ISSN 2347-7644

Sadakath

A Research Bulletin

Vol. III No. 2 Jan 2016

Published by

Sadakathullah Appa College

(Autonomous)

(Reaccredited by NAAC at an 'A' Grade with a CGPA of 3.40 in the III Cycle)

(An ISO 9001:2008 Certified Institution)

Rahmath Nagar, Tirunelveli - 627 011, India.

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Contents

Formulation and Standardization of Functional Foods Incorporated Chikkies to Improve the CD4 Cells

V. Angel Mary[1]

Abstract: A food either natural or formulated will enhance physiological performance or prevent or treat disease or disorder. Functional foods have been defined as foods with ingredients (Either, naturally occurring or added) that provide health benefits beyond the traditional nutritive value of food. The herbs identified are largely useful for the treatment of immune disorders or compromised immune system. Herbs or ayurvedic preparation with immune stimulant property have traditionally been use to treat various disease like AIDS and transplant rejection. AIDS is not a disease, a collection of more condition result from the damage to the immune system and other parts of the body infection by HIV virus. Some Herbs like Trichopus zeylanicus (Arokya Patchai), Tribulus Terrestris (Nerujimull), Tinospora cordifolia (Shindlla Kodi), Terminalia catappa (Nattu Vatham Kottai), Achyrantes Aspera (Nayuruvi), Arabinoxylon (Rice bran), Trichosanthes Cucumerina (Snakegourd) improve the immune system, prevent the replication of the HIV Virus, have antioxidant activity, increase the CD4 cells. And they increase the life time of the HIV patients. The Chikkies were prepared by functional foods incorporated in three different proportions viz,10 percent,15 percent, 20 percent respectively. The developed product were evaluated by using the panel judges and 5 point hedonic scale. 20 percent concentration were selected for the study. Nutrient content of the functional foods incorporated Chikkies was analyzed and the product was packed in three different kinds of packaging like 100 gauge and 200 gauge polythene bags and vacuum packaging. The keeping quality of the functional foods incorporated Chikkies was noted. The following are the result of the nutrient analysis: Energy (378kcal), protein (10.32g), carbohydrate (64g), fat (17.7g), fibre (22.6g), iron (18mg), calcium (780mg), phosphorous (240mg), copper (1.08mg),

Assistant Professor, Department of Nutrition and Dietetics, Sadakathullah Appa College (Autonomous) , Rahmath Nagar, Tirunelveli, India.

- To analyze the nutrient content of the developed product.
- To study the shelf life of the developed product.
- To do the cost analysis of the formulated Chikkies.

Methodology

Procurement of materials
(7 functional foods, sesame seed, jaggery)

⇩

Development functional foods incorporated Chikkies

⇩

Organoleptic Evaluation
(Taste, Texture, Flavour, Appearance, Consistency)

⇩

Analysis of nutrient content
(Energy, Protein, Fat, Carbohydrate, Zinc, Copper, Phosphorous, Iron, Anti Oxidant, Phenolics, vitamin C)

⇩

Packaging of incorporated Chikkies
(100, 200 gauge Polythene Bags, Vacuum Packaging)

Development of Functional Foods Incorporated Chikkies

Selection of functional food

⇩

Dried and powdered

⇩

Jaggery is made into syrup until it attains sticky consistency.

⇩

Incorporated functional food into the jaggery syrup

⇩

Add roasted sesame seed into syrup

⇩

Make it to a ball

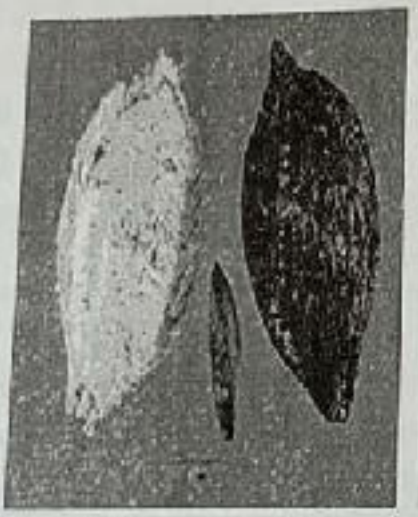
Trichopus zeylanicus (Arokya Patchai)

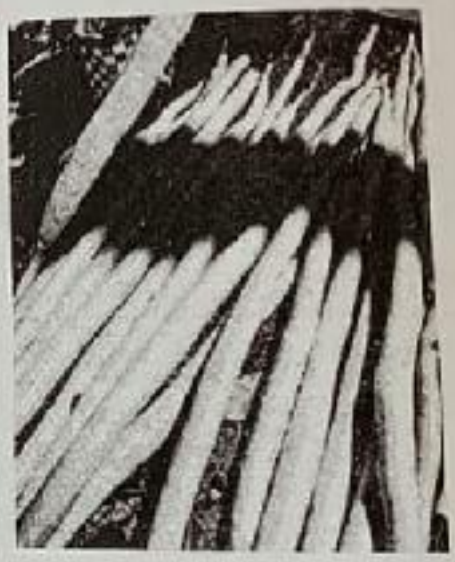
Tinospora cordifolia (Shindlla Kodi)

Tribulus Terrestris (Nerujimull)

Achyranthes aspera (Nayuruvi)

Terminalia catappa (Nattu Vatham Kottai)	Arabinoxylon (Rice Bran)	Trichosanthes Cucumerina (Snakeguard)





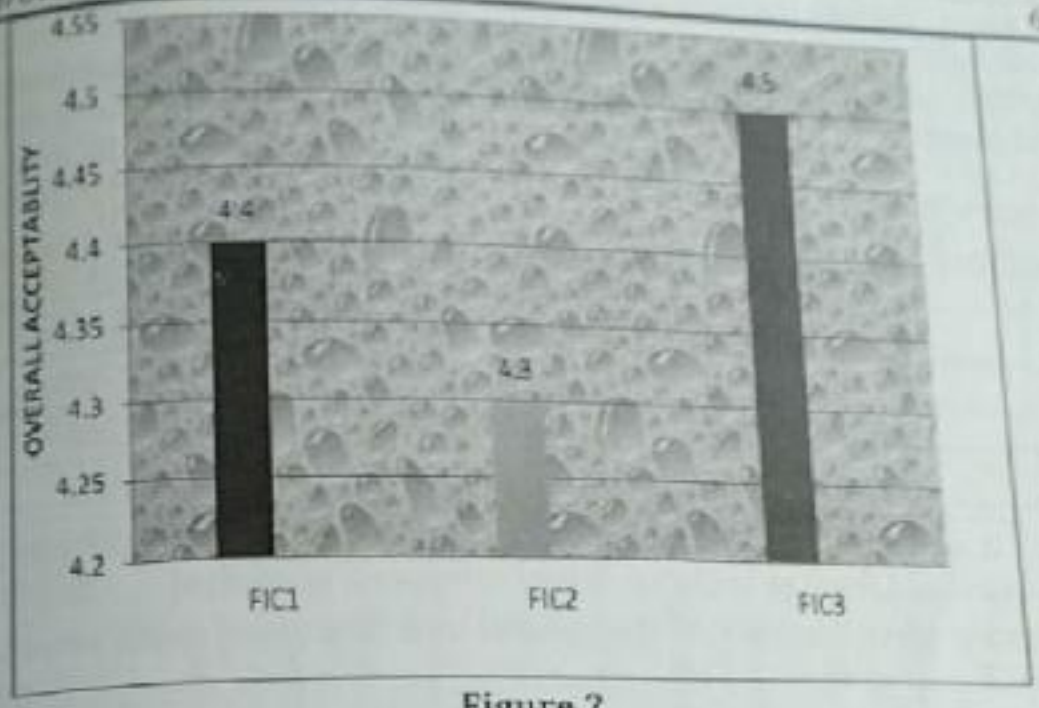


Figure 2

FIC1-10%, FIC2-15%,FIC3-20%

Figure 1 shows that 20 percent of the functional foods incorporated Chikkies has maximum score 4.5% when compared to 15 and 10 percent of the functional foods incorporated Chikkies.

2. Moisture content of the control and functional foods incorporated Chikkies

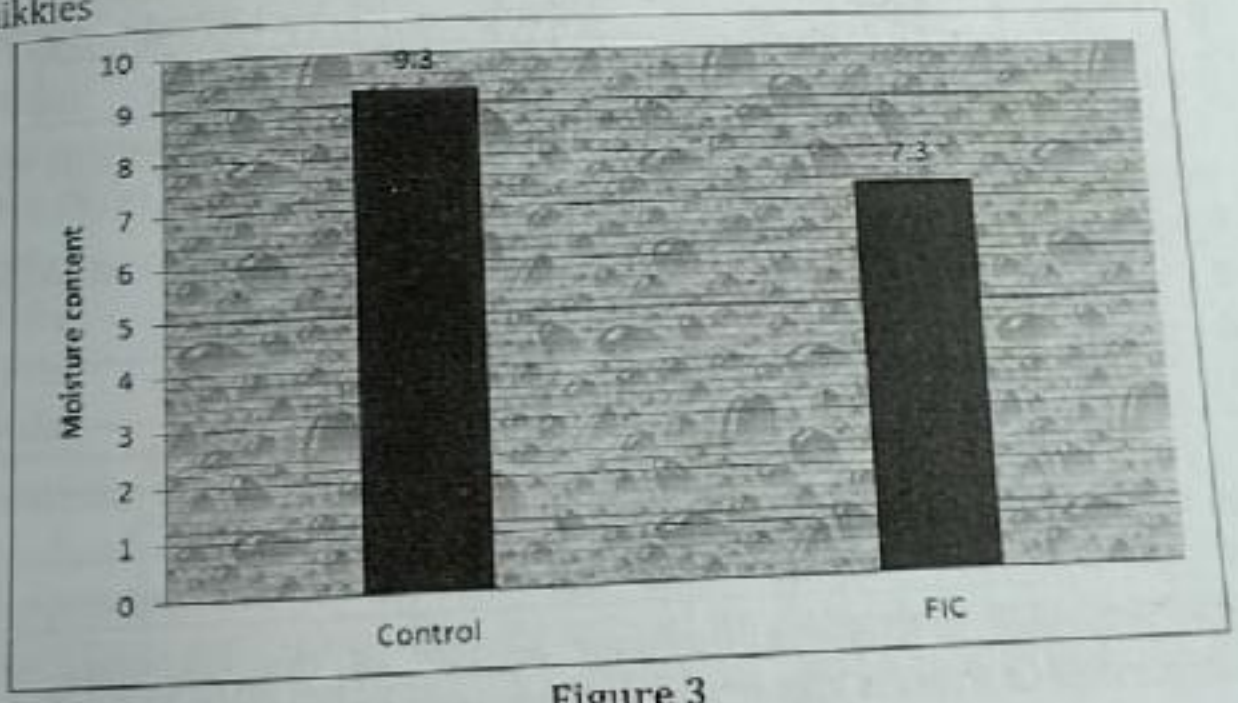


Figure 3

Proportion of functional foods incorporated Chikkies

Table 1

Ingredients	FIC1 (10%)	FIC2 (15%)	FIC3 (20%)
Seasame seed	50	45	40
Jaggery	40	40	40
Rice Bran	5	7.5	10
Trichophus Zeylanicus	1	1.5	2
Terminalia catappa	1	1.5	2
Tricosanthes Cucumerina	1	1.5	2
Tinospora Cordifolia	1	1.5	2
Acyranthes Aspera	0.5	0.75	1
Tribulus Terrestris	0.5	0.75	1

Functional foods incorporated Chikkies

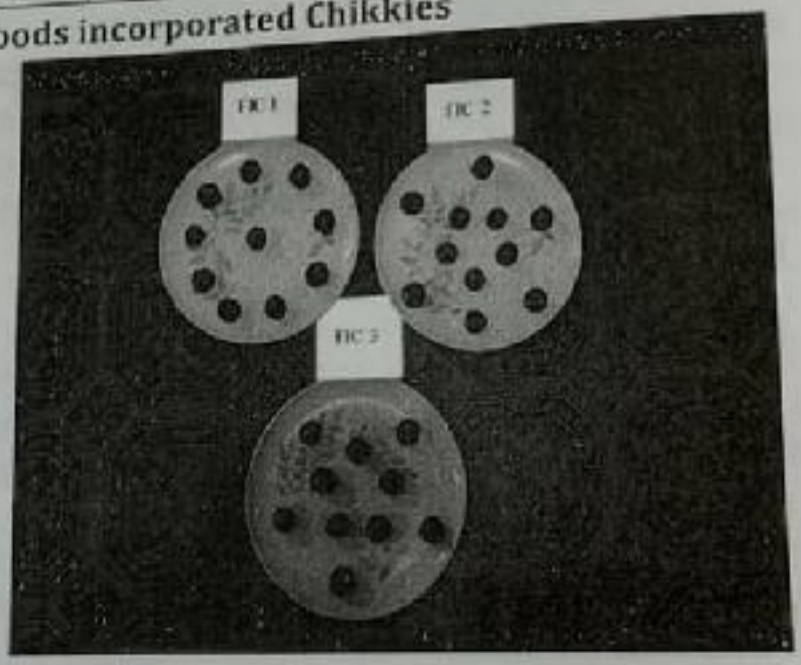


Figure 1

Results and Discussion

1. Overall acceptability of the functional foods incorporated Chikkies

Microbial quality was noted to analyze the keeping quality of the functional foods incorporated Chikkies. The product was packed in three different packaging such as 100 gauge, 200 gauge polyethylene and vacuum packaging. Microbes were found in vacuum package and in 100 and 200 gauge polythene bags speck of microbes were found only on the 45th day.

Microbial Load of control and functional foods incorporated Chikkies

Table 5

DAYS	CONTROL			FIC		
	p1	p2	p3	p1	p2	p3
Bacterial population (10-6cfu/g)						
0 day	0	0	0	0	0	0
15th day	0	0	0	0	0	0
30th day	0	0	0	0	0	0
45th day	4	3	1	2	2	1
Fungal population (10-3cfu/g)						
0 day	0	0	0	0	0	0
15th day	0	0	0	0	0	0
30th day	0	0	0	0	0	0
45th day	2	3	2	1	1	3
Yeast population (10-4cfu/g)						
0 day	0	0	0	0	0	0
15th day	0	0	0	0	0	0
30th day	0	0	0	0	0	0
45th day	1	2	2	1	3	1

Conclusion:

It can be concluded from the present study that functional foods incorporated Chikkies are rich in nutrients especially the phenolics, fibre, antioxidants are rich in that formulated product which help increase the CD4 count of AIDS patients.This Chikkies can also be used to treat the other immune disorders apart from AIDS.

ISSN 0017 8861

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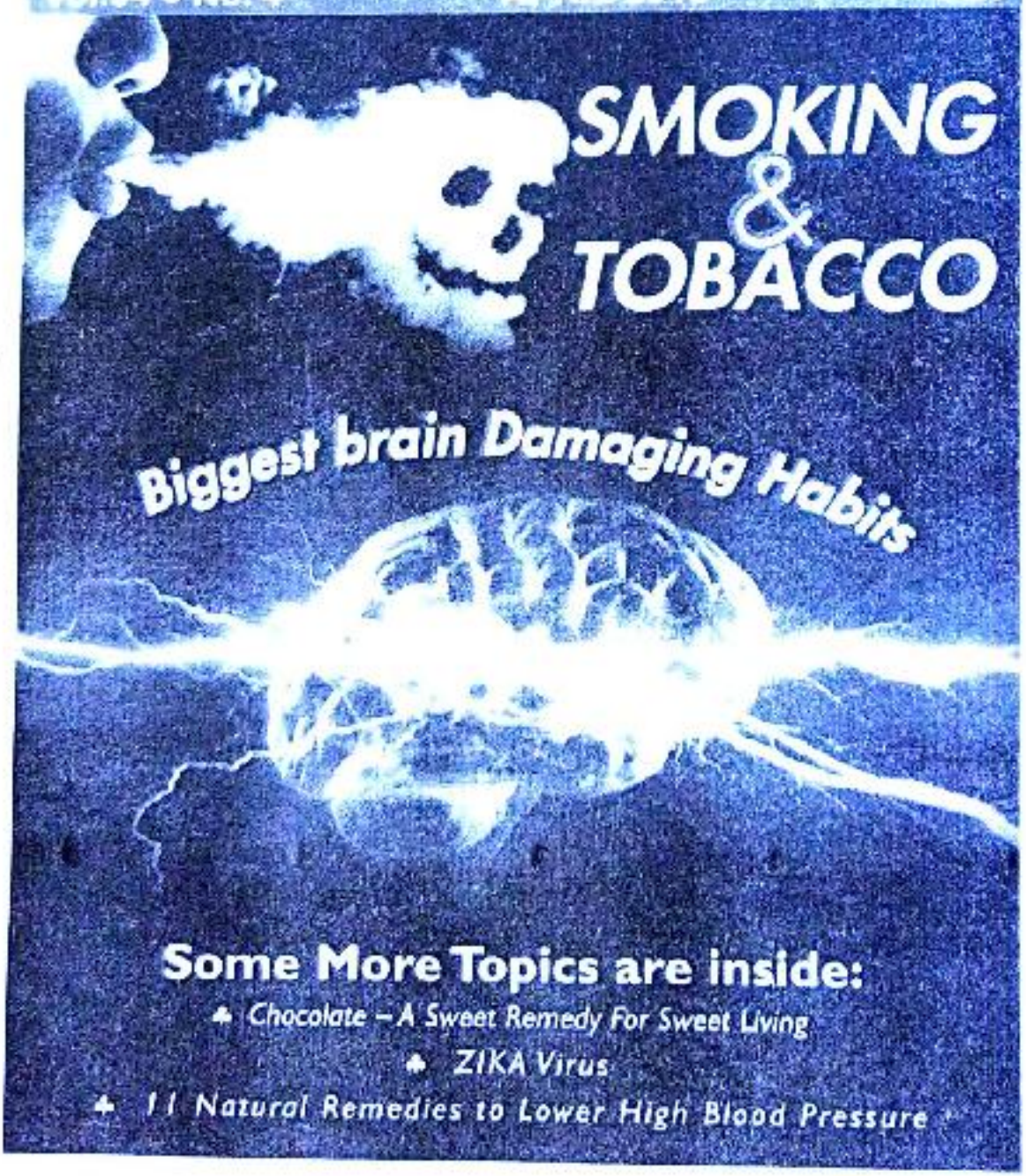
Vol.94 • No. 4 APRIL 2016 ₹ 50



Some More Topics are inside:

- Chocolate – A Sweet Remedy For Sweet Living
- ZIKA Virus
- 11 Natural Remedies to Lower High Blood Pressure

Estd 1923

Health

Founded by Dr. U. RAMA RAO

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Annual Subscription : Rs.240/- Rates include postage
Add Rs.50/- for outstation cheques, to be drawn
in favour of Professional Publications (P) Ltd., Madurai

Professional Publications (P) Ltd.,
"Lakshmi" 21, Sathya Sai Nagar, Madurai - 625 003, Tamilnadu
Ph: 0452 - 269 2939 Fax 0452 - 269 3602
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Printed at Graphico, Madurai - 625 001

HEALTH PHILOSOPHY

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CONTENTS

SOURSOP

INTRODUCTION

Soursop is a well-known fruit throughout the word rarely found fresh anywhere else. Fruit is large spiny green, with sweet flesh. It contains white pulp with smooth cream with nearly 50-100 black seeds. The seeds are not edible. Fruit is extremely delicious with sharp aroma and sweet sour taste. Fruits are Ovoid (pear- shaped) large and grow up to 19 centimeters long with soft skin, and spines. Fruits may weigh up to 2 to 5 kg. Leaves of soursop also contain some chemical compounds like Acetogininbulatacin, asimision and sqamosin. These compounds are effective in eradicating pests & insects.

CLASSSIFICATION

Native Origin	: Tropical America
Family	: Annonaceae
Botanical Name	: Annonamuricatalinn
Varieties	: Nearly ten
Season	: Almost all the year round
Tree	: Height up top 25 to 30 feet
Other Name	: Graviola
Cultivation Areas	: Africa, Asia, Indonesia, Philippines, India

NUTRIENT VALUES FOR 100 GRAM SERVINGS

S.No	Particulars	Values (per 100 g)
1	Calories	66kcal
2	Total Carbohydrate	16.84g
3	Protein	18g
4	Cholesterol	0.0g
5	Saturated Fat	0.05g
6	Polyunsaturated Fat	0.06g
7	Dietary Fiber	3.3g
8	Vitamin C	20.6mg
9	Calcium	14mg
10	Iron	0.6mg
11	Sodium	14mg

MEDICAL PROPERTIES

Soursop possesses many medicinal properties in curing diseases as follows

1. Diabetes

Soursop is believed to reduce diabetes by lowering blood sugar level in Diabetic Individual (African Journal of Complementary and Alternative Medicine, 2008)

2. Bacterial Infection

Applying fruit pulp in cuts will accelerate the healing process and also prevent bacterial infections.

3. Preventing Osteoporosis

Soursops possess a good amount of calcium and phosphorus so regular consumption of soursop fruit may prevent osteoporosis.

4. Curing Cancer

Eating soursop Fruit, may attack cancer cells safety and naturally. Leaves of this fruit kill ten types of cancer cells including colon, prostrate and lung. Soursop possess 1000 times active ingredients stronger than chemotherapy. It contains a chemical compound named annonacin which reduces cancer.

5. Immune Function

Soursop fruit offers a variety of phytochemical compounds such as acetogennis, anomurin, anonol, annonaain, annohexcin, annocatalin, genetisic acid, which a enhance immunity.

6. Prevent urinary tract infection

Since soursop contains vitamin C more in amount, it helps in decreasing in urinary tract infection.

7. Prevents Constipation

Soursop is rich in fiber and it is used against constipation.

8. Boosting Energy

Soursops possess antioxidant which can help in loosing energy.

9. Promotion of Bone health

It contain a mineral promoting absorption of calcium

10. Inflammation

Anticipative and anti-inflammatory activities of the ethanol extract from graviola leaves has proved to have reducing inflammation (International Journal of Molecular Sciences, 2010).

11. Other Health Benefits

Fruit juice can be orally taken as a remedy for urethritis hematuria and liver ailments. Also believed to reliance leprosy. Soursop would help mild headaches, since it contains vitamin B1.

Culinary Uses

Soursop can be used to make desserts, Sorbet, pies, ice cream, cakes, preserved and beverages raw young soursop is used as a vegetable in south India recipes for preparing sweat meat.

OTHER USES OF SOURSOP TREE

1	Leaves	Good for Cancer.Back pain joint pain, stomach distress asthma, fever
2	Seeds	Nausea, Vomiting
3	Young Shoots	Bladdertrouble, skin problem, rheumatism
4	Bark	Vomiting
5	Root	Used as antidote for poisoning
6	Flowers	Alleviate catarrh

Toxic Effects

Leaves, barks, seeds, are not recommended for internal consumption to young children, pregnant and lactating women. Graviolahas been reported to contain hydrocyanic acid, which is considered poisonous. Graviola is not recommended for people who leaves motor control difficulty or suspected of having Parkinson's disease.

CONCLUSION

This article focuses on the underutilized fruit soursop has recently paid attention in cancer research moreover its medicinal properties, now it has been also replaces in culinary uses too.

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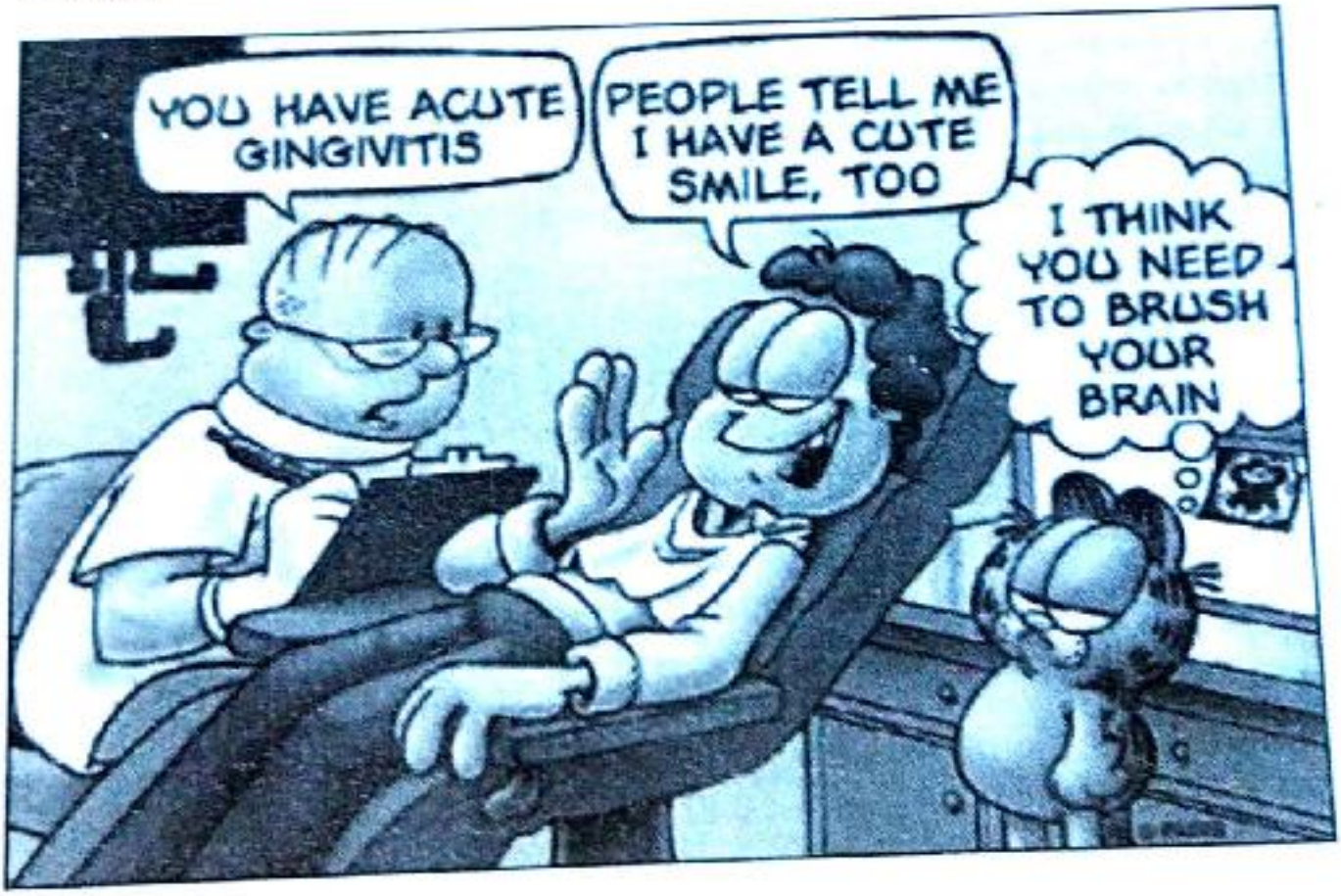

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A Research Bulletin

(UGC APPROVED JOURNAL NO. 64130)

S.H. PRASAD

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Rahmath Nagar, Tirunelveli – 627 011, India.

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Sadakath: A Research Bulletin

Bi-annual

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Contents

The Role of Mint Leaves in Preventing Diseases – A Focus

S. Aariba[1] and S.M. Prasad[2]

Abstract

Vegetables are plants or parts of plants that are used as food. Many types of greens are consumed all over our country. The commonly consumed greens are: Palak, Amaranth, Fenugreek, Drumstick, mint, etc. The green leafy vegetables are rich source of Calcium, Iron and β-Carotene and Vitamin- C, Riboflavin and Folic acid. Mint is a plant that has been long known in diverse cultures, such as Indian Middle East and Europe because of its rich aroma, soothing flavor and curative properties. It is cultivated all across the globe in different forms of environment and comes in many varieties. Hundreds of varieties of mints are available. Pepper mint, pineapple mint, pennyroyal, foxtail, spearmint, etc. Generally mint has a sweet flavor, with a cooling after sensation. Both fresh and dried mint find its usage in preparing large number of recipes, including curries, soups, chutneys, salads, juices, candies and ice creams. Pepper mint and spearmint are the most popular. They are often used as a dessert or candy flavoring. Lamb id is traditionally served with mint jelly. Aromatic menthol taste and smell is instantly recognizable. Herbs that mix well with mint include cilantro, basil and marjoram. Mint as a natural herb has a lot of uses. It contains so many nutrients. The leaves are the useful parts. The leaves yield an essential oil, about 0.2 %. The essential oil contains d – earlobe, d – sylvestrene and citronellal. Menthe ardencies are cultivated in India for the extraction of Menthe oil and Menthol. Mint leaves are cheaply available and they can be added in different forms of tea, recipes, food products, in various dishes. They also provide photochemical and antioxidant activity with many health benefits. In this era of fast foods, people should pay attention to this kind of food to counteract certain deadly diseases.

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2 Assistant Professor, Department of Nutrition and Dietetics, Sadakathullah Appa College (Autonomous), Rahmath Nagar, Tirunelveli, India.

Keywords: *Antioxidant, Iron, Good appetizer, Antiseptic dentifrice, Cures hoarseness*

Introduction:

Vegetables are plants or parts of plants that are used as food. The term vegetable has through usage come to apply in a more narrow sense to those plants or parts of plants that are served raw or cooked as a part of the main course of a meal. Vegetables are important in improving the acceptability of a meal, because of the innumerable shades of colour, flavour and texture they contribute. A meal would be very dull indeed.

The vegetables are normally classified into three broad groups:

- **Leafy Vegetables**
- **Roots and Tubers**
- **Other vegetables**

Green Leafy Vegetables:

Many types of greens are consumed all over our country. The leaves in consequence are low in Carbohydrates and Energy but they are good sources of β-carotene, calcium, riboflavin, folic acid, ascorbic acid, iron and vitamin K. The commonly consumed greens are: Palak, Amaranth, Fenugreek, Drumstick, mint, etc. The green leafy vegetables are rich source of Calcium, Iron and β-Carotene and Vitamin- C, Riboflavin and Folic acid. These grains are inexpensive and it is advisable to include at least 50 g of green leafy vegetables daily in one's diet. They contain all important nutrients required for growth and maintenance of health. Hence, Green leafy vegetables must be consumed by children, pregnant and nursing women to obtain much needed β-Carotene, Calcium and Iron. This is particularly a predominantly cereal based diet of the poor who suffer from the dietary deficiency of these nutrients. Hence, steps must be taken to green leafy vegetables in kitchen gardens and school gardens so that they are available all through the year. Green leafy vegetables can be obtained from trees like Drumstick, Agatha, etc., Mint and Mayalu (red bacchali) are good in iron content. Mints leaves have lot of medicinal properties and mint leaves have wonderful Antioxidant.

Scientific Classification of Mint Leaves:

Botanical Name-*Mentha sativa / Spicata*

English Name - Mint Leaves

Tamil Name - Pudina

Species Family - Mentha Labiatea

Mint is a plant that has been long known in diverse cultures, such as Indian Middle East and Europe because of its rich aroma, soothing flavor and curative properties. It is cultivated all across the globe in different forms of environment and comes in many varieties. There are hundreds of varieties of mints available. Pepper mint, pineapple mint, pennyroyal, foxtail, spearmint, etc. Generally mint has a sweet flavour, with a cooling after sensation. Both fresh and dried mint finds its usage in preparing large number of reripes, including curries, soups, chutneys, salads, juices, candies and ice creams. Pepper mint and spearmint are the most popular often used as a dessert or candy flavoring. Lamb id traditionally served with mint jelly.

Aromatic menthol taste and smell are instantly recognizable. Herbs that mix well with mint include cilantro, basil and marjoram. Mint has a lot of uses. It contains many nutrients. The leaves are the useful parts. The leaves yield an essential oil, about 0.2 %. The essential oil contains d – earlobe, d – sylvestrene and citronellal. Menthe ardencies are cultivated in India for the extraction of Menthe oil and Menthol.

Food Value: (Value per 100 gms edible portion)

CALORIFIC VALUE	-	48 Kcals
Moisture	-	84.90 g
Protein	-	04.80 g
Fat	-	00.60 g
Minerals	-	01.90 g
Fibre	-	02.00 g
Carbohydrates	-	05.80 g
Total	-	**100.00 g**

Minerals and Vitamins Content of Mint Leaves: (Value per 100 gms edible portion)

Calcium	-	200 mg
Phosphorus	-	62 mg
Iron	-	15. 6 mg
Vitamin	–	C-27 mg
β – Carotene	–	1,620 µg
Carotene Total	–	18,950

Beta	–	5,480
Thiamine	–	0.05 mg
Riboflavin	–	0.26 mg
Niacin	–	1.0 mg
Folic Acid	-	Free – 9.7 µg and Total 114.0 µg
Magnesium	–	60 mg
Copper	–	0.18 mg
Manganese	–	0.57 mg
Zinc	–	0.44 mg
Chloride	–	34 mg
Oxalic Acid	–	33 mg

Good amount of Vitamin D and E

Natural Benefits and Curative Properties

Mint is much valued as a carminative which relieves gastric discomforts, stimulant, antispasmodic, muscle strain and stomachic for improving appetite. It forms an ingredient of most drugs prescribed for stomach ailments because of its digestive properties. It is good for the liver and helps dissolve gravel in the kidneys and bladder. The leaves are used in the treatment of peptic ulcer, cough, asthma, bronchitis, amenorrhea and fever. It is well known for its properties related to indigestion, stomach cramps, menstrual cramps, flatulence, upset stomach, nausea, vomiting and colic in children. Also, it can be used as an appetite stimulant. It reduces hunger for a shelf time, but when the effects wear off the hunger returns stronger than before.

Anti cancer Properties:

Various researches indicate mint as having anti – cancer properties. The phytonutrient called perillyl alcohol in mint is believed to prevent colon, skin and lung cancer.

Respiratory Disorders:

A teaspoonful of fresh mint juice, mixed with two spoonfuls of pure malt vinegar and equal quantity of honey is stirred in 4 ounces of carrot juice and is given thrice daily as a medicated tonic during the treatment of tuberculosis, asthma and bronchitis. It liquefies the sputum, nourishes the lungs, increases body's resistance against infection and prevents the

harmful effects of anti tubercular drugs. It prevents the asthmatic attacks and reduces congestion in air passages.

Skin Disorders:

Application of fresh mint juice over face every night cures pimples and prevents dryness of the skin. Juice is also applied over insect stings, eczema, scabies and contact dermatitis.

Hoarseness:

Gargling fresh mint decoction with salt cures hoarseness due to shouting or singing loudly. It keeps the voice clear if used before singing. Therefore, it is a boon to singers and orators.

Oral Disorders

Fresh leaves of mint, chewed daily are an effective antiseptic dentifrice, ie tooth paste. The chlorophyll combined with other antiseptic chemicals in the mint, kills all the germs causing harmful odour. It strengthens the gums by providing the required nutrients and thus prevents tooth decay, pyorrhea, pre-mature fall of the teeth, etc. It also keeps the mouth fresh and improves the sense of taste in the tongue.

Digestive System Disorders:

Mint juice is a good appetizer. Fresh mint juice mixed with a teaspoonful of lime juice and honey can be given thrice daily with excellent results in the treatment of indigestion, biliousness, flatulent colic, thread worm, morning sickness and summer diarrhea.

Used Form of Products

- Candy
- Tooth Paste
- Mouth Wash
- Chewing gum
- Tea Powder
- Cough Syrup
- Face Creams
- Face Washes

Conclusion:

Mint leaves are cheaply available and they can be added in different forms of tea, recipes, food products, in various dishes. They also provide phytochemicals and antioxidant activity with many health benefits. In this era of fast foods, people should pay attention to this kind of food to counteract certain deadly diseases.

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EFFICACY OF SUPPLEMENTATION OF STRAW BERRY FRUIT JUICES ON SELECTED HYPERTENSIVE PATIENTS OF DHANUVACHAPURAM IN THIRUVANANTHAPURAM

* S.M.Prasad, **M.L.Vidhya, ***P.Shamitha Trainee, ****C.T.David

ABSTRACT

Fruits consist mainly of carbohydrates and are known to have high nutritional values specifically in terms of micronutrients. Studies have shown that high intake of fruits and vegetables may have a protective effect against cardiovascular diseasesand decrease the risk of developing diabetes. Phytochemicals in plantreduces the risk of developing many diseases including heart diseases, cataracts, osteoporosis and urinary tract infections. In this study Sample of 60 subjects within the age 28 to 35 years were selected for the study, to assess their frequency of fruit consumption pattern, awareness about phytochemicals in fruits, clinical assessment and effect of supplementation of straw berry juices. Out of these, 10 (05males & 05females) sampleswere chosen as experimental group and the rest were treated as control group. Evaluation was carried out by comparing the results before and after the supplementation of fruit juices for one month and results were statistically analysed.The study finally revealed that subjects who consumed straw berry fruit juices had a tremendous improvement in reducing their blood pressure levels when comparing with the control group.

INTRODUCTION

India is the second largest producer of fruits in the world, because its diverse agro-climatic conditions allow a wide range of tropical, sub-tropical and a temperature fruit to be produced. Fruit production in India covers an area of 4.96 million hectares **(Agricultural Extension, 2004).**

Foods and therapeutic product are both used for well-defined purpose. In simple terms food provides energy , while therapeutic products are taken for managing ailments **(Thompson, 2006).**Well managed combination of foods and therapeutic products plays an important role in the prevention and treatment of many diseases, including a number of chronic diseases such as cancer, diabetes, hypertension, obesity **(Guo, 2004).**

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Increased fruit and vegetable intake as part of the daily diet could help prevent major chronic non communicable diseases (NCDS).Worldwide, low intake of fruits is estimated to cause about 31% ischemic heart disease, 11% of strokes and about 19% of gastrointestinal cancer(**Lock, 2005**).

Dry fruits are excellent sources of minerals and contain substantial quantities of essential nutrients. They are easy to digest, and help keeping us healthy similar to fresh fruits, dry fruits too have strong medicinal properties (**Journal of the Science and Agriculture, 2000**)

Straw berries contain fisetin and possess higher levels of flavonoids such as anthocyanins, than any other fruits. (**Khan et al., 2013**).Straw berries are rich in anti-oxidants which may lower blood pressure by relaxing the endothelium; the lining inside blood vessels, relaxing the endothelium widens the arteries, reducing pressure. Potassium is yet another healthy nutrient found in straw berry .It regulates blood pressure and help against blood pressure and act as a buffer against negative effects ofsodium. Epidemiological studies have associated straw berry consumption with lower rates of hypertension, inflammation, cancer and death from cardio-vascular diseases(**Basu et al., 2014**)

There is convolving evidence that consumption of fruits and vegetables decrease the risk of cardiovascular disease, hypertension obesity and diabetes (**WHO, 2003**).

