



जेठो इगो झुणुणवेडर

Sri Adichunchanagiri Shikshana Trust [R]
Adichunchanagiri Institute of Medical Sciences

Department of Community Medicine



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Cohort

Biannual Departmental Newsletter

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Department of Community Medicine



EDITORIAL

We are greatly pleased to bring out another edition of the newsletter "Cohort" from Department of Community Medicine, AIMS.

We would like to thank The Management, The Principal, Colleagues and our Postgraduate and Undergraduate students for their constant support and feedback in all the activities and endeavors planned and executed by the department.

We are pleased to inform that students who took up the Final M.B.B.S, Phase I exams in the month of December 2015 have passed Community Medicine with flying colours.

The department also organized a Jatha on account of World population day 2015 in the S.A.C.A.S college premises, Nagamangala. World AIDS day 2015 was observed with Health education and Quiz programme for students in Sri Bhakthanatha PU College, B.G.Nagara.

This issue of "Cohort", our biannual newsletter starts off providing a brief report on the Jatha and AIDS day programmes conducted by the department and includes an overview on "Dietary fibers, Antioxidants and its role in health", followed by the burning topic of "Anemia" explained in simple words for the layman. The issue ends showcasing the various research activities performed in the department and by an article on "Healthy Diet – Goals, Guidelines; Hypertensive & Diabetic Diet".

The previous edition was well received and appreciated. We welcome feedback, both positive and also negative, if any, to improve the quality of our future newsletters. We hope you enjoy reading this newsletter as much we enjoyed preparing it.

Dr Basavaraj M Ingalgeri

Professor and Head
Department of Community Medicine

REPORT ON JAATHA HELD ON WORLD POPULATION DAY

A rally was organized by the Department of Community Medicine with the students of Adichunchanagiri Institute of Medical Sciences, B.G. Nagara and the students of Sri Adichunchanagiri College of Arts & Science, Nagamangala town on 11.07.2015. The rally was flagged off by Prof. Ramu, Principal, Sri Adichunchanagiri College of Arts & Science, Nagamangala at 10.30 AM from the S.A.C.A.S college premises. The rally entered the main road (Mysore Tumkur road), crossed the KSRTC bus stand & took a U turn at Mandya circle to return to the college.

On the way, pamphlets, handouts, book markers were distributed to the public. Placards with slogans on the problem of population explosion & its ill effects were held by the students during the rally. Students also shouted slogans using megaphones about the problem of population explosion. As it was a major highway of the state, lot of buses plyed on the road & the commuters were also educated. The rally concluded at the college ground after covering a distance of about 5 kilometers at around 1 pm. All students were served with refreshments.

Dr Shashikiran M, Associate Professor, Dept of Community Medicine, AIMS & Prof. Ramu G C, Principal, S.A.C.A.S, Nagamangala, spoke on the occasion with regards to the problem of population explosion and ways & means to control it.

Dr Shashikiran.M,
Associate Professor
Department of Community Medicine

REPORT ON WORLD AIDS DAY CELEBRATION

The Department of Community Medicine organised an awareness and health education for the adolescent students in Sri Bhakthanatha PU College, B.G.Nagara on the occasion of World AIDS Day 2015 on 21 December 2015.

Around 700 students benefited from the programme. The programme was started by an introduction regarding HIV and AIDS, followed by Quiz regarding knowledge about HIV & AIDS for PUC students. Health education was given by audio visual presentation followed by group discussion with the students by individual staff members.

Poster competition was also organised for III term MBBS students on the same occasion.



Dr Shashank K J,
Assistant Professor
Department of Community Medicine

DIETARY FIBRES, ANTIOXIDANTS AND ITS ROLE IN HEALTH

What is Dietary fibre

- The edible parts of plants or analogous carbohydrates that are resistant to digestion and absorption in the human small intestine, with complete or partial fermentation in the large intestine.

Dietary fibre includes polysaccharides, oligosaccharides, lignin and associated plant substances.

Natural sources of various components of dietary fibre

- **Cellulose** - Vegetables, woody plants, cereal brans
- **Hemicellulose** - Cereal grains
- **Lignin** - Cereal brans, rice and legume hulls, woody plants
- **β-glucans** - Grains (oats, barley, rye, wheat)
- **Pectins** - Fruits, vegetables, legumes, sugar beet, potato
- **Gums** - Legumes, seaweed, micro-organisms(guar, locust bean, carrageenan, xanthan, gum arabic)
- **Inulin and oligofructoses / fructooligosaccharides** - Chicory, Jerusalem artichoke, onions
- **Oligosaccharides** - Human milk, grain legumes
- **Resistant starches** - whole grain cereals, maize, green bananas, raw potatoes

In what way dietary fibres help our body?

