WORLD  
FOOD  
DAY  
SPECIAL**

## **SPOTLIGHT**

- Water intake and nutrition
- Type of water
- Hydrating recipes
- Research insights



# THE EDITORIAL DESK.



Dear Nutrilicious Readers,

In this issue, we are thrilled to shine a spotlight on one of the most fundamental yet often overlooked aspects of nutrition: water. Water, the elixir of life, plays a crucial role in maintaining our health and well-being. From hydration strategies to the importance of water quality, we delve deep into this essential topic to provide you with comprehensive insights and practical advice.

As you navigate through the pages of this newsletter, you'll find a wealth of information dedicated to unraveling the mysteries of water and its impact on our bodies. We hope that our exploration of this vital topic will not only broaden your understanding but also inspire positive changes in your daily habits.

May the knowledge shared in this issue empower you to make informed choices and prioritize your hydration needs for optimal health.

Cheers to a well-hydrated future!!!

CHIEF EDITOR

Dr. Archana Prabhat

CO- EDITOR

Ms. Karthika Devi S.

Hello Everyone,

We would like to take a moment to express our deep gratitude for the opportunities our College and Department has provided us. Not only with academics our department encourages us to participate in extracurricular activities, continually investing in our growth and development. We take this chance to appreciate our HOD Dr. Archana Prabhat, teachers, and administration for their tireless efforts in creating these pathways which not only enhances our academic experience but also prepare us for the challenges ahead. As we seize the opportunities and strive for excellence, We also pay it forward to our supporting and encouraging peers for their contribution to this edition.

While writing and editing this edition, We felt focused and engaged, striving to convey information clearly and effectively. We sincerely hope the readers find it interesting and we look forward to your valuable feedback.

Happy Reading!

STUDENT EDITORS

Mr. Yasrin Py

Ms. Rutika R. Kuckian



# Interconnectedness of water and life



## The Interconnectedness of Water and Life

Water is the essence of life, a vital resource that sustains all living beings on Earth. It plays a crucial role in various biological processes, from hydration and digestion to regulating body temperature and supporting cellular function. Moreover, water is a key component of the food we eat, essential for growing crops, raising livestock, and processing food products. Without adequate water resources, agriculture, and consequently, food production, would come to a grinding halt, leading to widespread hunger, malnutrition, and food insecurity.

## Leaving No One Behind

The phrase "Leave No One Behind" underscores the importance of ensuring equitable access to water for all individuals, regardless of their socioeconomic status, geographic location, or cultural background. Unfortunately, millions of people, particularly those living in marginalized communities in developing countries, still lack access to clean water for drinking, cooking, and sanitation purposes. This disparity not only perpetuates cycles of poverty and inequality but also undermines efforts to achieve sustainable development goals, including zero hunger and good health and well-being for all.

## Empowering Communities Through Water:

Empowering communities begins with ensuring access to clean water. Sustainable solutions such as rainwater harvesting, community-managed water systems, and water purification technologies can help bridge the gap and provide vulnerable populations with reliable access to safe and clean water sources. By empowering communities to take ownership of their water resources, we not only address immediate water-related challenges but also foster resilience, promote self-sufficiency, and enable sustainable development over the long term.

## Preserving Every Drop

Water scarcity and pollution pose significant threats to global food security and human well-being. Climate change, population growth, and unsustainable water management practices exacerbate these challenges, putting pressure on already-strained water resources. To address these issues, concerted efforts are needed to conserve water, protect natural ecosystems, and promote sustainable agricultural practices. By preserving every drop of water and managing it wisely, we can ensure that future generations inherit a world where water is abundant, food is plentiful, and no one is left behind.

## Taking Action

As individuals, communities, and societies, we all have a role to play in advancing the cause of water and food security. Whether it's advocating for policy reforms, supporting grassroots initiatives, or making conscious choices in our daily lives to conserve water and reduce waste, each action we take contributes to the collective effort to leave no one behind.


*"Water is the driving force of all nature."*

# TYPES OF WATER

- 
- Supports health and digestion

## MINERAL WATER

↑ in sulfur, magnesium, and calcium.

