



SLMNA NEWSLETTER

SRI LANKA MEDICAL NUTRITION ASSOCIATION OFFICIAL NEWSLETTER

Linking nutrition research to practice...



EDITOR'S NOTE

"Gift"

The flowers blossomed in the spring are still waiting to be offered during the coming eve of Poson.

Poson is also another season with much color and gaiety that streets and homes decorated with glittering lanterns and illuminations.

Being the reason, the arrival of Buddhism to Sri Lanka in the 3rd century BC, the Poson festival is celebrated annually as a recall for its historical significance with great fervour, piety, and contemplative gratitude.

The flowers offered wither away, the bright lights of lamps fade away, and the days of the season also pass away, reminding us about the impermanence of life. In this impermanent course of life, one should understand that it is a gift to be alive and healthy.

As doctors and practitioners, we are gifted our lives not only to treat patients but also to heal humankind by spreading boundless affection, compassion, and kindness.

Therefore, let's together radiate boundless affection towards the entire world, to evoke the virtue of compassion to all living creatures and instill a sense of tranquillity in everyone's heart in this eve of sanctity.

Dr. Hasanthi and Dr. Udari

CAPTURE OF THE MONTH



Your interior is more important than you think. Find out why before you start listing.

ARTICLE OF THE MONTH

Ensure the Quality of Coconut Oil by Implementing a Ranking System

BY. DR. PABASARA WIJERATNE

Why we need a ranking system?

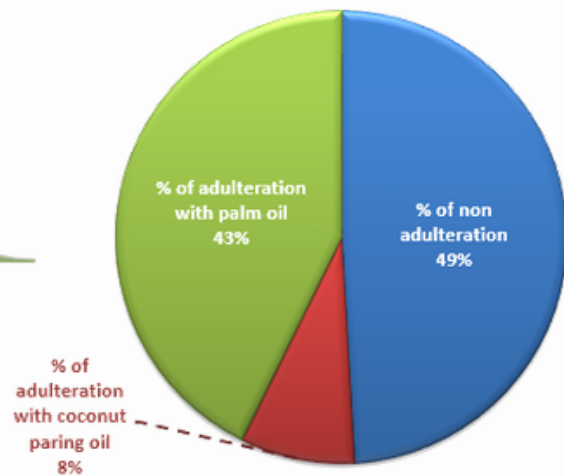
Coconut oil usage record goes back to thousands of years in Sri Lanka. It is an important edible oil produced by the coconut kernel or copra. In earlier days in Sri Lanka, coconut oil is produced using the "sekku". However, it changed with time. Since the 80s coconut oil is produced using modern machinery in large, medium, and small-scale mills.

Coconut oil production has expanded with time, but since the palm kernel oil industry became popular it was dropped with time. The drop was about 129,807 metric tons in 1985 to 37,982 metric tons in 2006. The decline of vegetable oil prices also negatively influenced the coconut oil industry over this time.

Due to these reasons, the quality of coconut oil in the market became poor. Importation of cheap palm oil and other vegetable oils by traders, resulted in the adulteration of coconut oil to make a bigger margin of profits. As a result of the reduction of quality and production, coconut oil consumption became low in Sri Lanka. For example per capita consumption of coconut oil dropped 5.2Lb in the '90s to almost 1.0 Lb. in 2005.

There was a survey on the adulteration of coconut oil all over the island done by the Coconut Development Authority in 2006. The survey found that 46% of the samples are adulterated and out of this 37% of samples are adulterated with palm oil as it was cheaper than coconut oil. According to the results of the survey adulteration mainly happens by agents or manufacturers.

Adulteration of Coconut Oil



After the results of this survey, the authorities identified that the quality of the coconut oil is destroyed by adding another oil and the genuine coconut oil industry is dropping. Other than this, due to the poor quality of coconut oil, the risk of aflatoxins/carcinogenic substances, risk of non-communicable diseases to the consumer also considered.

Therefore, a decision was taken to offer a certified badge from Coconut Development Authority, as the regulatory body, to promote the manufacturers who produce good quality products and ensure customers consume that quality product.



The procedure of offering star marks

This system is only applicable for coconut oil not for the refined and bleached oil (RDB) where oil is produced using chemicals. Authorities want to promote only pure coconut oil to the market. The certified badge will issue only for the product and not for the company.