- Non-digestibility in the small intestine is a key physiological characteristic of dietary fibre.

Dietary fibre generally has properties such as:

- Decrease intestinal transit time and increase stool bulk
- Fermentable by colonic microflora
- Reduce blood total and/or LDL cholesterol levels
- Reduce post-prandial blood glucose and/or insulin levels.

So improvements in large bowel function, lowering of blood cholesterol, and attenuation of post-prandial blood glucose and insulin levels.

How much dietary fibre we should take daily?

- 25-30 g/day

How should we take - Dietary or supplementation?

- Ideally as a part of Balanced Diet for normal people

Excessive overenthusiastic intake causes

1. **Compromised energy intake in** very young or very old persons, such diets will potentially satisfy appetite too readily and therefore make it difficult to achieve adequate intakes of energy and nutrients.
2. **Decreased mineral bioavailability** especially Iron, calcium, magnesium and Zinc
3. **Gastrointestinal discomfort** when dietary fibre is consumed at very high levels (75-80 g/day).

ANTIOXIDANTS

Are the substances which reduces the oxidative stress produced in the human body due to reactive oxygen species(ROS)/free radicals.

Examples: Vitamins C and E, selenium, and carotenoids, such as beta-carotene, lycopene, lutein, and zeaxanthin.

What are ROS/free radicals

- Free radicals are highly unstable molecules that are naturally formed when our body converts food into energy, when we exercise and when our body is exposed to variety of environmental sources, such as pollution, pesticides, insecticides, medications, stress, food additives, smoking*, sunlight, chlorine, even exercise.

What free radicals do to our body?

- Free radicals can cause “oxidative stress,” a process that can alter and destroy cells and damage DNA.

Damaged cells contribute to premature ageing, sickness and disease, such as Cancer, Heart Disease, Rheumatoid Arthritis, Osteoporosis, Parkinson’s disease Alzheimer’s, Autism and Chronic Fatigue Syndrome

How to counteract the effects of free radicals? - ANTIOXIDANTS

- Antioxidant molecules have been shown to counteract oxidative stress in laboratory experiments (for example, in cells or animal studies). However, there is debate as to whether consuming large amounts of antioxidants in supplement form actually benefits health. There is also some concern that consuming antioxidant supplements in excessive doses may be harmful.

Where can you get antioxidants?

- Some antioxidants are to be found in the body but most come from fruits and vegetables and are also found in such foods as nuts, oils, beans and some spices.

Balanced Diet not the supplements is the KEY

- Regular consumption of various fresh fruits and vegetables, whole grains, legumes and beans, sprouts and seeds is an effective and safe way to meet all antioxidant requirements in physically active persons.

Dr Radha R,
Associate Professor
Department of Community Medicine

ANAEMIA

Anaemia is a condition in which the number and size of red blood cells or the haemoglobin concentration, falls below an established cut off value, consequently impairing the capacity of the blood to transport oxygen around the body.

Anaemia is an indicator of both poor health and poor nutrition. Anaemia affects half a billion women of reproductive age worldwide. At present 29% of non-pregnant women and 38% of pregnant women are found to be anaemic.

What causes Anaemia?

1. The most common cause of anaemia worldwide is iron deficiency, resulting from prolonged negative iron balance, caused by inadequate dietary iron intake or absorption, increased needs for iron during pregnancy, growth periods, increased losses as a result of menstruation and helminth infestation.
2. Other important causes of anaemia include infections, nutritional deficiency (folate, vit B12), genetic conditions (sickle cell disease, thalassemia).
3. Anaemia is common in severe malaria and may be associated with secondary bacterial infection.
4. Pregnant adolescents are more vulnerable to anaemia because they have dual iron requirements, for their own growth and the growth of the fetus, and are less likely to access ante natal care.

Important interventions for prevention and control of anaemia:

1. A diet containing adequate amount of bioavailable iron should be recommended.
2. Intermittent iron and folic acid supplementation should be advised in menstruating women living in settings where the prevalence of anaemia is 20% or higher.
3. Fortification of wheat and maize flour with iron, folic acid and other micro nutrients should be advised in settings where these foods are major staples.
4. In malaria endemic areas, the provision of iron and folic acid supplementation should be made in conjunction with public health measures to prevent, diagnose and treat malaria.