- 
- Expensive
  - Balance diet provides the essential minerals

- Drinking, cleaning, and cooking.
- Cost effective

## TAP WATER

Commonest one.

- Potential for contamination (lead, pesticides etc)

- Safe from harmful substances

## PURIFIED WATER

undergone treatment removes contaminants such as bacteria, fungi, and parasites

- Removes beneficial minerals along with contaminants, such as fluoride, helps to prevent tooth decay

- Natural, free from treatment/processes
- Ensure safety by regular testing and installing filtration systems.

## WELL WATER

untreated and requires maintenance and testing to ensure safety

- High risk of contamination with bacteria, parasites, and other pollutants

- Tasty encouraging higher water

## FLAVOURED WATER

Enhanced with natural or artificial flavors, sweetened with sugar or artificial sweeteners.

- contains added sugars or artificial sweeteners

- Ideal in areas with contaminated water supplies
- free from harmful substances

## DISTILLED WATER

Produced by boiling water and condensing the steam back into liquid, removing impurities and minerals

- Lacks essential minerals, leading to mineral depletion in the body over time
- bland taste.

By SWATHI. IInd MSC FSN

*"Pure water is the world's first and foremost medicine."*



# BEST OF DEPARTMENTAL SEMINARS....

## TIME RELEASED SUPPLEMENTS

Allicor, a garlic-based dietary supplement, effectively lowers both systolic blood pressure (SBP) and diastolic blood pressure (DBP) in men with mild to moderate hypertension. Comparisons between Allicor and another garlic-based supplement, Kwai, show similar reductions in SBP over 4 weeks of treatment, Allicor, exhibited a significant decrease in DBP compared to Kwai, possibly due to differences in tablet disintegration and absorption, leading to sustained release of active compounds in Allicor. Given that both SBP and DBP are important predictors of cardiovascular risk, the moderate hypotensive effects of Allicor may offer significant cardiovascular benefits. This suggests that incorporating Allicor into the diet could be beneficial for cardiovascular disease prevention.

**PALLAVI**  
1st MSC FSN

## REFINED CARBS V/S PERCEIVED FACIAL ATTRACTIVENESS

Facial attractiveness is influenced by factors such as averageness, symmetry, masculinity/femininity, and secondary characteristics like skin texture, hair quality, and eye color. A French study examined the impact of refined carbohydrate intake on facial attractiveness using the glycaemic load (GL) of meals. Both chronic and immediate consumption of refined carbohydrates negatively affected facial attractiveness in men and women, with high-glycaemic breakfasts causing visible signs of hypoglycaemia that affect skin appearance. Chronic carbohydrate ingestion generally decreased attractiveness, except when men consumed high-GL afternoon snacks, which increased attractiveness. Regular intake of refined carbs leads to hyperglycaemia, accelerating glycation, which ages the skin and diminishes its appearance. High energy consumption overall did not have this detrimental effect, highlighting the specific impact of refined carbohydrates on facial aesthetics.

**AMISHA .1st MSC FSN**

## UTILIZATION OF VEGETABLE BY-PRODUCT AS FUNCTIONAL FOOD

Not all parts of fruits and vegetables are consumed, leading to significant global food waste. Efficiently utilizing these by-products, such as fruit and vegetable waste, can enhance food sustainability.

This study examined the impact of PPF on wheat bread characteristics and digestibility. Low PPF additions (5 g/100 g) produced bread similar to whole-wheat bread in texture, color, and digestibility. However, higher PPF additions resulted in bread with marked differences, including lower moisture content and weaker microstructure due to reduced gluten content. PPF increased bread hardness, chewiness, and adhesiveness, decreased total starch, and increased the relative content of slowly digestible starch at the expense of rapidly digestible starch. Overall, this study demonstrated that PPF has significant potential as a nutritional improver for bakery products.