In the light of the above facts realizing the significance of fruits and its role in hyper-tension, concerns were undertaken in this study with the following objects:

1. **To assess the frequency of fruit consumption pattern of the subjects.**
2. **To assess the level of knowledge about phytochemicals in fruits.**
3. **To assess the clinical status of the subjects**
4. **To evaluate the effect of supplementation of straw berry fruit juices among hypertensive patients**

METHODOLOGY

This chapter deals with the materials and methods adopted for the study"Efficacy of Supplementation of Straw Berry Fruit Juices on Selected Hypertensive Patients of Dhanuvacha-puram in Thiruvananthapuram" were as follows,

MATERIALS

I. **Raw materials needed for the study**

Raw materials needed for the study were straw berry fruits, milk, sugar, and raisins.

II. **Identification of raw materials**

Samples were identified with the help of a botanist

III. **Procurement of samples**

The samples needed for the study were purchased from big bazaar near Thiruvananthapuram, about 6 kilograms for a week, washed in running water, cleaned and stored in refrigerated conditions.

IV. **Equipment used for the study**

Equipment andinstruments used for this study was glass wares, strainers, blender, and mixer and sphygmomanometer.

METHODS

I. **Selection of the area**

Dhanuvachapuram situated in neyyatinkara were selected for the conduct of the study. This area was selected because of the willingness and the co-operation rendered by the subjects, more over most of the subjects waswell known to the investigator.

II. **Selection of the subjects**

Samples of 60 subjects within the age 28 to 35 years were selected for the study, to assess their frequency of fruit consumption, awareness about phytochemicals in fruits, clinical assessment and effect of supplementation of straw berry juices. Among these subjects 30 were malesand 30 were females. Among them 15 males and 15 females who suffered from high blood pressure were selected for the study. Out of these samples 10 (05 males & 05 Females) were chosen as the experimental group and the rest were treated as control group.

III. **Formulation of the tool**

A well framed questionnaire was formulated to know their general information like name, sex, age, numbers of members in the family, occupation and income etc. Thefirst part of the questionnaire included frequency of fruit consumption pattern. Thesecond part of the questionnaire included questions on awareness on phyto-chemicals in fruits. Thethird part of the questionnaire includes clinical examination.

CONDUCT OF THE STUDY

IV. **Procedure for the preparation of straw berry fruit juices**

Flow Chart indicatingstraw berry juice Preparation

50 grams of fresh straw berries selected

↓

Washing, cleaning in running water to avoid dust

↓

After washing, straw berries are cut in to small pieces

V. **Supplementation of straw berry juice**

Fruit juices prepared from straw berry were supplemented for about 200ml on daily basis for continuous one month.

VI. **Measurement of blood pressure**

Blood pressure is recorded by sphygmomanometer. Blood pressures were recorded in data sheet daily by the investigator initially and finally before and after supplementation.

VII. **Evaluation**

Evaluation was carried out by comparing the results before and after the supplementation

VIII. **Analysis of data**

The collected data was analyzed under student's t test using software and statistically interpreted. The data were statistically analyzed by graph pad software statistical packages. The results statistical differences between groups were performed using T Test. Difference considered significantly when $P < 0.0001$.

RESULTS AND DISCUSSION

I. **Frequency of fruit consumption**

It is clearly understood that fruits were not consumed by the subjects every day. Among these Bananas, sapota, guava, and grapes, were taken and preferred by most of the people once in a week. Apples and oranges are taken occasionally. Sapota and Pomegranates were not taken weekly. None of the selected subjects used Rambhutan, Straw berry due to its cost and seasonal availability.

II. **Awareness about phytochemicals in Fruits**

TABLE NO:

I.AWARENESS ABOUT PHYTOCHEMICALS IN FRUITS

Awareness of phytochemical in fruits	Male (n=30)		Female(n=30)		Total(n=60)	
	No	%	No	%	No	%
Yes	03	10	05	08.33	08	13.33
No	27	45	25	83.33	52	86.66
Total	**30**	**100**	**30**	**100**	**60**	**100**

The survey findings revealed that most subjects are not aware about knowledge of phytochemical in fruits and their health significance .the major reasons were most people were illiterate.Only a few (13.3) per cent of subjects know the importance of phytochemicals.

III. **Clinical Assessment ofthe Subjects**

With the help of a physician under bright illumination clinical assessment were carried out. Blood samples and other test mode were done with the help of a laboratory expert and results were drawn.Among these 20(10 Males and 10 Females) samples who suffered from high blood pressure were selected after getting a written willingness for the studywith their consent.

From figure no 1, it is evident that 05 per cent of subjects suffered from jaundice, 33.3 per cent hypertension, anemia 06.6 per cent, asthma 13.3 per cent, Tuberculosis, 03.3 per cent, diabetes 25 per cent, followed by obesity 13.3 per cent. Among these 10 hypertensive subjects are selected as experimental and 10 as control group.

IV. **Effect of Supplementation of Straw Berry Juice on Selected subjects**

TABLE NO: 2

EFFECT OF SUPPLEMENTATION OF STRAW BERRY JUICES ON SELECTED SUBJECTS

S.NO	Groups	Before intervention (n= 10)		After intervention (n= 10)		T value
		Mean	SD	Mean	SD	
1	Control	143.45	5.98	147.89	1.456	6.8899*NS
2	Experimental	136.70	4.99	133.50	5.19	12.8285**s

*Not significant

**Significant

From the table no 2, it was clearly evaluated that when administering straw berry juices to the experimental group, their systole and diastole level becomes normaland

showed a tremendous improvement, but in control group it remains same. This may the reasons that straw berry possess rich antioxidants and potassium in lowering the blood pressure levels.

SUMMARY AND CONCLUSION

The present study were summarized and concluded as follows,

The age of the selected subjects was between 28-35years.Majority of the respondent's were engagedin agriculture. None of the selected subjects were ova-vegetarians. All the non-vegetarian consumed mutton, beef, chicken and fish or all. Fruits were not included daily in the diets of all subjects. None of the selected subjects took fruit juices daily. They consumed fresh fruit juices occasionally .Smoking was commonly seen in male subjects. Some of the selected subjects didn't consume any fruits juices in their diet due to dislikes and poverty. Ten samples were selected as experimental group and other ten were kept as control group. Straw berry fruit juices were supplemented regularly for one month and recorded before and after study. Improvement was observed in subjects who consumed straw berry fruit juices daily.

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ISSN 0017 - 8861

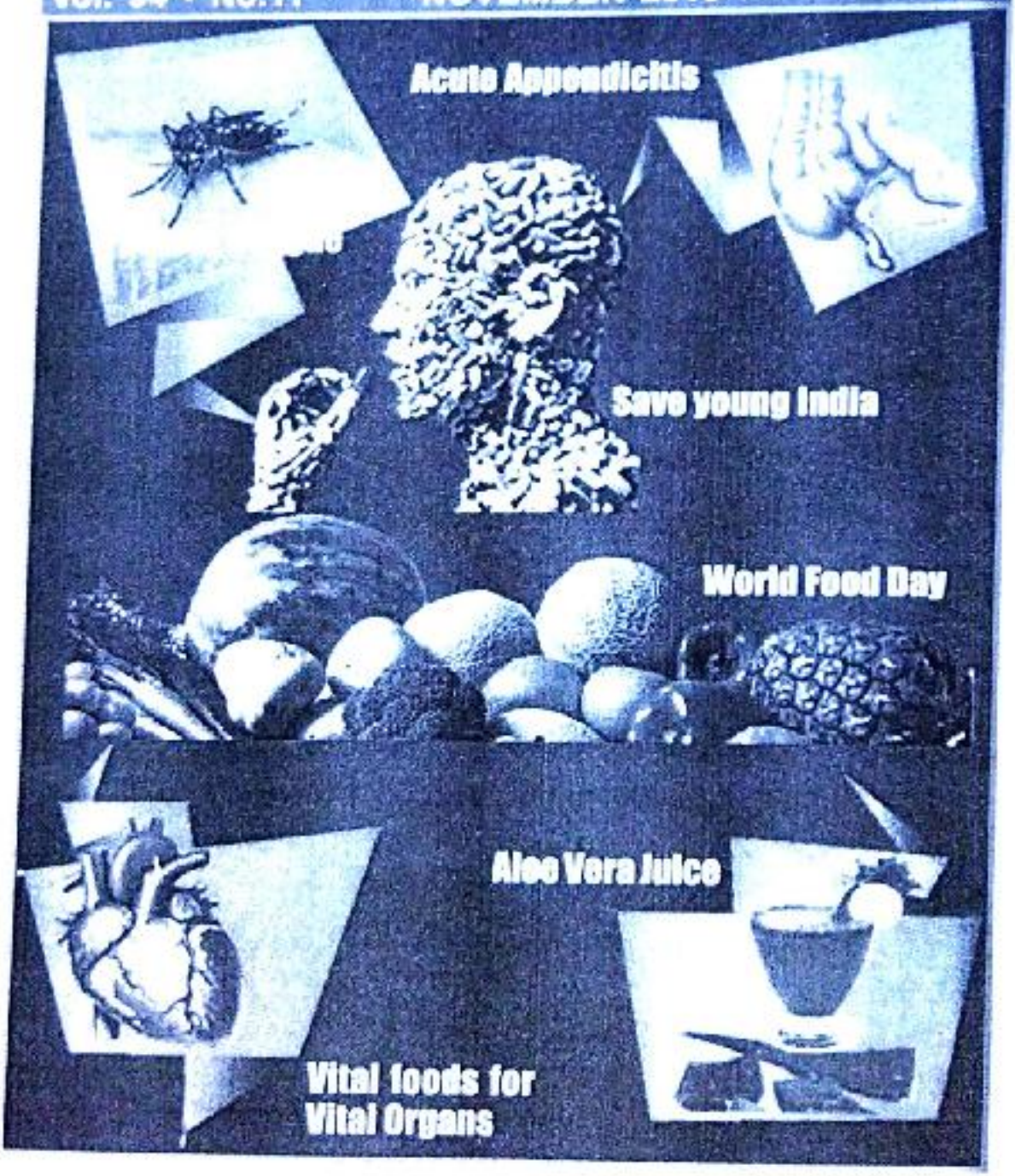
Estd 1923

Health

A JOURNAL DEVOTED TO HEALTHFUL LIVING

Email : admin@theantiseptic.in
www.theantiseptic.in

Vol. 94 • No.11 NOVEMBER 2016 ₹ 20



Estd 1923

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Founded by **Dr. U. RAMA RAO**

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Annual Subscription : Rs.240/- Rates include postage, Add Rs.50/- for outstation cheques, to be drawn in favour of Professional Publications (P) Ltd., Madurai-625 003, Tamilnadu. Ph: 0452 - 2692939 / 0452 - 4378300 Mobile No: 72000 84864 email: admin@theantiseptic.in

Health – A Journal Devoted to Healthful Living published by **Dr. R. Lakshmipathy** on behalf of (Owner) **M/S. Professional Publications (P) Ltd,** Sri Ram, 27, Sathya Sai Nagar, Madurai – 625 003. Printed by L. Saroja, Partner on behalf of **Sree Vinayaga Screens,** 12A/1, Subramania Pillai Street, Madurai – 625 010. Edited by **Dr. Hariharasubramanian MD, PHD. Dr. Usha Giridhar M.D.S.,** is responsible for selection of articles and news under PRB Act.

HEALTH PHILOSOPHY

Whatever might be your age "HEALTH" is committed to help you to stay healthy. You can enjoy life to the full. Eating Nutrients, taking regular exercises, adopting a positive attitudes would be the right way for living. If things go wrong use natural methods for healing.

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CONTENTS

POTENTIAL HEALTH BENEFITS OF THE TROPICAL FRUIT RAMBUTAN

Now-a-days, people are turning to nutrition, as different types of diseases are widespreade specially malnutrition, cancer and diabetes. Since majority of the diet lack in different nutrients, different diseases may join together and affect healthy life.

Fruits are the important component of a healthy diet. They supply low energy and provide vitamins, minerals, fiber, antioxidant and phytochemical (Van Dun, 2000). One such fruits Rambutan (Nephelium Lappaceum Linn). Rambutan is a tropical fruit and it possesses manynutrients, which are needed for a healthy living. In Malaya, the meaning for Rambut means "hair", hence it got the name because of the thorn like appearance.

Appearance

Rambutan closely resembles like lychee. Its outer skin is thick and covered with long soft pines. It has a white fleshy mass surrounding the seed. When the fruit matures it becomes sweet. Rambutan is available in season between June and August. It has a unique pleasant flavor.

Nutritional Information

Rambhutan is a godown of nutrients. This tropical fruit provides different types of nutrients. Some are listed below.

Vitamins

Mostly all fruits are good sources of Vitamin C. Rambutan contains a good source of Vitamin C. It also contains Niacin, Thiamine and Riboflavin.

Minerals

Fruits are good sources of potassium and pectin (Swaminathan, 2008). Functioning of vital organs depends on the presence of minerals (Onila, 2005). Rambutan possesses potassium, calcium, iron and phosphorus in fair amount.

Fiber

Fiber content of Rambutan

varies up to2.8 g per 100 g fruit flesh fire.

Antioxidant

The seed of Rambhutan contains antioxidant compounds such as Ellagic Acid (EA), Corilagin, and Geranin.

Sugars

Fruits contain carbohydrates as sugar fructose (fruit sugar) or laevulose which is easily digested and completely absorbed from the intestine. When the fruit ripes, the sugar content is higher (Shrinandan, 2010). Rambutans are rich in sugars, but provide fewer calories. Mainly 3 different types of sugars are observed in Rambutan. They are Glucose (2.8g/100g), Fructose (3/100g),and Sucrose (9.9/100g).

Organic Compounds

Fruit of Rambhutan contain acid like malic acid (0.05g) and citric acid 0.31g). The leaves contain tannin and saponin. Skin stem contains tannin, saponin, flavonoids, pectin substance and iron. Rambhutan seeds are rich in oleic acid,and eicosapentonic acid. It also possesses fat and polyphenols. The skin of this fruit contains an acid called as gallic acid.

Health Benefit of Rambhutan

This fruit provide the following health benefits.

1. Strengthen muscles

Potassium is a nearly constant component of lean body tissue. Therefore, When there is growth and development of lean tissue an adequate supply of potassium is essential (Shakutala,2007). Rambutan contain a good source of potassium

2. Treat dysentery

Riped Rambutan's fruit skin when boiled with water treats dysentery.

3. Prevent hypertension

Rambutan fruit has been employed in traditional medicine in Malaysia and Indonesia for hundreds of years against hypertension. Recent studies proved that eating nine to ten fruits of Rambutan were effective in lowering blood pressure.

4. Prevent Chronic diseases

Similar to Vitamin E, ascorbic acid is an antioxidants, including Vitamin C may prevent the development of chronic disease (Staci Nix, 2005). Rambutan contains vitamin C, and possess low in cholesterol.

5. Treat Diabetes

Fiber plays an important nutritional role in normalizing blood glucose levels because it slows digestion and therefore the absorption of accompanying nutrients (Paula, 2010). Rambutan seed contain fiber, which helps to regulate blood glucose level. Dried, powered, seeds of Rambutan taken with cold water have proved to cure diabetes.

6. Powerful against Cancer

Consumption of fruits is considered to reduce the risk of stroke, obesity, constipation, heart attack and different forms of cancer (FAO, 2004). The skin of this fruit contains an organic compound called Gallic acid. This compound is believed to be as a scavenger as it helps protect against oxidative damage in our body and fight against different forms of cancer.

7. Activation of Enzymes

Enzymes activation is easily done by this fruit as it possess manganese as a nutrient

8. Production of Blood Cells

The fruits functions for the production of RBC and WBC cells. Since it contain copper and iron. Iron is necessary for the production of hemoglobin (Indrani, 2003)

9. Improves Semen Quality

Vitamin C is very essential for the formation of sperm. Since Rambutan is rich in vitaminC it improves sperm quality. Lack of vitamin C leads to stents.

❐

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The Elements of Happiness

Unhappy People

- Don't make time for themselves
- Make fear motivated decisions
- Don't do what they love
- Don't Listen to their Bodies
- Judge others
- Compare themselves to others
- Constantly worried about money

ISSN (ONLINE): 2454-9762
ISSN (PRINT): 2454-9762
Available online at www.ijarmate.com
International Journal of Advanced Research in Management, Architecture, Technology and Engineering (IJARMATE)
Vol. II, Issue XII, December 2016

GENETICALLY MODIFIED FOODS- A FOCUS

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INTRODUCTION:

Genetically modified foods have made a big splash in the news lately. Now-a-days genetically modified crops and food are being grown and consumed by public without knowing that these plant's genes are altered. Everything is due to the emerging of biotechnology industry. The biotechnology industry is a booming one, having experienced significant growth over the last several decades.

DEFINITION:

Genetically modified foods are defined as those foods derived from genetically modified organisms that may have specific changes introduced into their DNA by Genetic Engineering Techniques.

HISTORY OF GM FOODS:

History of GM foods was started in the year 1980. Later in 1983, antibiotic resistant tobacco plant and in 1990 cotton was successfully genetically modified. In 1994 tomato was genetically modified for number of consumption, followed by Soya Bean, Potato, Canola and Alfalfa.

FOOD THAT HAVE BEEN MODIFIED:

Some of the Foods which have been modified to make them resistant against insects, viruses and able to tolerate herbicides includeMaize,Brinjal, Rice, Wheat, Rape Seed Oil Cotton, Soya bean, Alfalfa, Potato

Soya Bean, Corn and Tomatoes are commonly modified food.One type of "Monsanto" Soya Bean is resistance to herbicides.The herbicide resistant gene is removed from the bacteria and then inserted in the Soya Bean.

Tomatoes are frequently modified types of food. GM tomatoes will generally be engineered to maintain their quality for longer period of time. Sugarcane is another GM food that is resistant to some pesticides. Sweet Corn is one of the GM foods those produce toxins that kills insects, which serves to reduce problems with pests. Rice has been called "Golden rice" due to it being modified to contain high levels of vitamin A.

GM food is Genetically Modified Foods using biotechnology include Maize, Soya Bean, OilSeed, Chicory, Squash, Potato, Pineapple' Sugarcane, Brinjal And Strawberry. GM Foods provide greater resistance to pests and viruses, higher nutritional value and longer shelf life. Now ever their safety, potential risks and ethical concerns are still being debated. Laws to regulate labeling of GM Foods also vary.

ISSN (ONLINE): 2454-9762
ISSN (PRINT): 2454-9762
Available online at www.ijarmate.com
International Journal of Advanced Research in Management, Architecture, Technology and Engineering (IJARMATE)
Vol. II, Issue XII, December 2016

BENEFITS OF GENETICALLY MODIFIED FOODS:

There are numerous benefits from genetically modified foods. Some are listed below.

1. Nutritional Enhancement:

Genetic Engineering can also be used to increase the amount of particular nutrients (like vitamins) in food crops. For example, GM golden rice is deficient in vitamin A content, so vitamin A gene from daffodil plant is inserted and the golden rice is nutritionally enriched. This change in colour and vitamin can be utilized for people residing in malnourished area.

2. Shelf Life:

GM foods provide a greater shelf life.They can be able to withstand extreme weather, unfavorable climatic condition.

3. Better Quality Food:

They also provide better quality foods and gives higher nutritional value products.

4. Better Taste:

GM Food may alter taste in tomatoes, wheat, corn, and dairy products.

5. Deliver Vaccines:

Bananas that produce hepatitis B vaccines can be produced by genetic engineering method.

6. Crop Resistance:

Crop resistance to disease and insects and produce that requires less chemical application, Such as pesticides and herbicides resistant plants,(eg) canola by using genetically engineered crops that are resistant to attack by pests or disease (insect resistant). Farmers do not have to apply large amounts of pesticides and chemicals to the surrounding environment.

7. Faster Growth:

It is evident that genetically modified foods grow faster than the foods that are grown in the traditional manner. Due to this productivity increases providing the population with more food. Apart from this, it is claimed that genetically modified foods are a boon in places which experience frequent droughts or where the soil is incompetent for agriculture, due to which it is difficult to grow normal crops.

8. Inexpensive and Nutrition Food:

Carrots with more antioxidants can be obtained by genetic engineering methods.

9. Foods with Medicinal Benefits:

Foods with medicinal (Nutraceuticals) benefits such as edible vaccines, for example, bananas with bacterial or rotavirus antigens.

10. Providing Nutrients:

Genetically modified foods are said to be high in nutrients and contain more minerals and vitamins than those found in traditionally grown foods.

ISSN (ONLINE): 2454-9762
ISSN (PRINT): 2454-9762
Available online at www.ijarmate.com
International Journal of Advanced Research in Management, Architecture, Technology and Engineering (IJARMATE)
Vol. II, Issue XII, December 2016

11. Bio – Diversity:

Growing GM crops on a large scale may also have implications for bio-diversity, the balance of wildlife and the environment.

12. Diseases Resistance:

Certain diseases affectedarea can use genetically modified crops. This helps the farmers ensure that don't lose crops to diseases.

13. Allergy Control:

Allergens which causes allergy are able to be eliminated through genetic engineering which helps more people enjoy the great variety of foods.

14. Drought Resistance:

Genetically modified foods are often felt to be healthier and more resistant to things like drought than regular crops. This gives them the ability to ensure things that other crops cannot.

15. Improve Financial Gain:

It reduces the man powder needed to successfully grow the crops, which should transform in to improved financial gains.

16. Built In Pesticides:

GM corn and cotton are engineered to produce their own built in pesticides in every cell. When bugs bite the plant, the poison splits open their stomach and kills them. Bt produced from soil bacteria *Bacillus thuringiensis* has history of safe use, since organic farmers and others used Bt bacteria spray for natural insect control. Genetic engineers insert Bt genes into corn and cotton, so the plants do killing.

DEMERITS OF GMFOODS

Genetically modified foods are believed to possess some unhealthy and deadly effects also. They were listed below

1. Unknown Side Effects in Humans

Many genetically modified foods seem to react in negative ways. Studies have proved that GM foods may cause certain types of cancer and other illness. Consumptions of GM foods form significant organ disruptions, especially in the liver and kidneys. Othercases reported were infertility,immune problems,accelerated aging,insulin regulation and changes inmajororgansand thegastrointestinal systems.

2. Side Effectsin Animals

A Study in 2003 proved that GM soy fed to pregnant female rats killed most of their babies within three weeks. Investigations in some countries revealed that most of the buffaloes that ate GM cotton seeds have complications such as premature deliveries, abortions, and infertility and many calves died. About two dozen farmers reported that thousands of their pigs became sterile after consuming certain GM crop varieties followed by infertility in cows and bulls. When male rats were fed GM soy,

ISSN (ONLINE): 2454-9762
ISSN (PRINT): 2454-9762
Available online at www.ijarmate.com
International Journal of Advanced Research in Management, Architecture, Technology and Engineering (IJARMATE)
Vol. II, Issue XII, December 2016

their testicles actually changed colour from the normal pink to dark blue.

CONCLUSION

Genetically engineered foods saturate our diet today. Others include grains like vegetable and fruits, dairy products including Eggs, Meat, Chicken, Pork and other animal products, infant formula and an array of hidden additives and ingredients in processed foods. Consumers don't know what they are eating. Yet the danger is clear.In the modern world, the question of genetically modified food is becoming more and more urgent, and the pros and cons of this issue must be weighed in order for nations to make educated decisions in the future.Genetically modified foods present a very real threat to the genetic integrity of both mankind and the environment and requires long term research before being unleashed to the public.Genetic foods are sounds frightening and unnatural, but while consider the positive effects genetically, modified crops would have on health, farming methods and the environment, people focus more on this without knowing the hazards. This is the reason newly many nations are against GM foods even though they provide positive health benefits,any way we need more and better testing methods before making GM foods available for human consumption.

ISSN 0017 - 8861

Estd 1923

Health

A JOURNAL DEVOTED TO HEALTHFUL LIVING

Email: admin@theantiseptic.in www.theantiseptic.in

Vol. 95 • No.2 FEBRUARY 2017 ₹ 20

JUNK FOOD AND CHILDREN – STRONG CONNECT!

Estd 1923

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Founded by Dr. U. RAMA RAO

Publisher Dr. R. LAKSHMIPATHY

Annual Subscription : Rs.240/- Rates include postage, Add Rs.50/- for outstation cheques, to be drawn in favour of Professional Publications (P) Ltd., Madurai-625 003, Tamilnadu. Ph: 0452 - 2692939 / 0452 - 4378300 Mobile No: 72000 84864 email: admin@theantiseptic.in

Health - A Journal Devoted to Healthful Living published by **Dr. R. Lakshmipathy** on behalf of (Owner) **M/S. Professional Publications (P) Ltd,** Sri Ram, 27, Sathya Sai Nagar, Madurai - 625 003. Printed by L. Saroja, Partner on behalf of **Sree Vinayaga Screens,** 12A/1, Subramania Pillai Street, Madurai - 625 010. Edited by **Dr. Hariharasubramanian MD, PHD. Dr. Usha Giridhar M.D.S.,** is responsible for selection of articles and news under PRB Act.

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CONTENTS

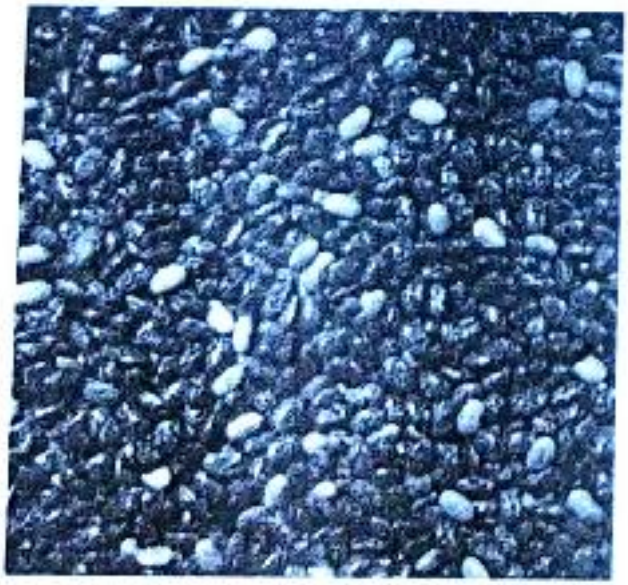
CHIA SEEDS: THE SUPER FOOD OF 21ST CENTURY

History of Chia Seeds:

Chia seeds are believed to be originated from European countries. Seeds were staple of the ancient Aztec diet and commercially grown in Argentina, Bolivia and Mexico. Australia is the largest producer of chia seeds. These seeds are harvested from Salvia hispanica plant, a type of sage in the mint family.

Nutritional Value of Chia Seeds:

Chia seeds are packed with complex carbohydrates, proteins fiber, vitamins, minerals and with low fat .Chia seeds are considered to be the richest plant based sources of essential fatty acids (Alpha Linolenic Acid).In olden days oils are extracted from chia seeds.



Both chia seeds and oils are rich in omega 3 fatty acids. They possess minerals like copper, calcium, magnesium, boron, sodium and zinc. They are high in flavonoids and antioxidants. All these nutrients present in the chia seeds make it worth consuming by people of all age groups, especially those who suffer from nutritional deficiencies.

Health Benefits of Chia Seeds:

- They increase energy production in the body
- May lower cervical and breast cancer
- Good for diabetic patients for stabilizing blood glucose level
- Helps in improving brain function
- It reduces pain and inflammation in arthritis patients
- Help in absorption of calcium
- Strengthen immune system
- Used to improve cardio vascular health
- Provide stamina and endurance

Possible Side Effects:

Possible side effects of chia seeds are gastro intestinal problems,allergies, blood pressure disorder and even prostate cancer. Chia seeds also possess some anti-nutrients in the form of phytic acid which binds to zinc, iron, and copper and to a lesser extent, calcium and magnesium present in it. Due to its high protein content some allergic reactions include watery eyes, diarrhea and skin eruptions may occur.

Conclusions:

This article mainly focuses on the health and medicinal aspects of chia seeds and to create awareness in using chia seeds in daily diet. ❐

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ISSN 2394-3777 (Print)
ISSN 2394-3785 (Online)
Available online at www.ijartet.com

International Journal of Advanced Research Trends in Engineering and Technology (IJARTET)
Vol. 4, Issue 4, April 2017

DEGENERATIVE DISEASES AND FIBRE

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INTRODUCTION:

The population of India has an increased susceptibility of diabetes in developing countries is closely associated with industrialization and socio economic development (Paris, 2002). Diabetes Mellitus is the third leading cause of death (after heart disease and Cancer) in many developed countries. It affects about 2 to 30 per cent of the general population. The complications of diabetes affect the eye, kidney and nervous system (Satyanarayana, 2010).

Diabetes the Latin word means “Flow through” and Mellitus means “Honey” and clinically it is manifested by the overflow of sugar or glucose in the blood and urine instead of getting converted in to glycogen (Begum, 2006).Diabetes is not just a disease involving sugar and cutting out sugar from the diet. It is about adding foods to the diet that will help control blood glucose levels (Bailliers, 2004).

Causes of diabetes are heredity, age, sex, obesity and sex (Swaminathan, 2006). Diabetes is characterized by polyuria, polydipsia and polyphagia (Darshan, 2010). Untreated diabetes exhibits the following symptoms polyuria, polydipsia and polyphagia (Shanmugam, 1998) any disorder of metabolism causing excessive thirst and the production of large volume of urine (Harrison, 2000)

The best way to prevent type 2 diabetes is to avoid gaining weight. Overweight people are four times more likely to develop type 2 diabetes than those who maintain normal body weight (Michael, 2010).Today obesity is the most common factor of malnutrition and is a factor in the two major causes of death, heart diseases and cancers. So any food that helps people limit calories is desirable.

ISSN 2394-3777 (Print)
ISSN 2394-3785 (Online)
Available online at www.ijartet.com

International Journal of Advanced Research Trends in Engineering and Technology (IJARTET)
Vol. 4, Issue 4, April 2017

Type 2 diabetes is more commonly seen in persons above 40 years. In this type, the defect is lack of insulin action and not production of insulin. Blood often contains normal levels of insulin. This defect is due to decrease in the number of target cell insulin receptors and lack of sensitivity to insulin. Type 2 diabetic patients are normally obese (Prasad, 2011).

Western data suggests that Indians are more centrally obese at a given level of BMI compared to Americans and that Indians are more insulin resistant even at lower levels of BMI (Srilakshmi, 2003). Type 2 diabetes accounts for 90 to 95 per cent of the total diabetes population in the United States and is the sixth leading cause of death in America (Paula, 2010).

Almost every one hears about the need for enough fibre in the diet. But few people understand the importance of dietary fibre-or where to get in only plants produce fibre no matter how chewy or "tough" animal products may be they do not contain fibre not even bones or egg shell. The understanding that fibre is good for us is relatively new until 1970; Fibre was regarded at best at worst, as a hindrance to good nutrition.

The word fiber (North American) can also be spelled fibre (British). It comes from the Latin word *fibra*, meaning fiber, thread, string, filament, entrailsLow fibre diets have been reported to be associated with ischemic heart diseases, diabetes, cardio vascular diseases, cancer of the colon, etc. The incorporation of fibrein the diet improves the glucose tolerance in diabetic humans (Swaminathan, 2003).

OTHER NAME FOR FIBRE

Fibre is also called as "roughage" or cellulose

IDENTIFIED BY:-

It was a naval doctor, T.L.Cleave (1906-83) who sparked the great re-think out fibre. He argued that refined fibre-depleted carbohydrates are harmful in many ways. He was supported by a surgeon from East Africa called Denis Burkitt, who presented evidence that western diseases are rare in Africa and other third world countries where fibre intake is high.

DEFINITION:-

Fiber is defined as the part of plant cellulose made up of indigestible parts or compounds of plants, which pass relatively unchanged through our stomach and intestines.

ISSN 2394-3777 (Print)
ISSN 2394-3785 (Online)
Available online at www.ijartet.com

International Journal of Advanced Research Trends in Engineering and Technology (IJARTET)
Vol. 4, Issue 4, April 2017

TYPES OF FIBRE:-

Fibreis made up of non-starch polysaccharides, such as cellulose, dextrin, inulin, lignin, chitins, pectin, beta-glucans, waxes and oligosaccharides. The word fibreis misleading, because many types of dietary fibreare not fibreat all. There are two broad types of fibre, soluble and insoluble.

1. **Soluble fibre**dissolves in water. It changes as it goes through the digestive tract, where it is fermented by bacteria. As it absorbs water it becomes gelatinous. Soluble fibreis found mostly in Oats, Psyllium, Barley, Vegetables, Seed husks, lentils, beans, fruits and flax seed.

2. **Insoluble fibre**does not dissolve in water. As it goes through the digestive tract it does not change its form. Insoluble fibreis found mostly in wheat bran, wheat-based cereals and pasta, whole meal and whole grain bread.

FOODS-LOW IN FIBRE:-

Foods that are low in fibre include meat, animal products, refined cereals white bread, dairy products and fast foods.

ROLE OF FIBRE IN HUMAN HEALTH

Eating fibre rich foods can lower some are listed below

1. Prevent constipation
2. Regulate blood sugar level
3. Reduce the risk of gall stones and kidney stones
4. Present Heart Diseases
5. Inhibit Diverticular Diseases
6. Keeping weight in control
7. Forms bulk for food
8. Prevents obesity
9. Role in metabolism
10. Prevents cancer
11. Reduces blood cholesterol level

1. **Prevent Constipation:-**

Fibre prevents constipation by forming a mucilaginous like particles over hard stools and makes it easy for bowel excretion. Dietaryfibreparticularity insoluble fibre

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helps prevent constipation by increasing stool weight and decreasing gut transit time. This effect is enhanced if parallel by an increase in water intake. The short chain fatty acid, produces when fibreis fermented by gut bacteria, is an important source of energy for colon cells and might inhibit growth and proliferation of gut tumor cells.

2. **Regular Blood Sugar Level (Diabetes):-**

Adding fibreto the diet helps in regulating blood sugar levels. Fibreslows digestion and absorption, so that glucose stream more slowly, which keeps blood sugar on a more even level. They slow down glucose absorption

3. **Reduce the Risk of Gall Stones and Kidney Stones:-**

Fibrereduces the risk of gall stones and kidney stones.

4. **Prevent Heart Diseases:-**

Foods containing soluble fibresuch as oats, rye, barley and beans can have a positive influence on cholesterol, triglycerides. Some fruits and vegetables (such as citrus fruits and carrots) have been shown to have the same effect.

5. **Inhibit Diverticular Diseases:-**

Diverticular disease is a condition in which small pouches develop in the wall of colon. Eatingfibrerich foods may relieve from this condition.

6. **Keeping Weight in Control:-**

Foods containingplenty of fibrehave more bulk than low-fibrefoods. If taken in the right format the right time and at sufficient quantities. Fibrecan sometimes slow the one set of hunger. Fibrestays in the stomach longer than other foods; feeling of fluffiness will stay with you much longer. Highfibrefoods such as fruits and vegetables tend to be low in calories, so adding fibreto your diet; it is easier to cut calories.

7. **Forms Bulk For Food:-**

Fibremakes food more satisfying, probably because the contents of the stomach are bulkier and stay there longer.

8. **Prevents Obesity:-**

Fibredemands that food be more thoroughly chewed, fibreslows down the eating process and helps contribute to a feeling of being full, which is turn, can help prevent obesity from over eating.

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9. Role In Metabolism:-

Fibreis broken down in the colon, at this time simple organic acids are produced.Acids produced helps to non-risk the lining of the colon. These acids also provide fuel for the rest of the body, especially the liver and may have an important role in metabolism.

10. Prevent Cancer:-

The passage of food through the body is speed up, when fibre is eaten.It may prevent some harmful substances in foods; from affecting the colon, and protectus from some cancers like breast cancer, ovarian cancer, and uterine cancer.

11. Reduces blood cholesterol level

Isolated fibressuch as pectin, rice bran, or oats bran lowers both serum cholesterol and low density lipoprotein (LDL, or bad) cholesterol levels, at the same time, researches show the diets high in a mix of dietary fibers also protects against CHD

CONCLUSION:-

Thus fibre with effective cunning properties is applied in many developing disease and its effect has been reduced. So, taking fibre rich foods were recommended for an individual every day to keep a sound healthy body. In order to have all the benefits of fibre, it is important to include a variety of sources of fibre in the diet. Diet with fruits adds vegetables; lentils, beans and whole grains not only provide dietary fibre, but as well many other nutrients and food components essential to good health.

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ISSN: 2321-788X UGC Approval No: 43960 Impact Factor: 2.114

A REVIEW ON CERTAIN UNDERUTILISED GREEN LEAFY VEGETABLES

Article Particulars

Received: 8.7.2017 Accepted: 13.7.2017 Published: 28.7.2017

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Abstract

Vegetables are an important part in every one's life and also as a part of Indiancuisine. They play a good role in preventing diseases and provide immune power. People hailing from villages are more aware than people from cities about their nutritive value and medicinal properties.Some leafy vegetables provides nutraceuticals and antioxidant health benefits .Due to advancement in technology people forget about these plants and they remain underutilized .The state of kaniayakumari is blessed with such vegetables. In this review some important underutilized green leafy vegetables were discussed for the welfare of the mankind.

Keywords: *Antioxidant, Eczema, Anti-Inflammatory, Appetizers, Depressions.*

Introduction

In India green leafy vegetables or greens from many plants have been used in the diet from ancient times.they are nutritionally very important very important and are rich in vitamins and minerals (Shakuntala Manay and Shadaksharaswamy, 2007). Vegetables are the store house of carotene, riboflavin, folic acid, vitamin c, and calcium. vegeatbles also supply water and roughaage to the body (Raheena Begum, 2006). Green lefy vegetables fruits and skins seeds contribute to the fibrecontent of the diet

(Srilaksmi, 2002). Green leaves of plants such as spinach are good source of vitamin k. (The Eduational Planning Group, 2007). Leafy vegetables contain an agent called carotene which gets converted in to vitamin A in our body (Rajeswari, 2004). Green leafy vegetables are exceptionally rich sources of β carotene,the natures most potent anioxidant that can inhibit at atherosclerosis and prevent heart disese.they also contain bioactive agents called Phytochemicals (Srilaksmi, 2008). Green leafy vegetables are very rich sources of carotene (Provitamin A) they are good sources of Calcium, Riboflavin, Folic Acid and vitamin C.

Daily consumption of 100 g of leafy vegetables by adults and 50 g by children will provide the daily reqiurement of carotene,folic acid and vitamn c and a part of the calcium and riboflavin requirements.they are the cheapest among the protective foods (Swaminathan, 2010). β carotene, the provitamin A, is important for its antioxidant properties. It is abundant in the colour vegetables and fruits (Elizabeth, 2007). Carotene is present in the dark green leafy vegetables,red and yellow fruits and vegetables except citrus friuits (Jovancy Mathew, 2009). Wilting of vegetables can be an index of loss of pro vitamin A content. (Subbulakshmi and Shoba, 2001). Flavanoids naturally occuring in fresh fruits, vegetables, tea and wine are powerful antioxidants (Rekha Sharma, 2004).