5. Late cord clamping (not earlier than 1 min after birth) is recommended for improved maternal and infant health and nutrition outcomes.
6. Exclusive breast feeding of infants upto 6 months of age should be promoted and supported.
7. Deworming: periodic treatment with antihelminthic, for all women of child bearing age living in endemic areas.
8. Daily oral iron and folic acid supplementation should be recommended as part of antenatal care, to reduce the risk of low birth weight, maternal anaemia. In addition, supplements may be formulated to include other vitamins and minerals, according to United Nations Multiple Micronutrient Preparation, to overcome other possible maternal micronutrient deficiency.
9. Basic hygiene reduces the risk of infection; therefore, water and sanitation interventions can be integrated in order to reduce nutritional losses incurred by infection.
10. Health education must encompass the component of reproductive health and family planning services for women and adolescent girls to encourage dialogue and promote adequate birth spacing.

Dr Sabariraj N, Dr Chandrasekar C J, Dr Srividya J,
Postgraduates,
Department of Community Medicine

PUBLICATIONS BY STAFF & PG STUDENTS

1. Sheethal MP, Mahendra B J, Harish BR. Assessment of Quality of Life (QOL) In Known Hypertensive Workers of Karnataka State Road Transport Corporation (KSRTC), Mandya District. International Journal of Medical Science and Public Health. 2015;4(10).
2. Sheethal M P, Shashikantha S K. Knowledge, Attitude and Practice Regarding Food Safety Among the Anganwadi Workers in Mandya District. International Journal of Health Sciences and Research (IJHSR). 2015;5(8):28-32.
3. Shashank K J, Angadi MM. Gender Differences in Nutritional Status Among Under Five Children in Rural Areas of Bijapur District, Karnataka, India. International Journal of Community Medicine and Public Health. 2015;2(4):506-9.
4. Shashank K J, Angadi MM. A Study to Evaluate the Knowledge of ASHA Workers On Antenatal and Postnatal Care in Bijapur District. International Journal of Research in Medical Sciences. 2015;3(9):2299-302.
5. Shashank K J, Angadi MM. Impact of Gender and Mother Education Status On the Immunization Status of Children in Rural Areas of Bijapur District, Karnataka, India. International Journal of Community Medicine and Public Health. 2015;2(4):672-6.
6. Shashank K J, Angadi MM. Gender Disparity in Health and Nutritional Status Among Under-Five Children in A Rural Field Practice Area of Shri BM Patil Medical College. International Journal of Medical Science and Public Health. 2016;5(2).
7. Shashank K J, M M Angadi. Assessment of Role and Responsibilities of ASHA Workers in Bijapur Taluk of Karnataka. Indian J.Pharm.Biol.Res.2015;3(2):78-80.

8. Udgiri R, Shashank K J, Sorganvi V. Breast Feeding Practices Among Postnatal Mothers - A Hospital Based Study. Journal of Advanced Scientific Research. 2015 Feb 1;6(1).
9. Angadi MM, Shashank K J. Gender Discrimination in Relation to Breast Feeding Practices in Rural Areas of Bijapur District, Karnataka. International Journal of Contemporary Pediatrics. 2015;2(4):340-4.

CONFERENCES ATTENDED

1. 26th KACHCON, conference of Karnataka Association of Community Health hosted in Yenapoya Medical College, Mangalore on 30 and 31st October was attended by Dr Shashikiran, Dr Shashikanth, Dr Sheethal, Dr Shashank. Dr Sabari, Dr Chandrashekhar and Dr Srividya.
2. "International Conference of Health, Food, Energy, Security (ICHFES 2015)" in Pondicherry was attended by Dr Shashikant, Dr Sheethal, Dr Shashank, Dr Sabari in October 2015.

PAPERS PRESENTED

1. Gender Difference in Nutritional Status among Under-five Children in Rural Areas of Bijapur District, Karnataka. (Oral paper at KACHCON by Dr Shashank K J)
2. Gender Difference in Perception and Care Seeking for Illness Under-five Children in Rural Areas of Bijapur District, Karnataka. (Oral paper at ICHFES 2015 by Dr Shashank K J)
3. Awareness Regarding Food Safety Among The Anganwadi Workers in Mandya District, Karnataka (at ICHFES by Dr Shashikantha S K)
4. Dietary Diversity and Nutritional Status of Women in a Rural Area of South India. (at KACHCON by Dr Shashikantha S K)
5. Assessment of QOL among KSRTC workers with diabetes in Mandya District (at ICHFES by Dr Sheethal M P)
6. A Cross Sectional Study on the Coverage and Utilisation of Sanitary Latrine in Rural Field Practice Area of a Tertiary Care Hospital (at KACHCON by Dr Sheethal M P)

HEALTHY DIET – GOALS, GUIDELINES; HYPERTENSIVE & DIABETIC DIET

DIETARY GOALS

1. Maintenance of a state of positive health and optimal performance in populations at large by maintaining ideal body weight.
2. Ensuring adequate nutritional status for pregnant women and lactating mothers.
3. Improvement of birth weights and promotion of growth of infants, children and adolescents to achieve their full genetic potential.
4. Achievement of adequacy in all nutrients and prevention of deficiency diseases.
5. Prevention of chronic diet-related disorders.
6. Maintenance of the health of the elderly and increasing the life expectancy.