**SUNITHA .1st MSC FSN**

## EVOLUTION OF DIET

A balanced diet, containing essential macro and micronutrients, is crucial for overall health. Understanding the evolution from ancestral (Palaeolithic) to modern diets highlights significant changes. The Palaeolithic diet relied on fruits, vegetables, nuts, seeds, roots, small animals, insects, and meat, providing abundant vitamins, minerals, and fiber. The development of agriculture introduced staples like wheat, rice, and maize, along with domesticated animal products such as eggs, milk, and meat. The Industrial Revolution brought refined cereals, sugars, and canned foods high in salt, sugar, and preservatives. While the Palaeolithic diet offered substantial nutrients from plant-based foods and animal sources, the modern diet often includes many refined products. Adopting positive aspects of the Palaeolithic diet, such as its emphasis on whole foods, could offer health benefits today.

**HARSHITHA**  
1st MSC FSN

## FORMULATION AND DEVELOPMENT OF AIR FRIED FOODS ENRICHED WITH ALL PLANT PROTEIN POWDER (APP NUTRILITE)

Air-frying is one of the new technologies of cooking food by spraying hot air around the raw materials to promote the even contact between food, also around the food with a smaller capacity, shorter cooking time, and fewer calories after consumption. Extensively used in the low-fat diet with low fat absorption. These plant protein powders are formulated with ingredients like pea protein, rice protein, and other plant sources to provide vegan-friendly option for individuals looking to supplement their protein intake was added to crackers and nippattu The air frying was more suitable for frying process and produce healthy fried foods than other traditional frying method. APP powder used as an ingredient with potential to promote the nutritional profile of a food. The community can benefit from this information by becoming more aware of the benefits of air frying, especially for fried meals, as a method for reducing health risks including cardiovascular disease and cancer, as acrylamide exposure raises the risk for multiple types of cancer. Air frying can be a healthy substitute for traditional frying. Considering the large amount of oil used and the drawbacks of deep-fat frying, oil undergoes a number of chemical processes when heated at high temperatures, including oxidation; numerous oxidative chemicals might be ingested by the fried foods. In addition of protein powder to these kinds of recipes will increase the nutritional quality

**BHAVYA .IInd MSC FSN**

*"When the well is dry, we know the value of water."*



## India's Water quality: A Call to Action

Groundwater, often considered the lifeline for drinking, irrigation, and industrial activities, plays an indispensable role in sustaining livelihoods and fostering economic development. Natural factors such as aquifer material interactions contribute to certain elements, anthropogenic activities introduce contaminants into the groundwater system, exacerbating the existing challenges.

Findings revealed with a spectrum ranging from poor to unfit water quality, Elevated levels of fluoride and nitrate, identified as significant contributors to

health risks, pose non- carcinogenic hazards through ingestion, with children identified as particularly vulnerable. Urgent interventions are imperative to mitigate groundwater pollution and alleviate associated health risks.

As India grapples with the multifaceted challenges of water quality Pollution control measures, and community awareness initiatives proactive measures are needed to ensure the sustainability and safety.

Source: Singh, G., Rishi, M. S.(2020). Evaluation of groundwater quality and human health risks from fluoride & nitrate in semi-arid region of northern India. *Environmental geochemistry & health* | **MOKSHA P. IInd MSC FSN**

## Unveiling the Health Benefits of Kombucha

Kombucha tea, a fermented beverage made with sugar and catalyzed by a Symbiotic Culture Of Bacteria and Yeast (SCOBY), has recently become a superstar in functional foods, captivating health enthusiasts with its health benefits. Following fermentation, it transforms into a complex mix of organic acids, tea polyphenols, fiber, and essential elements like copper, iron, manganese, nickel, and zinc. It also contains vitamins such as C and various B vitamins including thiamine, riboflavin, niacin, pyridoxine, folate, and B12.

Kombucha's benefits include antimicrobial properties, support for liver and gastrointestinal systems, detoxification, antioxidant effects, anti-tumor properties, and immune system stimulation. It has been shown to inhibit the development of ailments such as cancer, cardiovascular disease, diabetes, and neurodegenerative disorders.

As we explore wellness, unlocking kombucha's full potential promises to be enlightening and transformative.

Source :Kapp, J. M., & Sumner, W. (2019). Kombucha: A systematic review of the empirical evidence of human health benefit. *Annals of epidemiology* | **RUTIKA KUCKIAN. Ist MSC FSN**



## Bottled Water: how safe is it?

Bottled water sales have surged to over \$35 billion globally due to perceptions of purity and safety, and concerns over tap water quality.

