

Clinical studies – Need of the hour for product positioning: Dr Varsha

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Dr. Varsha, regionally, nationally and internationally acclaimed Clinical Nutritionist and Founder Chair of Indian Institute of Nutritional Sciences (IINS) visited Coconut Development Board, Kochi recently and shared her views on coconut and its health aspects with Shri. T. K Jose IAS, Chairman, CDB and senior officials of Coconut Development. IINS is a trademark registered institute established with the intention of dissemination of principles and practical knowledge on clinical nutrition through workshops, seminars etc to nutrition seeking professionals and public.

Dr. Varsha received the prestigious *Wimpfheimer-Guggenheim Fund Award for International Exchange in Nutrition, Dietetics & Management* instituted by Academy of Nutrition & Dietetics Foundation – ANDF [Formerly known as American Dietetic Association Foundation], in the year 2004 for her “Partnerships in Action: Medical-Nutrition Synergism for Clinical Nutrition/ Dietetic Practice and Nutrition Education in the Indian Subcontinent” describing an innovative approach for solving nutritional problems in a developing country through creating policies. At

present she is working as consultant clinical nutritionist, certified Nutrition Injury Specialist and Executive Director of Parvati Ben Trikamji Bhatt, Gujarati Sahayakari Hospital.

An interview was arranged on the occasion which is apportioned into two parts. First part pertains to Neera and Neera products wherein she has shown interest on carrying out clinical studies and developing social marketing strategies and second part to coconut oil. Dr. Varsha disclosed that she is interested in undertaking a cross sectional study on coconut oil and its impact on different age groups across the world. She sought support of the Coconut Development Board in evidence based documentation on cardio/cerebrovascular nutritional health of populace traditionally consuming coconut oil and coconut products with Coconut Boards of India, Srilanka, Phillipines and West Indies – i.e. in coconut belt.

Part – I

Q: Kindly brief your views on “Neera”, the natural health drink from coconut inflorescence?

My father had introduced “Neera” to me whenever we were travelling to Gujarat via Mumbai in my childhood days. He believed in the goodness of this product. My uncle however would never concede to our request as he confused it with the fermented product “Toddy”. Hence I firmly reiterate that public need to be educated that “Neera”, is a sweet sap extracted from the immature inflorescence of various species of



toddy palms. Neera juice is a nutritious, non-alcoholic, mineral rich and healthy natural refreshing drink for all ages.

It is a sugar containing delicious health drink with 0% alcohol and low Glycemic Index [GI 35] making it a valuable thirst quencher even for diabetic patients. Actually it is a boon for them. The drink must be popularized on account of its high nutritive value, delicious taste and agreeable flavor. People also need to be made aware that the extraction never requires mechanical crushing, as in the case of sugarcane. It is obtained by chiseling the spathe of the tender most part of coconut, sago, and Palmyra palm. Neera is highly susceptible to natural fermentation at ambient temperature within a few hours of extraction from the palm source. Once fermented, it transforms into toddy with 8% alcohol.

Rich in carbohydrates, mostly sucrose, and has a nearly neutral pH, the chemical percentage composition of Neera varies, depending on factors such as place, type of palm, mode and season of collection. Using several technologies developed by various research institutes, Neera is processed and preserved in its natural form to retain the vitamins, sugar, and other nutrients beneficial for health. To extend the shelf life of Neera, heat preservation techniques such as pasteurization are used. Typical nutrient composition values are: sucrose [sugar] 12.3 – 17.4g/100mL; protein 0.23 – 0.32g/100mL and contains a number of minerals and salts [iron, zinc & phosphorus] and is high in protein. It contains significant amounts of vitamins – ascorbic acid, nicotinic acid and riboflavin. Neera syrup is used as a health drink in connection with Ayurveda and other systems of medicine

Q: As a practicing nutritionist what



would be your thoughts on marketing “Neera” and its products?