DIETARY GUIDELINES

Right nutritional behavior and dietary choices are needed to achieve dietary goals. The following 15 dietary guidelines provide a broad framework for appropriate action:

1. Eat variety of foods to ensure a balanced diet.
2. Ensure provision of extra food and healthcare to pregnant and lactating women.
3. Promote exclusive breastfeeding for six months and encourage breastfeeding till two years or as long as one can.
4. Feed home based semi solid foods to the infant after six months.
5. Ensure adequate and appropriate diets for children and adolescents, both in health and sickness.
6. Eat plenty of vegetables and fruits.
7. Ensure moderate use of edible oils and animal foods and very less use of *ghee/ butter/ vanaspati*.
8. Avoid overeating to prevent overweight and obesity.
9. Exercise regularly and be physically active to maintain ideal body weight.

10. Restrict salt intake to minimum.
11. Ensure the use of safe and clean foods.
12. Adopt right pre-cooking processes and appropriate cooking methods.
13. Drink plenty of water and take beverages in moderation.
14. Minimize the use of processed foods rich in salt, sugar and fats.
15. Include micronutrient-rich foods in the diets of elderly people to
16. enable them to be fit and active.

What is a Healthy Diet?

A healthy diet is a way of eating that that reduces risk for complications such as heart disease and stroke.

Food Pyramid



Abstain from drinking alcohol



Say NO to Tobacco

Healthy eating includes eating a wide variety of foods including:

- vegetables
- whole grains
- fruits
- non-fat dairy products
- beans
- lean meats
- poultry
- fish

There is no one perfect food so including a variety of different foods and watching portion sizes is key to a healthy diet. Also, make sure your choices from each food group provide the highest quality nutrients you can find. In other words, pick foods rich in vitamins, minerals and fiber over those that are processed.

People with diabetes can eat the same foods the family enjoys. Everyone benefits from healthy eating so the whole family can take part in healthy eating. It takes some planning but you can fit your favorite foods into your meal plan and still manage your blood glucose, blood pressure and cholesterol.

COMPLEMENTARY FOODS FOR INFANTS

1. Rice ... 35 g
Green gram dhal ... 10 g
Leafy vegetables ... 2 t.sp
Fat ... 2 t.sp
Cumin (jeera)

Method: Clean rice and dhal and cook them in water with salt till the grains are soft and water is absorbed. Leafy vegetables can be added when the cereal/pulse is 3/4th done. Cumin is fried in fat and added towards the end.

2. Malted Ragi ... 30 g
Roasted Groundnut ... 15 g
Jaggery ... 20 g

Method: Malted ragi, roasted groundnuts and jaggery are powdered. Sufficient water is added and cooked.

3. Wheat ... 30 g

Roasted Bengal gram flour ... 15 g
Roasted & crushed Groundnut ... 5 g
Sugar ... 15 g

Method: Roast whole wheat and powder. Add roasted Bengal gram flour, groundnut and sugar. Cook with sufficient water.

4. Vermicelli/Rice ... 30 g
Milk ... 100 ml.
Water ... As required
Jaggery ... 20 g

Method: Boil rice/vermicelli in water till half done. Add milk and bring to boil. Add jaggery and cook well.

Note:

- a. All these recipes provide approximately 250 Kcals. and 5 g proteins and amounts given are for 2 servings.
- b. Recipes Nos.2 and 3 can be prepared and stored in airtight containers to be used whenever required.
- c. Non-vegetarian foods such as soft boiled egg, minced meat may be introduced at the age of 6 months.

(P.T.O)

Sample Meal Plan for Adult Man (Sedentary)

| Meal Time | Food Group | Raw | Cooked Recipe | Servings Amounts |
|------------------|-------------|----------|----------------|------------------|
| Breakfast | Milk | 100 ml | Milk | 1/2 Cup |
| | Sugar | 15 g | Tea or Coffee | 2 Cups 1 Cup |
| | Cereals | 70 g | Breakfast Item | |
| | Pulses | 20 g | | |
| Lunch | Cereals | 120 g | Rice | 2 Cups |
| | | | Pulkas | 2 Nos. |
| | Pulses | 20 g | Dhal | 1/2 Cup |
| | Vegetables | 150 g | Veg. curry | 3/4 Cup |
| | Vegetables | 50 g | Veg. salad | 7-8 Slices |
| Tea | Milk | 100 ml | Curd | 1/2 Cup |
| | Cereals | | | |
| | Milk | 50 ml | Tea | 1 Cup |
| Dinner | Sugar | | | |
| | Cereals | 120 g | Rice | 2 Cups |
| | | | Pulkas | 2 Nos. |
| | Pulses | 20 g | Dhal | 1/2 Cup |
| | Vegetables | 150 g | Veg. curry | 3/4 Cup |
| | Milk (Curd) | 50 ml | | |
| | Vegetables | 50 g | | |
| Fruit | 100 g | Seasonal | 1 Medium | |

1 Cup = 200 ml

Note: For Non-Vegetarians - Substitute one pulse portion with one portion of egg/meat/chicken/fish

Use 25 g visible fat and <5g salt during preparation of meal per day.