The FDA lacks guidelines on storing opened bottled water police

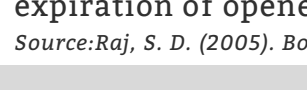
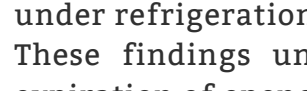
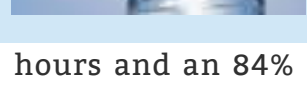
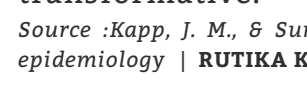
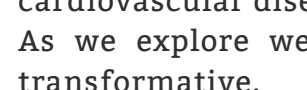
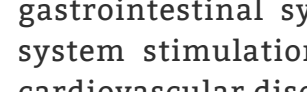
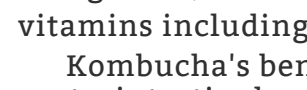
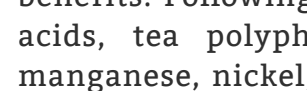
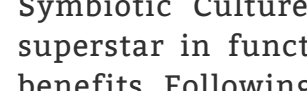
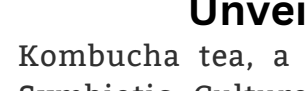
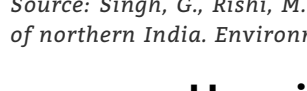
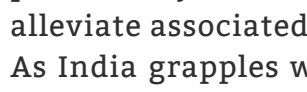
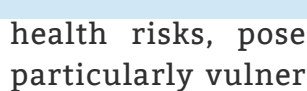
This study examined the impact of storage time and temperature on bacterial growth in bottled water after a single drink. Using standard microbiology culture methods, results showed a dramatic increase in bacterial count from under 1 colony per milliliter (col/mL) to 38,000 col/mL within 48 hours at 37°C.

Refrigeration significantly reduced bacterial growth, with a 50% decrease in 24 hours and an 84% decrease in 48 hours. Tap water exhibited minimal bacterial growth, particularly under refrigeration, with fewer than 100 col/mL at 48 hours.

These findings underscore the need for public awareness and guidelines on the storage and expiration of opened bottled water.

Source: Raj, S. D. (2005). Bottled water: how safe is it?. *Water Environment Research* | **MOKSHA P. IInd MSC FSN**

*"No matter, how much rich you are, you can't live without water."*



## Exploring the Nutritional Benefits of Pomegranate

### Peel-Enriched Buttermilk

Pomegranate peel is renowned for its antioxidant properties, which play a crucial role in protecting LDL cholesterol against oxidation and reducing the risk of cancer and heart disease. Rich in polyphenols, it also aids in cell protection and inflammation reduction.

Notably, the 10% incorporation showed a significant increase in protein content by 0.8, fiber by 2.1, and calcium by 257 units. In conclusion, this study underscores the potential of pomegranate peel enriched buttermilk as a functional food with numerous health benefits. By leveraging the nutritional properties of pomegranate peel, we can develop innovative and nutritious products that contribute to overall well-being.

This research opens avenues for further exploration and the development of value-added food products aimed at promoting public health.

Source: Begum, M., Ali, Z., & Toijam, R. (2018). Acceptability Scores and Enhancement of Nutritional Quality Parameters of Buttermilk Enriched with Pomegranate Peel Powder. *Int. J. Curr. Microbiol. App. Sci* | GR VIBHASHREE Ist MSC FSN



## The Unseen Dangers: Understanding Water Intoxication

Water is essential for life, but like any substance, too much can be harmful. Water intoxication, also known as water poisoning or hyperhydration, occurs when the balance of electrolytes in the body is disrupted by excessive water intake. Although rare, it can be fatal.

Intoxication typically happens when a person drinks an excessive amount of water in a short period, overwhelming the kidneys' ability to excrete it. This leads to dilution of sodium in the blood, causing hyponatremia. Symptoms range from nausea and vomiting to confusion, seizures, and even coma.

Athletes, marathon runners, and those practicing extreme water consumption challenges are particularly at risk. However, anyone can fall victim if they consume water excessively without replenishing electrolytes lost through sweat or other means.