Review of Literature

1. *Amaranthus viridis (Kuppameni Keerai)*

History: It is an annual herb growing 10-80 cm long.Commonly found as green leafy vegetable in indian villages. The villagers used to cook this vegetable as side dish. It is believed to enhance in producing milk, so farmers feed their cows to yield good quality milk.

Nutritional Profile: The leaves are rich in calcium, iron, magnesium and zinc. The plant is good source of vitamin B and C. It possess excellent source of protein. Also contain considerable amount of two fatty acids essential to humans (linoleic and alpha-linolenic)

Medicinal Uses: Leaves of this plant are used to treat eczema,psoriasis,and rashes. In India tribal people use the stem and leaves for snake bite and scorpion stings. In ayurveda the stem is used for the treatment of diabetics, stomach problems, constipation and anaemia.

2. *Ecliptaprostrata (KarisilankanniKeerai)*

History: It grows in rainny season and are found very near to paddy fields. It grows throughout the year every where. Four varieties of eclipta prostrate are seen such as yellow, white, red and blue, but yellow varitey are used for traditional treatment, but other varities of blue and red are not commonly observed in fields. They tend to appear rare.

Nutritional Profile: This plant posess proteins,calcim,phosphorus,iron and other minerals salts

Medicinal Uses: Specially recommended leafy vegetable for jaundice.It protects night blindness and other problems due to its high vitamin A content. It is also good for hair growth. It gives natural color and shining hair. This leafy vegetable is also used for skin problems and scorpion stings. Women undergoing menstrual problems make use of this plant to equalize their irregular periods.

3. *Cissus quadrangularis (Pirandai)*

History: This plant was originated in India and resembles like bones attached with each other. A strange looking wild plant creeper with branches. It grows on fences in forests to a height of 1.5 cms. Mostly seen in dry waste lands too. It requires only less water. The leaves are modified in the form of stem.

Nutritional Profile: It is rich in vitamin C. It is said to have antioxidant activities.

Medicinal Uses: A well known plant used by the traditional bone setters for quick healing of bones.It acts as a pain killer.Cissus quadrangularis is used for diabetes, ulcer, malaria, cholesterol, astma and stomach upset. (Sheela Rani, 2012)

4. *Centella asiacitaca (Vallarai Keerai)*

History: Vallarai is the name given to the plant due to its leaves which resembles the shape of the human brain. It is widely used in indian villages. It acts as a natural brain boosters. Easily grow in places where water is more and preferred in siddhatreatment.

Nutritional Profile: Nitric acid a compound found in this plant have a positive effect onbrain activity.

Medicinal Uses

It strengthen the immune system and delay premature greying of hairs. It also increases memory power. Because of its relaxing effect on brain, it is used to treat depression. The extract of the plant leaves cures infection lkes eczema.

5. *Solanaum nigrum (Manathakali Keerai)*

History: Also called as milagu thakakali.Some people wont feel comfortable due to its bitter taste.it may be available in all seasons.the plant yields fruit in the form of berries or pepper. In villages the plant is grown in fields and easily available in market. The Plant has white flowers and green berries and they turn to purple colour after they ripe.Gravies and vathals are made from manathakali keerai,when it is unripe

Nutritional Profile: It provides a major surces of niacin, riboflavin, protein, fiber, phosphorus, antioxidants and calcium. Vitamin C is the only mineral that is seen in high quantitiy.

Medicinal Uses: The leaves of this plant is good for heart and stomach ulcer.Increases memory power.It puries blood and provide good sleep.It is the best medicine for head ache and skin infections.The fruit of this plant are excellent appetizers.

Conclusion

Incorporation of these leafy vegetables which grows wild in our country side gives good relief from degenerative diseases.So care must be taken to plant these leafy vegetables in cities considering its medicinal value.

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ISSN 0017 - 8861

Estd 1923

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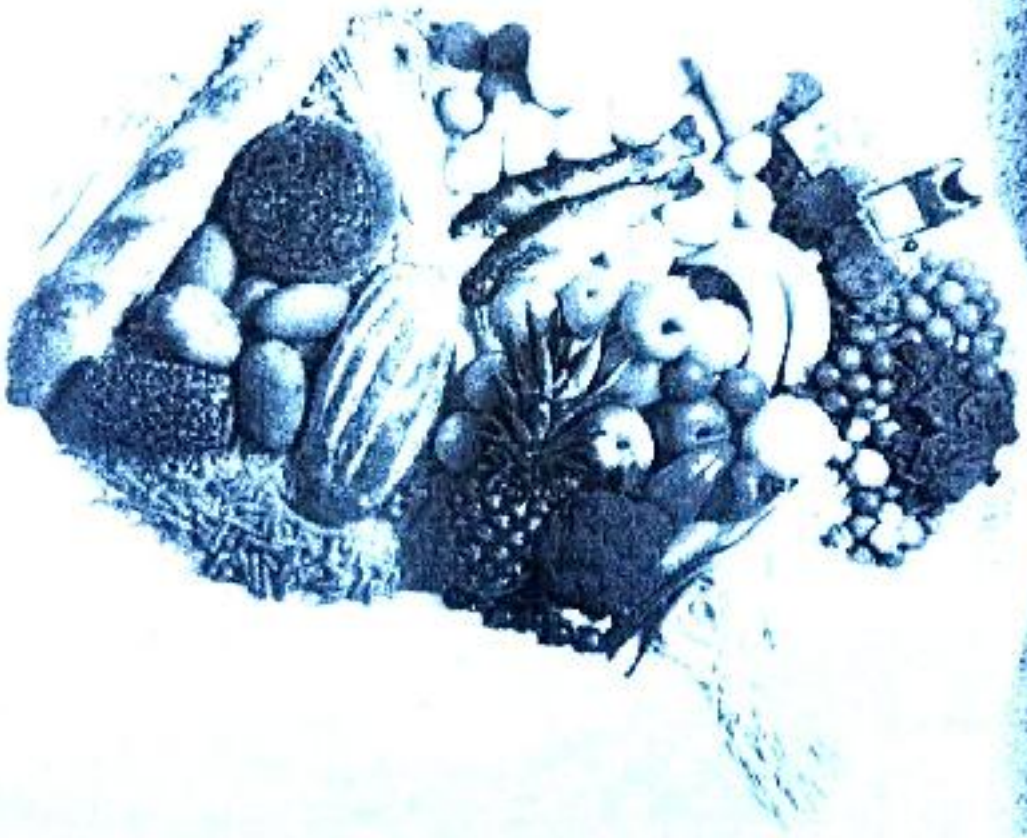
Vol. 95 • No.9 SEPTEMBER 2017 20



BRAIN FOODS

Estd 1923

Health

Founded by : Dr. U. RAMA RAO

Publisher : Dr. R. LAKSHMIPATHY

Edited by : Dr. HARIHARASUBRAMANIAN, MD, PHD

Co-ordinate Editor : Dr. USHA GIRIDHAR, M.D.S.

Advisory Board : Dr. S. SUDHAKAR NAYAK, M.D.
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Annual Subscription : Rs.240/- Rates include postage, Add Rs.50/- for outstation cheques, to be drawn in favour of Professional Publications (P) Ltd., Madurai-625 003, Tamilnadu. Ph: 0452 - 2692939 / 0452 - 4378300 Mobile No: 72000 84864 email: admin@theantiseptic.in

Health – A Journal Devoted to Healthful Living published by **Dr. R. Lakshmipathy** on behalf of (Owner) **M/S. Professional Publications (P) Ltd,** Sri Ram, 27, Sathya Sai Nagar, Madurai – 625 003. Printed by L. Saroja, Partner on behalf of **Sree Vinayaga Screens,** 12A/1, Subramania Pillai Street, Madurai – 625 010. Edited by **Dr. Hariharasubramanian MD, PHD. Dr. Usha Giridhar M.D.S.,** is responsible for selection of articles and news under PRB Act.

HEALTH PHILOSOPHY

Whatever might be your age "HEALTH" is committed to help you to stay healthy. You can enjoy life to the full. Eating Nutrients, taking regular exercises, adopting a positive attitudes would be the right way for living. If things go wrong use natural methods for healing.

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CONTENTS

BRAIN FOODS

Introduction

Eating well is good for our mental as well as physical health. Everyone must be aware about what we eat. Diet plays an important role in our overall health and it also influences memory so, what we consume for brain reflects on our memory. Now–a day's people in this era have no idea about the foods we have to eat for brain.

A healthy memory requires fit brain function. Energy that needs the brain to work comes from the diet which we eat. They are not conscious too. We every day experiences stress, when releases inflammatory in the body will elevate diseases like blood pressure and anxiety.

A person thinks that eating three or five serving a day will improve brain function, but it is not true. The quantity which we eat does not reflect on brain function. At the same time even a small quality food packed with phytonutrients will have a good effect on brain. Adding multi vitamins to the diet ensures that brain to get good enough nutritents. The best vitamins for memory include vitmin B6, vitamin B12, folic acid and zinc.

In each individual food places an important role in every day's life. More attention has to pay for the brain functions, since it is the one among the important organs. Mostly colourful foods experiences phytochemicals and antioxidants.it is the need for the hour to turn to antioxidants and phytochemicals. Some foods which are good for brain were listed below

1. Apples

Apples are valuable sources of quercetin, a flavonoid, which is considered to be a powerful antioxidant. They prevent neurotoxicity caused by oxidative stress.Alzhimers diseases are common in old age. More consumption of vitamin C reduces Alzheimer's diseases. Apples have dementia fighting properties.

2. Avocados

They contain monounsaturated fatty acids, which increase blood flow to the brain, which helps to recall and remember details.

Avocados lower blood pressure, condition that put up at risk for cognitive decline. They too contain copper and iron, which aids in blood regeneration and help prevent anemia.

3. Barley

Barley helps the brain cells to communicate with each other more effectively. It when consumed releases glucose to blood, which turn produces a chemical called acetylcholine, functioning of the brain. Barley contains fibre. Many people who cannot tolerate wheat can eat barley

4. Blue Berries

Blue berries help to reverse age related problems in the area of brain function; improve learning motor skills and vision. Berries are

packed with full of antioxidants, which help protecting the brain by reducing the stress of oxidation in the brain. Special nutrients in blue berries increases the production of brain cells in the hippocampus. it contains an antioxidant called "anthocyanin".

5. Black Currants

These are fruits packed with bunch of gamma linoleic acid. These acids are rare to find in fruits. Black currants are rich in vitamin and seeds gamma linoleic acid which acts as natural anti-depressant. They protect brain cells against stress.

6. Boysen Berries

They contain antioxidants and polyphenols. Polyphenols have been found in studies to protect the aging from brain damage.

7. Dark Chocolates

Dark chocolate are good for heart as well as brain. They could prevent oxidation in the brain.it is also reduce the inflammation in the brain. Dark chocolates are believed to contain a special type of flavonoid called "Procyanidin", which encounters the damage caused by inflammation and oxidation. Procyanidin also boost the circulation of blood to the brain.

8. Fatty fish

Fishes contain DHA, an omega-3-fatty acid that plays a critical role in brain function. They are proved in the case of dementia, memory loss and stroke. Such sources include sardine, salmons, tuna, halibut and cod

9. Green Tea

Green tea is prepared from the unfermented leaves .They possess full of antioxidants and polyphenols. Highest consumption of tea reduces the prevalence of cognitive impairements.Japanese people prefer green tea more than any other country people.

10. Leafy Vegetables

Leafy vegetables are good for brain health one such example is spinach, celery, mustard greens which contain iron and folate which could strengthen memory.

11. Straw Berries

Straw berries are high in vitamin c and contain anthocyanin

and another brain boosting nutrient called "quercetin" for some people straw berries are allergic, so running in hot water may be good.

Some Points to Be Considered In Improving Brain Function

1. Avoid caffeine –it over stimulate and interfere with memory
2. Drink plenty of water
3. Avoid too much sugar – it reduces memory performances
4. Add vitamin C and E rich foods in the diet –it prevents oxidation
5. Avoid alcohol and smoking

Conclusion

All foods are healthy, but when we consume it as a food it will provide a sense security and gives a healthier living, some foods when consumed beyond a limit it will provide certain disadvantages too, remembering a famous proverb said by ***"Let food be thy medicine and medicine be thy food"*** ❐

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In rice grains, the phosphorous molecules are well bound to the phytic acid moiety making them unavailable to the human body when we eat it. Additionally, these phytic acids are tightly bound with the essential minerals such as calcium, magnesium, iron and zinc, resulting in to low bio availability. Thus in its native forms, the phytic acids are anti-nutrient inhibiting the key digestive enzymes in our body including pepsin, amylase and trypsin. So when you ferment the rice, all those essential minerals and nutrients get released into the body making us more healthy.

ISSN 0017 - 8861

Estd 1923

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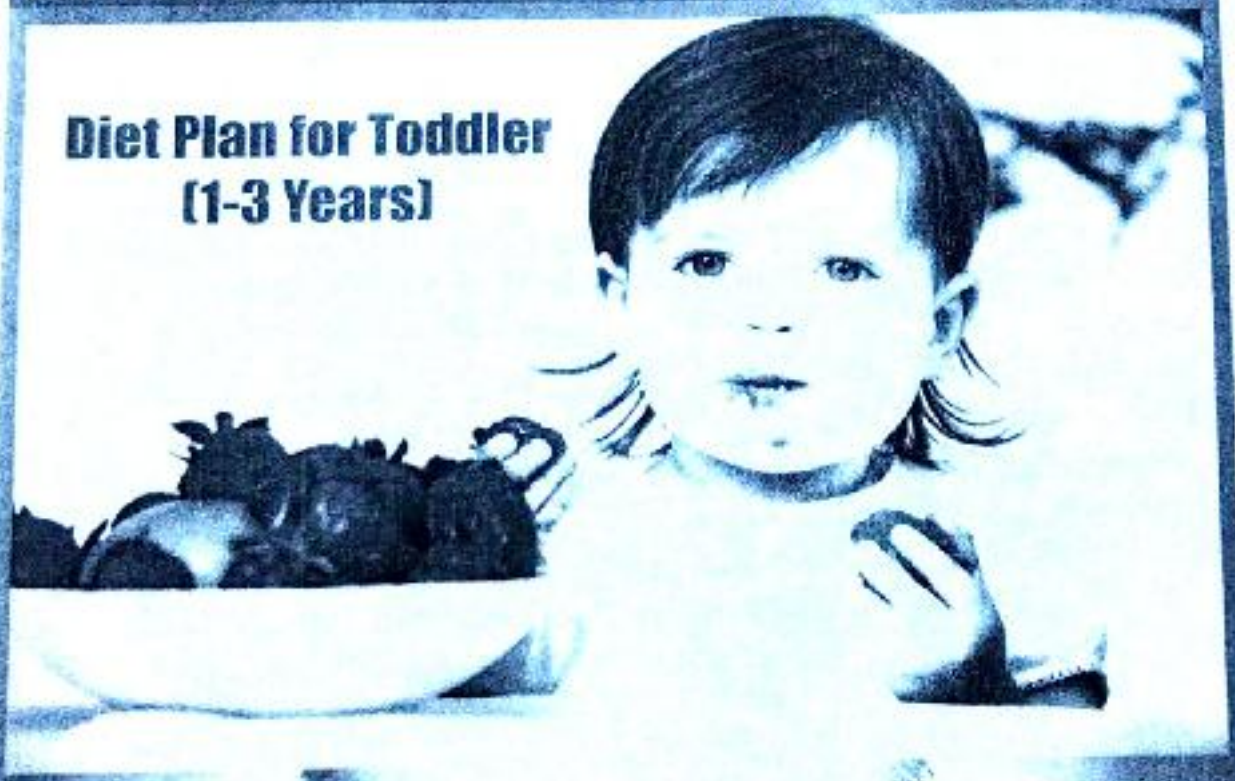
Email: admin@theantiseptic.in
www.theantiseptic.in
Vol. 96 • No.3 MARCH 2018 ₹ 20



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CONTENTS

ANTHOCYANINS IN HEALTH AND DISEASES

Introduction

It belongs to the group of flavonoids family. They occur in all tissues of higher plants. Almost 400 different anthocyanin's have been reported.

Properties of Anthocyanin

They are water soluble pigments. They appear as red, purple or blue according to PH. Sometimes they may exhibit the property of odorless or flavourless. They are easily damaged while cooking.

Sources of Anthocyanins

Fruits like acai, black currants, blue berry, cherry, red grapes, banana, and vegetables like pea, potato, and asparagus are rich sources like anthoycanins.It is absent in goose berry. Anthocyanins can be also found in naturally ripened olives

Health benefits of Anthocyanins

1. Anthocyanins act on different cells involved in the development of atherosclerosis
2. It may act as anticancer agents by inhibiting promotion and progression of tumor cells
3. Provide anti-inflammatory action
4. Anthocyanins can prevent diabetes
5. Also act as a powerful antioxidant
6. Protect plant cells against damage caused by UV radiation

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Eat fruits that contain high amounts of citrates. Citrates stops calcium from accumulating in your kidneys while preventing kidney stones from increasing in size.

Vol. 5 No. 4 April 2018 ISSN: 2321- 4643 UGC Approval No: 44278 Impact Factor: 3.122

CERTAIN UNDERUTILIZED FRUITS FOR MOCK TAIL PREPARATION

Article Particulars
Received: 06.04.2018 Accepted: 12.04.2018 Published: 28.04.2018

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Introduction

India is the second largest producer of fruits in the world, because its diverse agro-climatic conditions allow a wide range of tropical, sub-tropical and a temperature fruit to be produced. Fruit production in India covers an area of 4.96 million hectares. Flavanoids naturally occuring in fresh fruits, vegetables, tea and wine are powerful antioxidants. β carotene,the provitamin A, is important for its antioxidant properties.It is abundant in the colour vegetables and fruits.

Increased fruit and vegetable intake as part of the daily diet could help prevent major chronic non communicable diseases (NCDS).Worldwide, low intake of fruits is estimated to cause about 31% ischemic heart disease, 11% of strokes and about 19% of gastrointestinal cancer.Some underutilized fruits were discussed below

Description

Rose Apple

Rose apple is believed to be originated as fruit of south east asia.It possess a natural sour taste.When it ripens it gives sweet taste.it is also called as bell fruit,java apple,wax apple.Rose apple is a shrub or a small tree a native to Southeast Asia, but it spread throughout the world as an ornamental plant. It has dozen of names. Jambu is a popular name for this fruit. The active organic compounds found in rose apples, combined with vitamin C and vitamin A, have become known as

effective cancer – prevention treatments. Early research and traditional medical texts claim that prostrate and breast cancer is reduced by adding rose apples to our diet.

Star Fruit

Star fruit also known as carambola is a star shaped tropical fruit with sweet and sour flavor, believed to contain antioxidant phytonutrient polyphenolic flavonoids. Some of the important flavonoids present are quercetin, epicatechin and Gallic acid. Antioxidants in the form of vitamin C in star fruit help by cleaning the body and slow down the growth of these free radicals before they cause any damage to healthy cells. Star fruit contains fiber that cleanses toxin storing the colon and since these toxins increase the risk of colon cancer, it neglects the risk as well.

Passion Fruit

Passion fruit contain powerful phytochemicals called Vitexin, Harmol, and Harmallin. The phytochemicals which can be liable for this particular anti-cancer effect usually are carotenoids as well as polyphenols. Passion fruit also contain vitamin A, various Flavonoids and phenolic compounds all of which have been linked to anticancer properties, particularly in to term of oral and lung cancers.

Sour Sop

A well-known fruit throughout the word rarely found fresh anywhere else. Fruit is large spiny green, with sweat flesh. It contains white pulp with smooth cream with nearly 50-100 black seeds. The seeds are not edible.

Fruit is extremely delicious with sharp aroma and sweet sour taste. Fruits are Ovoid (pear- shaped) large and grow up to 19 centimeters long with soft skin, and spines. Fruits may weigh up to 2 to 5 kg. Leaves of soursop also contain some chemical compounds like Acetogininbulatacin, asimision and sqamosin. These compounds are effective in billing pests & insects. Soursop can be used to make desserts, Sorbert, pies, ice cream, cakes, preserved and beverages raw young soursop is used as a vegetable in south India recipes for preparing sweat meat.Eating soursop Fruit, may attack cancer cells safety and naturally. Leaves of this fruit kill ten types of cancer cells including colon, prostrate and lung, Soursop possess 1000 times active ingredients stronger than chemotherapy. Itcontains a chemical compound named annonacin which reduces cancer. Since soursop contains vitamin C more in amount, it helps in decreasing in urinary tract infection.

Conclusion

This article focuses on the underutilized fruit which can be used for mock tail preparation. It has recently paid attention in cancer research. Moreover its medicinal properties, now it has been also replaces in culinary uses too.

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Vol. 5 No. 4 April 2018 ISSN: 2321- 4643 UGC Approval No: 44278 Impact Factor: 3.122

FUTURE TOURISM THROUGH WORMHOLE TIME TRAVELING

Article Particulars
Received: 06.04.2018 Accepted: 18.04.2018 Published: 28.04.2018

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Abstract

Objectives: *The aim of make this research is to find out the way to reach past and future through the wormhole and also promote the tourism industry through time travel. And after making research for "How it's possible?" And finally, we show the uses and benefits of this research at the Government, Tourist, and society. Now a day's Tourism is the one of the biggest industry in all over the world. And also it is one of the heritage industry. It is survived in the old days to now modern days. In the reason of surviving that, the tourism industry is easily adapted to technology and trends. That's why people need tourism industry at every time. Naturally, every human brain has a searching ability. In that same searching ability, makes the human at the top of the world. In our world is going to move the next step. Human brains have a unique ability; every person can think imagination, innovation, intelligently and creatively. I was watching "THOR II" movie, that time I saw body transfer through the magnetic hole. At the time I was thinking about "Time travel is that possible?" In the modern days, peoples don't like to visit previously visited place. The reason is they have no surprises, no searches, etc. So now we need some new tourist spot. That's why we try to touch the wormhole and make a time travel tour. Tourism industry that gives the sweetness to the humans searching. In the tourism industry, people search lot of things but the end of every searching people get lots of happiness only.*

Methods: *collect the data's from the internet, daily newspaper, and research-based books. After that, meet the scientists from space research through e-mail and Skype. And ask the question about time travel and wormhole. After that, discuss with tourism department legends and space research department peoples. Finally, conclude.*

Keywords: *Time Travel, Wormhole, Stephen Hawking, Tourism*

Introduction

The wormhole is a theoretical passage through space-time that could create shortcuts for long journeys across the universe. Wormholes are predicted by the theory of general relativity. Many more legends they, explained the possibility of time travel. They are made the theory of time travel. But all are showing one think that's Wormhole is the only way of time travel.

Wormhole Theory

The Wormholes were first theorized in 1916, though that wasn't what they were called at the time. While reviewing another physicist's solution to the equations in Albert Einstein's theory of general relativity, Austrian physicist Ludwig Flamm realized another solution was possible. He described a "white hole," a theoretical time reversal of a black hole. Entrances to both black and white holes could be connected by a space-time conduit.

In 1935, Einstein and physicist Nathan Rosen used the theory of general relativity to elaborate on the idea, proposing the existence of "bridges" through space-time. These bridges connect two different points in space-time, theoretically creating a shortcut that could reduce travel time and distance. The shortcuts came to be called Einstein-Rosen bridges, or wormholes.

Wormholes contain two mouths, with a throat connecting the two. The mouths would most likely be spheroidal. The throat might be a straight stretch, but it could also wind around, taking a longer path than a more conventional route might require. Einstein's theory of general relativity mathematically predicts the existence of the wormholes, but none have been discovered to date. A negative mass wormhole might be spotted by the way its gravity affects the light that passes by. Certain solutions of general relativity allow for the existence of wormholes where the mouth of each is a black hole. However, a naturally occurring black hole, formed by the collapse of a dying star, does not by itself create a wormhole.

Also, wormholes for travel would likely need to be artificially constructed, because there is no solid evidence that they exist naturally. "We see no objects in our universe that could become wormholes as they age," Thorne writes in his new book "The Science of Interstellar". By contrast, scientists see huge numbers of stars that will eventually collapse to form black holes. There is a possibility that very, very small wormholes exist in the universe in something called "quantum foam," which may or may not exist in the universe.

Traveling through the Wormhole

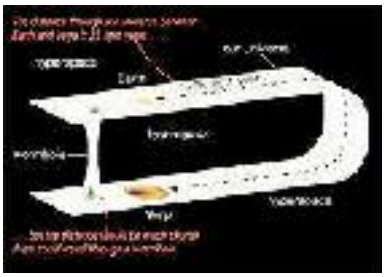
Looking to travel from one star to another, but don't want the trip to take tens of thousands of years? How about using a wormhole? Science fiction is filled with tales of traveling through wormholes. But the reality of such travel is more complicated, and

not just because we've yet to spot one. The first problem is size. Primordial wormholes are predicted to exist on microscopic levels, about 10centimeters. However, as the universe expands, it is possible that some may have been stretched to larger sizes. Another problem comes from stability. The predicted Einstein-Rosen wormholes would be useless for travel because they collapse quickly.

But more recent research found that a wormhole containing "exotic" matter could stay open and unchanging for longer periods of time.Exotic matter, which should not be confused with dark matter or antimatter, contains negative energy density and large negative pressure. Such matter has only been seen in the behavior of certain vacuum states as part of quantum field theory.If a wormhole contained sufficient exotic matter, whether naturally occurring or artificially added, it could theoretically be used as a method of sending information or travelers through space. Unfortunately, human journeys through the space tunnels may be challenging. "The jury is not in, so we just don't know," physicist Kip Thorne, one of the world's leading authorities on relativity, black holes, and wormholes, told Space.com. "But there are very strong indications that wormholes that a human could travel through are forbidden by the laws of physics. That's sad, that's unfortunate, but, that's the direction in which things are pointing."

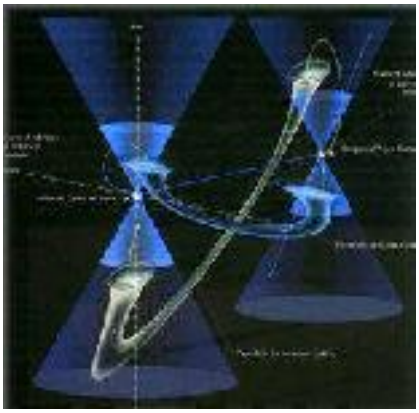
Wormholes may not only connect two separate regions within the universe, they could also connect two different universes. Similarly, some scientists have conjectured that if one mouth of a wormhole is moved in a specific manner, it could allow for time travel. Today's technology is insufficient to enlarge or stabilize wormholes, even if they could be found. However, scientists continue to explore the concept as a method of space travel with the hope that technology will eventually be able to utilize them. "You would need some of the super-super-advanced technology," Hsu said. "Humans won't be doing this any time shortly."

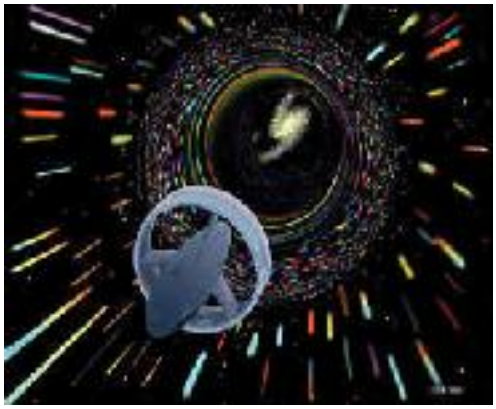
Faster-Than-Light



Wormhole travel as envisioned by Les Bossinas for NASA. Digital art by Les Bossinas, 1998. The impossibility of faster-than-light relative speed only applies locally. Wormholes might allow effective superluminal (faster-than-light) travel by ensuring that the speed of light is not exceeded locally at any time. While traveling through a wormhole, subluminal (slower-than-light) speeds are used. If two points are connected by a wormhole whose length is shorter than the distance between them *outside* the wormhole, the time is taken to traverse it could be less than the time it would take a light beam to make the journey if it took a path through the space *outside* the wormhole. However, a light beam traveling through the wormhole would, of course, beat the traveler.

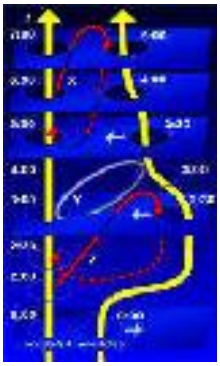
Time Travel





A Wormhole could allow time travel. This could be accomplished by accelerating one end of the wormhole to a high velocity relative to the other, and then sometime later bringing it back; relativistic time dilation would result in the accelerated wormhole mouth aging less than the stationary one as seen by an external observer, similar to what is seen in the twin paradox. However, time connects differently through the wormhole than outside it, so that synchronized clocks at each mouth will remain synchronized to someone traveling through the wormhole itself, no matter how the mouths move around.

This means that anything which entered the accelerated wormhole mouth would exit the stationary one at a point in time before its entry. For example, consider two clocks at both mouths both showing the date as 2000. After being taken on a trip at relativistic velocities, the accelerated mouth is brought back to the same region as the stationary mouth with the accelerated mouth's clock reading 2005 while the stationary mouth's clock read 2010. A traveler who entered the accelerated mouth at this moment would exit the stationary mouth when its clock also read 2005, in the same region but now five years in the past. Such a configuration of wormholes would allow for a particle's world line to form a closed loop in space-time, known as a closed time like the curve.



It is thought that it may not be possible to convert a wormhole into a time machine in this manner; some analyses using the semi-classical approach to incorporating quantum effects into general relativity indicate that a feedback loop of virtual particles would circulate through the wormhole with ever-increasing intensity, destroying it before any information could be passed through it, in keeping with the chronology protection conjecture. This has been called into question by the suggestion that radiation would disperse after traveling through the wormhole, therefore preventing infinite accumulation. In the future its help to develop tourism. Because it's the part of tourism management.

Conclusion

The conclusion of this research is that rapid space-travel, or travel back in time or future. Nothing is impossible, everything is possible. One day or one day we can do that. At the time our tourism industry adapted with time traveling. We earn more profit through wormhole time traveling. They would cause great logical problems, so let's hope there's a Chronology Protection Law, to prevent people going back, killing, etc. Whatever it maybe we people can able to handle everything, We make the rule on time travel like resent days bus travel, air travel, and rail travel. So people, ready to move a future and past through wormhole time travel.

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ISSN 0017 - 8861

Estd 1923

Health

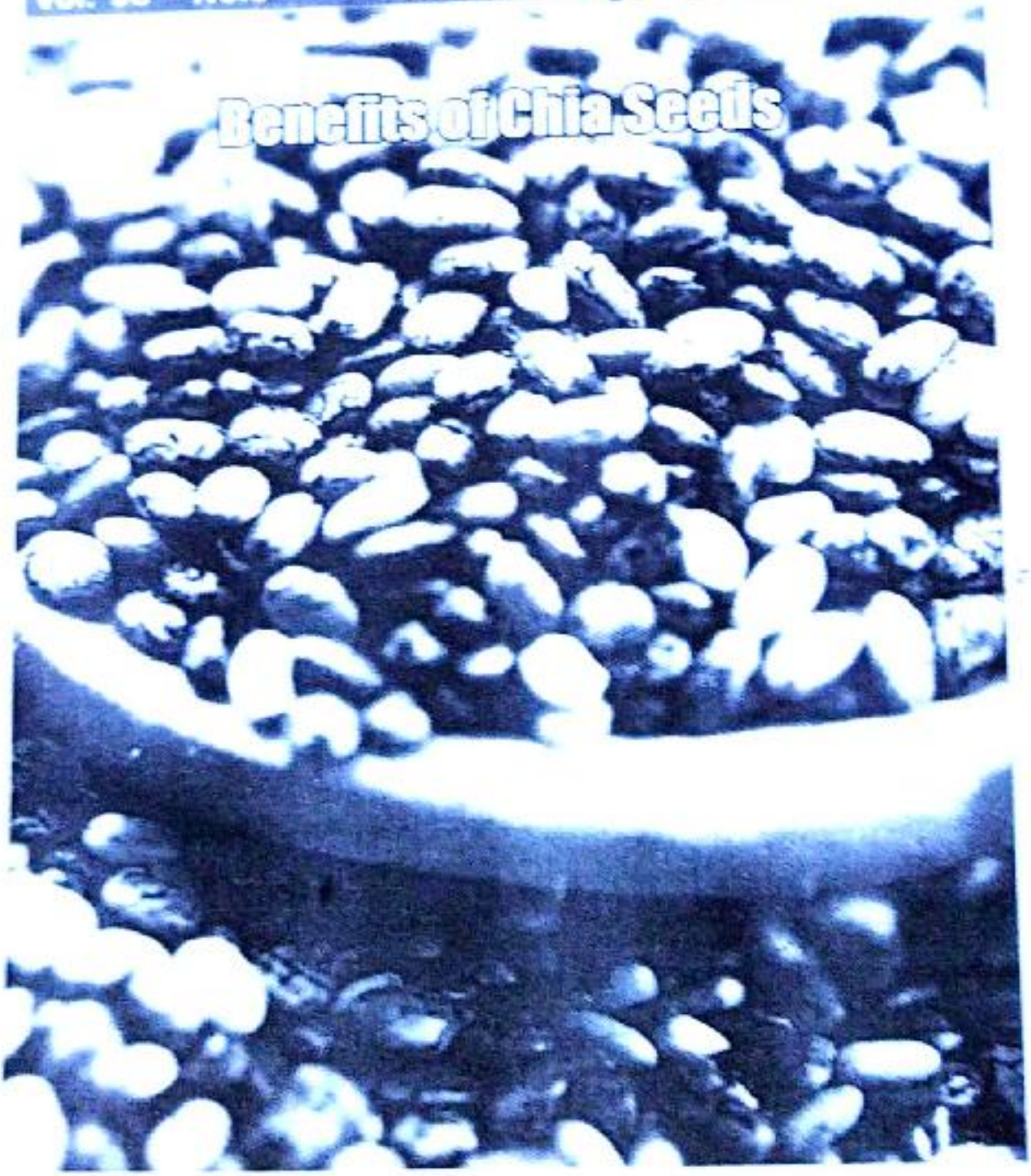
A JOURNAL DEVOTED TO HEALTHFUL LIVING

www.theantiseptic.in

Email: admin@theantiseptic.in

Vol. 96 • No.6 JUNE 2018 ₹ 20

Benefits of Chia Seeds



ISSN 0017 - 8861

Estd 1923

Health

A JOURNAL DEVOTED TO HEALTHFUL LIVING

Founded by : **Dr. U. RAMA RAO**

Publisher : **Dr. R. LAKSHMIPATHY**

Edited by : **Dr. HARIHARASUBRAMANIAN, MD, PHD**

Co-ordinate Editor : **Dr. USHA GIRIDHAR, M.D.S.**

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Annual Subscription : Rs.240/- Rates include postage. Cheques / D.D., to be drawn in favour of Professional Publications (P) Ltd., Madurai-625 003, Tamilnadu. Ph: 0452 - 4378300, 2692939. Mobile No: 72000 84864 email: admin@theantiseptic.in

Printed by **L. Saroja**, Partner on behalf of **M/S. Sree Vinayaga Screens,** and published by **Dr. R. Lakshmipathy,** Sri Ram, 27, Sathya Sai Nagar, Madurai - 625 003 on behalf of **M/S. Professional Publications (P) Ltd,** and printed at 12A/1, Subramania Pillai Street, Madurai - 625 010 and published at 21, Lakshmi Sathya Sai Nagar, Madurai - 625003. Editor: **Dr. Hariharasubramanian MD, PHD. Dr. Usha Giridhar M.D.S.,** is responsible for selection of articles and news under PRB Act.

HEALTH PHILOSOPHY

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CONTENTS

CAROTENOIDS - POWERFUL PHYTONUTRIENT IN PLANTS

Introduction

More than 600 varieties of carotenoids have been found in plants. Three different groups of carotenoids are observed

a. Orange Carotenoids-Alpha, Beta, Gamma

b. Red Carotenoids-Lycopene, Astaxanthin

c. Yellow Carotenoids-Lutein and Zeaxanthin

Properties of Carotenoids

a. Soluble in lipids

b. Insoluble in water

c. Best absorbed when associated with oil

d. They cannot be synthesized by humans

e. Exist in free state in plant tissues

Sources of Carotenoids

Red pepper, egg yolk, annatt, saffron, pumpkin, tomatoes, carrots, sweet melons, potato, cantaloupe, spinach, water melon, kale, dark green leafy vegetables are the good sources of carotenoid.

Health benefits of Carotenoids

1. Carotenoids are helpful in protecting vision
2. They combat cellular damage
3. Supports cardio vascular health
4. Lycopene a potent carotenoids found in tomatoes reduces the risk of cancer (liver, colon, breast, and lungs)
5. Eating carrots an excellent sources of carotenoids helps in degenerative diseases of the retina
6. They also have action against harmful micro organisms
7. Helps in sperm health and increases,male fertility
8. Carotenoids helps in skin health from environmental toxicity
9. Provides nutritional support for a healthy immune system

Conclusion

Carotenoids a natural pigment is believed to cure all types of diseases, especially its role has been proven in curing cancer. This pigments come from different yellow orange coloured vegetables and fruits with lot of potential health benefits.

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SEAWEEDS-A POTENTIAL MEDICINE TO KILL CANCER AND HIV

Introduction

The southern coast of India bears luxuriant growth of seaweeds. More than 200 species of seaweeds have been found in this area. In coastal waters they grow almost like grass in large areas, extending over hundreds of kilometers. Western cultures are only recently beginning to enjoy the taste and nutritional value of sea vegetables, often referred to as seaweed, that have been a staple of the Japanese diet for centuries.

Numerous various varieties of sea vegetables can be found in health food and specialty stores through the year. Owing to their rise in popularity, they are also becoming much easier to find in local Supermarkets as well. Seaweed has been traditionally harvested in Europe, Asia and the Pacific Islands for thousands of years, and today harvesting Seaweed is big international business.

Seaweeds in curing cancer and HIV

Wakame Seaweed is also a source of lignans which play a role

in reducing the risk of breast cancer. Researchers have discovered a new molecular structure having natural compounds showed the potential to kill cancer cells, bacteria and HIV virus, according to the research at the Georgia Institute of Technology. The compound that was isolated in the greatest abundance named Bromophy collide A by the researchers killed human tumour cells by inducing programmed cell death, a mechanism that is promising for development of new anti-cancer, drugs researchers noted.

Much of their knowledge process of being confirmed by modern scientific analysis. And demographic studies have shown that people who regularly in corporate edible seaweeds in to their diets have fever problems from mineral depletion and live longer than other peoples.

Lignans, Phytonutrients found in sea vegetables, have been shown to inhibit fast-growing tumors. Studies have shown that diets high in Folate rich foods are associated with a significantly reduced risk for colon cancer.