Initially, the manufacturer should apply for the certified badge. Thereafter at least five officers (two or at least one medical officers from the Ministry of Health, an officer from consumer affairs authority, an officer from Coconut Development Authority, an officer from Coconut Development Authority-Quality Assurance Unit) visit the factory and observe the production process. The quality of raw material, the preparation of copra, storage of material, and the quality of water are checked and those parameters should be according to the SLS standards. They also take samples to check free fatty acids, iodine level, and aflatoxin level which should follow the SLS standards and be checked at the laboratory in Coconut Development Authority. With fulfillment of this inspection and testing, the appointed committee can recommend the star marks.

	Free fatty acid level (a marker of rancidity and adulteration),
	Iodine level (check adulteration)
	Aflatoxin level, according to the SLSI;32;2017.
	Production premises and production process are according to the SLS standards
	The raw materials are according to the standards and no chemical use for the production process

The manufacturer can add the badge to their product label after signing the written document on rules and regulations with the Coconut Development Authority. If a manufacture misuse the badge, the Coconut Development Authority can take legal actions under the 1917 no: 46 act. The product label should follow the Food Labeling Act by the Consumer Affairs Authority.

The continuous monitoring of the sample from island-wide market surveys will be done to ensure the quality. The star mark badge is only giving for the standard number of productions and it should renew to make sure that the production adheres to the SLS standards.

After implementing this ranking system, authorities are decided to make a marketing campaign to educate the consumer to make sure that they buy a quality product, certified by the Coconut Development Authority.

Challenges and ways to overcome

Even though the Coconut Development Authority is the body of the regulation of coconut products of the country, the legal power is minimal as compared to the Consumer Affairs Authority. When there is a break of rules by the manufacturer, CDA can publish it in the media to acknowledge the consumer. But only the Consumer Affairs Authority has the power of taking legal actions.

In the Food Act, there was a misunderstanding, saying that coconut oil cannot mix with other oils more than 75%, so the progress committee decided to get actions to revise this sentence and publish it as the coconut oil, cannot be mixed with other oil by law.

The majority of retail coconut oil found to be adulterated according to the survey. Authorities plan to offer a sealed stainless steel container to the producers. Retail manufacturers can apply and obtained the storage containers with the certified badge from the Coconut Development Authority. As the oil containers are sealed no one can open and mix them with the other oil.

Even though there are many challenges the implementation of this ranking system will encourage the production of good quality coconut oil by the manufactures and give valuable information to the customer to make a healthy choice.

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Acknowledgment

My sincere gratitude goes to all the staff of Coconut Development Authority and especially Mrs. Madhuri Wijebandara, Assistant Director, Quality Assurances Unit for helping me to find the information to make this document.



FOOD OF THE MONTH POMEGRANATE



(*Punica granatum*)

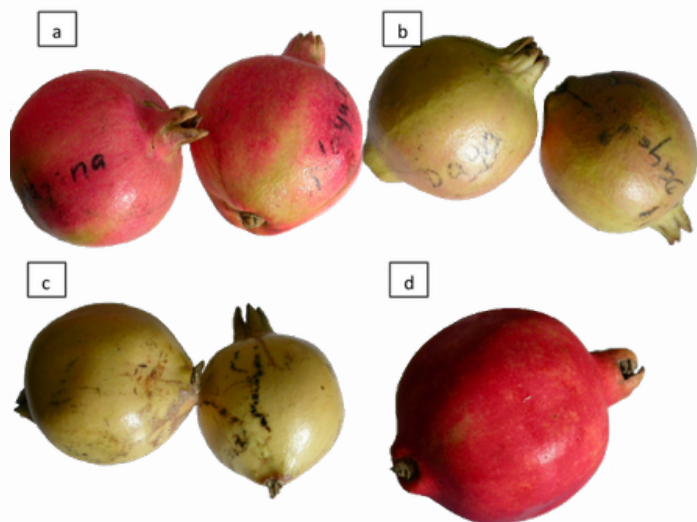
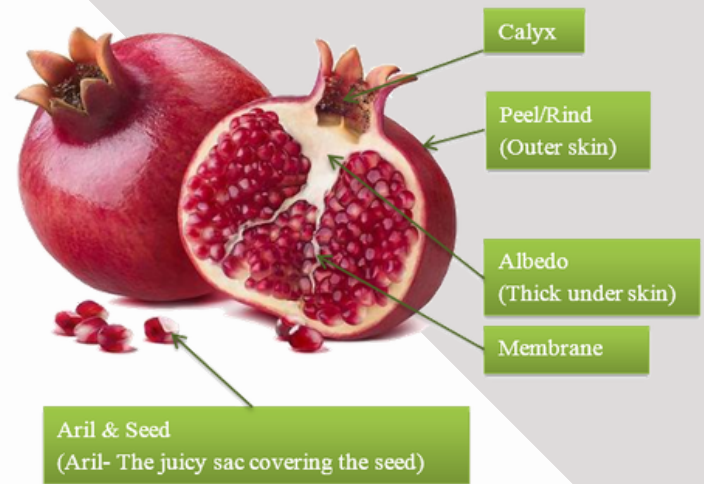
BY DR.MIHIRI AMARASINGHE