Breakfast Items: Idli - 4 Nos. / Dosa - 3 Nos. / Upma - 1-1/2 Cup / Bread - 4 Slices/
Porridge - 2 Cups / Corn flakes with milk - 2 Cups.

Snacks: Poha - 1 Cup / Toast - 2 Slices
Dhokla - 4 Nos.

Sample Meal Plan for Adult Woman (Sedentary)

| Meal Time | Food Group | Raw | Cooked Recipe | Servings Amounts |
|------------------|-------------|--------|----------------|------------------|
| Breakfast | Milk | 100 ml | Milk or | 1/2 Cup |
| | Sugar | 10 g | Tea or | 2 Cups |
| | | | Coffee | 1 Cup |
| | Cereals | 50 g | Breakfast Item | |
| | Pulses | 20 g | | |
| Lunch | Cereals | 100 g | Rice | 1 Cup |
| | | | Pulkas | 2 Nos. |
| | Pulses | 20 g | Dhal | 1/2 Cup |
| | Vegetables | 100 g | Veg. curry | 1/2 Cup |
| | Vegetables | 50 g | Veg. salad | 7-8 Slices |
| | Milk | 100 ml | Curd | 1/2 Cup |
| Tea | Cereals | 50 g | Snack | |
| | Milk | 50 ml | Tea | 1 Cup |
| | Sugar | 10 g | | |
| Dinner | Cereals | 100 g | Rice | 1 Cup |
| | | | Phulkas | 2 Nos. |
| | Pulses | 20 g | Dhal | 1/2 Cup |
| | Vegetables | 100 g | Veg. curry | 1/2 Cup |
| | Milk (Curd) | 50 ml | | |
| | Vegetables | 50 g | | |
| | Fruit | 100 g | Seasonal | 1 Medium |

1 Cup = 200 ml

Note: For Non-Vegetarians - Substitute one pulse portion with one portion of egg/meat/chicken/fish

Use 20 g visible fat and <5g salt during preparation of meal per day.

Breakfast Items: Idli - 3 Nos. / Dosa - 2 Nos. / Upma - 1 Cup / Bread - 3 Slices / Porridge - 1-1/2 Cups / Corn flakes with milk - 1-1/2 Cup.

Snacks: Poha - 1 Cup / Toast - 2 Slices
Dhokla - 4 Nos.

Approximate Calorific Value of Nuts, Salads and Fruits

| | Portion | Calories |
|-----------------------------|----------|----------|
| Nuts | | |
| Almonds | 10 Nos. | 85 |
| Cashewnuts | 10 Nos. | 95 |
| Coconut (fresh) | 100 g | 444 |
| Coconut (dry) | 100 g | 662 |
| Peanuts | 50 Nos. | 90 |
| Fresh fruits | | |
| Apple | 1 medium | 65 |
| Banana | 1 medium | 90 |
| Grapes | 30 Nos. | 70 |
| Guava | 1 medium | 50 |
| Jackfruit | 4 pieces | 90 |
| Mango | 1 medium | 180 |
| Mosambi/orange | 1 medium | 40 |
| Papaya | 1 piece | 80 |
| Pineapple | 1 piece | 50 |
| Sapota | 1 medium | 80 |
| Custard apple | 1 medium | 130 |
| Watermelon/muskmelon | 1 slice | 15 |
| Salads | | |
| Beetroot | 1 medium | 30 |
| Carrot | 1 medium | 70 |
| Cucumber | 1 medium | 12 |
| Onion | 1 medium | 25 |
| Radish | 1 medium | 10 |
| Tomato | 1 medium | 10 |