Seaweeds and bioactive substances seaweed are called medicinal food of the 21st country. Igenea (Rhodophyta) products and Laminaria and Sargassamspecies have been used in china for the treatment of cancer. Anti-viral compounds form seaweeds have been fund to inhibit the herpes simplex viruses which are now sold in capsule form. Research in now being carried out into using extract to treat breast cancer and HIV

Conclusion

Research shows that special polysaccharides in wrack seaweed cause the destruction of cancer cells by interrupting the progress of their DNA and preventing their research lovers brain tumour, breast cancer, intestinal cancer, leukemia, lung cancer and throat cancer. It is believed that even the ancient Egyptians used seaweed as a cancer treatment for patients with breast cancer.

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Twelve Indian homemade summer drinks you drink to wade away the heat stroke.

1. Lemon Drink – Nimbu Paani / Shikanji
2. The famous lassi : Drink made of curd
3. Sattu Ka Sharbat
4. Imli ki Chatney : An amazing summer drink recipe
5. Chanch or Buttermilk
6. Watermelon Juice
7. Aam Panna
8. Panakam, Panagam or panaka – A South Indian Summer Drinks
9. Thandai
10. Pan Gulkand Drink or Paan shot
11. Nannari Syrup Drink
12. Bel Ka Sharbat / Wood Apple Juice

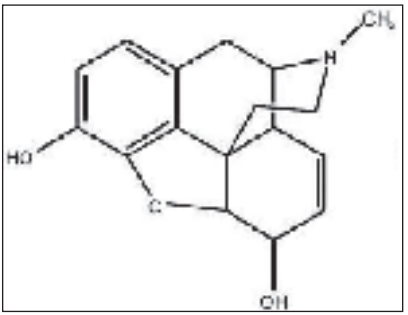
ALKALOIDS

Alkaloids are class of nitrogenous organic compounds of plant origin which have pronounced physiological actions on humans. They include many drugs morphine, quinine and poisons atropine, strychnine.

Generally, an alkaloid contains at least one nitrogen atom in an amine-type structure—i.e., one derived from ammonia by replacing hydrogen atoms with hydrogen-carbon groups called hydrocarbons., Most alkaloids have one or more of their nitrogen atoms as part of a ring of atoms, frequently called a cyclic system. Alkaloid names generally end in the suffix -ine, a reference to their chemical classification as amines. most alkaloids are colourless, nonvolatile, crystalline solids. They also tend to have a bitter taste.

Morphine

Morphine, narcotic analgesic drug used in medicine in the form of its hydrochloride, sulfate, acetate, and tartrate salts. Morphine was isolated from opium. In its power to reduce the level of physical distress, morphine is among the most important naturally occurring compounds, being of use in the treatment of pain caused by



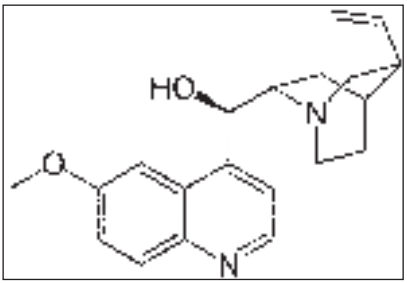
Morphine

cancer It also has a calming effect that protects the system against exhaustion in traumatic shock, internal hemorrhage, congestive heart failure, and debilitated conditions (as certain forms of typhoid fever). It is most frequently administered by injection to ensure rapid action, but it is also effective when given orally.

Morphine is extract from Papaver somniferum (in tamil kasakasa), flowering plant of the family. It is also grown for its tiny nonnarcotic ripe seeds, which are kidney-shaped and grayish blue to dark blue; the seeds are used in bakery products and for seasoning, oil, and birdseed.

Quinine

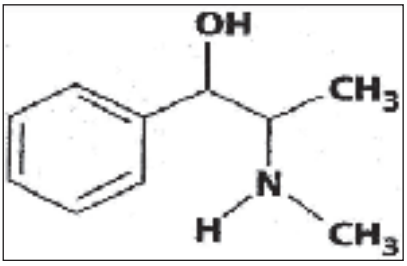
Quinine is an alkaloid derived from the bark of the cinchona tree. It is used as an antimalarial drug,



Quinine

and is the active ingredient in extracts of the cinchona .quinine was the only effective remedy for malaria; Quinine, an alkaloid, acts by interfering with the growth and reproduction of the malarial. parasites, which inhabit the red blood cells (erythrocytes).

Ephedrine

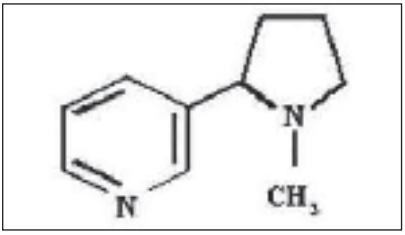


Ephedrine

Ephedrine, alkaloid used as a decongestant drug. It is obtainable from plants of the genus Ephedra, particularly the Chinese species it has been used in China for more than 5,000 years to treat asthma and hay fever. It is effective when administered orally, and, in contrast to the shorter-acting norepinephrine.

Nicotine

Nicotine, an organic compound that is the principal alkaloid of tobacco. (An alkaloid is one of a group of nitrogenous organic compounds that have marked physiological effects on humans.) Nicotine occurs throughout the



Nicotine

tobacco plant and especially in the leaves. Nicotine is the chief addictive ingredient in the tobacco used in cigarettes, cigars, and snuff. In its psychoactive effects, nicotine is a unique substance with a biphasic effect. This is why smoking can feel invigorating at some times and can seem to block stressful stimuli at others.. When ingested in larger doses, nicotine is a highly toxic poison that causes vomiting and nausea, headaches, stomach pains, and, in severe cases, convulsions, paralysis, and death.

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TANNINS - UNKNOWN NUTRITIONAL SECRETS

Introduction

They are also called as tannic acid and or Gallo tannic acid. It is a mixture of polymeric polyphenolase. Foods rich in tannins are considered to be low nutritional value.

Properties of Tannins

a. Molecular weight ranges up to 500 to 3,000.

b. They are capable of binding and shrinking proteins.

c. They are bitter and contribute astringent of foods.

d. It usually causes enzymatic browning in apples.

e. They occur as polyphenolase chemicals of plant origin.

f. Decomposes at 210 C

g. Soluble in boiling water, alcohol and acetone

h. Darkens when exposed to air

Types of Tannins

Tannins are of two categories

1. Hydrolysable tannins-

Interfere with iron absorption,

Posses antinutrients qualities

2. Condensed tannins-

Do not interfere with iron absorption

Sources of Tannins

Teas, coffees, and fruits like pomegranate, permissions,

berries, cranberries, straw berries, blue berries, grapes, red wine, chocolates, spices like vanilla, cloves, thyme, red wine, beetel nuts, vegetables like rhubarb, sorghum and chick peas cereals like barley contains tannis

Health benefits of Tannins

1. Protect cellular oxidative damage
2. Possess anti-inflammatory activity
3. Used in food processing to increases the shelf life of certain foods
4. Decreases serum lipid level
5. Reduces blood pressure
6. Accelerate blood clotting
7. Prevent urinary tract infection
8. Tannins with vitamin c help build and strengthen collagen
9. Break down cholesterol in the blood stream
10. Used in leather industry
11. Preparation of paints and dyes and paper inks
12. Protect agent for preventing germination and growth of pathogenic fungi

Side effects of Tannins

Tannins causes carcinogen to human (betel nuts). It may inhibit iron absorption (tea). It may also causes anemia if taken more in amount (tea and coffee)

When you have menstrual cramps, massage for 2-3 minutes this area.

One yoga tip to protect yourself from the scorching heat in this summer-

Close the right ear with a small ball of cotton wool before going out...

In a few minutes, the left nostril will become more active & since it is the chandranadi, it will keep you cool from within.

You will be saved from heatstroke, high BP, pitta, migraine & other problems caused by the heat.

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ISSN 0017 - 8861

Estd 1923

Health

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Email: admin@theantiseptic.in www.theantiseptic.in

Vol. 97 • No. 6 JUNE 2019 ₹ 20

ISSN 0017 - 8861

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A JOURNAL DEVOTED TO HEALTHFUL LIVING

Founded by : **Dr. U. RAMA RAO**

Publisher : **Dr. R. LAKSHMIPATHY**

Edited by : **Dr. HARIHARASUBRAMANIAN, MD, PHD**

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Annual Subscription : Rs.240/- Rates include postage. Cheques / D.D., to be drawn in favour of Professional Publications (P) Ltd., Madurai-625 003, Tamilnadu. Ph: 0452 - 4378300, 2692939. Mobile No: 72000 84864 email: admin@theantiseptic.in

Printed by **L. Saroja**, Partner on behalf of **M/S. Sree Vinayaga Screens,** and published by **Dr. R. Lakshmipathy,** Sri Ram, 27, Sathya Sai Nagar, Madurai – 625 003 on behalf of **M/S. Professional Publications (P) Ltd,** and printed at 12A/1, Subramania Pillai Street, Madurai – 625 010 and published at 21, Lakshmi Sathya Sai Nagar, Madurai - 625003. Editor: **Dr. Hariharasubramanian MD, PHD. Dr. Usha Giridhar M.D.S.,** is responsible for selection of articles and news under PRB Act.

HEALTH PHILOSOPHY

Whatever might be your age "HEALTH" is committed to help you to stay healthy. You can enjoy life to the full. Eating Nutrients, taking regular exercises, adopting a positive attitudes would be the right way for living. If things go wrong use natural methods for healing.

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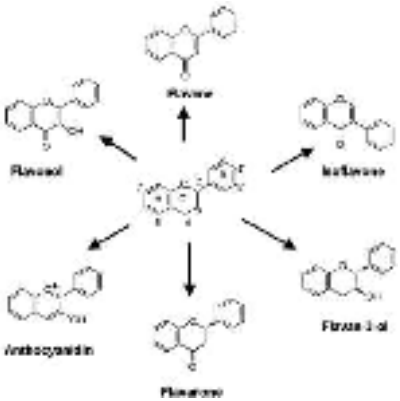
FLAVONOIDS - A NEEDED ANTIOXIDANT FOR A HEALTHIER LIVING

Structure of Flavonoids



Introduction

They belong to polyphenol family and are widely distributed in plants. Flavonoids are largest group of phyto nutrients with more than 4,000 types. It consists of major sub groups such as Chalcones, Flavones, Flavonols, Flavonones, Anthocyanins, Isoflavonoids. Examples of Flavonoids are Lutein, Quercetin, Tetra Hydroxyflavone, EpigallocatechinGallate, and Tamarixetin

Properties of Flavonoids

1. It resembles the structure of anthocyanin.
2. It is more stable to heat and oxidation.
3. They are soluble in water.
4. They contain more than 15 carbon atoms.

Sources of Flavonoids

Flavonoids are often distributed in skins and outer parts of vegetables and fruits, so it is better not to cut the skin of the fruits

S. No.	Particulars	Components	Sources
1.	Flavones	Lutein, apigenin	Celery, parsley, herbs, hot pepper
2.	Anthocyanidins	Malvidin, Pelargondin	Red, purple blue berries,pomegranate, plums, purple grapes, red wine

3.	Flavonones	Hesperidin, Criodictyol, Naringenin	Citrus fruits
4.	Isoflavones	Genistein, Glycitein, Diadzein	Soy beans, Soy products
5.	Flavonols	Quercetin, Kaempferol	Onions,leeks,Brussels, Tea, sprouts, kale, broccoli,berries, beans, apples, berries

Health benefits of Flavonoids

1. Flavonoids have antioxidant activity
2. Tea flavonoid can reduce the oxidation of low density lipo-protein
3. Soya flavonoids reduces the blood cholesterol
4. Soy flavonoids also prevent osteoporosis
5. It cures menopausal symptoms
6. Intake of red wine reduces the risk of coronary heart diseases
7. Possess anti-viral, anti-cancer, anti-allergy and anti-inflammatory properties

Conclusion

This article focuses on the flavonoid component which has recently paid attention in cancer research. Most of the properties of flavonoids are generally life style curing properties and moreover their medicinal property has come to know worldwide too. ✪

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Flat Belly Diet

- 2 liters water
- 1 teaspoon freshly grated ginger
- 1 medium cucumber sliced
- 1 medium lemon, sliced
- 12 small spearmint leaves

Place all ingredients in a large pitcher, let blend together overnight. The next day drink the whole pitcher during the course of the day.

HOT TEA MAY RAISE ESOPHAGEAL CANCER RISK

New research, appearing in the International Journal of Cancer, finds an association between drinking tea at very high temperatures and the risk of developing esophageal cancer.

According to the American Cancer Society, in 2019, there will be approximately 17,650 new cases of esophageal cancer and over 16,000 people will die from it.

In terms of a person's outlook, the Society estimate that approximately 20 percent of people with esophageal cancer go on to live for 5 years after the diagnosis.

Numerous factors may raise a person's risk of developing cancer of the esophagus. These include being older than 55, being male, having acid reflux, or eating a diet high in processed meats and low in fruits and vegetables.

Some researchers have also suggested that regularly drinking very hot liquids may also raise the risk of esophageal cancer.

However, most of these studies asked the participants to remember and estimate how much tea they drank and at what temperature.

The researchers clinically followed the participants for an average period of 10.1 years, between 2004 and 2017. During this time, 317 people developed esophageal cancer.

The researchers divided tea temperature into "very hot" — meaning a temperature of over 60°C, and "cold [or] lukewarm," that is, a temperature that is or falls below 60°C.

Overall, the study found that drinking 700 milliliters (ml) of "very hot" tea per day increased the chances of esophageal cancer by 90 percent compared with drinking the same daily amount of cold or lukewarm tea.

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Professional Publications (P) Ltd., Annual Subscription Tariff

Particulars	Printed Copy	E-Magazine	Both Print & E - Copies	No. of Issues
The Antiseptic	₹ 1200/-	₹ 1180/-* (1000+GST Rs.180)	₹ 2180/- (2000+GST Rs.180)	12
Health	₹ 240/-	₹ 236/-* (200+GST Rs.36)	₹ 436/- (400+GST Rs.36)	12

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Branch	TVS Nagar, Madurai-625003
Account No	268109000188090
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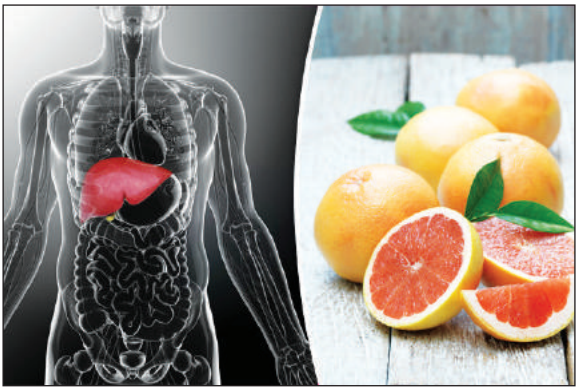
FOODS THAT CLEANSE THE LIVER



Introduction:

Modern society is a sad state that produces many over-processed livers. When we overeat or eat processed or fried foods, or anytime we are exposed to environmental pollutants or stress, the liver becomes overworked and overloaded. When the liver is taxed, it can't process toxins and fat in an efficient way. There are many foods that can help cleanse the liver naturally by stimulating its natural ability to expel toxic waste from the body.

10 Foods That Cleanse the Liver

1. Garlic

Just a small amount of this pungent white bulb has the ability to activate liver enzymes that help your body flush out toxins. Garlicalso holds high amounts of allicin and selenium, two natural compounds that aid in liver cleansing.

2. Grapefruit

High in both vitamin C and antioxidants, citrus fruits like grapefruit, oranges, limes, and lemons support the natural cleansing abilities of the liver.Have a small glass of freshly-squeezed grapefruit juice to boost production of the liver detoxification enzymes that help flush out carcinogens and other toxins.

3. Beets and Carrots

Both are extremely high in plant-flavonoids and beta-carotene; eating beets and carrots can stimulate and support overall liver function.

4. Leafy Green Vegetables

One of our most powerful allies in cleansing the liver, leafy greens can be eaten raw, cooked, or juiced. Extremely high in chlorophyll, greens soak up environmental toxins from the blood stream. Incorporate leafy greens such as

bitter gourd, arugula, dandelion greens, spinach, mustard greens, and chicory into your diet. This will increase creation and flow of bile the substance that removes waste from the organs and blood.

5. Apples

High in pectin, apples hold the chemical constituents necessary for the body to cleanse and release toxins from the digestive tract. This, in turn, makes it easier for the liver to handle the toxic load during the cleansing process.

6. Olive Oil

Cold-pressed organic oils such as olive, hemp, and flaxseed are great for the liver when used in moderation. They help the body by providing a lipid base that can absorb harmful toxins in the body. In this way, they take some of the burden off the liver.

7. Lemons and Limes

These citrus fruits are high in vitamin C, which aids the body in synthesizing toxic materials into substances that can be absorbed by water. Drinking freshly-squeezed lemon or lime juice in the morning can stimulate the liver.

8. Cabbage

Much like broccoli and cauliflower, eating cabbage stimulates liver detoxifying enzymes that help flush out toxins. Kimchi, coleslaw, cabbage soup, and sauerkraut are great cabbage-foods to add to your diet.

9. Turmeric

Turmeric is the liver's favorite spice. This golden spice tastes great in all kinds of dishes, but you can further boost your intake with a turmeric supplement. This premium liquid supplement contains potent antioxidants and is sourced only from organic Curcuma longa root.

10. Green Tea

This liver-loving beverage is full of plant based antioxidants known as catechins compounds known to assist liver function. Green tea is a delicious, healthy addition to any diet. Just remember that green tea offers the benefits, not green tea extract. ✪

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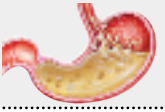
Stomach acid (conc.HCl) is strong enough to dissolve razor blades!!



TIPS TO MANAGE SUMMER SEASON

- Try to drink more water you may consume water more than 2.5 liters per day.

- Try to have multi fruits items which help you to balance your body temperature during summer season

- Try to use less quantity of Dettol liquid mixed in your showering water that helps you to avoid rashes or any minor skin issues

- You may apply Aloe vera leaves on your skin where it has affected or you may use Aloe vera cream.

- Buttermilk is one of the best options in summer; try to have it without adding ice cubes or icy buttermilk

- Try to use Glucose powder daily to keep your health stable, you

may get extra hungry during summer due to energy loses on huge temperature;

- You may use Tender coconut once in two days to keep yourself chill .

- You may take shower with little or medium warm water or cold water and do not use over heated water to take bath

- Try to consume vegetables and seasonal fruits items during the summer season and don't forget to consume healthy liquid items during summer.

- Must be avoiding the non – vegetarian food. Because it may take more time for digestion.

- We should avoid the directly exposure to sun light in the mid day. ✪

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WATER SAVING TIPS

1. **Fix a dripping tap.** A dripping tap can waste 15 litres of water a day, or 5,500 litres of water a year.

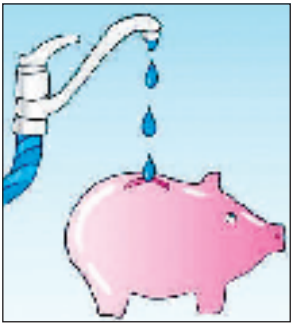
2. **Install a water butt** to your drainpipe and use it to water your plants, clean your car and wash your windows. A water butt can collect around 5,000 litres a year.

3. **Water your garden with a watering can** rather than a hosepipe. A hosepipe can use as much as 1,000 litres of water an hour. Mulching your plants (with bark chippings, heavy compost or straw) and watering in the early morning and late afternoon will reduce evaporation and also save water.

4. **Fill a jug with tap water and place this in your fridge.** This will mean you do not have to leave the cold tap running for the water to run cold before you fill your glass.

5. **Install a water meter.** When you're paying your utility provider for exactly how much water you use, laid out in an itemised bill, there's an incentive to waste less of the stuff.

6. **Invest in water-efficient goods** when you need to replace household products. You can now get water-efficient showerheads, taps, toilets, washing machines, dishwashers and many other water-saving products.



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AWESOME HEALTH BENEFITS OF PAPAYAS

Christopher Columbus, an Italian voyager once referred to papayas as the fruit of the angels. The fruit which is extremely rich in Vitamin C has a wide range of health benefits making it a great fruit option to include in your diet. Here are some of the top health benefits of papaya.

1. Lowers cholesterol

Papaya is rich in fiber, Vitamin C and antioxidants which prevent cholesterol build up in your arteries. Too much cholesterol build-up can lead to several heart diseases including heart attack and hypertension.

2. Helps in weight loss

Those looking to lose weight must include papaya in their diet as it is very low in calories. The fiber content in papaya leaves you feeling full and also clears your bowel movement making your weight loss regime easier.

3. Boosts your immunity

Your immunity system acts as a shield against various infections that can make you really sick. A single papaya contains more than 200% of your daily requirement of Vitamin C, making it great for your immunity.

4. Good for diabetics

Papaya is an excellent food option for diabetics as it has low-sugar content even though it is sweet to taste. Also, people who don't have diabetes can eat papaya to prevent it from happening.

5. Great for your eyes

Papaya is rich in Vitamin A which helps protect your vision from degenerating. Nobody wants to lose their ability to see due to diseases like age-related macular degeneration, and eating papayas will ensure that you do not see a day where you cannot see.

6. Protects against arthritis

Arthritis can be a really debilitating disease and people who have it may find their quality of life reduced significantly. Eating

papayas are good for your bones as they have anti-inflammatory properties along with Vitamin C which helps in keeping various forms of arthritis at bay. A study published in Annals of the Rheumatic Diseases showed that people who consumed foods low in Vitamin C were three times more likely to have arthritis than those who didn't.

7. Improves digestion

In today's times, it is near impossible to avoid eating foods that are bad for your digestive system. Often we find ourselves eating junk food or restaurant food prepared in excessive quantities of oil. Eating a papaya daily can make up for such occasional mistakes, as it has a digestive enzyme known as papain along with fiber which helps improve your digestive health.

8. Helps ease menstrual pain

Women who are experiencing menstrual pain should help themselves to several servings of papaya, as an enzyme called papain helps in regulating and easing flow during menstrual periods.

9. Prevents signs of ageing

All of us would love to stay young forever, but no one in this world has managed to do it. Still, healthy habits like eating a papaya daily will prolong the process and may make you look 5 years younger than you are. Papaya is rich in Vitamin C, Vitamin E and antioxidants like beta-carotene which helps prevent your skin from free radical damage keeping wrinkles and other signs of ageing at bay.

10. Prevents cancer

Papaya is a rich source of antioxidants, phytonutrients and flavonoids that prevent your cells from undergoing free radical damage. Some studies have also linked the consumption papaya to reduced risk of colon and prostate cancer.

11. Helps reduce stress

After working hard for the whole day, it is a good idea to come home to a plate papaya. The wonder fruit is rich in several nutrients like Vitamin C which can keep you free from stress.

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EFFECTS OF PHYSICAL ACTIVITY ON SCHOOL CHILDREN'S ACADEMIC PERFORMANCE

Physical activity is not only essential for healthy growth and development, it's also important to learning. physical activity has an impact on cognitive skills such as concentration and attention, and it also enhances classroom attitudes and behaviours, all of which are important components of improved academic performance.Children participating in the study were given electroencephalograms (EEGs) to measure brain waves and how fast the brain responds to certain stimuli. Researchers found that the brain synapses of physically fit children fired faster and stronger, and as a result those children had better language skills.

The more physically fit children were not only better at reading, they were also better at reading passages with several grammatical errors. The researchers looked at the brainwave patterns that deal with language and the ability to spot errors in grammar. The fit children had strong results with both brain wave groups, and a better understanding of nonsensical or error-filled sentences.

The positive effects of physical activity on the brain

Physical activity has a direct impact on the behaviour and development of the brain. An essay by Charles Basch of Columbia University summarised how physical activity can improve brain function:

- The flow of oxygen to the brain is increased

- The number of brain neurotransmitters is increased, which assists your ability to focus, concentrate, learn, remember and handle stress
- The number of brain-derived neurotrophins is increased, which assures the survival of neurons in areas of the brain that are responsible for learning, memory and higher thinking.

Building their cognitive functioning:

- Just one session of moderate physical activity instantly boosts kids' brain function, cognition and academic performance.
- Mastering fundamental movement skills boosts brainpower and academic performance.
- Time away from lessons in favour of physical activity doesn't come at the cost of good grades.

Nurturing their engagement, motivation and psychological well-being:

- Physical activity boosts children's self-esteem.
- It nurtures relationships with peers, parents and teachers.
- A caring environment that supports autonomy enhances kids' motivation, their behaviour relating to physical activity and their general well-being.
- Regular and organised physical activity training promotes life skills (interpersonal, self-regulation) and core values like respect and social responsibility.

Supporting a culture of inclusiveness:

- Culture- and context-sensitive activities promote social inclusion.

Work hard, play harder

Being a high performer isn't just about working hard at school. There are kids putting extraordinary effort into all kinds of fields - like school, sport, and the community. Is your child or student one of them? Nominate them at LiteracyPlanet Legends and they'll be in with a chance to win $10,000 worth of supplies for their school and a school visit from a sports star! Plus, every nominee will receive a limited edition LiteracyPlanet Legends pack (while stocks last).

Exercise is Important to Development of Academic & Social Skills

Exercise directly impacts the behavior and development of the brain. "It is likely that the effects

of physical activity on cognition would be particularly important in the highly plastic developing brains of youth," according to a 2010 essay penned by Charles Basch of Columbia University.

He summarized how exercise may affect executive functioning:

- Increased oxygen flow to the brain
- Increased brain neurotransmitters
- "[Increased] brain-derived neurotrophins that support neuronal differentiation and survival in the developing brain." Neurotrophins assure the survival of neurons in areas responsible for learning, memory, and higher thinking.

Physical activity has benefits beyond improved grades, too. Basch extrapolates current research and connects physical activity to absenteeism, drop-out rates, and social connectedness.

"Drop-out rates were lower for youth who consistently participated in interscholastic sports," he writes, though he cautions that forcing kids to join sports won't solve the drop-out problem that plagues many inner city schools, it simply may foster an environment of connectedness that could keep at-risk students attending school.

The importance of being physically active is well known. Active people are healthier, live longer, and have a lower risk of developing mental disorders. The foundation for a physically active lifestyle is laid in childhood. Unfortunately, we are seeing a decline in the number of children who engage in the recommended amount of physical activity each day (60 minutes of moderately or highly intense activity). Instead, children are sedentary much of the time, sitting in the classroom or in front of the television. This problematic development is reflected in a sharp rise in obesitylevels among children.

As children spend a large number of their waking hours at school, schools provide the perfect environment for children to be physically active. However, many schools have cut back on opportunities for them to do so. This is not surprising; schools are under great pressure to improve academic achievement. As a result, many educators believe that academics (i.e. reading, spelling, and mathematics) should be given priority over physical education.

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WAYS TO DEAL WITH TEMPER TANTRUMS IN CHILDREN

Temper tantrums are unpleasant and disruptive behaviors or emotional outbursts. They often occur in response to unmet needs or desires. Temper tantrums range from whining and crying to screaming, kicking, hitting, thrash, roll on the floor, throw things and breath holding. They're equally common in boys and girls and usually happen between the ages of 1 to 3yrs. Some kids may have tantrums often and others have them rarely. Tantrums are a normal part of child development.

Causes of temper tantrums

As a young child learns more and becomes more independent, he or she wants to do more than he or she can physically and emotionally manage. This is frustrating to the child and the frustrations are expressed in a variety of ways. Temper tantrums are worse and occur more often when a child is hungry, tired, or sick. Some reasons children have temper tantrums include the following:

- Want to be on their own, and get upset when they can't do what they want
- Are in a transition (such as from day care to home)
- Are trying to get attention to test the rules
- Have something taken away from them
- Have not learned all the words to tell you what they are feeling or want and this upsets them
- Do not understand what you want them to do
- Are tired or hungry
- Are worried or upset
- Feel stress in the home

Tantrum Red Flags

Even normal children may display every one of these tantrum warning flags from time to time. But kids with problems show these signs in nearly every tantrum:

➢ ***Aggression toward caregivers,***

objects, or both. If this happened more than half the time in the last 10 to 20 tantrums, it may signal disruptive disorders. If this happens 90% of the time, and you have to take cover to protect yourself during a tantrum, this may mean a problem .

➢ ***Self-injury.*** Kids with major depression and kids with mixed major depression and disruptive behaviour were much more likely than healthy kids to bite themselves, scratch themselves, bang their heads against a wall, or kick objects in an attempt to hurt their foot.

➢ ***Frequent tantrums.*** Preschoolers who have 10 to 20 tantrums a month at home, or who have more than five tantrums a day on multiple days outside the home, are at risk of a serious psychiatric problem.

➢ ***Very long tantrums.*** A five-minute tantrum can seem like a million years to a parent. But kids who consistently have tantrums that last more than 25 minutes may have underlying problems. A normal child may have a tantrum that lasts an hour, but the next one lasts 30 seconds. These children with psychiatric disorders are having 25-minute or longer tantrums 90% of the time.

➢ ***Inability to calm oneself after a tantrum.*** These kids almost every time require some sort of external force to calm them down.

Tactics to handle temper tantrums

❖ ***Be consistent.*** Establish a daily routine so that your child knows what to expect. Stick to the routine as much as possible, including nap time and bedtime. Set reasonable limits and follow them consistently.

❖ ***Plan ahead.*** Run errands when your child isn't likely to be hungry or tired. If you're expecting to wait in line, pack a small toy or snack to occupy your child.

❖ ***Encourage your child to use words.*** Young children understand many more words than they're able to express. If your child isn't yet speaking — or speaking clearly — teach him or her sign language for words such as "I want," "more," "drink," "hurt" and "tired." As your child gets older, help him or her put feelings into words.

❖ ***Let your child make choices.*** Avoid saying "no" to everything. To give your toddler a sense of control, let him or her make choices. "Would you like to wear your red shirt or your blue shirt?"

❖ ***Praise good behaviour.*** Offer extra attention when your child behaves well. Give your child a hug or tell your child how proud you are when he or she shares or follows directions.

❖ ***Avoid situations likely to trigger tantrums.*** Don't give your child toys that are far too advanced for him or her. If your child begs for toys or treats when you shop, try to steer clear of areas with these temptations. If your toddler acts up in restaurants, choose places that offer quick service.

❖ ***Select a timeout spot.*** Seat your child in a boring place, such as in a chair in the living room or on the floor in the hallway. Wait for your child to calm down. Consider giving one minute of timeout for every year of your child's age.

❖ ***Communicate with your toddler.*** Don't underestimate his ability to understand what you are saying. Tell him the plan for the day and stick to your routine to minimize surprises.

❖ ***Do not bribe your child*** to stop the tantrum. The child then learns to act inappropriately to get a reward

❖ ***Remove potentially dangerous objects*** from your child or your child's path.

✪

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My Mother

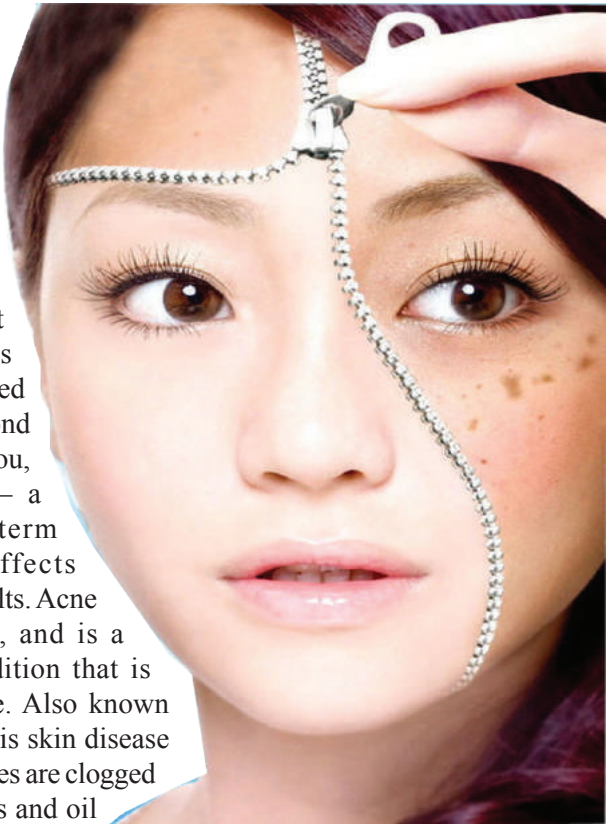
My mother is a woman like no other. She gave me life, nurtured me, taught me, dressed me, fought for me, held me, shouted at me, kissed me, but most importantly she loved me unconditionally.

There are not enough words to describe just how important my Mother was to me, and what a powerful influence she continues to be.

I LOVE YOU MOM.

TOP 10 TIPS FOR ACNE

Introduction



Acne and Pimples might look like a serious problem,Some people get one or two spots once in a while, whereas some others get frequent breakouts with lots of pus-filled pimples. If the second sounds more like you, it may be acne – a chronic or long-term condition that affects many teens and adults. Acne is a broader term, and is a more serious condition that is persistent in nature. Also known as acne vulgaris, this skin disease occurs as hair follicles are clogged with dead skin cells and oil from the skin

1. Get help

There is no point in suffering in silence. Although acne cannot be cured, it can definitely be treated effectively. Discuss your problem with your doctor and ask him/her to refer to a dermatologist.

2. To squeeze or not

It is hard to resist the temptation, but try not to pinch or squeeze lesions. In particular, inflammatory acne lesions should never be squeezed. If you handle your skin too often, infected material may go deeper into your skin and this could cause additional inflammation and possible scarring or dark blotches.

3. Stay out of the sun

It may be tempted to suntan because suntan can improve your

looks. However, the effect is only temporary and there is no evidence that sunlight improves acne. Sunlight can do more harm than good as it leads to early ageing and increases your risk of skin cancer. Many medications used to treat acne can actually make your skin more sensitive to ultraviolet light. Rather follow one of the many proven acne treatment programmes.

4. Give your skin a break

If you constantly switch products and try too many things, you don't give anything a chance to work. Try one new product at a time, giving each at least three weeks to take effect.

5. How to remember to take your medication

An easy way to remember to take your medication, is to associate it with a routine daily event such as brushing your teeth. Keep your medication next to your toothbrush or on the breakfast table.

6. Wear the right clothes

Tight bra straps, headbands, collars and other clothing which place pressure on the skin may cause zits and blackheads in those areas of the skin. Rather wear loose, cool clothing which allows your skin to breathe.

7. Stay out of the kitchen

Working in a kitchen, going on holiday to places with high humidity or using a steam room or sauna, can aggravate your acne or cause flare-ups. This is due to hydration and swelling of the ductal blockages which lead to the inflammatory phase of acne.

8. Check your medicine cabinet

Many medicines, especially corticosteroids and anti-epilepsy drugs, can make your acne worse. If you think this is the case, never stop taking it without discussing it with your doctor first.

9. Sleeping beauty

It is important to get eight hours' sleep - not only for your general health, but also for your skin. In order to build a healthy immune system, you need your rest. Although enough sleep cannot prevent acne, it can help fight infection and aid recovery.

10. Don't stop exercising

Excessive sweating can make your acne worse, but this is not a reason to stop exercising. Apart from all its other health benefits, exercise also helps you to get rid of

stress. It is important to limit stress because, although it doesn't cause acne, it can aggravate it. When you exercise, make sure to wash properly afterwards to get rid of persperation.

Apart from these answers, there are certain things you can do from your end to keep acne and pimples away from your bright and shiny face! Try out these very basic tips:

- Cut down on fried (basically oily) foods
- Use scarves while outside and a helmet while driving to protect your face from pollution
- Drink lots of water
- Include fresh fruits and vegetables in your diet
- Try to thoroughly cleanse your face once a month to remove dead skin and control oil secretion
- Wash and rinse your face with clean and clear pimple clearing face wash

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Did you know?

Sleeping without a pillow reduces back pain and keeps your spine stronger

Wearing headphones for just an hour will increase the bacteria in your ear by 700 times.

Rain contains vitamin B12

3 Lessons from a pencil

1. Pain always sharpens you!
2. Everything you do leaves a mark!
3. What's inside you is useful, not what's outside!

USEFUL TIPS FOR PREGNANCY CARE DURING SUMMER

Be hydrated

- Keeping yourself hydrated by drinking lots of water during pregnancy it is very important for both the mother and the baby.
- Dizziness, nausea, dry lips and mouth, less urine or yellow colored urine and overheating due to the hot weather all signal that you are dehydrated.
- Summer heat tends to cause dehydration so it is recommended to drink 6-8 glass of water to stay hydrated. Make sure you always carry a bottle of water when you are out and about.

Healthy meals

- Include lots of fresh fruits and juice to beat the heat. Vegetables like cucumber should be included in diet during summer months. Avoid very spicy foods.

Wear bright clothes

- Dark clothes, especially black or red, increase heat absorption making pregnant women feel hotter. Therefore, on hot sunny days, you should select bright clothes such as white, beige to reflect the sun rays. Remember to wear sunglasses, sun-proof vest and use sunblock when going out.

Take a bath with cool water

- In these hot days, the cool water bath makes you feel comfortable and a lot more pleasant. Swimming is also very good for pregnant women, so if you have time, just go to the pool near your house to enjoy cool summer.Speak to your doctor or the CareNine fitness expert before starting any new physical activity.

Avoid salty foods

- Salty foods will make you lose water quickly and make you thirstier on hot days. Therefore, keep away from those foods such as potato chips, cookies, crackers and pasta during summer days.

Take care of your legs

- Keep your legs on high position when having opportunity, especially during working time. It will help blood circulating to the legs and remove leg and hand oedema. In summer, pregnant women's legs are easy to be swollen, so taking care of them is very important.

Do not forget your lunchtime nap

- Summer heat makes pregnant women more tired, so do not skip the short naps. You should spend 30 minutes for lunchtime nap and sleep 7-8 hours a day.

Exercise at right time

- Walking, swimming, yoga and other pregnancy exercises are good for you and your baby.

- During summer, exercise should be done early in the morning or in the evening when the temperatures is low.

- During exercise if one feels tired it is better to relax and take rest. Don't try to over-stress yourself while doing physical activities. Do it light and limited to your comfort zone.

Limited outdoor activity during hot hours

- Being outdoors to get some fresh air is too good during pregnancy. It can actually help you to relax and rejuvenate.

- During summer days restrict your outdoor activities to early morning or evening. Avoid going out during the peak hours like 11 am to 4 pm when the sun's rays are strongest.

Proper rest and sleep

- Sleep and rest is very important factor for mothers. Sleeping helps to eliminate stress.

- Summer heat can make you more tired. Take time for yourself. Relax by reading a book, listening to music or doing meditation. Rest is very important during pregnancy.