Pomegranate is a fruit, full of nutritional factors in each part of the fruit which has given a high medicinal value to it. It can be cultivated in both cold and hot climates, provided that a good water supply is present in hot climates. Pomegranate cultivation can be seen mainly in dry zones in Sri Lanka. Depending on the conditions, 70-200 pomegranates can be plucked from one tree per year. Pomegranate can be stored in the refrigerator (below 5 C) for about 7months.

Nayana, Daya, and Nimali are the three varieties of pomegranate recommended by the Department of Agriculture in Sri Lanka.

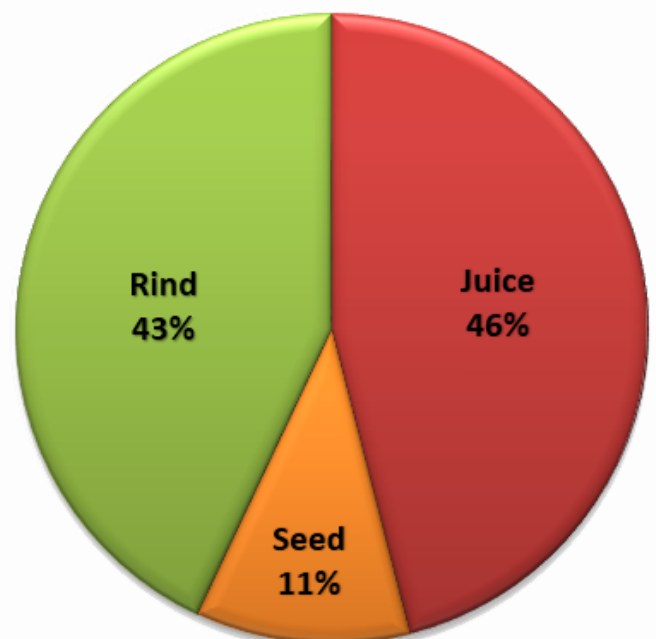
The local varieties are not much popular due to poor fruit characters such as less attractiveness of outer appearance, aril color, small fruit sizes, and low productive capacity. Thus other varieties of pomegranates are imported to meet the local demand.

Inside of the fruit



- a) Nayana
- b) Daya
- c) Nimali
- d) Indian variety

Weight percent composition of pomegranate



Nutritional factors of pomegranate



Water	83.5g
Carbohydrate	11.58g
Protein	1.33g
Fat	1.4g
Dietary Fiber	2.83g
Energy	229KJ

MINERALS	
K	206mg
P	27.2mg
Mg	11mg
Ca	10.65mg
Na	2.13mg
Fe	0.3mg
Zn	0.18mg
Cu	0.13mg
Mn	0.13mg
Se	0.55microgram

VITAMINS & PRECURSORS	
Caretinoids	47.28micrograms
Ergocalciferol	109micrograms
Alpha Tocopherol	30micrograms
Phyloquinone	18.5micrograms
Vit B1	0.06mg
Vit B2	0.01mg
Vit B3	0.2mg
Vit B5	0.4mg
Vit B6	0.3mg
Vit B7	0.6micrograms
Vit B9	38.6micrograms
Vit C	12.69mg

per 100g of Edible Portion of Pomegranate (aril)

Important chemical components of pomegranate

Pomegranate seeds

- **Pomegranate seed oil (18% of dried and cleaned seed)**

High in punicic acid. (a fatty acid with anti-oxidant and anti-inflammatory properties)

Other fatty acids are linoleic acid, oleic acid, palmitic acid and, stearic acid.