Vegetables and Fruits with High Calorie Value (≥ 100 Kcal)

| Food Stuff | Kcal/100g |
|---------------------------------|------------------|
| Leafy vegetables | |
| Chekkur manis | 103 |
| Colocasia leaves (dried) | 277 |
| Curry leaves | 108 |
| Fetid cassia (dried) (Chakunda) | 292 |
| Rape leaves (dried) | 297 |
| Tamarind leaves | 115 |
| Roots & Tubers | |
| Arrow root flour | 334 |
| Parsnip | 101 |
| Sweet potato | 120 |
| Tapioca | 157 |
| Yam ordinary | 111 |
| Yam wild | 110 |
| Other vegetables | |
| Beans, scarlet runner | 158 |
| Jack fruit, seeds | 133 |
| Karonda (dry) | 364 |
| Lotus stem (dry) | 234 |
| Sundakai (dry) | 269 |
| Water chestnut (fresh) | 115 |
| Water chestnut (dry) | 330 |
| Fruits | |
| Apricot (dry) | 306 |
| Avacado pear | 215 |
| Banana | 116 |
| Bael fruit | 116 |
| Currants, red | 316 |
| Dates (dried) | 317 |
| Dates fresh | 144 |
| Mahua (ripe) | 111 |
| Raisins | 308 |
| Seetaphal | 104 |
| Wood apple | 134 |

Approximate Calorific Value of Some Cooked Preparations

| Preparation | Quantity for one serving | Calories (Kcal) |
|--|--------------------------|-----------------|
| 1. Cereal | | |
| Rice | 1 cup | 170 |
| Phulka | 1 No. | 80 |
| Paratha | 1 No. | 150 |
| Puri | 1 No. | 80 |
| Bread | 2 slices | 170 |
| Poha | 1 cup | 270 |
| Upma | 1 cup | 270 |
| Idli | 2 Nos. | 150 |
| Dosa | 1 No. | 125 |
| Kichidi | 1 cup | 200 |
| Wheat porridge | 1 cup | 220 |
| Semolina porridge | 1 cup | 220 |
| Cereal flakes with milk (corn/wheat/rice) | 1 cup | 220 |
| 2. Pulse | | |
| Plain dhal | ½ cup | 100 |
| Sambar | 1 cup | 110 |
| 3. Vegetable | | |
| With gravy | 1 cup | 170 |
| Dry | 1 cup | 150 |
| 4. Non-Vegetarian | | |
| Boiled egg | 1 No. | 90 |
| Ommelette | 1 No. | 160 |
| Fried egg | 1 No. | 160 |
| Mutton curry | ¾ cup | 260 |
| Chicken curry | ¾ cup | 240 |
| Fish fried | 2 big pieces | 190 |
| Fish cutlet | 2 Nos. | 190 |
| Prawn curry | ¾ cup | 220 |
| Keema kofta curry | ¾ cup (6 small koftas) | 240 |

| Preparation | Quantity for one serving | Calories (Kcal) |
|-------------------------------|--------------------------|-----------------|
| 5. Savoury snacks | | |
| Bajji or pakora | 8 Nos. | 280 |
| Besan ka pura | 1 No. | 220 |
| Chat (Dahi-pakori) | 5 pieces | 220 |
| Cheese balls | 2 Nos. | 250 |
| Dahi vada | 2 Nos. | 180 |
| Vada | 2 Nos. | 140 |
| Masala vada | 2 Nos. | 150 |
| Masala dosa | 1 No. | 200 |
| Pea-kachori | 2 Nos. | 380 |
| Potato bonda | 2 Nos. | 200 |
| Sago vada | 2 Nos. | 210 |
| Samosa | 1 No. | 200 |
| Sandwiches (butter- 2tbsp) | 2 Nos. | 200 |
| Vegetable puff | 1 No. | 200 |
| Pizza (Cheese and tomato) | 1 slice | 200 |
| 6. Chutneys | | |
| Coconut/groundnuts/til | 2 tbsp | 120 |
| Tomato | 1 tbsp | 10 |
| Tamarind (with jaggery) | 1 tbsp | 60 |
| 7. Sweets and Desserts | | |
| Besan barfi | 2 small pieces | 400 |
| Chikki | 2 pieces | 290 |
| Fruit cake | 1 piece | 270 |
| Rice puttu | ½ cup | 280 |
| Sandesh | 2 Nos. | 140 |
| Double ka meetha | ½ cup | 280 |
| Halwa (kesari) | ½ cup | 320 |
| Jelly/Jam | 1 tbsp | 20 |
| Custard (caramel) | ½ cup | 160 |
| Srikhand | ½ cup | 380 |
| Milk chocolate | 25 g | 140 |
| Ice-cream | ½ cup | 200 |

| Preparation | Quantity for one serving | Calories (Kcal) |
|--------------------------------------|--------------------------|-----------------|
| 8. Beverages | | |
| Tea (2 tsp sugar + 50 ml toned milk) | 1 cup | 75 |
| Coffee (2 tsp sugar + 100 ml) | 1 cup | 110 |
| Cow's milk (2 tsp sugar) | 1 cup | 180 |
| Buffalo's milk (2 tsp sugar) | 1 cup | 320 |
| Lassi (2 tsp sugar) | 1 cup/glass (200 ml) | 110 |
| Squash | 1 cup/glass | 75 |
| Syrups (Sharabats) | 1 cup/glass | 200 |
| Cold drinks | 1 bottle (200 ml) | 150 |
| Fresh lime juice | 1 glass | 60 |