✪

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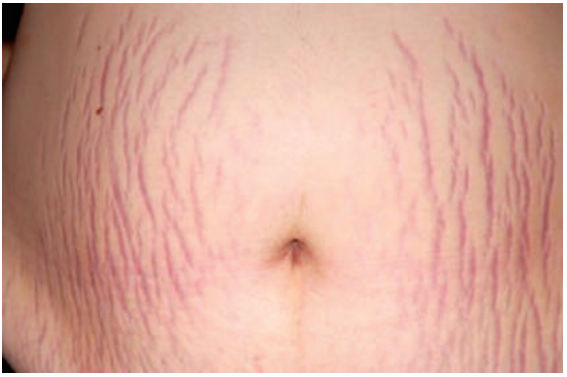
STRETCH MARKS AND AYURVEDA

Every woman is beautiful and deserves appreciation as well as admiration. God has instilled unique qualities in each woman. But, women are commonly subjected to beauty standards and stereotypes regarding their appearances and looks. Women go through many stages in the journey of their life among which pregnancy is the most glorious and vulnerable of all. Striae distensae or "stretch marks," referred to as striae gravidarum (SG) when they occur in pregnancy, are a common skin problem of considerable cosmetic concern to many patients. It is estimated that 50% to 90% of women develop some stretch marks during pregnancy. The prevalence is higher in women who are already obese prior to pregnancy.

They are characterized clinically by linear bands that are initially erythematous to violaceous and gradually fade to become skin colored or hypopigmented atrophic lines that may be thin or wide. SG occur on the abdomen, breasts, buttocks, hips and thighs and usually develop after the 24th week of gestation. Up to 90% of SG appear in first pregnancy.

The cause of SG remains unknown but clearly relates to changes in the structures that provide the skin with its tensile strength and elasticity. Mechanical stretching of the skin in association with hormonal factors has been implicated in the pathogenesis. It has been postulated that some hormones like estrogen, relaxin, and adrenocortical hormones decrease the adhesiveness between collagen fibers and increase ground substance, which results in the formation of striae in areas of stretching. Striae may form due to structural connective tissue changes that include realignment and reduced elastin and fibrillin in the dermis. SG tend to occur in areas of maximum skin stretching, which appear more frequently in the



Stretch marks

antero-lateral abdomen (35%), hips (25%), thighs (14%), in the breast (13%) and buttocks (13%).

• Risk factors

The most common risk factors for SG include younger age, maternal and family history of SG, higher prepregnancy and pre-delivery weight and higher birth weight. It has been reported that previous occurrence of striae on the breasts or thighs, family history of striae and race are significant predictors of striae development.

• Prevention

SG first present as flat, pink-to-red bands (striae rubra or immature striae) that become raised, longer, wider and violet-red. Over a period of months to years, the marks fade and become hypopigmented (striae alba or mature striae), appearing parallel to skin tension lines as scarlike, wrinkled, white and atrophic marks. SG can cause itching, burning, and discomfort Preventative treatments have met with limited success. The application of almond oil, olive oil or cocoa butter consistently failed to lower the incidence of SG.

• Treatment

The proposed treatment is through local massage by freshly prepared paste made up of equal quantities of Nimba (Azadirachta indica) leaves, Badari (Ziziphus mauritiana) leaves, Surasa (Ocimum sanctum) leaves and Manjishtha (Rubia cordifolia) roots. These plants are enriched mainly with anti-inflammatory, wound healing, antiulcer and anti-microbial properties and are therefore used in many skin problems.

✪

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There are so many kind of apples; if you ate a new one everyday, it would take over 20 years to try them all.

OEDEMA

It is a condition characterised by an abnormal collection of watery fluid in the interstitial space located under the skin and in the cavities in the body.

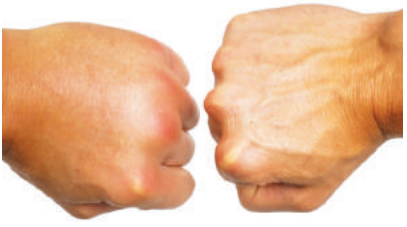
Causes of Oedema:

1. **Cardiac cause:** Cardiac patients presents with oedema of the feet with history of dyspnoea on exertion, which has been gradually increasing.

2. **Hepatic cause:** If a severe alcoholic patient starts developing oedema of the feet, suspectalcoholic lever disease.

3. **Renal cause:** Patients with puffiness of the face especially over the eyelids, more in the mornings and swelling of the feet may be because of renal impairment. The urine shows large amount of albumin.

4. **Nutritional anaemia with hypoproteinaemia:** If the patient has pallor of palms, tongue, palpebral conjunctiva and nails, anaemia with hypoproteinaemia is often responsible for oedema. The oedema is often generalised with puffiness of the face. This condition is very common in poor patients.



5. **Venous insufficiency:** Old deep vein thrombosis of the legs is also one of the cause of oedema of legs. The condition is more common in females. The high heeled shoes increases the symptoms. The incidence is maximum in middle aged females after every pregnancy. They often complain of swelling of the feet and ankles after prolonged standing, or after sitting for few hours, in the theatre, in the train, or at a sewing machine, or in an office chair.

6. Filariasis is also one of the cause of unilateral lymphatic oedema of the feet. Here the overlying skin is usually pigmented and the oedema does not pit easily due to underlying induration of the subcutaneous tissue.

7. In obese people salt retention is the most common cause of the swelling of the feet without any ischaemic heart disease.

Usually this type of oedema is not gross and only slight pitting is seen. The only permanent treatment is to lose weight.

8. Iatrogenic cases of swelling of the face and feet are also very common. Cortisone, phenylbutazone, hypotensive drugs, oestrogens are the drugs responsible for salt retention.

9. In young women's swelling of the whole body, more in the breasts is quite common during premenstrual period.

10. Idiopathic oedema is also seen quite commonly in practice where the cause of oedema in not known. The patient is investigated extensively without arriving at the final diagnosis.

11. Allergic angioneurotic oedema is also seen in practice. It occurs in one eye or a lip and is of sudden onset. Associated itching or past history of urticaria confirms the diagnosis.

12. Generalised puffiness of the whole body due to thyroid deficiency is rarely seen.

13. Loss of elasticity of the skin in old age can produce pitting like oedema.

These are the various causes of oedema seen in medical practice. Through examination proper investigation and history taking confirms the diagnosis.

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Life before computer

- Window was a square hole in a room..
- Application was something written in paper..
- Mouse was an animal..
- Keyboard was a piano..
- File was an important office material..
- Hard Drive was an uncomfortable road trip..
- Cut was done with knife and Paste was done with Glue..
- Web was spider's home..
- Virus was flu..
- Apple and Blackberry were just fruits..

SAVE YOUR KIDNEYS - 24

25. Kidney Transplantation-Part 2

Successful kidney transplantation (KT) is the best treatment option for CKD-ESKD (when both kidneys fail permanently and irreversibly) as it offers almost normal life. KT may offer better quality of life and longer patient survival compared with dialysis. After discussion of what is kidney transplantation, when it is required, when it is not required and its advantages, disadvantages as well as contraindications, we will discuss few additional pre-transplant information.

What is the age limit for a kidney transplant recipient?

Although there are no fixed criteria for the age of a kidney transplant recipient, it is usually recommended for persons from 5 to 65 years of age.

What are the likely sources of kidneys for transplantation?

There are three sources of kidneys for transplantation:

- Living related donors: blood relatives of the recipient.
- Living non-related donors: like friends, spouses or relatives.
- Deceased (cadaver) donors: from victims of brain death.

Who is the ideal kidney donor?

An identical twin is an ideal kidney donor with the best chances of survival after transplantation.

Who can donate a kidney?

A healthy person with two kidneys can donate one kidney as long as the blood group, tissue type and tissue cross matching are compatible with the recipient. Generally, donors should be between the ages of 18 and 65 years.

How does blood group determine the selection of a kidney donor?

Blood group compatibility is important in KT. The recipient and donor must have either the same blood group or compatible groups. Just like in blood transfusions, a donor with blood group O is considered a "universal" donor. (See table below)

Recipient's blood group	Donor's blood group
O	O
A	A or O
B	B or O
AB	AB, A, B or O

Who cannot donate a kidney?

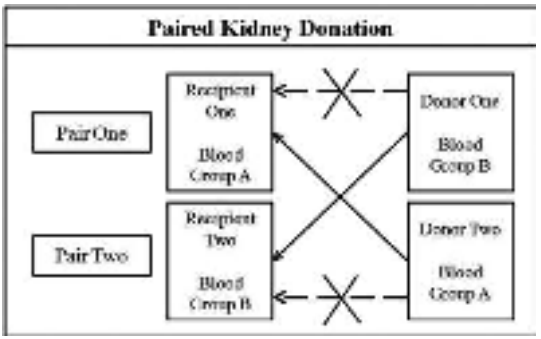
A living donor should be thoroughly evaluated medically and psychologically to ensure that it is safe for him or her to donate a kidney. A person cannot donate kidney if he or she has diabetes mellitus, cancer, HIV, kidney disease, high blood pressure or any major medical or psychiatric illness.

What are the potential risks to a living kidney donor?

A potential donor is evaluated thoroughly to ensure that it is safe for him or her to donate a kidney. With a single kidney, most donors live a normal healthy life. After kidney donation sexual life is not affected.

What is paired kidney donation?

Paired kidney donation (also known as "live donor kidney exchange", "living donor swap" or "kidney swap") is the strategy which allows the exchange of living donor kidneys between two incompatible donor/recipient pairs to create two compatible pairs. This can be done if the second donor is suitable for the first recipient, and the first donor is suitable for the second recipient (as shown above). By exchanging the donated kidneys between the two incompatible pairs, two compatible transplants can be performed.



What is pre-emptive kidney transplant?

Kidney transplantation usually takes place after an initiation of dialysis therapy. Kidney transplantation done before the initiation of maintenance dialysis is called a pre-emptive KT.

Pre-emptive KT is considered the best option for kidney replacement therapy because it not only avoids the risks, cost, and inconvenience of dialysis, but also is associated with better graft survival than transplantation performed after initiating dialysis.

(To be continued.)

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AN OVERVIEW OF REPETITIVE BEHAVIORS IN AUTISM

Introduction

Repetitive, purposeless behaviors are almost always a symptom of autism. In fact, many parents worry about autism when they see their child repetitively lining up toys, spinning objects, or opening and closing drawers or doors. Repetitive behaviors can also involve saying, thinking about, or asking about the same thing over and over again. In rare cases, repetitive behaviors can actually be dangerous; more often, though, they are a tool for self-calming. They can become a problem, though, when they get in the way of ordinary activities or make it tough to get through school or work.

"Stereotyped" (Repetitive) Behaviors Are Part of Autism

Practitioners and researchers call repetitive, apparently purposeless behavior "stereotypy" or "perseveration," and such behaviors are actually described as symptoms of autism in the DSM-5 (the official diagnostic manual). As is clear from the wording of the diagnostic criteria, being a "creature of habit" (preferring to follow a set schedule or eat certain foods, for example) is not enough to suggest autism; rather, the behaviors must be "abnormal in intensity or focus," and changes to those behaviors must cause "extreme distress."

Here is the description from the DSM:

Restricted, repetitive patterns of behavior, interest, or activities, as manifested by at least two of the following, currently or by history (examples are illustrative, not exhaustive)

Stereotyped or repetitive motor movements, use of objects, or speech (eg. Simple motor stereotypes, lining up toys or flipping objects, echolalia, idiosyncratic phrases)

Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal

or nonverbal behavior (eg., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take the same route or eat the same food every day)

Highly restricted, fixated interests that are abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative preservative interests)

What Stereotyped Behaviors Look Like

Repetitive behaviors in autism can vary radically from person to person. For some people, it involves saying or talking about the same things over and over again (for example, listing all of Marvel's Avengers and their powers, reciting scripts from TV, or asking the same question many times in a row). For others, it involves physical actions such as repetitive rocking, flicking, or pacing. In more severe autism, stereotyped behaviors can be violent; head-banging, for example, is a stereotyped behavior. Some people on the autism spectrum engage in repetitive behaviors constantly, while others only occasionally perseverate (get stuck in a behavioral routine) when they're stressed, anxious or upset.

Many people with autism feel very anxious when asked to change their routine or schedule. While changes can be annoying to someone who is not autistic, autistic reactions to change can be extreme. When a person with autism is asked to change a routine, for example, the response can be overwhelming anxiety or anger, even if the person is very high functioning.

Sometimes perseverative or stereotyped behaviors are obvious because they are so marked or unusual. Rocking back and forth for long periods, opening and closing doors repetitively, or reciting the same lines over and over are clearly unusual behaviors.

Often, however, autistic perseveration may not be obvious to the casual observer. A person with autism may, for example, ask "Do you like Marvel movies?" Upon hearing that the answer is "yes," the autistic person may then run through the same speech about Iron Man that he has run through ten times before, in exactly the same words, with exactly the same tone and gestures. As a parent or close friend you might know the speech backward and forward, but as a new friend, you might not even notice the repetition.

Are Repetitive Behaviors a Problem?

Of course, preservative behaviors are not unique to people with autism. Most people engage in some such behaviors. Nail biting, pacing, pencil or toe tapping, compulsive cleaning, or even a "need" to watch the same TV shows or sporting events without fail are all forms of perseveration.

For some people with autism, the problem of perseveration is really no problem at all, since it only arises at the same times as it would for other people (usually under stress) and the behaviors are fairly unobtrusive. Perseveration can even be a plus for people with autism, since it may relate to a passionate interest that can lead to friendships or even careers. An individual who is perseverative in his interest in computer games, for example, can join gaming clubs where she'll find others with a similar passion.

For many people with autism, though, perseveration or repetitive behavior is not only disturbing to others but it's also a major roadblock to communication and engagement in the world. A person who compulsively flicks his hands to the exclusion of anything else is clearly unable to attend to the world around him or take part in real-world activities. And while there is nothing intrinsically wrong with talking about the same subject in the same way over and over again, such behavior can cause a variety of social and practical problems.

Causes and Treatments

No one really knows what causes perseveration in people with autism, though there are a variety of theories. Depending on the theory you espouse, you are likely to select a particular treatment (or no treatment at all). Of course, if a behavior is dangerous or risky it must be changed. Some treatments have been more fully researched than others, but all have had some success with some individuals and less success with others. For example:

- If you believe perseveration is a behavioral issue, you are likely to use behavioral techniques (rewards and, in some cases, consequences) to "extinguish" the behavior.
- If you believe repetitive behaviors are a self-calming technique used to block out too much sensory input, you are likely to use sensory integration techniques to help the individual self-calm and regain a sense of control.

- If you believe perseveration is a manifestation of real interests on the part of the person with autism, you are likely to use therapeutic techniques such as Floortime or SonRise to connect with the autistic individual and help him turn perseverative actions into meaningful activities. For example, a person who lines up toy engines can often turn his repetitive actions into symbolic play, and can even build on his perseverative interest to develop social skills.

- If you believe the perseverative behavior is caused by anxiety or a chemical or neurological issue, you are likely to attempt to control the behaviors through the use of pharmacotherapy.

Conclusion:

As a parent, you may be embarrassed or put off by your child's repetitive behaviors. Before taking action to "extinguish" them, however, it's important to understand the purpose they serve. If they are really helping your child to stay calm, manage sensory challenges, or otherwise handle the demands of daily living, you'll need to support your child as he or she modifies or expands upon his routines. That may mean finding a therapist to work with your child, or modifying your child's environment to make it less challenging

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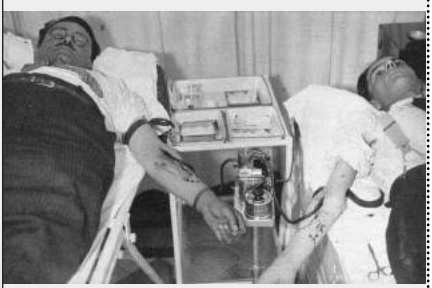
Tweezers to clamp the umbilical cord



First Blood transfusion

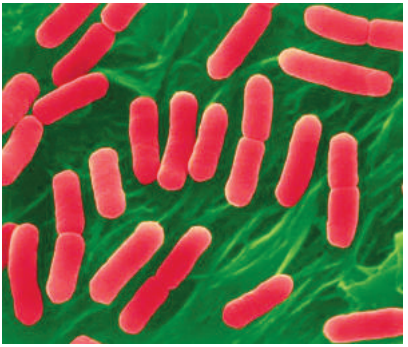
THREAT OF ANTIBIOTIC RESISTANT E. COLI

Introduction

Global population is increasing like a balloon. All these people need places to live and food to eat. Among them urbanization, population migration and the conversion of natural habitats to agricultural are predominant.This makes the potential for growth of new pathogens. Urbanization and climate change are major drivers of novel diseases or the re-emergence of infections. Antibiotics are often used for therapy of infected humans and animals as well as for prophylaxis and growth promotion of food-producing animals. Many findings suggest that inadequate selection and abuse of antimicrobials may lead to resistance in various bacteria and make the treatment of bacterial infections more difficult. Antimicrobial resistance in E. coli has been reported worldwide.

Fear factors about the dangerous Escherichia coli

- Escherichia coli (E.coli) is a frequent cause of life-threatening bloodstream infections and urinary tract infections.



- Escherichia coli (E-Coli) is the most predominant anaerobic species in the gastrointestinal tract of humans and animals. It is a harmless microbe, but it is witnessing many significant illnesses.

- Vegetables may be contaminated through insufficiently-treated water and fertilizers or may be compromised by the use of biocides during cultivation.

- Animals get infected from water or food contaminated with wastes of human or animal origin

- The ways of entry of various microbes may be due toimproper un-hygienic handling of meat and meat products.

- Raw meat and vegetables are

particularly likely to carry large numbers of bacteria. (E. coli found in food and in the patients who consumed it)

- A sterile diet was shown to lower the number of these microbes in feces.

- Bacteria escaping alive through the digestive tract to the colon are often short-lived as the resident flora having a protective effect against these microbes.

Discussion

- Bacteria are getting resistance for antibiotics and research developing new antibiotics.

- The more we use antibiotics, the more resistant bacteria will emerge.

- Thousands of people are dying due to untreatable infections.

- This warns about the emerging of antibiotic-resistant bacteria and we will not have suitable antibiotics to tackle. Many pharmaceutical companies are getting out of the business of developing antibiotics as it involves more money and time.

Conclusion

Make less use of antibiotics for treating the infection. This leads to the development of new resistant microbes.

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Did you know

SUGAR

That cancer cells need sugar to thrive? When you consume sugar-laden food, your pancreas' beta cells produce insulin. By consuming sugar excessively, an overproduction of insulin may occur and you may become immune to its effects. Reducing sugar intake and normalizing your insulin levels can lower your risk of cancer.

SAVE YOUNG INDIA - 32

Powerless hands raised in prayer seeking help from the most powerful

Alcoholic Anonymous (AA) founders, noble of heart with clear perception of things of life, offer guidelines to overcome addiction to alcohol; their guidelines have 12 steps.

The programmed proved very successful and many more kinds of 12 steps methodology emerged for any kind of addiction.

Let us go through those 12 steps with their implications with a view on de-addiction.

First step: We know that our life has become unmanageable because we are powerless, too small, before alcohol.

Knowing exactly what you are and why you are what you are is a critical fact; it involves almost exact knowledge about oneself. This is a very difficult task though it appears deceptively simple. To arrive at this stage, one would normally pass through some emotional states. The primary habit of any body's mind is, generally, justifying whatever it does and it feels. Even though you are an alcohol-addict, you are not prepared to accept the fact but blame others for your state of being. You are not a bad guy but people made you one. This attitude of self-justification and of condemning or at least criticizing others will not help your recovery from not only alcohol but also from any sort of addiction. The reason is obvious; in your efforts there will be some resistance to the recovery efforts. In other words, you will be subtly divided.

Knowing your powerlessness before the domineering habit of alcohol without condemning others will put you on the right spot to begin recovery.

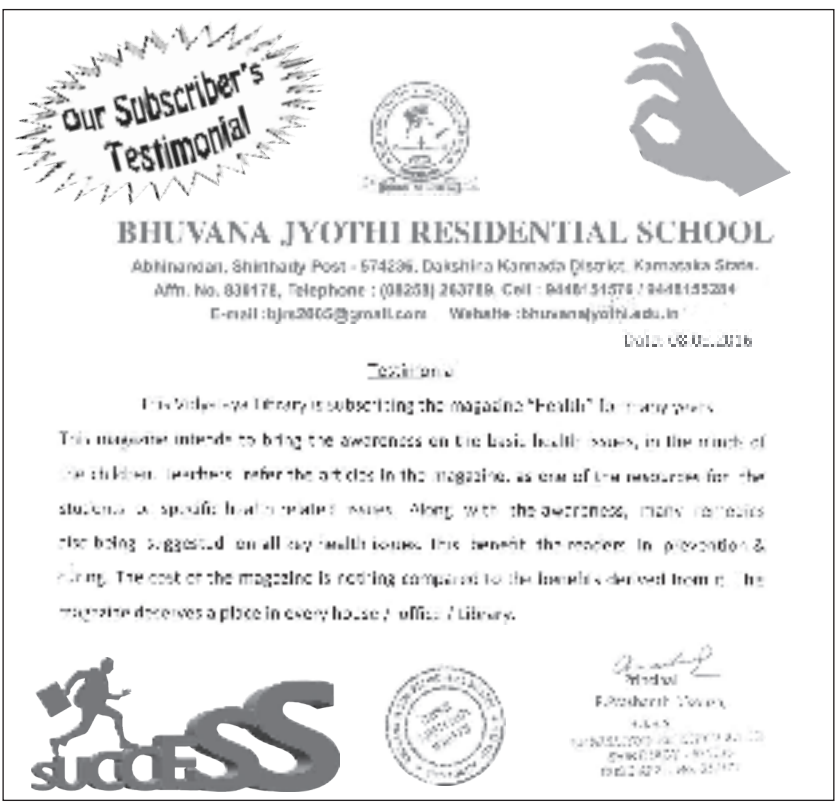
Second step: The basic requirement for members of AA is faith in some greater power than ourselves. And, generally, God is considered a greater power than the power of all men.

Realizing your powerlessness is closely linked to the possibility of a power being there greater than you; and, what you cannot achieve all by yourself with just your powers can be achieved with the support and help of the greater power. So, in the second step, you willingly offer yourself to a greater power for recovery.

In religious language, it is popularly called 'Surrender to the Almighty' seeking His Grace for a better life. We will continue with the other steps in our next session.

(To be continued.) ❐

- "HEALTH" - Editorial Board


Our Subscriber's Testimonial

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Testimonial

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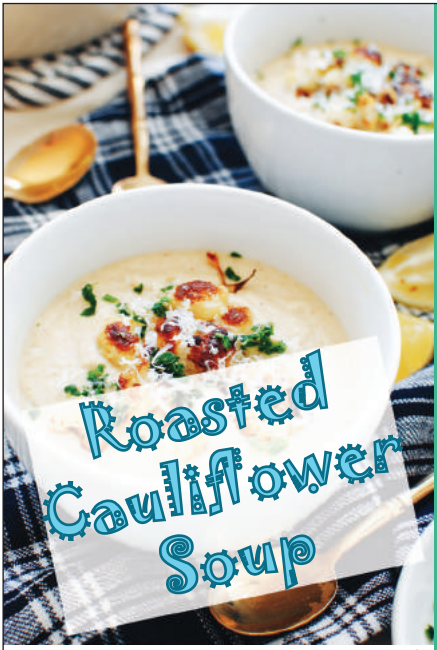

Ingredients

- 1 head cauliflower, cut into small florets
- 2 tablespoons roasted garlic-flavored extra-virgin olive oil
- ¼ teaspoon ground nutmeg
- 2 teaspoons garlic powder
- 1 ½ teaspoons salt
- ½ teaspoon ground black pepper
- 1 tablespoon butter
- 1 onion, finely chopped
- 3 tablespoons all-purpose flour
- 1 (14 ounce) can chicken broth
- 1 cup milk
- 1 tablespoon dry sherry

How to make it

- Preheat oven to 450 degrees F (230 degrees C).
- Place the cauliflower in a small roasting pan. Drizzle with oil and season with nutmeg, garlic powder, salt, and pepper; toss to coat.
- Roast the cauliflower in the preheated oven stirring every 10 minutes until golden brown and tender, 30 to 40 minutes. Remove from the oven and set aside.
- Melt the butter in a large saucepan over medium heat. Add the chopped onion and cook and stir until lightly golden brown, about 10 minutes.
- Sprinkle the flour over the onions and stir to coat. Slowly pour the chicken broth and milk into the pan. Mix with a wire whisk until all of the flour is dissolved. Bring to a boil while stirring continuously until it thickens, then reduce heat to low. Stir in the sherry and the roasted cauliflower. Serve as is, or blend half and recombine with the rest of the soup for a thicker consistency.

Nutritional Information

Total Fat:	7.6g	12 %
Saturated Fat:	2.0g	
Cholesterol:	10mg	3 %
Sodium:	969mg	39 %
Potassium:	397mg	11 %
Total Carbohydrates:	13.2g	4 %
Dietary Fiber:	3g	12 %
Protein:	4.4g	9 %
Sugars:	6g	
Vitamin A:	150IU	
Vitamin C:	46mg	
Calcium:	76mg	
Iron:	1mg	
Thiamin:	0mg	
Niacin:	2mg	
Vitamin B6:	0mg	
Magnesium:	23mg	
Folate:	67mcg	

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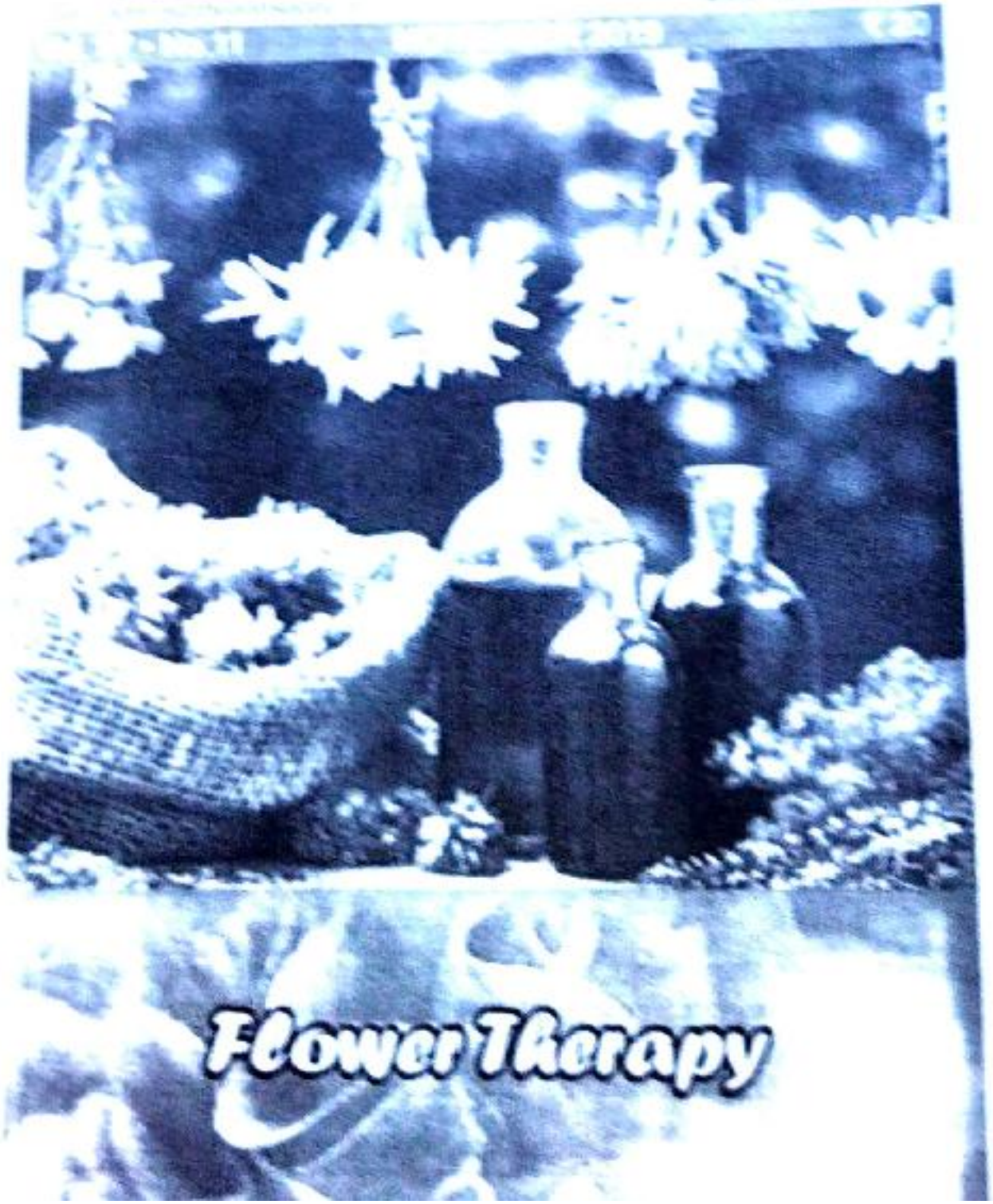

ISSN 0017 8861

Estd 1923

Health

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Printed by **L. Saroja**, Partner on behalf of **M/S. Sree Vinayaga Screens,** and published by **Dr. R. Lakshmipathy,** Sri Ram, 27, Sathya Sai Nagar, Madurai – 625 003 on behalf of **M/S. Professional Publications (P) Ltd,** and printed at 12A/1, Subramania Pillai Street, Madurai – 625 010 and published at 21, Lakshmi Sathya Sai Nagar, Madurai - 625003. Editor: **Dr. Hariharasubramanian MD, PHD. Dr. Usha Giridhar M.D.S.,** is responsible for selection of articles and news under PRB Act.

HEALTH PHILOSOPHY

Whatever might be your age "HEALTH" is committed to help you to stay healthy. You can enjoy life to the full. Eating Nutrients, taking regular exercises, adopting a positive attitudes would be the right way for living. If things go wrong use natural methods for healing.

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CONTENTS

SELECTION OF CHEAP AND NUTRITIOUS FOOD

Introduction

People many think that cheap foods are unhealthy food, but it is a wrong idea that inexpensive Foods that brings more nutrition when compared with other Foods. Numerous inexpensive Nutritional Foods are available to help gain weight and stay healthy. They are some way to select cheap nutritious foods.

I. Cereals & Millets

1. For making breakfast recopies, cereals & millet can be used.
2. While making chappathi, use half wheat flour and half white flour.
3. Dried maize, when soaked in slaked lime change the protein in to usable form
4. Ragi and Bajra are very rich in minerals, especially calcium & iron, they are very cheap than rice.
5. Try a mixed cereal diet.
6. Use Millets which are unknown (eg) Foxtail Millet.

II. Pulses & Legumes

1. Pulses are said to be poor man's food
2. These are good cheap sources of protein especially Soya beans and Winged beans.
3. When sprouted, it raises it vitamin C content.
4. They are Cheaper, when compared to Meat.

III. Milk & Milk Products

1. Prepare curd and ghee at home.
2. It will reduce cost, and we can save money and not only that the quality of homemade is often better than anything available at the store.
3. Cow's Milk and Dairy products contains Calcium & other Nutrient in dairy items.

IV. Fruits

1. Fruits like Banana can be added in your diet, since it contains Potassium and prevent cramp at work.
2. Grow Papaya, Jackfruit, Guava, Jamun fruit in our own Kitchen garden.
3. Prefer seasonal Fruits, whenever necessary since its contain Antioxidants, Carotenoids etc.,

V. Vegetables

1. Beans are really cheap and high in proteins & other Nutrients
2. Lima beans, black beans, Jacob beans can be tried in dried form.
3. Carrots are good for eyes.
4. Grow Lady's Finger, beans, chillies, in your own garden.
5. Prefer Spinach, drumstick leaves, Raw Papaya, Banana in alternate days.
6. Most vegetables which are seasonal are good in Phytonutrients which act against diabetes, cancers, and stroke

VI. Nuts & Oil Seeds

1. Many seeds can be purchased inexpensively. Flax seeds are high in fiber and Omega 3 fatty acids.
2. Try with another Pumpkin seeds, Sesame seeds, sunflower seeds which are cheap, healthy & Nutritious.

VII. Egg, Poultry & Meat

1. Eggs are cheap and most versatile one among proteins
2. They are also good sources of antioxidants, Lutein & Zeaxanthin which may ward of age – related eye problems.
3. Sardine and Salmon is excellent source of omega 3 fatty acid, proteins and calcium.
4. Dried fish can be an alternative
5. Chicken can also be used as a protein rich diet.
6. Now-a-days Mutton cost more

VIII. Sugars, Fats & Oils

1. Never use white sugar
2. Try Jaggery in Tea, since it contains iron and keep us healthier.
3. Sunflower oil, mustard oil, Rice bran oils are cheap and good for health.

Conclusion

Cheaply available foods which are found in village areas are very nutritious as well as healthy. All that is we need to find time for its conservation or preparation. Cheap foods always help in in getting better health.

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ISHS Acta Horticulturae 1080: I International Symposium on Cashew Nut

VALUE ADDED PRODUCTS FROM CASHEW APPLE

Authors: C.T. David, S.M. Prasad

Keywords: cashew apple juice, cashew apple jelly, cashew apple jam, osmotic dehydration

DOI: 10.17660/ActaHortic.2015.1080.51

Abstract:
Cashew apples are an important by-product of the cashew nut industry. Very few people know that the 573,000 MT of cashew apples are thrown away after taking the nuts is far more nutritious than many fruits, and would fetch more money than nuts if they are potentially utilized by processing them into value enhanced products like cashew apple juice, cashew apple jelly and cashew apple jam using osmotic dehydration. This piece of work delivers health obvious benefits to the society, economic potential for farmers, entrepreneurs and consumers to meet the growing global demand, retain market share and stay ahead of the rapidly emerging competition in the world market.

ISHS Acta Horticulturae 1241: III International Symposium on Underutilized Plant Species

Biochemical analysis on selected fruits of *Annona* species

Authors: C.T. David, J.D. Sherrie, D.S. Jeyalyn, S.M. Prasad

Keywords: nutritional security, disease prevention, proximate principle, mineral content

DOI: 10.17660/ActaHortic.2019.1241.93

Abstract:
The family *Annonaceae* comprises about 80 genera and 850 species occurring in the tropics, but with relics of earlier distributions remaining in some temperate regions. The large, edible, pulpy fruits typically called “annona” include species of *Annona*, custard apple (*A. squamosa*), soursop/graviola (*A. muricata*) and bullock's heart (*A. reticulata*) which are known to have excellent health and medicinal benefits which deserve to be further explored. They contain antioxidants, possess anti cardio-vascular, anti-obese, anti-diabetic, anti-cancer, anti-microbial activity and have a positive effect on blood haemoglobin. It is also efficacious to control blood pressure, normalize digestive function, cure constipation, treat diarrhoea and dysentery. High potassium and magnesium levels in these fruits help to protect against heart disease. These fruits also contain vitamin A, which is beneficial for a healthy skin, hair and eyes. High magnesium content helps balance the water in the body, remove acid from the joints and reduce the symptoms of rheumatism and arthritis. The potassium contained in it, helps fight muscle weakness and fatigue. In the light of the above facts, a biochemical study was made to assess their proximate principle and mineral content to pave the way for better utilization, to meet nutritional security and to aid in disease prevention.

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FORMULATION AND STANDARDIZATION OF TANG POWDER ICE CREAM AND CAKE PREPARED FROM PALMYRA PALM (Borassus *Flabellifer* L.) PRODUCTS

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ABSTRACT

India enjoys a varied climate where trees can be grown throughout the year, but certain tree can yield fruits throughout its life time.one such tree is palmyra palm. Palmyra palm enjoys hot climate to grow and commonly observed in villages. Palmyra palm products are really natural, healthy and nutritive. Palmyra yields us tubers, fruits, palm candy, palm sugar, palm toddy. So an attempt was made to prepare Tang Powder (TPP), Ice Cream (IPP) and Cake (CPP) by using palmyra palm products and subjected to different pre-treatment and standardized the value added products. 5 point hedonic scales were used for sensory evaluation. From the result the present study shows the product TPP shows had good sensory quality and consumer acceptability.

Key Words: Palm Tubers, Tang Powder, Ice Cream, Cake, Sensory Evaluation, Hedonic Scale

Corresponding author email:prasadsm@ymail.com

INTRODUCTION

Tropical tubers are known as the energy reservoirs of the nature. They provide much needed calories to about 1200 million people around the world, more specifically in developing countries in Asia and Africa (Peter, 2016).India's population is estimated at 1.273 billion in 2020 with a small marginal portion of uncertainity.The work force in crop production had declined to 54 per cent by the beginning of this century and was lower in many states which has a diversified agriculture. For each possible crop set in each region using potential crop yield and cost of cultivation data for each crop value added in agriculture can be worked out (Yoginder, 2014).

The palmyra palm tree is the official tree of Tamil Nadu. In tamil culture it is called as karpaga vircham and highly respected because all its parts can be used.(Hiralal Jana and Succhanda Jana,2017) . The

Palmyra palm trees are very familiar in South India especially Tamil Nadu and Andhra, when comparing with Kerala. It is also found in regions of Bihar and Orissa too. Palm tubers are those grown under the ground. In tamil it is called as "Panank Kizhanku". It is fibrous, nutritious food. Young tubers of Palmyra are diuretic and believed to cure respiratory diseases. It is harvested during the month of December and January for celebrating pongal festival of Tamil Nadu. Tubers cannot be eaten as raw. They have to be steamed or boiled and used.

Palm sugars are natural unrefined sugars obtained from palm tree with minimal processing. It is lesser in taste when compared to white sugar but their roles in culinary preparations are remarkable. Palm jaggery is called as "Karupatti" in Tamil. It is made by evaporating the palm juice called Akkani obtained from palm. Most ayurvedic and folk medicines prefer palm jaggery. It is considered to be the healthiest of all sugars in the world.

Palm gur (jaggery) contains calcium, low sodium and high potassium is prescribed for dispensing conditions like hypertension and edema due to heart and liver disease (Peter, 2013).

Mostly all bakery products are made of white sugars that are not recommended for a healthy life. In some villages people used to prefer more foods which are grown naturally. All Palmyra products are rich in vitamins, minerals, antioxidants, fibre. Some people prefer sweet varieties prepared from palm jaggery than white sugars. The reason behind is these palm jaggery are purely natural and white sugars contain some chemicals added artificially which may create some health issues.

Palmyra palm is considered as a total palm as each and every part of the tree has economic use.in many parts of the country, Palmyra palm is the main source of livelihood for the poor as they derive a substantial part of their income from this plant (Anuradha Srivastava, 2017). In the light of the above facts realizing the importance of Palmyra palm products the study were undertaken with the following objects:

1. To prepare Tang powder, Ice cream and Cake from Palmyra Palm Products
2. To assess the sensory evaluation of the prepared product
3. To know the shelf life, storage quality of the prepared product under room temperature
4. To know the shelf life, storage quality of the prepared product under refrigeration temperature

METHODOLOGY

This chapter describes the materials and methods used during the course of this study. These trials were carried out in the Department of Nutrition & Dietetics, Sadakathullah Appa College (Autonomous), Rahmath Nagar, Tirunelveli during the academic year from 2018-2019.