- **Phytoestrogen compounds in pomegranate seeds**

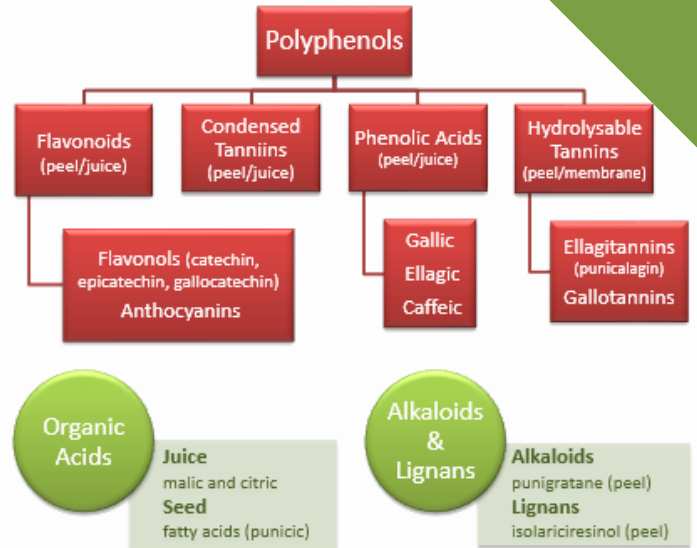
Have sex steroid hormones similar to those in humankind.

Pomegranate juice

It contains Fructose, sucrose, glucose, ascorbic acid, citric acid, fumaric acid and, malic acid.

Both juice and the peel

Contains polyphenols



Health benefits and medicinal values of Pomegranate

Other than the benefits of the nutritional factors, recent studies have demonstrated the potent antioxidant, anti-inflammatory, and anti-microbial effects of pomegranate. These properties have led to many health benefits.

Antioxidant activity

Phenolic compounds and ascorbic acid contents of pomegranate are known to have antioxidant properties. These act via scavenging free radicals and inhibiting lipid oxidation in vitro.

Antiinflammatory activity

Ellagitannins and ellagic acid are the two main components of pomegranate extract which are found to have anti-inflammatory properties. Pomegranate extracts have been shown to reduce lipoxxygenase, which catalyzes the

conversion of arachidonic acid to leukotrienes which are vital inflammatory mediators.

Studies have also shown that phenolic compounds of pomegranate inhibit both COX-1 and COX-2 enzyme activities, but the effect was more pronounced on the enzyme activity of the COX-2 enzyme which aids in inflammatory reactions. Thereby it exerts anti-inflammatory properties.

Due to anti-oxidant and anti-inflammatory properties, pomegranate extracts are beneficial in a wide range of diseases.

Antimicrobial activity

Anti-bacterial properties

Studies have shown that pomegranate peel extracts are effective against a wide range of bacteria. It has been shown to inhibit the formation of biofilms by *Staphylococcus aureus*, methicillin-resistant *S. aureus*, *Escherichia coli*. It is also effective against primary and secondary colonizer bacteria of dental plaque via anti-adhesive activity.

Anti-Fungal properties

Pomegranate peel extracts are especially effective against *Candida* species. Ellagic acid, one of the major components of pomegranate peel is effective in reducing the biofilm formation of *C. albicans*.

Anti-viral properties

Several studies have shown that polyphenolic compounds which are rich in pomegranate have broad-spectrum antiviral activity, by inhibiting viral DNA and RNA.



Why you should love to eat Pomegranate?

- Useful to control atherosclerotic plaque formation.
- Aid to control blood pressure
- Helps to control blood sugar
- Anti-inflammatory properties useful in obesity
- Useful in cancer prevention.
- Improves immunity
- Useful in osteoarthritis/rheumatoid arthritis
- Improves skin health
- Augments memory
- Useful in Alzheimer's disease
- Helpful for protection against pathogens
- Useful to maintain good dental health
- Useful in wound healing
- Aids food digestion.

Point to think - Pomegranate Biowaste

Pomegranate peel is the main non-edible portion that we usually throw away. As mentioned earlier in this article, it is rich in bioactive compounds. Thus the attention is drawn for its use in the food industry and skin applications.