DASH Diet and High Blood Pressure

DASH stands for Dietary Approaches to Stop Hypertension. The diet is simple:

- Eat more fruits, vegetables, and low-fat dairy foods
- Cut back on foods that are high in saturated fat, cholesterol, and trans fats
- Eat more whole-grain foods, fish, poultry, and nuts
- Limit sodium, sweets, sugary drinks, and red meats
- Another diet – DASH - Sodium - calls for cutting back sodium to 1,500 milligrams a day (about 2/3 teaspoon). Studies of people on the DASH-Sodium plan lowered their blood pressure as well.

Starting the DASH Diet

The DASH diet calls for a certain number of servings daily from various food groups. The number of servings you require may vary, depending on how many calories you need per day.

You can make gradual changes. For instance, start by limiting yourself to 2,400 milligrams of sodium per day (about 1 teaspoon).

Then, once your body has adjusted to the diet, cut back to 1,500 milligrams of sodium per day (about 2/3 teaspoon). These amounts include all sodium eaten, including sodium in food products as well as in what you cook with or add at the table.

Dash Diet Tips

- Add a serving of vegetables at lunch and at dinner.
- Add a serving of fruit to your meals or as a snack. Canned and dried fruits are easy to use, but check that they don't have added sugar.
- Use only half your typical serving of butter, margarine, or salad dressing, and use low-fat or fat-free condiments.
- Drink low-fat or skim dairy products any time you would normally use full-fat or cream.
- Limit meat to 6 ounces a day. Make some meals vegetarian.
- Add more vegetables and dry beans to your diet.
- Instead of snacking on chips or sweets, eat unsalted pretzels or nuts, raisins, low-fat and fat-free yogurt, frozen yogurt, unsalted plain popcorn with no butter, and raw vegetables.
- Read food labels to choose products that are lower in sodium.

Track What You Eat

Some people are not aware of how many calories they eat and drink each day. They may underestimate how much they eat and wonder why they can't lose weight.

Writing down the foods you eat, including the portion sizes, can let you see the truth about your food intake. You can then start cutting back -- reducing calories and portions -- to lose weight and manage your blood pressure.

Avoid Salt (Sodium)

A high-sodium diet increases blood pressure in many people. In fact, the less sodium you eat, the better blood pressure control you might have.

To lower the sodium in your diet, try these suggestions:

- Use a food diary to keep track of the salt in the foods you eat.
- Aim for less than 2,300 milligrams (about 1 teaspoon of salt) each day. Ask your doctor if you should go lower, to 1,500 milligrams.
- Read the nutritional facts label on every food package.
- Select foods that have 5% or less of the "Daily Value" of sodium.
- Avoid foods that have 20% or more Daily Value of sodium.
- Avoid canned foods, processed foods, lunch meats, and fast foods.

- Use salt-free seasonings.

Staying on the DASH Diet

The DASH diet suggests getting:

- Grains: 7-8 daily servings (serving sizes: 1 slice of bread, 1/2 cup cooked rice or pasta, 1-ounce dry cereal)
- Vegetables: 4-5 daily servings (1 cup raw leafy greens, 1/2 cup cooked vegetable)
- Fruits: 4-5 daily servings (1 medium fruit, 1/2 cup fresh or frozen fruit, 1/4 cup dried fruit, 6 ounces' fruit juice)
- Low-fat or fat-free dairy products: 2-3 daily servings (8 ounces' milk, 1 cup yogurt, 1.5 ounces' cheese)
- Lean meat, poultry, and fish: 2 or fewer servings a day (3 ounces cooked meat, poultry, or fish)
- Nuts, seeds, and legumes: 4-5 servings per week (1/3 cup nuts, 2 tablespoons seeds, 1/2 cup cooked dry beans or peas)
- Fats and oils: 2-3 daily servings (1 teaspoon vegetable oil or soft margarine, 1 tablespoon low-fat mayonnaise, 2 tablespoons light salad dressing).
- Sweets: less than 5 servings per week. (1 tablespoon sugar, jelly, or jam)

Diabetes Meal Plans and a Healthy Diet

What is a Diabetes Meal Plan?

A diabetes meal plan is a guide that tells you how much and what kinds of food you can choose to eat at meals and snack times. A good meal plan should fit in with your schedule and eating habits.

Some meal planning tools include:

- The plate method
- Carb counting
- Glycemic index.