Selection of Raw Material

The main raw material palm tubers needed for the study were collected from Valliyoor, near Tirunelveli, Tamil Nadu. The samples has been collected as per the requirement and stored in refrigeration for future uses. It was collected during the month of December 2018

Identification of the Sample

The Palm tuber samples were identified with the help of a botanist Mrs. Sherrie Jesulyn David from Women's Christian College, Chennai

Selection of Other Ingredients

The Ingredients needed for the study were purchased from a local super market Ananda near Tirunelveli and stored for research purpose.

Pretreatment Employed

The samples after collecting were cleaned by removing the stones and dust particles. The palm tubers were thoroughly washed in running water 2-3 times. Then it was shade dried, and with careful attention the samples were packed in polyethylene bags and stored in refrigeration for further analysis

MATERIALS USED FOR THE STUDY

1A **1B** **1C**

Fig 1(A,B,C) Investigator making equipment ready for work

Electronic Weighing Balance

Electronic weighing balance of AY-220 model was used to weigh the samples in terms of grams and milligrams.

Refrigerator

Refrigerator (Kelvinator) with a temperature range of 6-20^{0}C was used to store the samples.

Mixer

Mixer model of 2k-458 was used to grind the samples for separation.

Strainer

Stainless steel strainer were used for the extraction of the sample

Oven

OTG Oven were used for the study for preparing cake

Formulation of the Product

Figure 2 Ingredients for Tang Powder

Figure 3 Ingredients for Ice Cream

Figure 4 Ingredients for Ice Cream

Preparation of Tang Powder from Palm Sugar

Tang powder were prepared from 100g of palm sugars, 50g of glucose, Lemon salt 01g, common salt 01g and permitted food colour 03 ml shown in figure 2. Methodology for preparing Tang powder from palm sugar is given below in flow chart no: 1

Flow Chart No 1: Methodology for Preparing Tang powder from Palm Sugar

Samples Selection (Palm Sugar)

↓

Sorting

↓

Cleaning in Water

↓

Mixing (Palm Sugar, Glucose,
Lemon Salt, Common Salt and Permitted Food Colour)

↓

Blended in a mixer

Stored in bottles

↓

Refrigeration

↓

Mixed with water and Served Chill

Preparation of Ice Cream from Palm Jaggery

Ice cream were prepared from 500 ml of milk, 250 g of palm Jaggery, egg yolk of 1 No is shown in figure no 3. Methodology for preparing Ice cream from palm Jaggery is given below in flow chart no: 2

Flow Chart No 2: Methodology for Preparing Ice Cream

Sample Selection (Palm Jaggery)

↓

Sorting and Cleaning in Water

↓

Boil and make it in to syrup form

↓

Drain with Muslin Cloth

↓

Cool it and store it in a separate Vessel

↓

Boil the milk

↓

Reduce to half of its original amount

↓

Beat the egg yolk with the syrup

↓

After beating the egg yolk, it is once again boiled with boiled milk

↓

Cool it and then Store in separate vessels in freezer

↓

Grind the above mixture for four times

↓

At three hours of interval

↓

Store in freezer

↓

Add nuts and serve chills

Preparation of Cake using Palm Tubers

Cake were prepared from 100 g of palm tuber powder, 100 g of all-purpose flour, 200 g of powdered sugar, 1 g of baking soda, 2 g of baking powder,3 g of cocoa powder, egg 1 No, vanilla essence 1 ml,100 g of unsalted butter and 50 ml of milk is shown in figure 4. Methodology for preparing cake from palm tuber is given below in flow chart no: 3

Flow Chart No 3: Methodology for Preparing Cake from Palm Tuber

Samples Selection (Palm tubers)

↓

Sorting and cleaning in water

↓

Steamed and chopped in to pieces

↓

Dried in sunlight

↓

Grind it and make it in to a powder

↓

Store in bottles and refrigerate

↓

Beat the unsalted butter with egg and powdered sugar

↓

Sieve all-purpose flour, powdered tubers,

baking powder, baking soda and cocoa powder

↓

Avoid formation of lump

↓

Mix the sieved products with butter

↓

Add vanilla essence and milk

↓

Pour the mixture in the greased tray

↓

Cook the cake batter in microwave oven at 200°c for 20 minutes

↓

Serve hot

Sensory Evaluation

The prepared products were subjected to 06 trained panel members for a point five hedonic rating scale and results were recorded.

Figure 5A

Figure 5B

Figure 5C

Fig 5 Sensory Panel Evaluation for the Product Developed

Storage and Shelf Life Study

Each and every product must possess a good shelf life study. For this the prepared products were carefully observed in room temperature and refrigerated temperature for about one week.

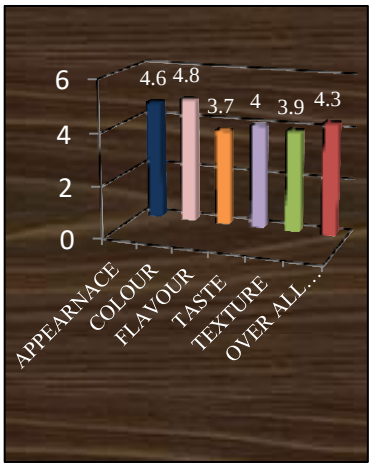
Statistical Analysis

For research related work statistical analysis must be carried out, here the samples were subjected to standard deviation values.

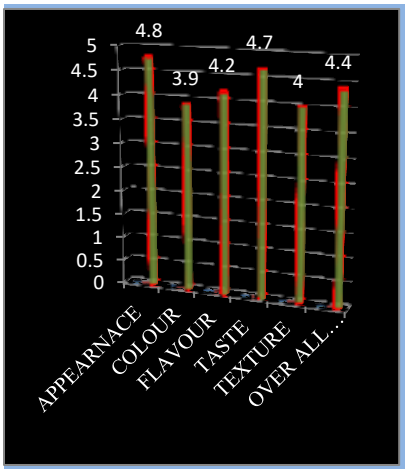
RESULTS AND DISCUSSIONS

Sensory Evaluation of the Prepared Product

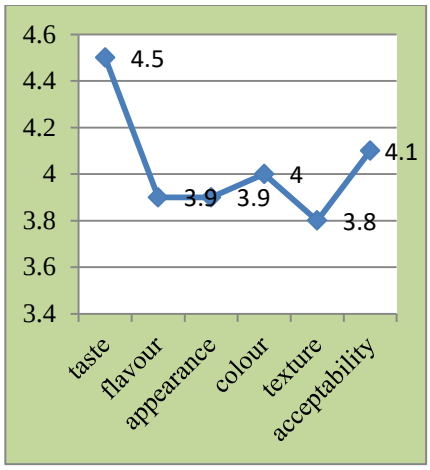
The formulated product was organoleptically evaluated by using numerical card to estimate the acceptance by 06 trained panel members. The panel members were asked to evaluate the product for appearance, texture taste, color, flavor, and overall acceptability. The mean score obtained for the formulated product is given below in fig no 6, 7 and 8.



SD: 0.3890872509 MEAN: 4.21666667
FIGURE No: 6
Sensory Evaluation of Tang Powder



SD: 0.3349958540 MEAN: 4.33333333
FIGURE No: 7
Sensory Evaluation of Ice Cream



SD: 0.4 MEAN: 4
FIGURE No: 8
Sensory Evaluation of Cake

Sensory Evaluation of the Prepared Tang Powder

With reference to the product tang powder (fig no 6) the highest score goes to colour 4.8, the lowest goes to flavor 3.7, appearance 4.6, texture 3.9, taste 4.0, overall acceptability of 4.3 and with a standard deviation value of 0.38908 and Mean value 0f 4.216

Sensory Evaluation of the Prepared Ice cream

Regarding the product ice cream(fig no 7)the lowest score goes to colour 3.9,the highest goes to appearance 4.8 followed by taste 4.7, flavor 4.2, texture 4.0, overall acceptability of 4.4 and with a standard deviation value of 0.33499 and Mean value 0f 4.3333.

Sensory Evaluation of the Prepared Cake

According to product cake(fig no 8) the lowest score goes to flavor 3.9, highest goes to taste 4.5, followed by appearance 3.9, texture 3.8, colour 4.0, overall acceptability of 4.1 and with a standard deviation value of 0.4 and Mean value 0f 4.

Storage and Shelf Life Study of the Prepared Product

The selected products were stored in air tight plastic containers till analyzing various parameters. Care was taken to see that they were stored in clean and dry place where was away from sunlight and pests. Prepared products were stored in room and refrigeration temperature to assess their storage pattern. Every day the containers were checked to see any microbial growth and the development of off flavor. Prepared products were kept for a week to find out the production of gases.

Table No 1: Storage and Shelf Life Study of the Prepared Products under Room Temperature

S. No	Days	Room Temperature	Room Temperature	Room Temperature
		Tang	Ice Cream	Cake
1	1st day	No change	Change in nature	No change
2	2nd day	No change	Fungus formation	No change
3	3rd day	No change	Fungus formation	No change
4	4th day	No change	Fungus formation	No change
5	5th day	No change	Fungus formation	change in colour
6	6th day	No change	Fungus formation	change in appearance
7	7th day	No change	Fungus formation	Fungus formation

Regarding room storage the prepared tang powder showed positive effect but at the same time on the first day itself ice cream showed a bad response since it needs a refrigeration temperature. In room temperature the product began to melt, emitted a lot of off flavor and keeping in room temperature for 7 continuous days fungus formation were the results. Regarding cake no change is observed till the 4th day but after 5th day change in colour, appearance and fungus formation are the results.

Table No 2: Storage and Shelf Life Study of the prepared products under Refrigeration Temperature

S. No	Days	Refrigeration Temperature	Refrigeration Temperature	Refrigeration Temperature
		Tang	Ice Cream	Cake
1	1st day	No change	No change	No change
2	2nd day	No change	No change	No change
3	3rd day	No change	No change	No change
4	4th day	No change	No change	No change
5	5th day	No change	No change	Change in taste
6	6thday	No change	No change	Change in taste
7	7th day	No change	No change	Change in taste

Regarding refrigeration storage no change is observed for tang powder and ice cream till one week, but in the case of cake change in taste from 5th day to 7th day were observed.

CONCLUSION

It may be concluded from the study that the sensory evaluation of the developed products for tang powder and ice cream is more or less same. The overall consumer acceptability of tang powder shows a positive response in room and refrigeration temperature storage and prove it has a worth to be used as a value added product .Since most of the products available in market are with added white sugars people cannot find a natural mode of preparing tang powder and ice cream with palm tuber and palm sugar which cannot be replaced with any ice creams or tang powder products in the market and more over this is also healthier for all people from kids to old aged.

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ISSN 0017 - 8861

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Vol. 98 • No. 4 APRIL 2020 ₹ 20

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ISSN 0017 - 8861

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A JOURNAL DEVOTED TO HEALTHFUL LIVING

Founded by : **Dr. U. RAMA RAO**

Publisher : **Dr. R. LAKSHMIPATHY**

Edited by : **Dr. HARIHARASUBRAMANIAN, MD, PHD**

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Printed by **L. Saroja**, Partner on behalf of **M/S. Sree Vinayaga Screens,** and published by **Dr. R. Lakshmipathy,** Sri Ram, 27, Sathya Sai Nagar, Madurai – 625 003 on behalf of **M/S. Professional Publications (P) Ltd,** and printed at 12A/1, Subramania Pillai Street, Madurai – 625 010 and published at 21, Lakshmi Sathya Sai Nagar, Madurai - 625003. Editor: **Dr. Hariharasubramanian MD, PHD. Dr. Usha Giridhar M.D.S.,** is responsible for selection of articles and news under PRB Act.

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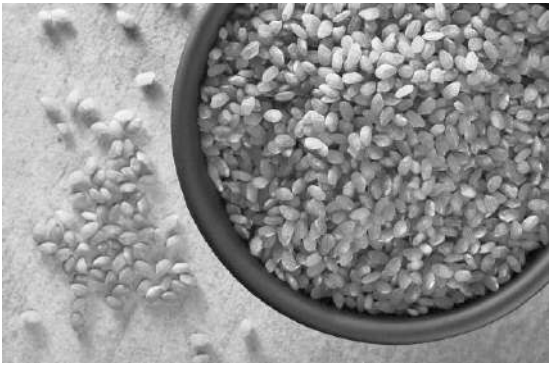
UNKNOWN FACTS ABOUT BAMBOO RICE

Bamboo rice is collected by the tribes residing in the forest from the seeds of flowers, bamboo, are known for its highly nutritive qualities and rich medicinal values. It can be used as a good substitute for the polished white paddy rice. Bamboo rice (Mulayari) has become an important and major source of income for tribals living in the forests. Nature keeps all its treasures hidden deep inside her. From the heart of nature a rare and lesser known seed is being introduced "bamboo rice" these seed are gathered from the jungles of tropical rain forest, bamboos trees which are known to be the tallest of herb grasses which grow in tropical rain forests.



Some species of bamboos only bloom with flowers once in 40-60 years and often die after flowering. They compensate this by releasing huge amounts of flowers and seeds, one of many mechanisms that nature employs to ensure the survival of certain species. Bamboo rice is not commonly available due to the reason that it takes many years for an aged plant to flower which is unpredicted able as these may vary from few years to 100 years for a bamboo plant to flower.

The bamboo rice goes very well with our South Indian curries, rasams and even curd. It is available in Tamil Nadu where it is called 'moongilarisi'. It is cooked in the same manner as regular rice is cooked.The bamboo rice is sweet, pungent, nutritious and strong. It cures kapha, pitta dosha, removes toxic substances from the body and cures the disease in which the vital humors of the body are excreted through urine.

The nutritious value of bamboo

rice is very remarkable. It is healthier to have bamboo rice than the rice from paddy. Recently some news and researchers said that eating bamboo rice increases fertility. Its powder is very useful in cough, cold asthma etc., the powder is taken one or 2 spoon twice a day with honey. It shows many possible health benefits as follows

1. Higher protein content than both rice and wheat.
2. Controls Joints pain, back pain and rheumatic pain.
3. Lowers cholesterol levels
4. Good source of vitamin B6
5. Have anti-diabetic properties

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1. The ***stomach*** is scared when you do not have breakfast in the morning.
2. The ***kidneys*** are afraid when you do not drink 10 glasses of water in 24 hours.
3. The ***gallbladder*** is scared when you do not sleep until 11 o'clock and do not wake up at sunrise.
4. The ***small intestine*** is scared when you eat cold and stale food.
5. ***Large intestines*** are scared when you eat more fried and spicy food.
6. The ***lungs*** are scared when you breathe in smoke, dirt and polluted environment of cigarettes and bidis.
7. The ***liver*** is scared when you eat heavy fried food, junk and fast food.
8. The ***heart*** is afraid when you eat your meals with more salt and cholesterol.
9. The ***pancreas*** is scared when you eat more sweets because of the taste and being freely available.
10. ***Eyes*** are scared when you work in the light of mobile and computer screen in the dark.
11. The ***brain*** is scared when you start thinking negative things.

Take care of the parts of your body and do not scare them.These parts are not available in the market. Those available are very expensive and probably cannot be adjusted in your body. So keep your body parts healthy.

BEAUTY BENIFITS OF PAPAYA

Papaya was once called the "fruit of the angels" by Christopher Columbus. The bright coloured fleshy fruit is known for its multiple benefits.

More than just a delicious fruit, papaya is a source of nutrients with a high content of vitamins A, B, and C. Its proteolytic enzymes, such as papain and chymopapain also have antibacterial, antifungal, and antiviral properties.

Beauty Tips - Papayas have gained popularity as a natural home treatment, and for their use in skin and hair products.Papaya is a miracle ingredient that can clear out the scars and uneven pigmentation on the skin. The skin lightening properties of the fruit help in getting rid of blemishes and pigmentation.

Skin Moisturizer - Papaya is indeed a boon in treating dry skin issues and helps in hydrating your skin. The rich array of antioxidants and enzymes present in papaya help in treating dry and flaky skin. Applying papaya pulp on your face makes your skin soft and radiant.

Anti-Aging- The richness of carotenoids, the potent antioxidants in papaya help in fighting free radical damage and prevent the break down of collagen and elastin,

which can tighten the skin and fades away the wrinkles.

Treats Skin Diseases - Papaya is a natural remedy to heal scars, burns and skin diseases since ages. The goodness of the enzyme papain exfoliates the dead skin cells and eases skin impurities. Apply mashed papaya pulp directly on the affected skin area to cure skin diseases like eczema and psoriasis and also prevent itching and reduces redness.

Promotes Hair Growth- The wealth of folic acid and antioxidants present in papaya enhance the circulation of hair follicles and promote the growth of healthy hair. Regular intake of papaya ensures that you get a long healthy mane. Furthermore, the antifungal properties of papaya help in controlling and preventing dandruff. ✪

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Particulars	Printed Copy only	E-Magazine only	Both Print & E - Copies	No. of Issues
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Health	₹ 240/-	₹ 236/-* (200+GST Rs.36)	₹ 436/- (400+GST Rs.36)	12

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BEST BENEFITS OF BROCCOLI FOR HEALTH

Broccoli belongs to the cruciferous vegetable family, which includes kale, cauliflower, Brussels sprouts, bokchoy, cabbage, collard greens, rutabaga, and turnips. These nutrition powerhouses supply loads of nutrients for few calories.

What Is The History Of Broccoli?

This was a popular food amongst the Romans. And it once grew like crazy on the shores of the Mediterranean Sea. Sources say its origins lie in Italy (about 2,000 years ago), and then, it spread to France and England in the 1700s. In the US, broccoli saw its commercial growth in the 1920s. At some point in time, broccoli was also called the Italian Asparagus.

Facts About Broccoli

- Broccoli gets its name from the Italian word "broccalo", which means"cabbage sprout".
- The most common type of broccoli is Calabrese broccoli – named after Calabria (Italy), its place of origin.
- And though available all year round, the vegetable is most nutritious from October to May.
- Broccoli was brought to America by Thomas Jefferson. In fact, in 1767, he imported the seeds from Italy and planted them in his own garden.

How does it work?

Chemicals in broccoli might have cancer-preventing and antioxidant effects. Additionally, when broccoli is eaten with a starch, it slows down how quickly sugar from the starch goes into the blood. This is beneficial for people with diabetes.

Is Broccoli Good For health?

This vegetable is extremely rich in vitamin C (has twice the amount as in orange), calcium (contains as much as in whole milk), and selenium (nutrient important for preventing cancer)

Eating broccoli also detoxifies your body after exposure to food

or airborne carcinogens and other oxidants. This activity can be attributed to sulforaphane, an important phytochemical in broccoli. In fact, one study proved that ingesting cruciferous veggies like broccoli can protect cells from DNA damage.

Side Effects & Safety

When taken by mouth: Broccoli is likely safe in the small amounts found in a normal diet. There's not enough information to know if broccoli is safe when taken in larger amounts

When applied to the skin: Broccoli can cause an allergic rash in hypersensitive people.

The Nutritional Profile of Broccoli

One cup of broccoli (cooked) has the following important nutrients:

- 101 mg of vitamin C (168%) 120 mg of vitamin A (48%)
- 165 mcg of folate (42%)
- 4 mg each of vitamin B6 and manganese (16%)
- 457 mg of potassium (14%)
- 33 mg of magnesium (8%)
- 105 mg of phosphorus (10%)
- 62 mg of calcium (6%)
- 100 mcg of vitamin K (270%)

Uses of Broccoli

- Helps Prevent Cancer
- Detoxifies Your Body
- Improves Bone And Teeth Health
- Promotes Heart Health
- Improves Digestive Health
- Enhances Liver Health
- Can Cure Allergies
- Might Promote Weight Loss
- Improves Vision Health
- Can Aid In Diabetes Treatment
- Improves Brain Health
- Improves Metabolism
- Boosts Immunity
- Offers Nutritional Support For Pregnancy
- Improves Men's Sexual Health
- Balances The Body's pH Levels
- Promotes Skin Health
- Helps Slow Down Aging ✪

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The safety steps of coronavirus is hidden in corona word itself
C – Clean your hands
O – Off from Gatherings
R – Raise your immunity
O – Only sick to wear mask
N – No to hand shake
A – Avoid Rumours
Follow All the steps and be safe guys!

BEST HOME REMEDIES FOR OPEN PORES

Skin pores appears like small pits, which makes skin look dull, and aged. This can lead to many problems like whiteheads, blackheads, and acne. There are many underlying causes for open pores, but they can be treated with simple homemade masks

Causes of Open Pores

- Excessive sweating
- Genetics
- Smoking
- Swelling of the pores
- Hormonal changes
- Improper diet
- Stress
- Aging
- Oily skin
- Unhealthy hygiene
- Sun exposure
- Improper skin care routine

Home Remedies for Open Pores

1. Papaya

Papaya is rich in deep cleansing, toning, and tightening properties in skin. Mash a ripe papaya and apply it as a face mask including under eyes. Rinse with warm water after 30 minutes.

2. Banana

The anti-oxidant, lutein present in banana peel has rejuvenating and healing properties. Regular application of banana peel helps to even out skin. Gently apply banana peel over face and rinse after 15 minutes.

3. Egg White

Egg white is well known for toning and skin whitening

properties. It also helps in skin tightening, for shrinking skin pores. Apply egg white as a face mask and let it dry. Rinse with warm water after it dries.

4. Cucumber

Cucumber helps to even out skin tone and improve skin texture. Its deep nourishing and moisturizing properties gives youthful and glowing appearance. Apply cucumber juice a a face mask and rinse after 20 minutes.

5. Tomato

Tomato is rich in natural acids, and natural oils. It helps to balance and tighten large pores. Apply tomato juice as a face mask, and rinse with warm water after 30 minutes.

6. Lemon

Lemon has strong astringent properties to unclog skin pores, and tightens skin pores. It helps to deeply cleanse pores and restore acidity in skin. Apply lemon juice (apply diluted if you have sensitive skin) and rinse with warm water after 20 minutes.

7. Yogurt

Yogurt contains lactic acid, which is rich in pore tightening and bleaching properties. It also helps to remove dirt, and dead cells. Apply yogurt as a mask for 20 minutes; rinse after 20 minutes.

8. Oatmeal

Oatmeal is rich in anti-oxidant, anti-inflammatory, and strong exfoliant properties. It helps to remove excess oil, blackheads, and whiteheads. Use soaked oatmeal as a face mask and rinse it after 30 minutes.

9. Turmeric

Turmeric is rich in anti-bacterial, anti-inflammatory, and anti-septic properties. It can reduce swelling, and shrinks pores size. Mix yogurt and turmeric together; use it as a face mask for 15 minutes and rinse with warm water.

10. Tea Tree Oil

The astringent characteristics of tea tree oil helps to even out skin tone and diminish skin pores. It also has anti-bacterial and anti-bacterial properties. Use a few drops of tea tree oil in your daily moisturizer.

11. Clay Mask

The currently trending clay masks like bentonite and kaolin are deeply cleansing pores and removes impurities in skin. It also helps to tightens skin, evens out

skin tone, and minimizes pores. Use clay with rose as a face mask and rinse after 20 minutes with warm water.

12. Apple Cider Vinegar

Apple cider vinegar is a natural toner, and astringent. It also has deep cleansing, and skin tightening properties. Apply apple cider vinegar as an everyday toner before moisturizing.

13. Aloe Vera

Aloe vera is a natural moisturizer, which helps to shrink large pores. It also helps to cleanse, nourish, moisturize, and remove dirt from skin. Apply aloe vera as an everyday moisturizer to help even out skin, and improve skin texture.

14. Fuller Earth

While clay masks are best at unclogging pores, fuller earth (multani mitti) helps to remove excess oil from skin. Fuller earth also deeply cleanses, and removes impurities from skin. It also has skin whitening properties which help to improve skin tone. Apply multani mitti and rose water as a face mask and rinse with warm water after it dries.

15. Besan

Besan or chickpea flour is a natural exfoliator. It helps to remove excess dead cells, dirt, and impurities from skin. Besan helps to shrink pores, and tighten skin effectively. Use besan, and honey together as a face mask. Rinse after 20 minutes with warm water.

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Read an actual book

Just six minutes of reading a book is enough to reduce stress by up to 68%

Spend time outside

Besides the sunlight exposure, stepping outside for 15 minutes a day has been linked to better mental health.

Hit the shower before bed

A warm shower before bedtime can slow down heart rate, breathing, and digestion, and help you sleep better.

SIDE EFFECTS OF JUNK FOOD IN CHILDREN

Now a days eating junkfood has become a habit among school chindren and teeenagers. Junk food is a term commonly used for food that containing high levels of calories from sugar & fat with less proteins. In short, the food that has less nutrition value & contains a lot of fat, sugar, salt & calories. They have almost no nutritional value to the body cells so called as junk food.

There are so many reasons to attract junk foods i.e. taste, color, easy availability in carte lines, vending machines, school canteens, lack of awareness of knowledge of side effects, negligence towards nutritional food, busy schedule of both the parents. It may harm to the normal physiology of the children digestive system which further creates problems like malnutrition, recurrent upper respiratory tract infections, general weakness etc. Junk foods are made up of processed & sometimes chemical added to ensure they do not go bad. These processing destroys some enzymes & nutrients so becomes nutrition less.

Concept of junk food in Ayurveda;

As per Ayurveda, junk food concept can be considered as 'viruddha ahar' or incompatible diet which is said tO be the cause of many systemic disorders. Viruddha ahar is a unique concept of Ayurveda explained in brief as causative factor for many diseases. Viruddha ahar means a food which exerts opposites or undesirable effects on the body.

According to Ayurveda such type of diet is one of the root cause of various health problems. The concept of viruddha ahar is explained by acharya charaka. The diet which vitiates doshas from their places but does not eliminate it out of the body and becomes harmful is said to be viruddha ahara i.e. the food which

wrong in combination, wrong in processing,consumed in incorrect dose & incorrect time of the day in wrong season etc.

Why do children eat junk food:

Chidren craves junk food because they contains a lot of sugar and artificial additives which tastes delicious and therefore triggers the release of certain pleasure inducing neurotransmitters.

Due to delicious tastes, most of the childrens are attracted towards junk food

One of the most is they are comparatively low price and convenience [does not require any cooking or preparation]

Since children typically do not understand how this kind of food negatively impacts their health so, it can be quite addictive.

Junk food may contain:

Salted snack foods

Candy

Sweet desserts

Fried fast food

Sugery carbonated beverages

Many foods such as pizza, harmburgers

Harmful effects of junk food:

There are so many harmful effects of junk food on children ,it can cause memory and learning problems Increase risk of dementia.

Lessons to control the ability of appetite

It can cause chemical changes that can lead to depression.

It can cause uncontrolled cravings.

It leads to dental carries as it contains sugar.

Main side effects of junk food:

A. Atopy

Fast food intake more than 3times a day leads to disorders like asthma, eczema, rhinitis

Eating food 4times per day may leads to reduce math and reading skills compared with the children who did not eat so much junk foods

B. Constipation

An overdose of calories, fats, sugars and other carbohydrates in repeated meals, changes the food desires of the child & make it less likely that the child will eat fibers, fruits, milk,& vegetables, these leads to greater chances of constipation.

C. Addiction

Eating a lot of food in children makes it hard to eat healthy in later life. Even if medical problems creates, as childhood food habits solidify.

D. Poor academics

Fast food can lead to impaired academics performance because higher sugar levels followed by sugar crashes & poor concentration level make it difficult to accomplish task which need extended periods of focused attention.

Blood sugar fluctuations can also results in mood swing &lack of concentration. It may leads to lowering classroom participation.

E. Less energy

Fast food can inhibit participation in extracurricular activities because it does not provide adequate nutrients for physical activity

F. Sleep disturbance

Pop & cold drinks often contain caffeine which can make bed time an ordeal by postponing normal sleep wake cycle

G. Hyperactivity

Essential fatty acids are typically missing or lacking in fast food

These include omega3& omega 6pollyunsaturated fatty acids which cannot be produced within the body, but are essential for the manufacture of cell membrane.

Conclusion:

Fast food intake definitely needs to be strictly controlled in children as it is not good for heath and may do much harm to the body systems. The antidote? Surprisingly, a simple increase in fruit intake can improve the childrens health and reduce the severity of many diseases.

Stopping the marketing of junk foods directed at children with attractive characters and gifts may be one way to help children eat better. Another method is to make healthy food more easily available at affordable prices and in more appealing format.

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NATURAL WAYS TO BOOST ESTROGEN

Estrogen and progesterone are two major sex hormones in the human body. Estrogen is the hormone responsible for sex characteristics and reproductive abilities in women. Progesterone is the hormone that plays a supporting role in the menstrual cycle and pregnancy. When you have low levels of estrogen and progesterone, such as during menopause, it can negatively affect your mood, sexual desire, bone health, Naturally way we boost estrogen in your body, as well as when it's time to see a doctor for low estrogen. Many of these remedies either directly support the creation of estrogen or replicate the activity of estrogen in the body.

1. Soybeans

Soybeans and the products produced from them, such as tofu and miso, are a great source of Phytoestrogens. Mimic estrogen in the body by binding to estrogen receptors. High amount soy intake was linked to a lower risk of breast cancer death. This may be due to the estrogen-like benefits of phytoestrogens.

2. Flax seeds

Flax seeds also contain high amounts of phytoestrogens. The primary phytoestrogens in flax are called lignans, which are beneficial in estrogen metabolism. flaxseed-rich diet was able to reduce ovarian cancer severity.

3. Sesame seeds

Sesame seeds are another dietary source of phytoestrogens..

4. B vitamins

B vitamins play an important role in the creation and activation of estrogen in the body. Low levels of these vitamins can lead to reduced levels of estrogen.

5. Vitamin D

Vitamin D functions as a hormone in the body. vitamin D and estrogen work together to reduce the risk of cardiovascular disease. The link between these hormones is due to the role that vitamin D plays in estrogen synthesis

6. Boron

Boron is a trace mineral that has a variety of roles in the body. Boron is also necessary for the metabolism of the sex hormones testosterone and estrogen. Boron influences estrogen receptors by allowing the body to more easily uses the estrogen available.(Sources of boron is Apple, Banana,Beans, Bran, carrot, Cashewnuts)

7. DHEA

DHEA, or dehydro-epiandrosterone, is a naturally occurring hormone that can be converted to estrogen and testosterone. Within the body, DHEA Trusted Source is first converted to androgens and then further converted to estrogens.

8. Black cohosh

Black cohosh is a traditional Native American herb that has historically been used to treat a variety of conditions, including menopause and menstrual issues.

9. Red clover

Red clover is an herbal supplement that contains a handful of plant compounds called isoflavones that may act like estrogen in the body. These isoflavones include:

1. Biochanin A
2. Formononetin
3. Genistein
4. Daidzein

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Daily Health Hacks for everyone

Try a mid-day workout on a workday - Moderate cardio exercise can result a two-hour creativity boost immediately after.

Listen to music - Music elevates mood, increases endurance, and may even promote metabolic efficiency.

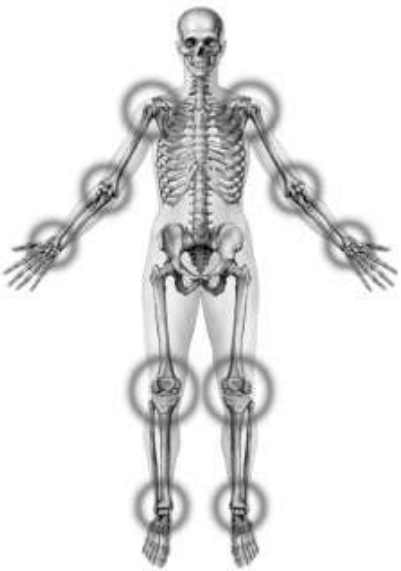
Stand up every 20 minutes - Standing up about every 20 minutes, reduces your risks of developing diabetes and heart disease.

Substitute cinnamon in your coffee - Cinnamon has numerous health benefits: reduces bad cholesterol and blood sugar levels, boosts immune system.

RHEUMATOID ARTHRITIS

1. Introduction

Rheumatoid arthritis (RA) is a systemic chronic inflammatory disease. It is characterized by chronic pain and joint destruction that usually progresses from distal to more proximal joints. The progression of this disease can be slowed down with adequate medical control; however, this condition remains as one of the most important cause of inability and disability if not properly treated. It has unclear etiology that is manifested in by a progressive and destructive poly arthritis in association with serological evidence of auto reactivity.



2. History

Several reports suggest that mommies from different eras have deformities that are path gnomonic of arthritis, however, was not until later 1800 where this chronic condition was named by Garrod rheumatoid arthritis, replacing the terms arthritis deformans and rheumatic gout. As many chronic diseases, the history of rheumatoid arthritis started around 1500 BC when Ebers Papyruralies describe a condition similar to rheumatoid arthritis. RA has a chronic progressive course especially in the tendon sheaths and bursa causing damage of the bone and cartilage .

3. Epidemiology

There are no reports of areas or ethnic groups in which this disease is not found. Rheumatoid arthritis (RA) is distributed universally. The annual incidence of RA has been reported to be around 40/100,000 worldwide, being women 2:1 to 3:1 more likely to be affected than men.

4. Pathogenesis

RA is a combination of genetic and environmental factors that when present increase the

susceptibility to develop clinical manifestations. Genetic factors are carry information that related with RA. The environmental risk factors that have been associated with RA are mainly smoking and alcohol intake, increasing the risk up to 40 times compared with non exposed, also other factors such as socioeconomic status, breastfeeding, birth weight and region of birth can increase susceptibility.

5. Clinical Features

Rheumatoid arthritis (RA) is a chronic inflammatory disease characterized by progressive damage of synovial-lined joints and variable extra-articular manifestations. Tendon and bursal involvement are frequent and often clinically dominant in early disease. RA can affect any joint, but it is usually found in metacarpophalangeal, proximal interphalangeal and metatarsophalangeal joints, as well as in the wrists and knee. The clinical presentation of RA varies, but an insidious onset of pain with symmetric swelling of small joints is the most frequent finding. RA onset is acute or subacute in about 25% of patients, but its patterns of presentation also include palindromic onset, monoarticular presentation (both slow and acute forms), extra-articular synovitis (tenosynovitis, bursitis), polymyalgic-like onset, and general symptoms (malaise, fatigue, weight loss, fever). Although any joint, including the cricoarytenoid joint, can be affected, the distal interphalangeal, the sacroiliac, and the lumbar spine joints are rarely involved. The clinical features of synovitis are particularly apparent in the morning. Morning stiffness in and around the joints, lasting at least 1 hour before maximal improvement is a typical sign of RA. It is a subjective sign and the patient needs to be carefully informed as to the difference between pain and stiffness. Morning stiffness duration is related to disease activity. Hand involvement is the typical early manifestation of rheumatoid arthritis. Synovitis involving the metacarpophalangeal, proximal interphalangeal and wrist joints causes a characteristic tender swelling on palpation with early severe motion impairment and no radiologic evidence of bone damage. Fatigue, feveret, weight loss, and malaise are frequent clinical signs which can be associated with variable manifestations of extra-articular involvement such as rheumatoid nodules, vasculitis, hematologic abnormalities, Felty's syndrome,

and visceral involvement. Although there is no laboratory test to exclude or prove the diagnosis of rheumatoid arthritis, several laboratory abnormalities can be detected. Abnormal values of the tests for evaluation of systemic inflammation are the most typical humoral features of RA. Erythrocyte sedimentation rate and C-reactive protein provide the best information about the acute phase response. Plain film radiography is the standard investigation to assess the extent of anatomic changes in rheumatoid arthritis patients.

6. Therapy

Early therapeutic intervention with intention to modify a pathologic process on early stages of the disease and achieve a long-term relief. "opportunity window" and "Treating Target" are current management strategies in the treatment of RA. New agents capable of inducing the remission of this disease have been introduced in clinical practice over the last decade. These include disease-modifying anti rheumatic drugs such as kinase inhibitor, lymphocyte co-stimulators, TNF blockers, anti-IL1 and anti-IL6 agents, B cell depletion regulators.

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Mango - Did you know?

- Mangoes are native to South Asia and can fruit even after 300 years
- Mango leaves help normalize insulin levels in the blood, aiding in Diabetes prevention and treatment.
- Ripe, Organic and fresh mangoes are the most Nutritious.
- Look for unsulfured organic dried mango.
- The peel is rich in phytonutrients, carotenoids and polyphenols8
- Keep them at room temp in paper covers to ripen
- Unripe, raw, green mangoes are used in of pickles, jam and chutney.
- National fruit of India, Pakistan and the Philippines
- Recent research has shown that mangoes are important in the fight against many types of cancers.

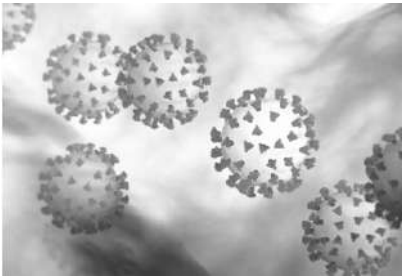
WUHAN CORONAVIRUS OUTBREAK (COVID-19, 2019-NCOV): 10 THINGS YOU NEED TO KNOW

What Is a Corona virus?

The coronavirus is a big family of pathogens. Some of them cause mild illnesses like the common cold. Others can cause fatal infections. A coronavirus gets its name from how it looks. Under an electron microscope, these pathogens exhibit spikes that resemble the angles of a crown. There are many coronaviruses that only infect animals. Some evolve in their animal hosts to infect humans. The type that infects humans was first identified in the 1960s. Since then, seven human-infecting types of coronavirus have been identified, including 2019-nCoV, also known as Wuhan Coronavirus.

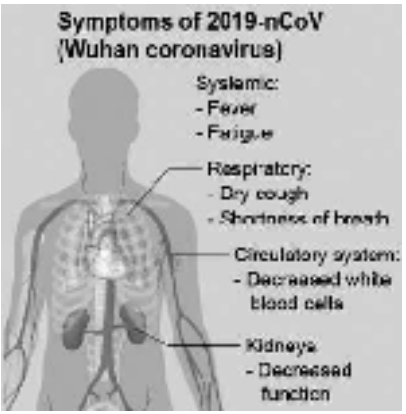
What Is Wuhan Corona virus?

On Jan. 7, 2020, Chinese health authorities announced that they had isolated the virus spreading in Wuhan. This novel coronavirus was named 2019-nCoV, and was also called Wuhan coronavirus because the first infected people came from Wuhan City, Hubei Province in China, a city of more than 11 million people and a major



transportation hub. This virus resembles other serious human coronavirus types MERS and SARS in that all belong to the "beta" subgrouping of virus. The CDC notes that MERS and SARS both began as infections in bats before mutating to infect humans.

What Are the Symptoms of Wuhan Corona virus?



The symptoms of Wuhan virus illness resemble other respiratory infections. Infected people may experience coughing and fever, as well as shortness of breath. Some patients have had vomiting, diarrhea, and similar stomach symptoms. The most severe cases have caused pneumonia, severe acute respiratory syndrome, kidney failure, and death. According to the CDC, some infected people have few or no symptoms, whereas others may be severely ill or die from the disease. Initial estimates suggest symptoms last between two and 14 days.