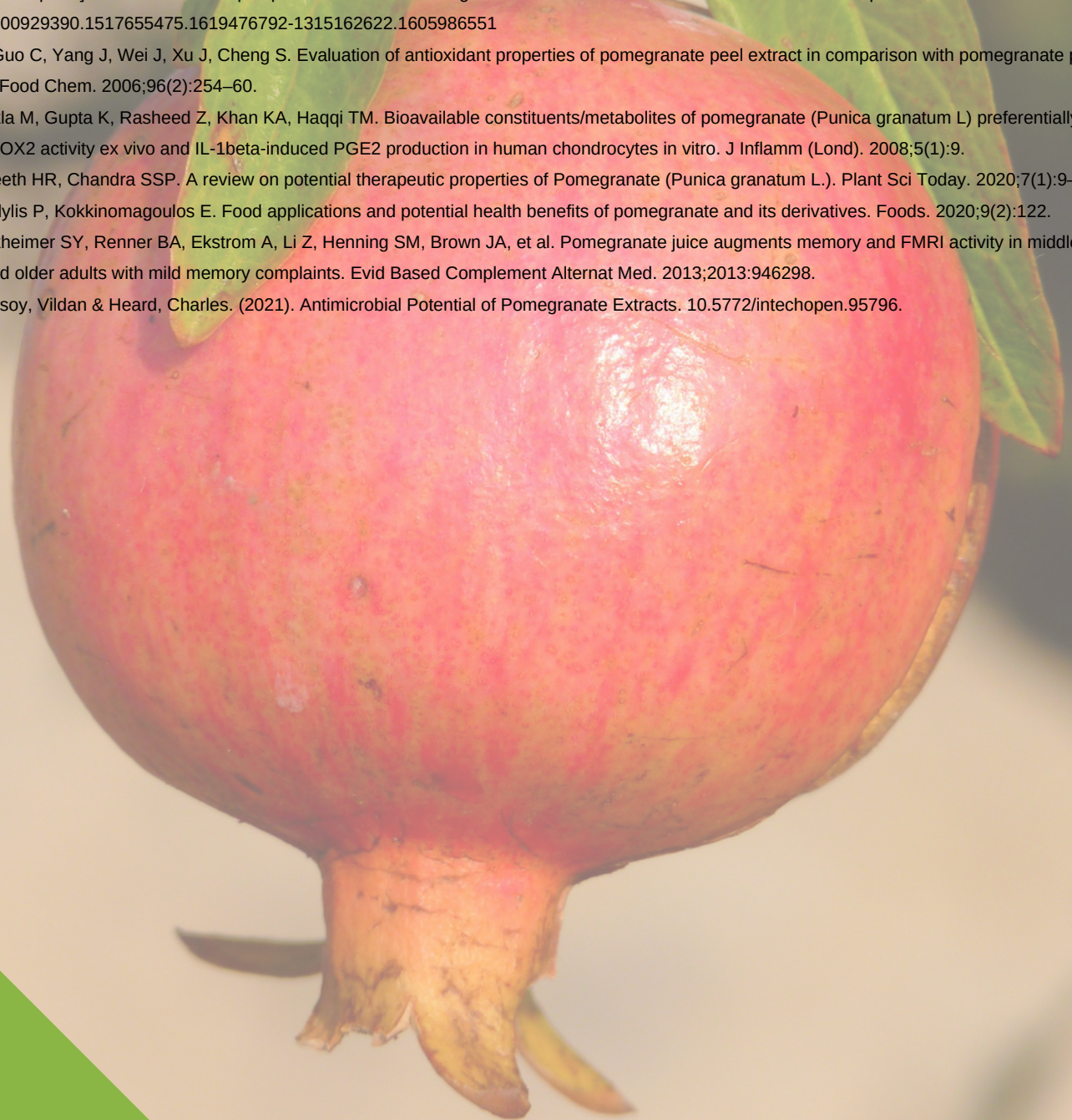
As pomegranate peel has fiber and phenolic compounds, pomegranate peel powder can be used as a natural food additive to enhance the nutritional value of food products. Several studies show the benefits of using pomegranate biowaste in food packaging as it has anti-microbial actions and strengthening effects.

Phenolic compounds in pomegranate biowaste can protect the skin from oxidative stresses. Thus it is used in skin health applications.

Therefore it's important to draw attention towards beneficially utilizing pomegranate biowaste rather than throwing it out.

