World Heart Day was celebrated on 29th September 2017 in collaboration with CARE hospital, Peace foundation, Women’s Technical Education and Research Institute. Awareness Rally was conducted for the masses, along with Skit and a lecture on Prevention of Heart diseases.

2018 Conference Calender
- AICNU : Chennai 4th 5th Aug
- ACD : Hong Kong 6th to 8th July

Edited by
Dr. Rita Bhargava
Kavita Bakshi

Ensure Safe and Nutritious Food

Dear Reader,

Indian Dietetic Association has partnered with Food Safety Standards Authority of India (FSSAI) to ensure Safe & Nutritious Food for each individual across the country. Food safety and security describes handling, preparation and storage of food to prevent potential health hazards, food borne infections which can be biological, chemical, physical and all people across different walks of life should have access to safe and nutritious food which meet their daily requirements to lead a healthy and active life.

SNF @ Work place- majority of people eat one meal at workplace. FSSAI has released orange book for workplace to ensure safe and nutritious food. To ensure regulatory compliance like license, Food Safety Management System Guidelines (FSMSG) for in-house catering services, provide training and appoint supervisors to conduct audits, create awareness by handouts, organize lectures on good eating habits for staff.

SNF @ Railways- to promote ‘safe food on track’, its collaborating with Indian Railways & IRCTC and aims to train and create awareness for licensed food handlers, vendors, pantry chefs on safe practices so as to provide hygienic and nutritious food to consumers while on travel.

'Serve Safe' food for Restaurants- its mandatory to have a FoSTaC-Food Safety Training & Certification, supervisor in each establishment, food safety display boards by FSSAI to be used with information on clean premises, hand-wash, use of portable water for preparation etc., safe and hygienic food SAIHF rating of restaurants by auditors and customers.

Clean Street Food—unhygienic street food is a major health risk factor and cause of food poisoning. We need to create awareness about safe and good hygiene practices by street vendors thereby making it safe to eat.

SNF @ School – Yellow book is for school. SNF at school can be achieved by creating wellness coordinators, training teachers and senior students. Reinforce good and wholesome eating practices in curriculum and other activities like quiz or health mascot, discourage high fat, high salt, sugary foods and promote healthy cafeteria snacks.

Pink book - comprises of tips for SNF at domestic level, also appoint health coordinator’s at residential areas so that every individual is benefitted.

We as IDA as partner to FSSAI should together aim at spreading awareness in society, schools, railways, thereby ensure safe and nutritious food practices so as to achieve good health, well being and prevent NCD’s in our country.

Dr. Rita Bhargava
President IDA
Nagpur Chapter
An orientation talk by Dr. Asmita Taokar, FSSAI trainer for IDA, Nagpur chapter members on SNF was organized, she highlighted the importance of hand washing and having qualified food supervisors in health care industry. It was followed by quiz, cake cutting and felicitation program for members. Special Thanks to my team on board for making it happen.

Dietetics Day Celebration

Moringa (Drumstick)
Moringa Oleifera is a widely cultivated species of the genus Moringa. English common name include Moringa, drumstick tree, etc. It is a drought resistant tree, the bark, seeds, pods, roots, sap and flowers are all used in traditional medicines. Moringa leaves have been known to contain 46 types of antioxidants and nearly most of the macro nutrients and micronutrients making it one of the most powerful ‘SUPER FOOD’ known. The antioxidants in Moringa aid in protecting the skin from skin cancer and premature ageing. It contains ‘Zeatin’, a powerful plant hormone linked to slowing ageing process. ‘Quercetin’ an antioxidant may help lower blood pressure. The amino acids helps in higher clarity and alertness. Moringa helps to regulate hormones in the body and reduce fat stores in the liver; it also helps in regulating glucose levels; prevents plaque build up in the arteries. The leaves can be used on skin for their anti fungal and anti bacterial properties. It enhances digestion, prevents Urinary tract infection, helps in constipation and has a super immune boosting power. It is a good source of proteins 9.4 grams per 100 grams, rich in vitamin, B, Vitamin A, Calcium, potassium, magnesium, B-complex Vitamin and Iron. The leaves can be consumed fresh, cooked and dried. They can be added to salads pasta dishes, and Indian savouries like Thalipeth, wadas, kebabs, parathas etc. It is often used for making Moringa green tea. While drumsticks are also used in Indian curries.

Ingredients:
- Moringa leaves: 50 g, potatoes: 150 g, corn: 25 g, cottage cheese: 25 g
- Peas: 25 g, green chilli: 1 no., Mint leaves: 5 g, carrots leaves: 5 g
- Turmeric powder: 1 tsp, Garam masala: 1 tsp, cumin powder: 1 tsp, Oil: 1 tsp, Salt as per taste

Method:
- Boil potatoes and remove the skin. Blanch Moringa leaves ( dip in hot water immediately remove and strain in cold water) and chop the leaves.
- Mash the potatoes, add Moringa leaves, boiled corn, cottage cheese, boiled peas, chopped green chillies, mint, coriander and all the dry ingredient. Mix well and make 6 small kebabs. Grease baking dish with oil, brush the kebabs with oil on both sides and bake in an oven till golden brown for 10 to 15 mins at 180 degree centigrade.