With respect to the marketing of Neera and Neera products there are two issues that need to be considered – 1. Marketing various brands of Neera and exploring the potential of neera/ neera products. 2. Marketing strategy i.e. Product positioning

1. Marketing various brands of Neera and exploring potential of neera products

Presently it’s a state sponsored activity with tremendous individual limitations. Central Food Technological Research Institute - CFTRI, Mysore & National Institute of Nutrition, Hyderabad are two apex bodies that could offer unified expertise and insights. In addition to the present system of Neera production and marketing strategy being adopted by the Board, on all India basis the views of the individual stakeholders must be consolidated so that the potential could be maximized for the

benefit of the entire Indian population in various states such as;

- Gujarat [Federation of Gujarat Neera & Tadparth GramodyogSangh, 1991].
- In Maharashtra and Gujarat, neera is made available through various outlets known as “NeeraVikri Kendra” (Neera sales centre). The Neera Palm Product Cooperative Society had set up small kiosks that sold neera in major railway stations, but they are now found only alongside highways and expressways outside the Mumbai city area.
- In Andhra Pradesh Neera is extracted and sold by the Goud caste (no state government sponsorship/support) and in Tamil Nadu, it is traditionally extracted and sold by the Nadar caste. Also, KVIC and Tamil Nadu Palm Products Co-operative association sell refrigerated Padaneer at their outlets.
- Karnataka [Neera is tapped, extracted and sold by the Ediga and Bilava castes. Govt. has constituted Neera Board.

In Orissa, State Palmgur Cooperative Federation provides technological support in the processing and production of neera and its associated by-products.

2. Marketing strategy i.e. Product Positioning

A wide variety of value added products like "coconut syrup", honey, crystal sugar and jaggery can be produced from Neera. Development of popular snack items like biscuits and cookies offers a major shift in the ingredients and opens up a vast potential on nutritious snack front. These products have huge prospects in the domestic and international markets owing to the health and nutritive attributes of the products.

a. The Nutritious Health Drink – is to be categorized under beverages. It means that Neera is being promoted in lieu of beverages i.e. tea, coffee, fruit juices or whatever drinks. The comparison therefore would be positives versus the negatives. While Neera has the obvious positives let's look at the negatives that could be quoted against it – Flavors Added: Guava and Green Apple, litchi etc – Is it real fruit pulp or just the artificial flavor? In the event of artificial flavoring it is the goodness of Neera alone that needs to be highlighted. Pure Neera is marketed against tea, coffee, or aerated beverages. The analysis should be covered the basic nutrition content of each of these beverages. For example, the total calories consumed, the contribution of sugar and the final glycemic index impact etc. Also analysis of the sugar component and why the glycemic index is only 35 for neera would be the greatest strength of this product.

In the event tea or coffee or an aerated drink is consumed, without added sugar or with addition of artificial sweetener what limitations that would take place and how Neera with its natural sugar offers a better alternative. It would be a **winner** not only on the health front in general but also for its acceptance in a major compromised health condition – diabetes. This analysis is the marketing strategy and will assist the product positioning in terms of the value addition that consumption of NEERA would do.

b. Sugar or Jaggery: What needs to be highlighted is the basic composition difference between sugar and jaggery products derived from other sources especially cane sugar already in the market. Also need to consider the consistency variants of Neera – liquid, semisolid and solids. Also the existing products such as jaggery have issues such as change in colour to green. The consumer is concerned and no one explains why this happens. It is obviously the technology after effect. Can 'Jaggery' derived from 'Neera' overcome this limitation? If yes this would be the **pluspoint** in marketing strategy.

c. Honey: The possibility of adulteration of the natural honey, the allergenic potential of the natural honey due to pollen contamination could all be the possible counters to be used in the marketing strategy for the honey derived from Neera

d. Biscuits: There is diminished nutrient value for the available biscuits with use of refined flour [Maida]; it's minimized use in biscuits raises the potential of the product derived from Neera and

coconut combination in terms of marketing strategy and product positioning

e. Chocolates and candies and sweets prepared using sugar and jaggery derived from neera with a low glycemic index is better than use of artificial sweeteners which causes adverse side effects.

All the major coconut-growing countries of the world like Philippines, Thailand, Indonesia and our neighboring country Sri Lanka have exploited the potential of this product in the domestic and export market. It's high time to popularize goodness of Neera across the country.

Part – II

Q: Some cooking oils such as rice bran oil, olive oil etc are making inroads into the culinary practices of Kerala where coconut oil was exclusively used. From the nutritionist's point of view what is your opinion in this regard?

From the Nutritionist's perspective "oil consumption" in Indian context must be viewed as "routine" vs. "specialty" oils. This is essential for paving way towards good health. Vegetable/plant oils are the primary dietary source of fats and cooking oils [medium] are considered as secondary derivation of this primary source. When regional consumption patterns in the world are studied, India is identified primarily as one where "liquid oil" is the major form consumed.