Prevention of intoxication-

- Drink water in moderation and maintenance of electrolyte balance (esp. during strenuous activities)
- Awareness and education ensures water as a source of nourishment, not harm.

Source: Rowntree, L. G. (1923). Water intoxication. *Archives of Internal Medicine* | RUTIKA KUCKIAN Ist MSC FSN

## Dehydration: The Silent Threat Lurking in Every Drop

While water is essential for survival, dehydration poses a constant risk, especially in hot climates or during physical activity. Dehydration occurs when the body loses more fluids than it takes in, disrupting essential functions and causing a range of symptoms.

Mild dehydration can lead to thirst, dry mouth, and fatigue, while severe dehydration can result in dizziness, rapid heartbeat, and even unconsciousness. Prolonged dehydration can have serious health consequences, including kidney stones, urinary tract infections, and heat-related illnesses.

Prevention of dehydration- regular intake of water, especially in hot weather or during exercise.

Rehydration, paying attention to signs of dehydration, viz., dark urine or dry skin.

Source: Pross, N. (2017). Effects of dehydration on brain functioning: a life-span perspective. *Annals of Nutrition and Metabolism* | RUTIKA KUCKIAN Ist MSC FSN



*"A river is more than an amenity, it is a treasure."*



# WATERY DELIGHTS



**Watermelon**

92%

Vit A,C  
Potassium,Magnesium

Highly hydrating, rich in lycopene, supports heart health



**Celery**

95%

Vit C,K  
Potassium,Folate

Excellent hydration, supports digestion, combats inflammation



**Cucumber**

95%

Vit C,K  
Potassium,Manganese

Extremely hydrating, supports skin health, aids digestion



**Lettuce**

95%

Vit A,K  
Potassium,Folate

Hydrating, promotes satiety, supports digestive health



**Zucchini**

95%

Vit C,K  
Potassium,Manganese

Hydrating, aids digestion, supports heart health



**Strawberry**

91%

Vit C,Manganese,  
Folate,Antioxidants

Hydrating, supports immune function, promotes heart health



**Tomato**

94%

Vitamins A, C,  
potassium, lycopene

Hydrating, supports heart and skin health



**Coconut water**

94%

Potassium, sodium,  
magnesium, Vitamin C,  
antioxidants

Hydrating, replenishes electrolytes, aids post-exercise recovery

Incorporating these watery delights in daily diet regime provides vitamins,minerals and antioxidants for overall health and well being and keeps you well hydrated.

*"When the well is dry, we know the value of water."*



**MYTH: SPORTS DRINKS ARE THE BEST CHOICE TO REHYDRATE**

**Fact:** Sports drinks contains high-fructose corn syrup (HFCS) and large amounts of sugar, causes a dramatic spikes in blood sugar levels.

**MYTH : TO DRINK 8 GLASSES OF WATER A DAY.**

**Fact:** There's no scientific evidence supporting this specific amount. Your water needs depend on various factors like age, weight, activity level, and climate.

**MYTH : ALL WATER FILTERS ARE THE SAME.**

**Fact:** Different filters target different contaminants. It's essential to choose a filter that suits your water source and specific concerns.

## MYTH BUSTERS

**MYTH : DRINKING WATER BEFORE MEALS AIDS WEIGHT LOSS.**

**Fact:** While staying hydrated is essential for overall health, there's limited evidence to support the claim that drinking water before meals directly leads to weight loss.

**MYTH: YOU CAN'T GET DEHYDRATED IN COLD WEATHER.**

**Fact:** Cold weather can lead to dehydration.. You may not feel as thirsty in colder temperatures, but your body still loses water through breathing, sweating, and urination, especially in dry, heated indoor environments.

**MYTH: DRINKING WATER FLUSHES TOXINS FROM YOUR BODY.**

**Fact:** While staying hydrated is essential for kidney function and overall health. Kidneys and liver primarily detoxify your body, and they don't require excessive water intake to do their job.

*"We forget that water and life cycles are one."*

# DEPARTMENTAL NUTRI PRODUCTS.



## ISABGOL COOLER

AIDS DIGESTION AND PROVIDES A SOOTHING, HYDRATING EFFECT, MAKING IT A REFRESHING AND BENEFICIAL FOR DIGESTIVE HEALTH.