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PAST EVENTS AND PUBLICATIONS

1. Monthly clinical meeting - April 2021

The monthly clinical meeting, April 2021, was held virtually. Dr. Piyumika De Silva, MD, Assistant Professor of Medicine in Rutgers New Jersey Medical School, USA, delivered a lecture as the guest speaker.

2. Monthly clinical meeting - May 2021

The monthly clinical meeting, May 2021 was held virtually. Pujitha Wickramasinghe, Senior Professor in Paediatrics, Faculty of Medicine, University of Colombo, delivered a lecture as the guest speaker.

3. Towards a healthy Ramadan

TOWARDS A HEALTHY RAMADAN

SUHOOR OR SAHAR (Pre-dawn meal)

- Start the day with a full glass of water
- If you need to consume milk/milk tea/plain tea/coffee, maintain a gap of minimum 1 hour between meals & these drinks
- Choose whole grain varieties or high fiber diet (Eg: rice, oat meal, whole wheat) and vegetables
- Limit consumption of high salty foods & fat rich foods
- Can have yoghurt /curd/fruits
- Do not miss suhoor

IFTHAR (Breaking fast)

- Break the fast with water and 1 or 3 dates
- Consume plenty of fluids & hydrating foods like watermelon & cucumber
- Soup or kanji can be taken after maghrib or isha prayer
- Milk or home prepared fruit juices without more added sugar are also options
- Avoid simple sugars like soft drinks, ice cream & faluda
- Minimize short eats & deep fried foods

IFTHAR TO SUHOOR

- If you had a heavy kanji you can have a light dinner with mixed vegetable salads
- Consume required amount of animal protein (fish, lean meat, skinless chicken, egg)
- If kanji contains rice, vegetables, meat & oil then it is equal to a balanced dinner
- Consuming fruit salad with or without yoghurt/curd is a good option after tharaweeh prayer
- Drink plenty of water - atleast 1 litre between ifthar & suhoor

TIPS

- Develop a meal schedule - consider adequate nutrients & portion
- Consume variety of fruits & vegetable
- Healthy fats & nuts (avocado, cashew nuts & almonds) are beneficial
- Rather than frying, try other cooking methods such as steaming, stir frying & baking
- Engage in physical activity - Eg: waking to mosque for prayers

Sri Lanka Medical Nutrition Association (SLMNA)

UPCOMING EVENTS

1. Monthly clinical meeting - June 2021

The next monthly clinical meeting will be held on 24th June 2021, virtually. The guest speaker will be Dr. Theodoric Wong, Consultant Paediatric Gastroenterologist, Honorary Clinical Lecturer, University of Birmingham.

2. Low Salt Cooking Challenge - National event



3. PENSA congress 2021



PENSA 2021

CONGRESS

14 - 16 October 2021, BITEC, Bangkok, Thailand

Joining Hands to Improve Quality of Nutrition Support Practices

Day 1, 14th October

Room 1 (BHIRAJ Hall 2) Topics: • Covid 19 experience (Nutrition) • Critical care 1 • Protein • Micronutrient	Room 2 (BHIRAJ Hall 3) Topics: • Obesity 1 • Liver transplantation • Novel technology	Room 3 (AMBER) Topics: • Pediatrics 1 • GLIM • Obesity 2
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Day 2, 15th October

Room 1 (BHIRAJ Hall 2) Topics: • Meeting expert lecture; critical care • Quality of nutrition care • Critical care 2 • Trauma - wound care • Geriatric 2 • Chronic illness	Room 2 (BHIRAJ Hall 3) Topics: • Meeting expert lecture; Surgery • Surgery 1 • Geriatric 1 • Sport • Nutrition during organ support • Nutrition in for health promotion	Room 3 (AMBER) Topics: • Meeting expert lecture; Cancer • Home PN • GI disease and EN • Dietary patterns • Pediatrics 2 • SPENT General Assembly
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Day 3, 16th October

Room 1 (BHIRAJ Hall 2) Topics: • Meeting expert lecture; Renal • Critical care 3 • PN • Microbiota in practice	Room 2 (BHIRAJ Hall 3) Topics: • Meeting expert lecture; Nutrition research • Renal • Albumin • Nutrition in cancer	Room 3 (AMBER) Topics: • Meeting expert lecture; Pediatrics • Surgery 2 • Pharmacist • Pediatric 3
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