"Routine" edible oils commonly used in Indian cuisine are: *Peanut oil*, popular in northern and western India; *Mustard oil* in eastern India; *Coconut oil* along the western coast, especially in Kerala; and *Gingelly* (sesame) oil commonly used in the south.

Several "Specialty" oils as enumerated below are replacing routine oils in the day-to-day use

- *Corn oil*, one of the most common cooking oils. As of 2006

the US produced about 1.09 million metric tons of corn oil, which is used for cooking oil, salad dressing, margarine, mayonnaise, prepared goods like spaghetti sauce and baking mixes, and to fry prepared foods like potato chips and French fries.

- *Grape seed oil*, used in cooking and cosmetics
- *Hazelnut* and other nut oils
- *Linseed oil*, from flax seeds
- *Rice bran oil*, from rice grains
- *Safflower oil*, a flavorless and colorless cooking oil
- *Sesame oil*, used as a cooking oil, and as a massage oil, particularly in India

I totally disagree with the use of Olive oil in the tropical set up and also discourage indiscriminate use of "PUFA" (Poly Unsaturated Fatty Acid) oils such as soybean oil, sunflower oil etc and do not prescribe to the mixing of oils especially since the perfect single combination ratio is not available. According to me, – "Specialty" edible oils that are strong contenders for advocacy are: *Coconut Oil & Rice Bran Oil*.

Why "Specialty" ?

Dr. Varsha says "While Rice Bran Oil with its unique compound "ã-

oryzanol" is hypo-cholesterolemic and has anti-oxidant and anti-tumor properties; prevents dyslipidemia, lowers blood pressure and with both the PUFA (Poly Unsaturated Fatty Acid):SFA (Saturated fatty acid) ratio and the Omega 6:Omega 3 ratio closest to WHO recommendations, it is "Coconut oil" that is re-emerging as one with Positive Health Promoting effects since it has an "unique combination of saturated fatty acids [Lauric acid] & medium chain triglycerides" that results in favorable blood cholesterol profile and hence does not carry the same heart risks as other saturated fats and is also the "Safest" cooking medium producing non-toxic byproducts [transfats, etc.] with deep frying and Indian cooking methodology.

Dr Varsha provided the following facts to support her contention that Coconut Oil is **Heart Friendly** despite 91% Saturated fatty acid [SFA]; 6% Monounsaturated fatty acid [MUFA]; 3% Polyunsaturated fatty acid [PUFA]; ω6 (Omega6) – 2%; ω9 (Omega9) – 6% [oleic acid] because of Lauric acid that positively influences High Density Lipoprotein [HDL] & produces a favourable blood cholesterol profile [the only food that influences HDL] & in combination with Medium Chain Triglyceride provides "SAFETY" to the heart.

Dr. Varsha added that when one wants to talk about "The Most Appropriate Cooking oil", Coconut Oil is the most "Safest Cooking Oil" because it is most "Stable" oil at high temperature and it is highly "Resistant to oxidation" at high temperature [*Oil during cooking is subjected to high temperatures rendering it unstable in its composition and creation of byproducts that are harmful [cancer producing] and damage body tissues [free radical formation that destroy body cells].

She further highlighted the wonderful chemistry of coconut oil in that the saturated fat is entirely constituted of 7 different types of Medium Chain Triglycerides which are much easier to digest than Long Chain Triglycerides; absorbed instantly in the digestive tract and transported to liver's powerhouses for rapid metabolism and **Instant** energy releases without insulin spike [beneficial for diabetics]; Do not circulate in the blood stream [hence no plaques that block the blood vessels]; Do not get stored as body fat [hence no obesity]. She goes with the present recommendation of two tablespoons of Coconut Oil every day for its "Positive Health Promoting" effects.

She concluded with the following message: "Oils and fats and products made there of play an important role in our diets worldwide. Despite wide differences in dietary habits, modern products made from fats and oils are essential for healthy diets for children and adults worldwide. The food industry has made significant improvements to the nutritional quality of cooking products. Switching products from animal fats to vegetable cooking oils contributes positively to a healthy diet. Many people are not aware of the benefit of cooking products: It's time to educate and motivate for better health!"