How Wuhan Corona virus Spreads

Health experts widely agree that many infected patients had some association with a large live animal/seafood market in Wuhan City, suggesting the disease was first spread from animal-to-human contact. Human-to-human transfer was soon confirmed in China, Germany, and the United States. The first person to be infected within the United States was an Illinois man in his 60s. His wife became infected while traveling in Wuhan, China. The CDC says the full picture of how easily this virus can spread remains unclear.

How Is Wuhan Corona virus Treated?

As a newly identified virus, 2019-nCoV has no specified treatment. Supportive care is the treatment; a large number of patients need hospitalization to obtain appropriate care. Work is underway to develop antiviral medications to combat the illness. Meanwhile the CDC says that health care workers should strive to treat the symptoms of an infection through supportive care. Researchers are also trying to develop a vaccine against the virus

Is There a Vaccine for Wuhan Virus?

So far, no vaccine has been developed for this newly discovered virus. On Jan. 28, the US Department of Health and Human Services announced that the National Institute of Health has begun to collaborate on the development of a Wuhan coronavirus vaccine. Early trials could begin in three months, but it will likely take a year or longer before a safe, proven vaccine can be released to the public. The National Health Commission in China is collaborating with various health organizations, including the World Health Organization (WHO), to further study how severe and how contagious this virus may be. By sharing data and continuing to study the illness, health researchers worldwide hope

to contribute to the development of a vaccine.

Is the Virus Likely to Mutate?

This is a class of virus that is known to mutate easily. Prior mutations led to the 2002-2003 SARS outbreak, in which a virus native to civet cats mutated to spread the illness to humans. In Saudi Arabia in 2012, a coronavirus that infected camels mutated to become infectious in humans, leading to the MERS outbreak. Currently, researchers have not discovered the original source of the Wuhan coronavirus, but they suspect it came from wild animals killed and sold for food.

What Can You Do to Protect Yourself?

Based on advice gathered from previous coronavirus outbreaks, the WHO offers general guidance about how to prevent Wuhan virus infection:

- Keep your hands clean frequently with either soap and water or an alcohol-based rub
- Cover your mouth anytime you cough or sneeze. Throw away used tissues.
- Avoid spending time around people who have a fever or cough.
- If you show symptoms of Wuhan virus (cough, fever, shortness of breath), tell your doctor right away, and fill your doctor in on your recent travel history.
- If you visit an animal market where a coronavirus outbreak is suspected, avoid animals and any surfaces they may have touched.
- Make sure any animal product you use in meals is fully cooked. Handle raw meat carefully.

In addition, the CDC recommends you avoid visiting areas where there is an outbreak of this infection and to avoid any close contact with anyone who has visited the outbreak area or shows signs of the infection in the last 14 days.

How Have Chinese Authorities Responded?

Authorities from China confirmed the identity of the new virus on Jan. 7, 2020, and began

working with the WHO on the same day to learn more about the virus. Chinese authorities have reacted to the Wuhan virus outbreak with an unprecedented lockdown of Hubei province. The travel restrictions affect millions of people in cities, and airports, public transportation, workplaces and schools have been shut down to prevent further contagion.

How Has the World Responded?

Some other countries have taken steps to prevent the further spread of Wuhan virus. Screening has expanded to US airports of returning passengers and other countries such as the UK, Hong Kong, Singapore, and more have taken similar measures. US authorities at the CDC say the screenings help find infected travelers, but are also an attempt to educate the public about this emerging disease.

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Tips to control your blood pressure

Some ways to help control blood pressure

- Eat a heart –healthy diet that includes potassium and fiber.
- Drink plenty of water.
- Exercise regularly.
- Don't smoke.
- Limit alcohol consumption to one drink a day for women, two a day for men.
- Limit salt consumption to less than 1,500 mg per day.
- Try to avoid stress.
- Maintain a healthy body weight.

Bad Breath

They say that yogurt fights bad breath. Yogurt is rich in active flora, which may have a beneficial effect on odor – causing mouth bacteria.

LEGAL LIABILITIES AND DUTIES OF A DOCTOR - PART-1

Introduction

Current climate in our country is witnessing a degradation of doctor patient relationship, erosion of mutual trust leading to recurring conflict situations. Media, administrative set ups and governmental agencies are increasingly targeting health care facilities for perceived wrongs committed by physicians. Although conflict is both understandable and inevitable in all human dealings, its dramatic increase in the past decade is a cause of concern and introspection for the medical fraternity. Conflict if allowed to escalate, becomes destructive with the dissatisfied or trouble seeking patient, resorting to legal action seeking monetary compensation for "alleged /perceived maltreatment practices." Research into doctor patient "difficult encounters" have identified some contributory factors to be - unreasonable / unscrupulous patients, yellow journalism, un -professionalism in doctors, lack of rapport due to poor communication skills. A triumvirate of clinical competence, effective communication skills and requisite knowledge of legal liabilities / responsibilities, on the part of the treating physician, has been recognized as the key to deescalate conflict and thwart litigation. Medical curriculum of India emphasizes training in clinical competence but is largely silent and fragmentary in aspect of communication skills and legal liabilities. The third aspect "requisite legal knowledge", is still being overlooked and ignorance regarding legal liabilities often lands the physician in an unenviable position of being charged as a defendant, subjected to ignominy of a trial in either a consumer or criminal court. A claim that "I did not know," does not hold any water in a court of law and since a charge of professional negligence has economic, social and legal consequences it is imperative that doctors become familiar with legal language and duties, so that they are not caught napping.

What is medical negligence?

The medical profession is considered a noble profession because it helps in preserving life. We believe life is God given. Thus, a doctor figures in the scheme of God as he stands to carry out His command. A patient generally

approaches a doctor/hospital based on his/its reputation. Expectations of a patient are two-fold: doctors and hospitals are expected to provide medical treatment with all the knowledge and skill at their command and secondly they will not do anything to harm the patient in any manner either because of their negligence, carelessness or reckless attitude of their staff. Though a doctor may not be in a position to save his patient's life at all times, he is expected to use his special knowledge and skill in the most appropriate manner keeping in mind the interest of the patient who has entrusted his life to him. Therefore, it is expected that a doctor carry out necessary investigation or seeks a report from the patient. Furthermore, unless it is an emergency, he obtains informed consent of the patient before proceeding with any major treatment, surgical operation or even invasive investigation. Failure of a doctor and hospital to discharge this obligation is essentially a tortious liability. A tort is a civil wrong (right in rem) as against a contractual obligation (right in personam) – a breach that attracts judicial intervention by way of awarding damages. Thus, a patient's right to receive medical attention from doctors and hospitals is essentially a civil right. The relationship takes the shape of a contract to some extent because of informed consent, payment of fee and performance of surgery/ providing treatment etc. while retaining essential elements of tort.

In a Supreme court case during 1989 it was laid down that when a doctor is consulted by a patient, the doctor owes to his patient certain duties which are:

a. Duty of care in deciding whether to undertake the case

b. Duty of care in deciding what treatment to give

c. Duty of care in the administration of that treatment.

A breach of any of the above duties may give a cause of action for negligence and the patient may on that basis recover damages from his doctor. In the aforementioned case, the apex court interalia observed that negligence has many manifestations – it may be

(To be continued.)

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SAVE YOUR KIDNEYS - 34

34. Urinary Tract Infection Prevention and Treatment

The urinary tract infection (UTI) is a bacterial infection that affects any part of the urinary tract. UTI is the second most common type of infection in the body. Once diagnosis of UTI is made, its proper treatment is necessary.

Prevention of Urinary Tract Infection

1. Drink plenty (3-4 liters) of fluids daily. Fluids dilute urine and help in flushing bacteria out of the bladder and urinary tract.
2. Urinate every two to three hours. Do not postpone going to bathroom. Holding urine in the bladder for a long period provides opportunity for bacteria to grow.
3. Consume food containing vitamin C, ascorbic acid or cranberry juice to make urine acidic eventually reducing bacterial growth.
4. Avoid constipation or treat it promptly.
5. Women and girls should wipe from front to back (not back to front) after using the toilet. This habit prevents bacteria in the anal region from spreading to the vagina and urethra.
6. Clean genital and anal areas before and after intercourse. Urinate before and after intercourse and drink a full glass of water soon after intercourse.
7. Women should wear only cotton undergarments, which allow air circulation. Avoid tight-fitting pants and nylon underwear.
8. Recurrent urinary tract infection in women after sexual activity can be effectively prevented by taking a single dose of an appropriate antibiotic after sexual contact.

Treatment of Urinary Tract Infection

General measures

Drink plenty of water. A person, who is very ill, dehydrated or unable to take adequate oral fluids due to vomiting will need hospitalization and administration of IV fluids.

Take medications to reduce fever and pain. Use of heating pad reduces pain. Avoid coffee, alcohol, smoking and spicy foods, all of which irritate the bladder. Follow all preventive measures of urinary tract infection.

Treatment of lower urinary tract infection (cystitis, mild infections)

In a healthy young female, short

term antibiotics for three days is usually enough. Some drugs need to be given for seven days to complete a course. Occasionally, a single dose of an antibiotic such as Fosfomycin can be used. Except for a previously healthy adult male who develops a cystitis for the first time, adult males with UTI require 7 to 14 days of antibiotics because of underlying structural abnormalities of the urinary tract that make them prone to infection. Commonly used oral antibiotics are nitrofurantoin, trimethoprim, cephalosporins, or fluoroquinolones. The choice of antibiotic is best determined by the sensitivity and resistance patterns of commonly used drugs in your locality.

Treatment of severe kidney infection (Pyelonephritis)

Patients with moderate-to-severe acute kidney infection, those with severe symptoms or sick patients need hospitalization. Urine and blood cultures are obtained before initiating therapy to identify causative bacteria and proper selection of antibiotics. Patients are treated with intravenous fluids and antibiotics for several days, followed by 10-14 days of oral antibiotics. If response to IV antibiotics is poor (marked by persistent symptoms and fever, worsening kidney function) imaging is indicated. Follow up urine tests are necessary to assess response to therapy.

Treatment of recurrent urinary tract infection

In patients with recurrent UTI, proper identification of the underlying cause is essential. According to the underlying cause, specific medical or surgical treatment is planned. These patients need follow-up, strict adherence to preventive measures and long term preventive antibiotic therapy.

When should a patient with UTI consult a doctor?

All children with UTI should be evaluated by a doctor. Adult patients with UTI should immediately consult a doctor when there is:

- Decrease in urine volume or total absence of urine output.
- Persistent high fever, chills, back pain and cloudy urine or blood in the urine.
- No response to antibiotics after 2 to 3 days of treatment.
- Severe vomiting, severe weakness or fall of blood pressure.
- A single kidney.
- Previous history of stones.

(To be continued.)

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SIMPLE WAYS TO RELIEVE STRESS

Tips to manage stressful situations

It might surprise you to learn that biological stress is a fairly recent discovery. It wasn't until the late 1950s that endocrinologist Hans Selye first identified and documented stress.

Symptoms of stress existed long before Selye, but his discoveries led to new research that has helped millions cope with stress.

Listen to music

If you're feeling overwhelmed by a stressful situation, try taking a break and listening to relaxing music. Playing calm music has a positive effect on the brain and body, can lower blood pressure, and reduce cortisol, a hormone linked to stress.

We recommend cello master Yo-Yo Ma playing Bach, but if classical really isn't your thing, try listening to ocean or nature sounds. It may sound cheesy, but they have similar relaxing effects to music.

Talk it out with a friend

When you're feeling stressed, take a break to call a friend and talk about your problems. Good relationships with friends and loved ones are important to any healthy lifestyle.

They're especially important when you're under a lot of stress. A reassuring voice, even for a minute, can put everything in perspective.

Talk yourself through it

Sometimes calling a friend is not an option. If this is the case, talking calmly to yourself can be the next best thing.

Don't worry about seeming crazy — just tell yourself why you're stressed out, what you have to do to complete the task at hand, and most importantly, that everything will be okay.

Eat right

Stress levels and a proper diet are closely related. When we're overwhelmed, we often forget to eat well and resort to using sugary, fatty snack foods as a pick-me-up.

Try to avoid sugary snacks and plan ahead. Fruits and vegetables are always good, and fish with high levels of omega-3 fatty acids have been shown to reduce the symptoms of stress. A tuna sandwich really is brain food.

Laugh it off

Laughter releases endorphins that improve mood and decrease levels of the stress-causing hormones cortisol and adrenaline. Laughing tricks your nervous system into making you happy.

Our suggestion: watch some classic Monty Python skits like "The Ministry of Silly Walks." Those Brits are so hilarious, you'll soon be cracking up, rather than cracking up.

Drink tea

A large dose of caffeine causes a short-term spike in blood pressure. It may also cause your hypothalamic-pituitary-adrenal axis to go into overdrive.

Instead of coffee or energy drinks, try green tea. It has less than half the caffeine of coffee and contains healthy antioxidants, as well as theanine, an amino acid that has a calming effect on the nervous system.

Be mindful

Most of the tips we've suggested provide immediate relief, but there are also many lifestyle changes that can be more effective in the long run. The concept of "mindfulness" is a large part of meditative and somatic approaches to mental health and has become popular recently.

From yoga and tai chi to meditation and Pilates, these systems of mindfulness incorporate physical and mental exercises that prevent stress from becoming a problem. Try joining a class.

Exercise (even for a minute)

Exercise doesn't necessarily mean power lifting at the gym or training for a marathon. A short walk around the office or simply standing up to stretch during a break at work can offer immediate relief in a stressful situation.

Getting your blood moving releases endorphins and can improve your mood almost instantaneously.

Sleep better

Everyone knows stress can cause you to lose sleep. Unfortunately, lack of sleep is also a key cause of stress. This vicious cycle causes the brain and body to get out of whack and only gets worse with time.

Make sure to get the doctor-recommended seven to eight hours of sleep. Turn the TV off earlier, dim the lights, and give yourself time to relax before going to bed. It may be the most effective stress buster on our list.

Breathe easy

The advice "take a deep breath" may seem like a cliché, but it holds true when it comes to stress. For centuries, Buddhist monks have been conscious of deliberate breathing during meditation.

For an easy three- to five-minute exercise, sit up in your chair with your feet flat on the floor and hands on top of your knees. Breathe in and out slowly and deeply, concentrating on your lungs as they expand fully in your chest.

While shallow breathing causes stress, deep breathing oxygenates your blood, helps center your body, and clears your mind.

Chew gum

For a super easy and quick stress reliever, try chewing a stick of gum.

One study showed that people who chewed gum had a greater sense of wellbeing and lower stress

One possible explanation is that chewing gum causes brain waves similar to those of relaxed people. Another is that chewing gum promotes blood flow to your brain.

Additionally, one recent study found that stress relief was greatest when people chewed more strongly

Write it down

One way to handle stress is to write things down.

While recording what you're stressed about is one approach, another is jotting down what you're grateful for.

Gratitude may help relieve stress and anxiety by focusing your thoughts on what's positive in your life.

Light a candle

Using essential oils or burning a scented candle may help reduce your feelings of stress and anxiety.

Some scents are especially soothing. Here are some of the most calming scents:

• Lavender, • Rose, • Vetiver, • Bergamot, • Roman chamomile, • Neroli, • Frankincense, • Sandalwood, • Ylang ylang, • Orange or orange blossom, • Geranium

Using scents to treat your mood is called aromatherapy. Several studies show that aromatherapy can decrease anxiety and improve sleep

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HEALTH BENEFITS OF YOGA

Yoga is usually defined as union between the limited self and the Divine Self. The aim of Yoga is not really to unite us with anything for we are already united. It is to help us realize our identity with the Divine Self, to make us know and tune into our intrinsic nature.

1. Improves your flexibility

Improved flexibility is one of the first and most obvious benefits of yoga. During your first class,

you probably won't be able to touch your toes, never mind do a backbend. But if you stick with it, you'll notice a gradual loosening, and eventually, seemingly impossible poses will become possible. You'll also probably notice that aches and pains start to disappear. That's no coincidence. Tight hips can strain the knee joint due to improper alignment of the thigh and shinbones. Tight hamstrings can lead to a flattening of the lumbar spine, which can cause back pain. And inflexibility in muscles and connective tissue, such as fascia and ligaments, can cause poor posture.

2. Builds muscle strength

Strong muscles do more than look good. They also protect us from conditions like arthritis and back pain, and help prevent falls in elderly people. And when you build strength through yoga, you balance it with flexibility. If you just went to the gym and lifted weights, you might build strength at the expense of flexibility.

3. Perfects your posture

Your head is like a bowling ball big, round, and heavy. When it's balanced directly over an erect

spine, it takes much less work for your neck and back muscles to support it. Move it several inches forward, however, and you start to

strain those muscles. Hold up that forward-leaning bowling ball for eight or 12 hours a day and it's no wonder you're tired. And fatigue might not be your only problem. Poor posture can cause back, neck, and other muscle and joint problems. As you slump, your body may compensate by flattening the normal inward curves in your neck and lower back. This can cause pain and degenerative arthritis of the spine.

4. Prevents cartilage and joint breakdown

Each time you practice yoga, you take your joints through their full range of motion. This can help prevent degenerative arthritis or mitigate disability by "squeezing and soaking" areas of cartilage that normally aren't used. Joint cartilage is like a sponge; it receives fresh nutrients only when its fluid is squeezed out and a new supply can be soaked up. Without proper sustenance, neglected areas of cartilage can eventually wear out, exposing the underlying bone like worn-out brake pads.

5. Protects your spine

Spinal disks the shock absorbers between the vertebrae that can herniated and compress nerves crave movement. That's the only way they get their nutrients. If you've got a well-balanced asana practice with plenty of backbends, forward bends, and twists, you'll help keep your disks supple.

6. Betters your bone health

It's well documented that weight-bearing exercise strengthens bones and helps ward off osteoporosis. Many postures in yoga require that you lift your own weight. And some, like Downward- and Upward-Facing Dog, help strengthen the arm bones, which are particularly vulnerable to osteoporotic fractures. In an unpublished study conducted at California State University, Los Angeles, yoga practice increased bone density in the vertebrae. Yoga's ability to lower levels of the stress hormone cortisol may help keep calcium in the bones.

7. Increases your blood flow

Yoga gets your blood flowing. More specifically, the relaxation exercises you learn in yoga can help your circulation, especially in your hands and feet. Yoga also gets more oxygen to your cells, which function better as a result. Twisting poses are thought to wring out venous blood from internal organs and allow oxygenated blood to flow in once the twist is released. Inverted poses, such as Headstand, Handstand, and Shoulder stand,

encourage venous blood from the legs and pelvis to flow back to the heart, where it can be pumped to the lungs to be freshly oxygenated. This can help if you have swelling in your legs from heart or kidney problems. Yoga also boosts levels of hemoglobin and red blood cells, which carry oxygen to the tissues. And it thins the blood by making platelets less sticky and by cutting the level of clot-promoting proteins in the blood. This can lead to a decrease in heart attacks and strokes since blood clots are often the cause of these killers.

8. Drains your lymphs and boosts immunity

When you contract and stretch muscles, move organs around, and come in and out of yoga postures, you increase the drainage of lymph (a viscous fluid rich in immune cells). This helps the lymphatic system fight infection, destroy cancerous cells, and dispose of the toxic waste products of cellular functioning.

9. Ups your heart rate

When you regularly get your heart rate into the aerobic range, you lower your risk of heart attack and can relieve depression. While not all yoga is aerobic, if you do it vigorously or take flow or Ashtanga classes, it can boost your heart rate

into the aerobic range. But even yoga exercises that don't get your heart rate up that high can improve cardiovascular conditioning. Studies have found that yoga practice lowers the resting heart rate, increases endurance, and can improve your maximum uptake of oxygen during exercise all reflections of improved aerobic conditioning. One study found that subjects who were taught only pranayama could do more exercise with less oxygen.

10. Drops your blood pressure

If you've got high blood pressure, you might benefit from yoga. Two studies of people with hypertension, published in the British medical journal The Lancet, compared the effects of Savasana (Corpse Pose) with simply lying on a couch. After three months, Savasana was associated with a 26-point drop in systolic blood pressure (the top number) and a 15-point drop in diastolic blood pressure (the bottom number—and the higher the initial blood pressure, the bigger thedrop.

11. Regulates your adrenal glands

Yoga lowers cortisol levels. If that doesn't sound like much, consider this. Normally, the adrenal glands secrete cortisol in response to an acute crisis, which temporarily boosts immune function. If your cortisol levels stay high even after the crisis, they can compromise the immune system. Temporary boosts of cortisol help with long-term memory, but chronically high levels undermine memory and may lead to permanent changes in the brain. Additionally, excessive cortisol has been linked with major depression, osteoporosis (it extracts calcium and other minerals from bones and interferes with the laying down of new bone), high blood pressure, and insulin resistance. In rats, high cortisol levels lead to what researchers call "food-seeking behavior" (the kind that drives you to eat when

you're upset, angry, or stressed). The body takes those extra calories and distributes them as fat in the abdomen, contributing to weight gain and the risk of diabetes and heart attack.

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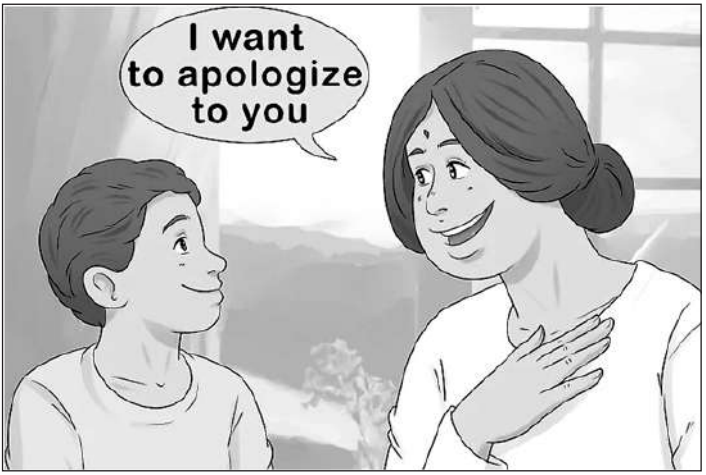
Summer is the time to "Enjoy" . But in summer season you will have to be very careful about your skin mainly because sometimes people forget that the scorching summer sun is not as kind for your skin. The intense summer heat not only affects our body. But also harms your skin too. These problems are further compounded by dehydration, leading to electrolyte imbalance due to excessive sweating. This also 'fells' on your skin harshly.

Top 10 Hydrating foods

Celery – 95% water
Cantaloupe – 92% water
Tomato – 94% water
Lettuce -95% water
Blueberries – 95% Water
Cucumber – 96% water
Watermelon – 96% water
Pineapple – 95% water
Grapefruit – 90% water
Pear – 89% water

RELATIONSHIP - LIVING IN HARMONY - 7



Mother to her son: I want to apologize to you. I compared you to your brother yesterday and I shouldn't have. Each of you is special with your own qualities. Will you forgive me?

Good Mother

That all mothers have to be good is a common belief but it does not seem to be always right. We hear of some mothers who disown their children for some reasons or other. Putting aside the exception, we shall rather go into the qualities of a good mother.

Generally we come across good mothers in all societies. No need to say that mothers love their children; we have already dealt with Mother's love for her children in detail.

Psychoanalysis says the personality of an individual is largely influenced by the kind of mother he or she has had. Mother is said to be the first great influence on the children. Naturally, she appears to be the role model to her children in the early formative period of the children's life. Therefore the good mother teaches all the good things of life. But of course unless she herself does those things, practices them, children will not choose to follow them willingly. Suppose a mother feels that getting up early in the morning is a good habit and

healthy one, she must herself get up if she wants her children to adopt this habit. All matters of social etiquette like greetings people when they meet or even saying thank you for any small help or so, --- all these must be shown in practice by the mother herself. You should practice what you preach. There is a saying: Apple does not fall far from the tree. It only means that children learn all things at least to begin with from their parents, especially the mother. They say Precepts teach, examples move. A good mother must be an example, not just a preacher like a teacher in school.

The good mother must have a clear sense of what to do and what not to do. Unless she is clear, she won't be able to influence her children naturally and automatically through feelings and emotions.

At the same time, she should not forget that she has to be patient with her children in the matter of their learning. After all, they are very small and very young in the sense that they have not lived much through different kinds of experiences; they are naïve and fresh unlike the grown-ups. Therefore, the mother has to be patient with her children. She should be forgiving her children for their mistakes and try to impress upon them through her patience.

Above all, she must really show consideration towards them; that is, she must give genuine care; she must, so to say, respect them in the sense that she should not hurt their feelings just like that. Most importantly, you show your respect for them by saying sorry to them if you happen to make mistakes. This will go a very long way in influencing the children. They understand first of all that even the grown-ups also make mistakes. Of course, the mother must be sensitive enough to point out to them that saying sorry does not in any way suggest they can do the same mistakes again and again just saying sorry every time.

We will spend some more time on this Good Mother in our next session also.

(To be continued.)

- "HEALTH" - Editorial Board

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Citrus salad with seed and nut crunch

A vibrant fruit salad to wake up tired taste buds at breakfast time.

Rich in vitamin C.

INGREDIENTS

- 1 large orange
- 1 red grapefruit
- 2 clementines
- 25g pumpkin seeds
- 25g sunflower seeds
- 1 ½ tbsp orange blossom honey
- 100g Waitrose Fat Free Fromage Frais
- 25g pistachio nuts, chopped

METHOD

1. Peel and remove the pith from the orange, grapefruit and one of the clementines. Slice and arrange on plates. Zest and juice the remaining clementine, then scatter and drizzle over the sliced fruit.

2. Heat a non-stick frying pan over a medium heat. Tip in the seeds and toast for 1 minute or until fragrant, then add 1 tablespoon of the honey and bubble for 30 seconds until caramelised. Tip onto a sheet of baking parchment and set aside until cool, then break into small pieces.

3. Stir the remaining honey into the fromage frais. Spoon on top of the citrus salad and scatter with the crunchy seeds and chopped pistachios before serving.

NUTRITION VALUE

Energy	834 kj 199 kcals
Fat	9.4 g
Saturated Fat	1.2 g
Carbohydrate	21.6 g
Sugars	19.5 g
Protein	7 g
Salt	0.1 g
Fibre	2.9 g

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OPEN ACCESS

Manuscript ID:
ASH-2020-08012424

Volume: 8

Issue: 1

Month: July

Year: 2020

P-ISSN: 2321-788X

E-ISSN: 2582-0397

Received: 24.03.2020

Accepted: 21.05.2020

Published: 02.07.2020

Citation:
Prasad, SM, et al. "Value Added Products from Yam (Dioscorea Spp.)." *Shanlax International Journal of Arts, Science and Humanities*, vol. 8, no. 1, 2020, pp. 207–212.

DOI:
https://doi.org/10.34293/sijash.v8i1.2424

Abstract
Yams are believed to be originated in Asia and Africa. They are packed with a bunch of nutrients like Vitamin C, Potassium, Manganese, Copper, and Phytochemicals. The present study was aimed to provide good nutritional products using tuber vegetable Yam. Attempts were made to prepare yam payasam (YPP) and yam vadai (YVP) and subjected to different pre-treatment, and value-added products were standardized. 5 point hedonic scales were used for sensory evaluation. From the result, the present study shows the product YPP shows good quality, sensory, and consumer acceptability.

Keywords: Yam vadai, Yam payasam, Nutrients, Phytochemicals, Sensory evaluation and Hedonic scales

Introduction

Tropical tubers are known as the energy reservoirs of nature. They provide much-needed calories about 1200 million to people around the world, more specifically in developing countries in Asia and Africa (Peter, 2016). India represents an important food crop rich in starch. It is utilized as a fresh vegetable after boiling or cooking the peeled and sliced tubers (Arvind Kumar et al., 2018). Tamil Nadu produced yam in 38.76 tons in the year 2015-2016. West Bengal is the first and leading state to produce yam in 293.84 tons in the same year (National Horticultural Board, 2016). It is a tropical and subtropical crop. It requires well-distributed rainfall with humid and warm weather during the vegetative phase and cool and dry weather during the crop development period (TNAU, 2016). Arginine is the amino acid present in yam (Shih-Chuan Liu et al., 2015).

India's population is estimated at 1.273 billion in 2020, with a small marginal portion of uncertainty. The work force in crop production had declined to 54 percent by the beginning of this century and was lower in many states, which have diversified agriculture. For each possible crop set in each region using potential crop yield and cost of cultivation data for each crop value added in agriculture can be worked out (Yoginder, 2014).

Vegetables are an important part of everyone's life and also as a part of Indian cuisine (Prasad et al., 2017). Vegetables are the store house of carotene, riboflavin, folic acid, vitamin C, and calcium. Vegetables also supply water and roughage to the body (Raheena Begum, 2006). Based on the nutritive evaluation studies on the wild edible yams consumed by the tribals Kanikkars and Palliyars, it can be summarized that most of them were found to be a good source of protein, lipid, crude fiber, starch, vitamins and minerals

(Shajeela et al., 2011). Yams are good sources of vitamin c, which is vital in fighting infections such as cold and flu and quick healing (Beatrice Nabibuka, 2018). Tubers have an immense potential as functional foods and nutraceutical ingredients to be explored in disease risk reduction and wellness (Anoma Chandrasekhar and Thamilini Joseph Kumar, 2016).

Yam contains antioxidants, and these antioxidants may help to reduce inflammation (Cheri Bantilan, 2019). Yams are rich in diosgenin, which is a special compound that is known for improving neuron growth and overall brain health. The roots of yams provide a beneficial fiber known as glucomannan, which is thought to help with weight loss. (https://www.conserve-energy-future.com.).

Value addition in yams could be helpful to promote consumer preferences enabling the producers to increase their income (SurajitMitra and Tarafdar, 2012). In light of the above facts realizing the importance of yam, the study was undertaken with the following objects:

- To prepare value-added products like payasam and vadai from Yam (Dioscorea spp.)
- To assess the sensory evaluation of the prepared product.
- To know the shelf life, storage quality of the prepared product under room temperature.
- To know the shelf life, storage quality of the prepared product under refrigeration temperature.

Methodology

Selection of the Samples

The samples were collected from the Palayamkottai market in Tirunelveli. Other ingredients like jiggery, milk, ghee, cardamom, nuts, raisins oils, onion, and green chilies were purchased from a local super market named Ananda near Tirunelveli for research purpose. The samples have been collected as per the requirement and stored in refrigeration for future use. It was collected during the month of December 2017

Pretreatment Employed

Washing is one of the simplest food processing operations that you can carry out, but one of the most important. Fruit and vegetables should be washed to remove surface dust and dirt and any bacteria that may be contaminating the outer skin. Only clean, chlorinated water should be used for washing (Susan Azam Ali and Cherlotte Dufour, 2018).

The sample, after collecting thoroughly washed in running water 2-3 times. The samples were cleaned to remove the stones and dust particles. Then it was shade dried, and with careful attention, the samples were packed in polyethylene bags and stored in refrigeration for further analysis.

Material Used

Electronic Weighing Balance: The electronic weighing balance of the AY-220 model was used to weigh the samples in terms of grams and milligrams.

Refrigerator: Refrigerator (Kelvinator) with a temperature range of 6-200C was used to store the samples.

Mixer: A mixer model of 2k-458 was used to grind the samples for separation.

Strainer: Stainless steel strainer was used for the extraction of the sample

Formulation of the Product

Preparation of Yam Payasam

Fig. 1: Investigator Preparing Yam Payasam

Table 1: Ingredients used for making Yam Payasam

S. No	Ingredients used	Amount
1	Yam	100 g
2	Jaggery	125 g
3	Milk	50 ml
4	Ghee	40 g

5	Cardamon	05 g
6	Nuts	10 g
7	Raisins	10 g

Yam Payasam was prepared from 100g of Yam, 125g of Jaggery, 50ml of Milk, 40g of Ghee, 05g of Cardamon,10g of Nuts, and 10g of Raisins. The methodology for preparing Yam Payasam is given below in flow chart no 1.

Flow Chart 1: Methodology for Preparing Yam Payasam

Samples selection (yam)
↓
Sorting
↓
Cleaning in water
↓
Cutting and boiling
↓
By using Muslin cloth water is drained
↓
Mash yam well add milk and jaggery
↓
Cook it for continuously for 10 minutes
↓
Add ghee in a pan and roast raisins and nuts
↓
Transfer nuts and raisins to the yam mixture
↓
Store in vessel once temperature gets low
↓
Serve hot or refrigeration

Preparation of Yam Vadai

Table 2: Ingredients used for making Yam Vadai

S. No	Ingredients used	Amount
1	Yam	100 g
2	Onion	50 g
3	Green Chilies	10 g
4	Oil	100 ml
5	Curry Leaves	10 g

Yam vadai was prepared from 100g of yam, Onion 50 g, 10g of chilies, 100 ml of Oil, and 10g of curry leaves. The methodology for preparing yam vadai is given below in flow chart no 2.

Flow Chart 2: Methodology for Preparing Yam Vadai

Samples selection (yam)
↓
Sorting
↓
Cleaning in water
↓
Cutting and boiling
↓
Draining water by using the muslin cloth
↓
Mash yam and bring to a semi-solid paste consistency
↓
Add chilies, curry leaves, and onion.
↓
Bring to required shape for vadai.
↓
Fry in oil
↓
Serve hot

Sensory Evaluation

Fig. 2: Sensory Panel Evaluation

The prepared products were subjected to 06 trained panel members for a point five hedonic rating scale, and results were recorded.

Shelf Life Study

Every product must possess a good shelf life study. For this, the prepared products were carefully observed in refrigerated and in room temperature for about one week

Statistical Analysis

Each sample must be subjected to statistical values; here standard deviation is carried out.

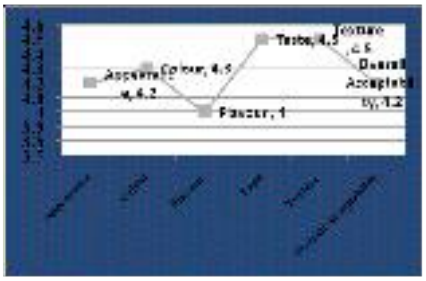
Results and Discussion

Sensory Evaluation of Prepared Yam Payasam and Yam Vadai

Sensory evaluation is a scientific method that evokes, measures, analyses, and interprets responses to products as perceived through the senses of sight, smell, touch, taste, and sound (Stone and Sidel, 2004). The methods used to measure these attributes are known as sensory or organoleptic tests (Sumathi et al., 2003).

The formulated product was organoleptically evaluated by using the numerical card to estimate the acceptance by 06 trained panel members. The panel members were asked to evaluate the product for appearance, color, flavor, taste, texture, and overall acceptability. The formulated and standardized product yam payasam (YPP) and yam vadai (YVP) for sensory evaluation and the mean score obtained are given below in fig no 03 and fig no 04, respectively.

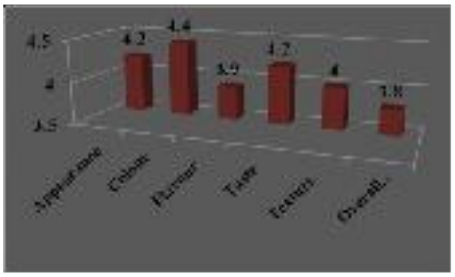
Fig. 3: Sensory evaluation of Yam Payasam



SD = 0.177169; Mean = 4.28333

From fig no 3, it was concluded that the overall acceptability scored was 4.2 while for color it obtained a value of 4.3, flavor 4.0, taste 4.5, texture, 4.5, and the last values 4.2 goes to appearance with a standard deviation value of 0.177169 and a mean value of 4.28333.

Fig. 4: Sensory evaluation of Yam Vadai



SD = 0.20344; Mean = 4.0833

From fig no 4, it was concluded that the overall acceptability scored was 3.8 while for color it obtained a value of 4.4, flavor 3.9, taste 4.2, texture, 4.0, and for appearance 4.2 with a standard deviation value of 0.20344 and a mean value of 4.0833

Shelf Life Study

Shelf life is the determination of how long a product will hold its quality as perceived by customers. The shelf life of a product is important when considering distribution channels. Shelf life can be determined through the use of accelerated or real-time testing (Fadi Aramouni and Kathryn Deschenes, 2015). Samples should be transported and stored at the correct temperature and humidity. Records should be kept of fridge and freezer temperatures (Sarah E. Kemp et al., 2009).

Prepared yam payasam and yam vadai were stored in refrigeration and normal room temperature to assess their storage pattern. Care was taken to see that the jars were stored in a clean, dry place where sunlight does not enter. Every day the containers were checked to see any microbial growth and the development of off-flavor. Prepared products were kept for one week to find out the production of gases. The selected products were stored in airtight plastic containers for analyzing various parameters.

Table 3: Shelf-life study of the Yam Payasam (YPP)

S. No	Days	Refrigeration Temperature	Room Temperature
1	1st day	No Change	No change
2	2nd day	No Change	Change in Taste, Appearance, Flavor, Texture, and Off Flavor Developed
3	3rd day	No Change	
4	4th day	No Change	
5	5th day	No Change	
6	6th day	No Change	
7	7th day	No Change	

Concerning table no 3, there were no changes in appearance, flavor, taste, texture as described in the table under refrigeration temperature from day 1 to day 7. This may be due to the amount of jaggery used, which acts as a preserving agent. Regarding room temperature storage, no change is observed on the 1st day, but from the 2nd day to 7th-day change in taste, appearance, flavor, texture, and off-flavor developed.

Yams have a unique taste too. Compared to sweet potatoes, yams are less sweet and much starchier and dry. They also tend to have a good shell life. However, certain varieties store better than others. (Mary Jane Brown, 2017).Tuber crops have a prominent role in feeding the world, and these crops are going to be an important component in food security systems in the coming decades (Parvathi et al., 2016)

Table 4: Shelf-life study of the Yam Vadai (YVP)

S. No	Days	Refrigeration Temperature	Room Temperature
1	1st day	No Change	Change in Taste, Appearance, Flavor, Texture, and Off Flavor Developed
2	2nd day	No Change	
3	3rd day	No Change	
4	4th day	No Change	
5	5th day	Change in Colour	
6	6th day	Change in Flavor	
7	7th day	Change in Taste	

According to the table no 4, there were no changes in appearance, flavor, taste, texture as described in the table till the 4th day, but from the 5th-day change in color, 6th-day change in flavor, and 7th-day change in taste observed. Regarding room temperature storage on the 1stday itself, the product showed changes in taste, appearance, flavor, texture, and off-flavor developed.

Conclusion

It is concluded that since commercial foods are prepared from food additives, they lack phytonutrients, so added sugars and preservatives serve as food sources for alleviating disease. Keeping this in mind, a trial is made formulating foods prepared form yam. Many studies revealed that the samples have no side effects, so considering this statement, the present study was undertaken. The study highlighted the fact that certain value-added products can be prepared from yam. This prepared product can be used for children since any type of preservatives, or artificial additive is not added. The prepared product has over all acceptability of a good score.