People with diabetes have to take extra care to make sure that their food is balanced with insulin and oral medications (if they take them), and exercise to help manage their blood glucose levels.

Indian Diet Plan for Diabetes

| Food Item | Amount | Protein(g) | Calories (kcal) |
|---|---------------|------------|-----------------|
| EARLY MORNING | | | |
| Fenugreek seeds with 1 cup of water | – | – | – |
| Tea (without sugar) | 1 cup | 4 | 35 |
| Marie Biscuits | 2 | 1 | 56 |
| Breakfast | | | |
| Stuffed methi/palak /lauki paratha | 2 small | 7 | 200 |
| Curd | 50 gm (1 cup) | 3 | 30 |
| OR | | | |
| Egg white / Paneer Bhurji | 1 medium bowl | 6 | 130 |
| Plain roti (no oil) | 2 small | 3 | 150 |
| OR | | | |
| Vegetable poha/upama/oats/daliya | 1 soup bowl | 4.5 | 230 |
| MID MORNING | | | |
| Apple /guava/orange | 1 | – | 40 |
| LUNCH | | | |
| Salad (10 mins before lunch) | 1 Medium bowl | 1 | 30 |
| Capsicum + gobhi veg | 1 medium bowl | 1 | 85 |
| Dal | 1 soup bowl | 6 | 130 |
| Phulka (no ghee) | 2 | 6 | 175 |
| EVENING | | | |
| Milk / green tea / herbal tea / lemon water | 1 cup | 2 | 35 |
| Roasted chana + Muri | 1 cup | 5 | 85 |
| DINNER | | | |
| Salad (10 mins before dinner) | | | |
| Phulka (no ghee) | 2 | 4.5 | 150 |
| Lauki veg | 1 cup | 2 | 85 |
| Curd | 1 cup | 3 | 30 |
| LATE NIGHT | | | |
| Skim Milk (no sugar) | 1 glass | 4 | 120 |

| | | | |
|--------------|---|------|------|
| Total | – | 49.5 | 1286 |
|--------------|---|------|------|

Type 2 Diabetic diet plan for Indians (1500 calories)

| MENU | AMOUNT | CALORIES (KCAL) | PROTEIN (GMS) |
|---|-------------------------------|-----------------|---------------|
| EARLY MORNING | | | |
| Fenugreek seeds with 1 cup of water | 1 tsp | -- | -- |
| Tea (without sugar) | 1cup | 35 | 4 |
| Marie biscuits | 2 | 56 | – |
| Total | | 91 | 4 |
| BREAKFAST | | | |
| Stuffed lauki / Methi paratha | 2 small | 270 | 7 |
| Curd | 1 cup / 50 gms | 30 | 1.5 |
| Total | | 300 | 8.5 |
| OR | | | |
| 2 Egg White omlette with capsicum | (2 egg white) | 150 | 7 |
| Brown Bread Slice | 2 no. | 100 | 3 |
| Total | | 250 | 10 |
| MID MORNING | | | |
| Apple | 1 med (50- 60 gms) | 40 | – |
| Green Tea (No Sugar) | -- | -- | -- |
| LUNCH | | | |
| Vegetable brown rice pulav | 1 soup bowl (50 gms uncooked) | 250 | 3 |
| Cucumber and onion raita | 1 small bowl | 75 | 3.5 |
| Mix veg salad | 1 bowl | 30 | 2 |
| Total | | 355 | 8.5 |
| OR | | | |
| Chappati / Phulka (little or no fat) | 3 medium size | 255 | 9 |
| Capsicum / lady finger / parval / torai veg | 1 med bowl | 70 | 1.5 |
| Dal | 1 med bowl | 130 | 6 |

| | | | |
|---|----------------|------|------|
| Salad | 1 med bowl | 30 | 2 |
| Total | | 485 | 18.5 |
| 10 minutes,walk post lunch + 1 cup warm water with lemon / Green tea (no sugar) | | | |
| EVENING | | | |
| Green tea / Tea / Coffee (without sugar) | 1 cup | 35 | 4 |
| Puffed Rice / 2 wheat rusks | 1 bowl | 100 | 3 |
| Total | | 280 | 7 |
| DINNER | | | |
| whole wheat flour chapati / phulka | 3 medium sized | 255 | 9 |
| Mix veg / bottle gourd / palak vegetable | 1 med bowl | 70 | 1.5 |
| Curd / kadhi / dal | 1 small bowl | 30 | 1.5 |
| Total | | 435 | 14.5 |
| 10 minutes,walk post lunch + 1 cup warm water with lemon / Green tea (no sugar) | | | |
| BED TIME | | | |
| Milk | 1 cup | 75 | 2 |
| Soaked almonds | 4 no. | 20 | 3 |
| Total | | 1546 | 50 |

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