•ENERGY	20KCAL
•CHO	4
•PROTEIN	0.1
•FAT	0.2G

## AAM PANNA

•ENERGY	47.1KCAL
•CHO	11.2G
•PROTEIN	0.4G
•VITAMIN C	5.4MG

A REFRESHING BLEND OF TANGY SWEETNESS PACKED WITH VITAMINS AND ELECTROLYTES, MAKING IT A HYDRATING AND REVITALIZING BEVERAGE.



## PAPAYA LEMONADE

PROVIDES A VITAMIN-RICH, HYDRATING BLEND WITH DIGESTIVE ENZYMES, PROMOTING DIGESTION AND SUPPORTING OVERALL IMMUNE HEALTH.

•ENERGY	258KCAL
•CHO	63G
•PROTEIN	0.8G
•FAT	0.3G



## PADENGI SHAKE

OFFERS A PROTEIN-PACKED, THIAMINE-RICH BEVERAGE PROMOTING MUSCLE RECOVERY, WEIGHT MANAGEMENT AND PROMOTING SATIETY

•ENERGY	18KCAL
•PROTEIN	1G
•CALCIUM	6MG
•THIAMINE	0.45MG



## MUHABBAT KA SHERBAT

COMBINED WITH HYDRATING WATERMELON AND THE SOOTHING AROMA OF ROSE, PROVIDES REFRESHING AND NOURISHING BEVERAGE RICH IN ANTIOXIDANTS AND VITAMINS, IDEAL FOR HYDRATION AND SKIN HEALTH.

•ENERGY	146KCAL
•CHO	26G
•PROTEIN	2.7G
•FAT	3.44G



*"Save water, quench the future's thirst."*





## MARBLE CAKE

COMBINED FLAVORS OF VANILLA, CHOCOLATE AND NUTS OFFERING OMEGA 3. HEALTHY AND TASTY IN ONE DELICIOUS TREAT

•ENERGY	221KCAL
•CHO	30G
•PROTEIN	7G
•FAT	8G
•OMEGA3	38MG

## JOWAR SHAKARPOLI

•ENERGY	400KCAL
•CHO	83G
•PROTEIN	8G
•FAT	5G

MADE FROM NUTRIENT-RICH SORGHUM FLOUR, OFFERS A HEALTHIER ALTERNATIVE TO TRADITIONAL SWEETS, PACKED WITH FIBER, VITAMINS, AND MINERALS.



## BANANA OATS CAKE



A NUTRITIOUS AND SATISFYING DESSERT RICH IN FIBER, VITAMINS, AND MINERALS. ALSO BEING A GREAT WAY TO USE UP RIPE BANANAS AND INCORPORATE HEART-HEALTHY OATS INTO YOUR DIET.

•ENERGY	135KCAL
•CHO	21G
•PROTEIN	2G
•FAT	6G

## RICE SAGO PAPDI

•ENERGY	120KCAL
•CHO	21G
•PROTEIN	3G
•FAT	2G

A CRUNCHY AND DELICIOUS SNACK, PROVIDES ENERGY AND SATISFIES HUNGER WHILE OFFERING A GLUTEN-FREE OPTION FOR THOSE WITH DIETARY RESTRICTIONS.



## RUSSIAN HONEY CAKE



KNOWN FOR ITS DECADENT LAYERS OF HONEY-INFUSED SPONGE CAKE AND CREAMY FILLING, OFFERS A DELIGHTFUL INDULGENCE WHILE PROVIDING A COMFORTING TASTE OF TRADITION AND SWEETNESS.

•ENERGY	1222KCAL
•CHO	247G
•PROTEIN	29G
•FAT	75G

*"Save water, quench the future's thirst."*



# DEPARTMENTAL ACTIVITIES



**Nutritional Education Program**



**Diet Camps**



**Staff Achivement**



**FUZO – A Food Event**



**Association Activity**



**Extension Activity**



**Common Seminar**



**Dysphagia Workshop**



**International Women's Day celebration**

See more on