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ISSN 2394-3777 (Print)
ISSN 2394-3785 (Online)
Available online at www.ijartet.com

International Journal of Advanced Research Trends in Engineering and Technology (IJARTET)
Vol. 7, Issue 5, May 2020

Efficacy of Supplementation of Kiwi Fruit Juice on Selected Hypertensive Adult Patients of Suchindrum in Kanniyakumari District

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Abstract: Fruits consist mainly of carbohydrates and are known to have high nutritional values specifically in terms of micronutrients. Studies have shown that high intake of fruits and vegetables may have a protective effect against hypertension. Phytochemicals in plant reduces the risk of developing many diseases including heart diseases, hypertension, cataracts, osteoporosis and urinary tract infections. In this study Sample of 60 subjects within the age 28 to 35 years were selected for the study, to assess their frequency of fruit consumption pattern, awareness about phytochemicals in fruits, clinical assessment and effect of supplementation of kiwi juices. Out of these, 10 (05 Males & 05 Females) samples were chosen as experimental group and 10 (05 Males & 05 Females) samples were treated as control group. Evaluation was carried out by comparing the results before and after the supplementation of kiwi fruit juices for one month and results were statistically analysed.The study finally revealed that subjects who consumed kiwi fruit juices had a tremendous improvement in reducing their blood pressure levels when comparing with the control group.
Keywords: Phytochemicals, Supplementation, Hypertension, Kiwi Juices, Clinical Assessment

I. INTRODUCTION

India is the second largest producer of fruits in the world, because its diverse agro-climatic conditions allow a wide range of tropical, sub-tropical and a temperature fruit to be produced.

Fruit production in India covers an area of 4.96 million hectares (Agricultural Extension, 2004). There is convolving evidence that consumption of fruits and vegetables decrease the risk of cardiovascular disease, hypertension, obesity and diabetes (WHO, 2003). Kiwifruit is one of the most commercialized fruits on the international market, which has notable high nutritional and medicinal value with many health benefits (Ma, 2019).Kiwi fruit or Chinese gooseberries are the edible berries of several species of woody wines in the genus Actinidia. Kiwi fruit is oval in shape, greenish brown in colour, it has little sweet and bitter taste. It has many health benefits like it helps in digestion, boosts our immunity, and maintains blood pressure (Tyagi & Sahay, 2015). The qualitative phytochemical analysis of the extracts revealed the presence of alkaloids, flavonoids, saponins, cardiac glycosides,tannins and terpenoids in whole fruit of Actinidia deliciosa (Soham et al., 2020).

Kiwifruit are exceptionally high in vitamin C and contain an array of other nutrients, notably nutritionally relevant levels of dietary fibre, potassium, vitamin E and folate, as well as various bioactive components, including a wide range of antioxidants, phytonutrients and enzymes, that act to provide functional and metabolic benefits.(Richardson et al., 2018).

In the light of the above facts realizing the significance of fruits and its role in hypertension, concerns were undertaken in this study with the following objects:

1. To assess the frequency of fruit consumption pattern of the subjects.
2. To assess the level of knowledge about phytochemicals in fruits.
3. To assess the clinical status of the subjects
4. To evaluate the effect of supplementation of kiwi fruit juices among hypertensive patients

ISSN 2394-3777 (Print)
ISSN 2394-3785 (Online)
Available online at www.ijartet.com

International Journal of Advanced Research Trends in Engineering and Technology (IJARTET)
Vol. 7, Issue 5, May 2020

II. METHODOLOGY

Materials

Raw materials needed for the study

Raw materials needed for the study were kiwi fruits, milk, sugar, and raisins.

Identification of raw materials

Samples were identified with the help of a botanist

Procurement of samples

The samples needed for the study were purchased from big bazaar near Nagercoil, about 6 kilograms for a week, washed in running water, cleaned and stored in refrigerated conditions.

Equipment used for the study

Equipment and instruments used for this study was glass wares, strainers, blender, and mixer and sphygmomanometer.

III. METHODS

Selection of the area

Suchindrum situated in Kanniyakumari District were selected for the conduct of the study. This area was selected because of the willingness and the co-operation rendered by the subjects, more over most of the subjects were well known to the investigator.

Selection of the subjects

Samples of 60 subjects within the age 28 to 35 years were selected for the study, to assess their frequency of fruit consumption, awareness about phytochemicals in fruits, clinical assessment and effect of supplementation of kiwi juices. Among these subjects 30 were males and 30 were females. Among them 15 males and 15 females who suffered from high blood pressure were selected for the study. Out of these samples 10 (05 males & 05 Females) were chosen as the experimental group and 10 (05 males & 05 Females) were treated as control group.

Formulation of the tool

A well framed questionnaire was formulated to know their general information like name, sex, age, numbers of members in the family, occupation and income etc. The first part of the questionnaire included frequency of fruit consumption pattern. The second part of the questionnaire included questions on awareness on phytochemicals in fruits. The third part of the questionnaire includes clinical examination.

CONDUCT OF THE STUDY

Procedure for the preparation of kiwi fruit juices

Flow Chart indicating kiwi fruit juice Preparation

50 grams of fresh Kiwi fruit were selected

↓

Washing, cleaning in running water to avoid dust

↓

After washing, Kiwi fruits are cut in to small pieces

↓

After cutting, place it in a bowl, add milk, sugar and water about 150 ml

↓

put it in a blender and mix well

↓

Add raisins

↓

Serve chill

Supplementation of kiwi juice

Fruit juices prepared from kiwi fruit were supplemented for about 200 ml on daily basis for continuous one month.

Measurement of blood pressure

Blood pressure is recorded by sphygmomanometer. Blood pressures were recorded in data sheet daily by the investigator initially and finally before and after supplementation.

Evaluation

Evaluation was carried out by comparing the results before and after the supplementation

Analysis of data

The collected data was analyzed under student's t test using software and statistically interpreted. The data were statistically analyzed by graph pad software statistical packages. The results statistical differences between groups were performed using T Test. Difference considered significantly when $P < 0.0001$.

ISSN 2394-3777 (Print)
ISSN 2394-3785 (Online)
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International Journal of Advanced Research Trends in Engineering and Technology (IJARTET)
Vol. 7, Issue 5, May 2020

IV. Results And Discussion

Frequency of fruit consumption

Table No 1: Frequency of Fruit Consumption

Particulars	Frequency of Fruit Consumption
Daily	Nil
Once in a week	Banana,Sapota,Grapes
Occasionally	Apples and oranges
None	Straw Berry, Kiwi, Rambhutan

It is clearly understood that fruits were not consumed by the subjects every day. Among these Bananas, Sapota, Guava, and Grapes, were taken and preferred by most of the people once in a week. Apples, Orange and Pomegranates and oranges are taken occasionally. None of the selected subjects used Rambhutan, Straw berry and Kiwi fruit due to its cost and seasonal availability.

Awareness about phytochemicals in Fruits

Table No 2: Awareness about phytochemicals in fruits

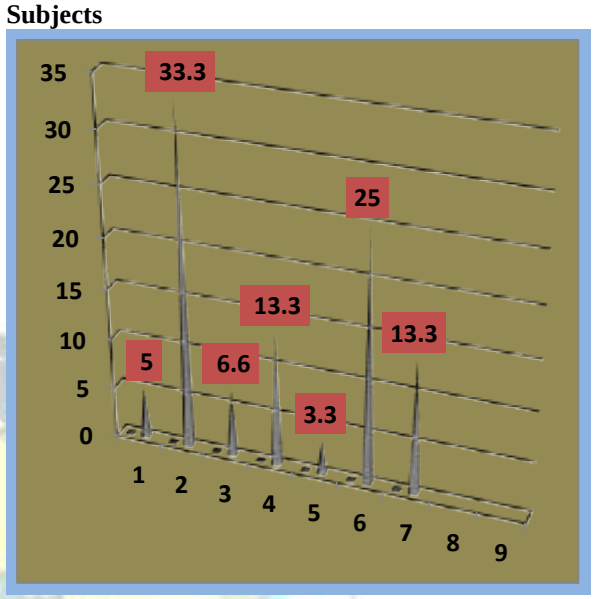
Awareness of phytochemical in fruits	Total (n=60)	
	No	%
Yes	08	13.33
No	52	86.66
Total	**60**	**100**

The survey findings revealed that most subjects (86.66 Per Cent) are not aware about knowledge of phytochemical in fruits and their health significance .The major reasons were most people were illiterate. Only a few (13.33 per cent) of subjects know the importance of phytochemicals.

S. N	Group	Before Intervention (N= 10)		After Intervention (N= 10)		T value
		M	SD	M	SD	
1	Control	142.45	5.98	146.89	1.456	6.8899 *NS
2	Experimental	137.70	4.99	133.50	3.19	2.8285 **S

Clinical Assessment of the Subjects

Fig No 1: Clinical Assessment of the Subjects



With the help of a physician under bright illumination clinical assessment were carried out. Blood samples and other test mode were done with the help of a laboratory expert and results were drawn. From figure no 1, it is evident that 05 per cent of subjects suffered from jaundice, 33.3 per cent hypertension, anemia 06.6 per cent, asthma 13.3 per cent, Tuberculosis, 03.3 per cent, diabetes 25 per cent, followed by obesity 13.3 per cent.

Effect of Supplementation of Kiwi Juice on Selected subjects

Table No 3: Effect of Supplementation of Kiwi Juice on Selected Subjects

***Not significant **Significant**

From the table no 3, it was clearly evaluated that when administering kiwi juices to the experimental group, their systole and diastole level becomes normal and showed a tremendous improvement, but in control group it remains same. This may be the reasons that kiwi possess rich antioxidants like carotenes, luteins and xanthophyll and potassium in lowering the blood pressure levels.

V. Summary

The present study were summarized and concluded as follows, the age of the selected subjects was between 28-35years. Fruits were not included daily in the diets of all subjects. None of the selected subjects took fruit juices daily. Some of the selected subjects didn't

ISSN 2394-3777 (Print)
ISSN 2394-3785 (Online)
Available online at www.ijartet.com

International Journal of Advanced Research Trends in Engineering and Technology (IJARTET)
Vol. 7, Issue 5, May 2020

consume any fruits juices in their diet due to dislikes and poverty. Kiwi fruit juices were supplemented regularly for one month and recorded before and after study. Improvement was observed in subjects who consumed kiwi fruit juices daily.

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BIOGRAPHY

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International Journal of All Research Education and Scientific Methods (IJARESM), ISSN: 2455-6211
Volume 9, Issue 4, April -2021, Impact Factor: 7.429, Available online at: www.ijaresm.com

Comparative Study on Calcium Rich Balls Prepared Using Powdered Jaggery and Jaggery Syrup Obtained From Sugarcane

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ABSTRACT

In this research work the author describes the preparation method of calcium rich balls using powdered jaggeryand jaggery syrup prepared from sugarcane. Products were formulated and sensory evaluation is carried out using 20 trained panel members. Finally products made with jaggery syrup got the overall acceptance rate.

Key Words: Calcium Rich Balls, Sugarcane, Jaggery, Shelf life.

INTRODUCTION

Food is one of the basic needs of the human being. It is required for the normal functioning of the body parts and for a healthy growth **(Training Manual for Food Safety Regulators, 2010).**

The basic function of the food is to keep us alive and healthy.It is important to understand the composition of foods and changes that occurs when food are grown harvested stored prepared processed and eaten so that foods can fulfil their basic function. Dhals and pulses have between 55 mg to 200 mg of calcium per cent. Sesame has an unusually high content of calcium of 1450 mg per cent **(Sumathi et al., 2006)**

Tavdidisvili et al (2007)reported in his study about problems related to the osteoporosis the promising directions of its prevention and the issues of improving the calcium absorption capacity. There has been justified the feasibility of combined using flax, sesame and curd in the production of functional food.

As per recent studies, Indian women are more susceptible to developing this condition as compared to men and the reasons could be attributed to several factors. Women with a smaller body frame consume a lower portion of calcium-rich foods and tend to have poor exposure to sunlight. Further, at menopause bone loss accelerates because of the decline in estrogen levels **(Binita Priyambada, 2019).**

METHODOLOGY

Selection of raw material

The raw materials used for the study were collected from Tenkasi in Tamil Nadu. The samples has been collected as per the requirement and stored in refrigeration for future uses. It was collected during the month of December 2020-March 2021.

Pretreatment employed

The samples after collecting were cleaned by removing the stones and dust particles.

Fig No 1: Ragi Flour

Fig No 2: Pumpkin Seeds

Fig No 3: Flax Seeds

Fig No 4: Jaggery (Sugarcane)

Fig No 5: Moong Gram Dhal

Fig No 6: Horse Gram Dhal

Fig No 7: Figs

Fig No 8: Almond

Fig No 9: Ghee

MATERIALS USED

Electronic weighing balance

Electronic weighing balance of AY-220 model was used to weigh the samples in terms of grams and milligrams.

Refrigerator

Refrigerator (Kelvinator) with a temperature range of 6-20^{0}C was used to store the samples.

Mixer
Mixer model of 2k-458 was used to grind the samples for separation.

Formulation of the Product

Table No 1: Ingredients used for preparing calcium rich balls

S.No	Ingredients Used	Amount
1	Ragi Flour	50 g
2	Pumpkin Seeds	25g
3	Flax Seeds	25g
4	Moong gram dhal	25g
5	Horse gram dhal	25 g
6	Fig	3 Nos
7	Almond	25 g
8	Ghee	1Table Spoon
9	Jaggery (Sugarcane)	30 g

Preparation of Calcium Rich Balls
Calcium rich balls were prepared from Ragi Flour, Pumpkin seeds, Flax seeds, Moong Gram Dhal, Horse Gram Dhal, Fig, Almond, Ghee and Jaggery (Sugarcane). Methodology for preparing calcium rich balls is presented in below Figure No.13 and ingredients needed for the preparation is tabulated in the above Table No 1.

Figure No 11: Prepared Balls Using Powdered Jaggery(Sugarcane)

Figure No 12: Prepared Balls UsingJaggerySyrup(Sugarcane)

Sensory Evaluation
The prepared products were subjected to 20 trained panel members for a point five hedonic rating scale and results were recorded.

Shelf Life Study
Each and every product must possess a good shelf life study. For this the prepared products were carefully observed in refrigerated and in room temperature for about 10 days.

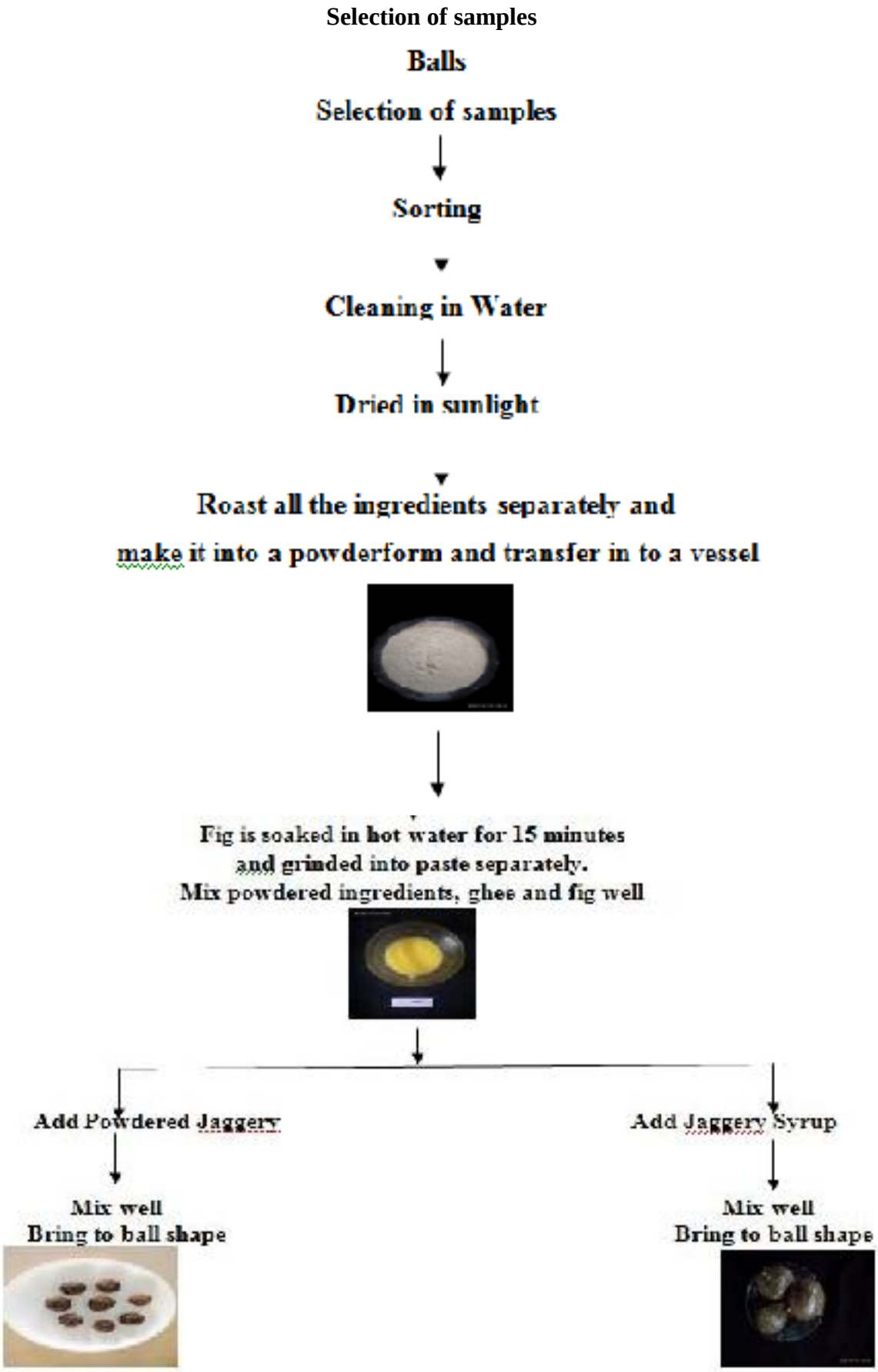

Fig No 13: Flow Chart Indicating the Methodology of Preparing Calcium Rich Balls
Selection of samples

RESULTS AND DISCUSSIONS

Sensory Evaluation of the Prepared Products

Sensory testing utilizes one or more of the five senses to evaluate foods. Taste panels comprising groups of people, taste specific food samples under controlled conditions and evaluate them in different ways depending on the particular sensory test being conducted. This is the only type of testing that can be measure consumer preference and acceptability.when it comes to public opinion of a product there is no substitute for tasting by individual consumers **(Vickie and Elizabeth, 2008).**

Sensory evaluation of the prepared product using powdered jaggery (Sugarcane)

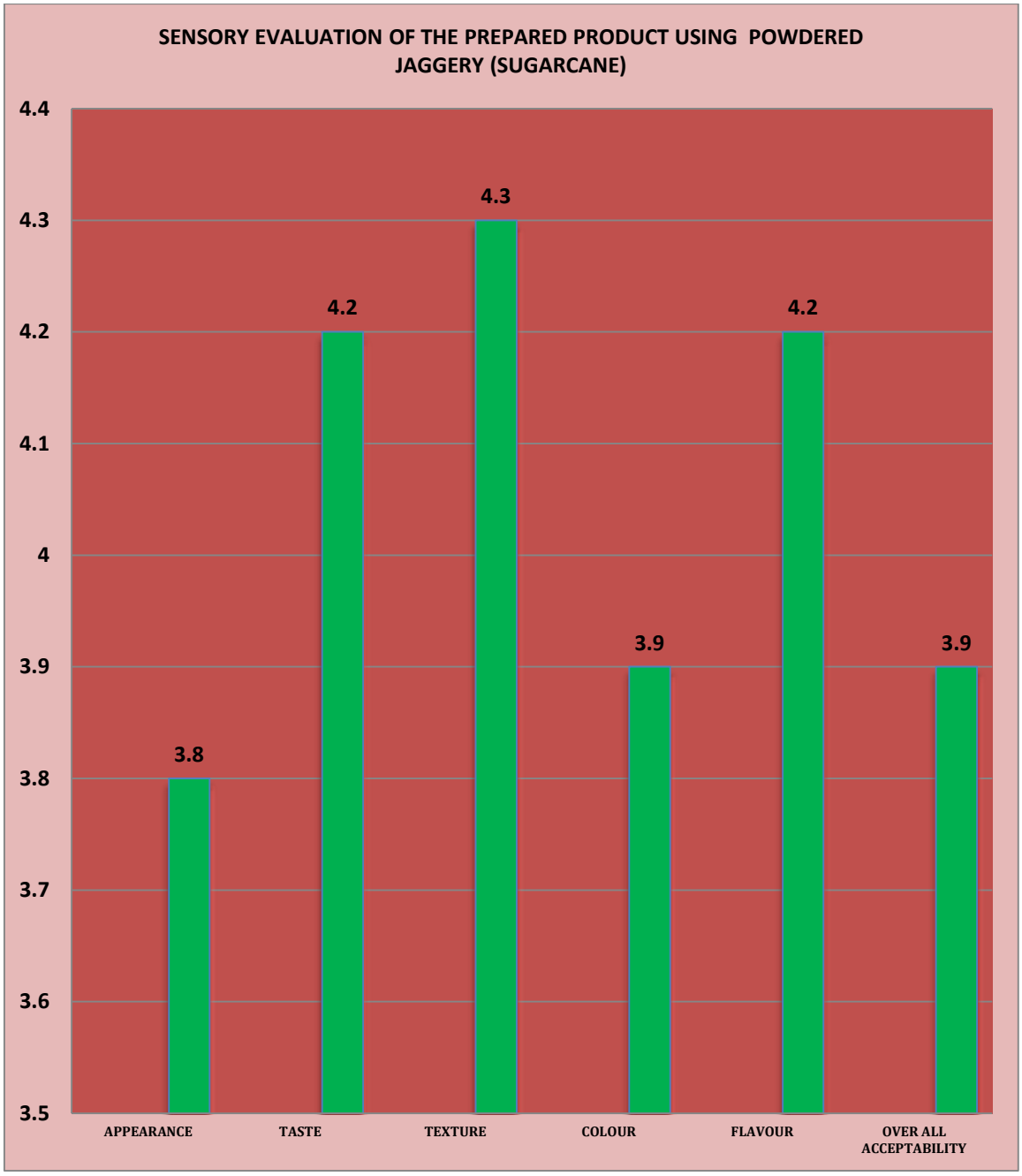

Fig No 14: Sensory evaluation of the prepared product using powdered jaggery (Sugarcane)

From Figure No.14, it is clearly observed that product prepared shows the lowest score goes to appearance 3.8, followed by colour 3.9 and the highest goes to texture 4.3, flavor and taste 4.2 with an overall acceptability of 3.9.

Sensory evaluation of the prepared product using Jaggery Syrup (Sugarcane)

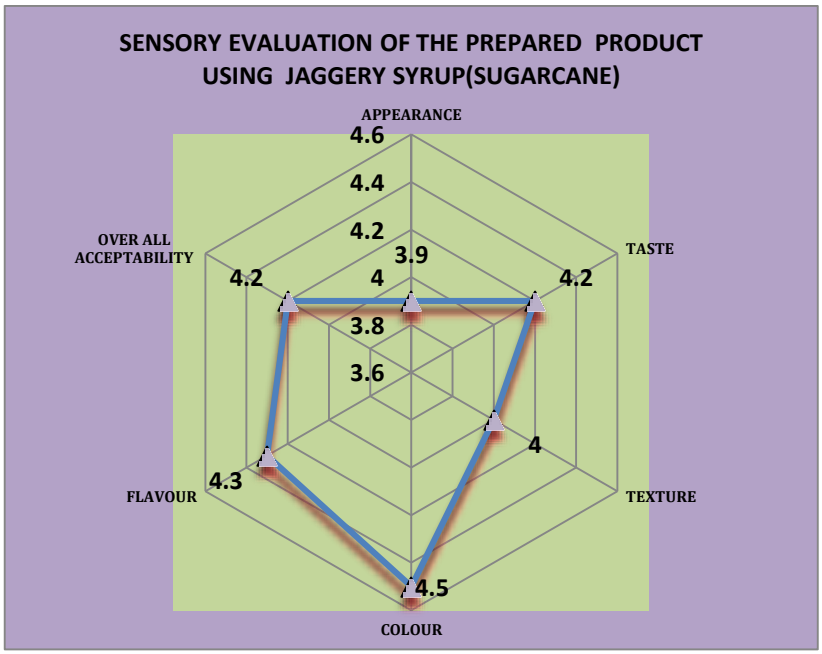

Fig No 15: Sensory evaluation of the prepared product using Jaggery Syrup (Sugarcane)

From fig no 15, it is clearly observed that product prepared shows the highest score for appearance, followed by colour 4.5, flavor 4.3, taste 4.2, texture 4.0, with an overall acceptability of 4.2.

Shelf Life Study of the Prepared Product

The selected products were stored in airtight plastic containers till analyzing various parameters. Prepared products were kept for months to find out the production of gases. Care was taken to see that they were stored in clean and dry place. They are to be placed away from sunlight and pests. Prepared products were stored in normal room temperature and in refrigeration temperature to assess their storage pattern. Every day the containers were checked to see any microbial growth and the development of off flavor.

Every product must possess a good shelf life study. For this, the prepared products were carefully observed in refrigerated and room temperature for about one week **(Prasad et al.,2020).**

Shelf life study of the prepared product using powdered jaggery (Sugarcane)

Table No 2: Shelf life study of the Prepared Product using powdered jaggery (Sugarcane)

Days	Product incorporated using powdered jaggery (Sugarcane)	
	Room Temperature	Refrigeration Temperature
1	No change	No change
2	No change	No change
3	No change	No change
4	Change in colour	No change
5	Change in flavour	No change
6	Fruity smell	No change
7	Change in taste	No change
8	Becomes rancid	Change in colour
9	Fungus formation	Change in taste
10	Fully spoiled	Change in flavour

Regarding room temperature storage, the prepared product have positive effect till 3rd day, but on continuous storage naturally it changes its colour on 4th day, change in flavour in 5th day, fruity smell on 6th day, change in taste on 7th day, on 8th day it becomes rancid, following 9th day fungus formation and on the 10th day the prepared product get

completely spoiled. Regarding refrigeration temperature storage, the prepared products have positive effect till 7th day, but on continuous storage naturally it changes its colour, taste and flavor on 8th, 9th and 10th day.

Shelf life study of the prepared product using jaggerysyrup (Sugarcane)

Table No 3: Shelf life study of the prepared product using jaggerysyrup (Sugarcane)

Days	Product incorporated using jaggerysyrup (Sugarcane)	
	Room Temperature	Refrigeration Temperature
1	No change	No change
2	No change	No change
3	No change	No change
4	No change	No change
5	No change	No change
6	Change in colour	No change
7	Change in flavour	No change
8	Fruity smell	No change
9	Change in taste	No change
10	Fungus formation	No change

Regarding refrigeration temperature storage, the prepared products have positive effect till 10th day. Regarding room temperature storage, the prepared product have positive effect till 5th day, but on continuous storage naturally it changes its colour on 6th day, change in flavour in 7th day, fruity smell on 8th day, following 9th day change in taste and on the 10th day the prepared product get fungus formation. The above results may be due to hot melted jaggery(sugarcane) syrup which acts as a binding factor and acts as a preservation factor.

SUMMARY AND CONCLUSION

The product calcium rich balls prepared with powdered jaggery (sugarcane) has an overall acceptability of 3.9.The product prepared with jaggery syrup (sugarcane) has an overall acceptability of 4.2.The above results may be due to hot melted jaggery (sugarcane) syrup which acts as a binding agent and acts as a preservation factor.More over the consumption of calcium rich ball provides the following health benefits.

1. To build and maintain healthy bone and teeth.
2. A good supplementation for person whose taking vegan diets and allergic in dairy products.
3. Promote bone health during pregnant and lactating mother who need more calcium.
4. Lower blood pressure in sports person.
5. Good nutritious food for children to strengthen the bone and teeth
6. Strengthen the bones of adolescent girls.
7. To reduce osteoporosis among menopause women and elderly person.

ACKNOWLEDGEMENT

The authors thank Mr.S.M.Prasad, Assistant Professor, Department of Nutrition and Dietetics, SadakathullahAppa College, Rahmath Nagar, Tirunelveli, Tamil Nadu, India for his timely help and valuable suggestions.

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International Journal of Food Science and Nutrition
ISSN: 2455-4898; Impact Factor: RJIF 5.14
Received: 03-01-2021; Accepted: 18-01-2021; Published: 27-02-2021
www.foodsciencejournal.com
Volume 6; Issue 1; 2021; Page No. 89-91

Bilimbi: The underutilized fruit of South India

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Abstract
India is a country with rich heritage and lot of flora and fauna. India's economy mainly depends upon agriculture and Indian agricultural products have a very good demand over world market. Many of the locally available fruits and vegetables go unnoticed in many states. They become underutilised due to the lack of awareness about its nutritional, health benefits and preservations techniques. In this review paper the authors focuses about the features of the underutilised fruit bilimbi.
Keywords: Bilimbi pickle, culinary uses, phytochemicals, recipes

Introduction
Bilimbi is considered to the native of South East Asia, now it has been cultivated all over the world. Due to increased population and lack of agricultural facilities these plant is now recognised and comes under underutilised plant. Earlier it is cultivated in countries like Srilanka, Asia, Malaysia and Maldives. Now it has been a question that many people in Asia were not aware of this perianal tree. The reason behind this is many farmers do not grow this tree in their farms. The tree is found in some parts of Indian villages. In India this tree is observed in North and South India. In South India certain parts of Kerala and Tamil Nadu these tree is grown and called as sour tree (Pulichi Maram in Malayalam Language).

Common Names
1. Pickle tree
2. Sour tree
3. Cucumber tree
4. Bilimbi
5. Irumban Puli in Malayalam Language
6. Pulichikai in Tamil Language

Morphology of Bilimbi
Plant
Bilimbi is a perennial tree which grows up to a height of nearly 15 meters. It can grow in any type of soil, but the pH must be in between 5.5 to 6.5.It needs less water to grow.

Bilimbi Leaves
Bilimbi leaves are green in colour on the top and pale green colours in bottom. Leaves are densely crowded and long. Leaves emerge at opposite directions and are distributed evenly.

Bilimbi Flowers
Bilimbi flowers are reddish purple in colour with five petals. They bloom in the month of December and February.

Fig 1: Bilimbi Leaves

Fig 2: Bilimbi Flowers

Fig 3: Bilimbi Fruits

Bilimbi Fruits

Bilimbi fruit is always sour in taste, extremely acidic and astringent. The fruit is sour because it contain high amount of oxalic acid and Vitamin C. The fruit is preserved by sun drying in many countries. Fruits of bilimbi are available throughout the year. The tree yields thousands of fruit in a year. When the fruit is unripe Ned it is crunchy in taste and when it gets matured and ripe the fruit changes in to bright green to yellowish. Once it gets ripe it falls on the ground. Seeds are brown in colour. Besides its refreshing aroma and zesty taste, the bilimbi fruit confers umpteen benefits for human health such as managing diabetes, treating hypertension, remedying hemorrhoids, strengthening bones and soothing cough and cold (Kalyani Krishnan,2020) [2]

Bilimbi fruit may be stored for up to one week in the refrigerator. (www.specilaityproduce.com). Freshly made concentrated juice has a very high oxalic acid content and consumption carries a high risk of developing acute renal failure (ARF) by deposition of calcium oxalate crystals in renal tubules.(Bakul *et al*.,2013) [1]

Major Nutrients Present in Bilimbi Fruit

1. Calcium
2. Dietary Fibre
3. Iron
4. Oxalic Acid
5. Phosphorus
6. Protein
7. Vitamin B_2
8. Vitamin B_3
9. Vitamin C

Phytochemicals Present in Bilimbi Fruit

1. Alkaloids
2. Coumarins
3. Emodins
4. Flavonoids
5. Glycosides
6. Saponins
7. Tannins
8. Terpenoids

Culinary Uses of Bilimbi Fruit

Pickle and Fish Curry

In Kerala it is used for making pickles and to make fish curry, especially with Sardines, while around Karnataka, Maharashtra and Goa the fruit is commonly eaten raw with salt and spice (www.en.wikipedia.org)

As Preserve

Fig 4: Dried Bilimbi Preserve

Sun dried bilimbis are used as a preserve

Salads

Used in salads

As a Substitute

As a substitute for tomatoes and tamarind

Recepies from Bilimbi Fruit

The fruits were examined for any damage and bruises. All dirty things impurities and foreign materials were removed. Washed it thoroughly in luke warm water.

A. Bilimbi pickle (pulichikai achaar)

Fig 5: Bilimbi Pickle

Ingredients Needed

Table 1: Ingredients Needed For Bilimbi Pickle

S.No	Particulars	Amount
1	Bilimbi	250 g
2	Chilli Powder	3 tsp
3	Asafoetida	½ tsp
4	Gingerly oil	50 ml
5	Salt	To taste
6	Mustard Seeds	½ tsp
7	Fenugreek Seeds	¼ tsp
8	Turmeric Powder	½ tsp

Procedure for Preparation
1. Select unripe bilimbi fruit
2. See whether the fruit is damaged and bruised
3. After selection wash it in running water to avoid dirt or impurities
4. With a help of a knife cut it in to small pieces
5. Take it in a bowl and add salt to set it
6. Leave the bowl for two days
7. Once salt sets in to the fruit, drain the water separately
8. Take a pan and pour gingelly oil and heat it
9. Add mustard seeds and curry leaves
10. Once it burst, add chilli powder, fenugreek powder, asafoetida powder to the pan and mix well with the drained water.
11. Leave the spice mixture to get cool. wait and then add spice mixture to bilimbi pickle mix
12. Store in an airtight container and refrigerate.

B. Bilimbi juice (pulichikai juice)

Fig 6: Bilimbi Juice

Ingredients Needed

Table 2: Ingredients Needed For Bilimbi Juice

S.No	Particulars	Amount
1	Bilimbi	250 g
2	Sugar	325 g
3	Ginger	2 Pieces
4	Salt	A pinch

Procedure for Preparation
1. Select unripe bilimbi fruit
2. See whether the fruit is damaged and bruised
3. After selection wash it in running water to avoid dirt or impurities
4. With a help of a knife cut it in to small pieces
5. Put bilimbi and along with ginger in a mixer and grind well
6. Squeeze out the juice from the pulp
7. Take a pan and pour the juice add sugar and a pinch of salt to it
8. Boil the mixer and allow it to cool
9. Store it in an airtight container and when needed it can be dilute with water

Medicinal Benefits of Bilimbi
Bilimbi and Fever
The high vitamin C in this fruit helps strengthen the immune system helping to fight against the fever (Teresa Thomas, 2017) [7].

Bilimbi and Veneral Diseases
In Malaysia the leaves of bilimbi are used as a treatment for venereal diseases (www.flowersofindia.net)

Bilimbi and Muscle Pain
Leaves of the bilimbi tree are pounded and turned either into a paste or poultice, which may then be applied directly on painful muscles. Unlike conventional painkillers and non-steroidal anti-inflammatory drugs, bilimbi leaves help ease muscle pain without causing unfavorable side effects. (www.helathbenefits.com)

Conclusion
The versatile tree bilimbi goes unnoticed in many regions. Some study reveals that the consumptions of bilimbi fruit may produce oxalate stones when consumed raw, but the fruit when preserved can be a source of income generation to the local farmers.

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International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

A Creeper Vegetable with Amazing Health Benefits

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ABSTRACT

In ancient Ayurveda all plants have occupied a good position in the medicinal preparation. It doesn't bother whether the plant has good fragrance, colour or taste. Each and every plant by nature varies. Some plants might possess good smell while other tastes bitter. Our ancestors have found a creeper variety of plant calledPirandai (Cissusquadrangularis)as an excellent creeper plant with amazing nutritional as well as medicinal benefits, which are considered to be remarkable. Many studies have suggested the use of these plants in medicinal, culinary as well as therapeutic preparation. In this article the author describes a short note on the uses of pirandai.

Keywords: Cissusquadrangularis,Nutritional Properties, Medicinal Benefits, Culinary Uses**,**

1 INTRODUCTION

Fig No: 1 **Fig No: 2** **Fig No: 3**

Leaves of *CissusquadrangularisCissusquadrangularis* creeper*Cissusquadrangularis*stem

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Commonly known as adamant creeper, square stalked vine, veldt grape and devils back bone in English as well as regional names such as hadhoj or bone setter,Pirandai.The *Cissusquadrangularis* is a resilient succulent vine, that is distinct in its appearance as its wide ranging ethno medical properties **(JehanNizar, 2020).** The wealth of nutrition that exists in the flora and fauna around us must be chronicled and taught to our children. It's very hardy and grows quickly. When exposed to sunlight, it requires almost no maintenance and is resistant to pest attacks **(ShanthiniRajkumar, 2018).**

This pirandai is largely available in India.With its medicinal value,this is grown in dense forests known as "patrai forest" where movement of people is rather limited .Its stem and root parts are only used for medicinal purposes**(https://www.santhionlineplants.com/product/pirandai-herbal-plant/).**

Pirandai has long, slender, quadrangular stems averaging around of 1 meter in length and 1-2 centimeters in diameter. The green stems are rubbery to the touch and are thick and succulent. Each stem is segmented by many nodes with small leaves and curly tendrils may appear at the tips of the stem. When pirandai stems are peeled, they reveal a bright jelly like flesh. Pirandai is tender with a pungent smell and highly acidic flavor (https://www.specilaityproduce.com)

2 NUTRITIONAL PROPERTIES

Pirandai is a rich source of vitamin C and Vitamin E. In 100 gof Pirandai 327 mg Vitamin C and 696 mg of Vitamin E are present. It is an antioxidant containing flavonoids and quercetin. The herb is also a rich source of calcium that helps in strengthening the bones **(RamyaSrinivasan, 2016).**

3 MEDICINAL BENEFITS

Cissusquadrangularis is a plant that is rich in vitamins and antioxidants. It has been used to treat an array of health condition for centuries and today its extracts are widely available in herbal supplements **(Rachael Link, 2019).**It will help in the removal of blocks in blood vessels so that the blood circulation to the heart will be regular. Heart function will be normal and effective. Prandai paste will be ideal for bone fracture to become normal. The ripe stem can be mixed with the tamarind and salt and the powdered form can be heated and when it warm, it can also be extremely applied on the part of fractured bone or catch or on the swollen part to become normal **Pachampet Ramamurthy(2017).**

4 CULINARY USES

Though the folk refers to keerai, it's very different from the spinach. Pirandai can be used in to different ways. It's delicious in chutney or can even be made in to pickle. In earlier times, the famous kallidaikurichiappalam were much sought after for their unique taste, which is due to the addition of the pirandai juice **(ShanthiniRajkumar, 2015).**

5 CONCLUSION

More studies and research work must put in forward to cultivate the use of these plants.Allof us know the importance of these grave yard plant, but people hesitate to use this in their diet. Some people hailing from villages even don't use this plant due to the lack of awareness and limited resources, thinking is a wild creeper. Steps must be taken to cultivate in large scale since it is having amazing calcium content. In future it can be a part of every one's life.

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