Kavita Bakshi
Hon.Secretary IDA, Nagpur chapter

Bone Health in Diabetic Women

Health systems depend on women as providers of health care but women’s health has been a global concern for several decades. Now it is time to take stock of how women’s rights are fulfilled in the world especially right to health. Bone health is one of the neglected part in women’s life cycle. A striking but transient bone loss occurs in women who breast feed for longer, from the femoral neck and lumbar spine. Several successive pregnancies contribute to bone loss. The bone mineral density normally begins to decrease in women during the fourth decade of life. However that decline in bone density is accelerated during the menopausal transition. As a consequence, both age and the hormonal changes (estrogen) due to the menopause transition act together to cause osteoporosis. A history of diabetes, duration and chronic complications are also associated with an increased risk of osteoporotic fracture. The BMD T-score reflected a decrease in bone density with an increase in BMI. The study was carried out on 215 Diabetic women which revealed that—Surprisingly pre menopausal women seemed to be more affected than post menopausal women. Obesity was in higher percentage in pre menopausal subjects. These subjects also had uncontrolled diabetes and higher mean values of serum cholesterol, TG and VLDL levels. A decline in the BMD T Scores suggestive of Osteopenia was observed. In contrast the post menopausal subjects had moderate to severe hyperinsulinemia and a significant decrease in BMD T Scores with increasing age reflecting the stage of Osteoporosis.

It is pertinent to note here that adequate dietary care coupled with exercise is required in the premenopausal stage or else obesity and low BMD at this stage may further aggravate during post menopause and thereby affect the quality of life. Control of blood sugar levels through proper diet, medication and exercise in regular consultation with the dietician may be required to stay healthy and reduce the complications post menopause.

Minal Gujarathi
Treasurer
IDA, Nagpur chapter
Type 1 Diabetes: Practical Approach

Unlike type 2 diabetes, type 1 diabetes is not caused by obesity or lifestyle. It is an auto-immune disease and completely different. When diagnosed, immediately placed on insulin and have to take insulin life long, everyday and with every meal. They need a healthy diet with proper amount and proportions, appropriate to the age, stage, cultural, ethnic, family traditions and psychosocial needs, three meals, three snacks a day, with 3-4 hours gap, never skipping meal. Meals should be well balanced, with proper protein, fat, complex carbohydrates, fresh fruit and vegetables avoiding simple sugars following principals of diet for type 1 diabetes. Encourage the child to take the right dose, right insulin with right amount and right food. Insulin doses must be matched to the carbohydrate content of the food consumed, avoiding hypoglycemia and hyperglycemia.

Carbohydrate counting is one of best and easiest method to plan meals and keep a check on blood glucose levels. Counting carbs can also offer more variety to meal plan. It’s the balance between the carbohydrates you eat and insulin you take that determines how much blood glucose levels will rise after your meal. Counting carbs servings provides an accurate guess of how blood sugar will rise after a meal. The more carbs you eat, the higher will be the spike in blood glucose levels and the more insulin you will need to cover that meal. Carbohydrates are measured in grams and may be referred to in grams, exchanges, servings or each choice. A food that contains 15 g of carbs are called 1 carb exchange. Insulin Carb ratio: The number of carbohydrate grams covered by one unit of insulin. Using 450/500 rule: By dividing 450 or 500 by average number of units of insulin you take daily, you can get a reasonable approximation of your insulin and carb ratio. Insulin to carb ratio is individualized for each child according to age, sex, pubertal status, duration of diagnosis and activity. In practice, the detailed records of SMBG results, carb intake and insulin doses provide useful information for making adjustments. If blood glucose reading is within the target range, it means insulin to carbs ratio is working well. Effect of peer pressure, eating disorders, depression, alcohol are the major worries resulting in skipping insulin and disturbing meals. Spending most time in school or socializing with their friends in order to fit in with healthy peers, education for choosing a healthy snack and follow proper insulin regime is important. Type 1 diabetes are respected for the difficulty they face everyday living with their disease, 24x7 diet and insulin calculations.

Seema Chakhore
Dietitian and Diabetes Educator
Diabetes Care and Research Centre

Congestive Cardiac Failure

CCF, unlike coronary heart disease, has no territorial boundaries. The plague of CCF is common in developed & developing countries. Some of this increase is owing to an aging population in all countries. Extensive CAD places extra demand upon the heart & can precipitate CCF. It’s a clinical syndrome in which cardiac output is insufficient to meet the body’s need leading to fatigue, breathlessness & fluid retention. Most of the cases are characterized by impaired myocardial contractile function accompanied by increased activity of sympathetic nervous & rennin angiotensin aldosterone systems. Genetic factors, CAD & viral infection are important causes of heart failure. As the heart pumps harder to meet increased demands, it enlarges causing cardiomegaly. The body is then overloaded with fluid & sodium causing oedema. An elevated LVEDP is a hallmark of uncompromised CCF. Dietary modification has a pivotal role in management of CCF. Patients with CCF should follow the dietary guidelines provided by their healthcare provider. Patient should be encouraged in self-monitoring looking for fluid retention by way of rapid weight gain & oedema in extremities.

Shabina Yusuf
Dietitian Armeja Heart Institute

We celebrated Dietetics Day with the theme Ensure Safe and Nutritious Food for wellness. An awareness lecture on the theme by Dr. Rita Bhargava was conducted at power-grid office executives on 10th January for SNF at workplace, eating out and at home to prevent non-communicable lifestyle diseases like HT, CAD, DM, cancer etc.
In this age of specialization, challenges in therapeutic dietetics are ever increasing with newer knowledge of role, inter-relationship and availability of micronutrients. Moreover, demand for nutritionists and dieticians has mounted over the past few years due to awareness to keep healthy and overcome dietary limitations successfully.

Holistic approach to disease prevention and management is making big strides in dietetics world. Efforts to prevent obesity and metabolic diseases have largely been unsuccessful. WHO estimates that by 2020 two thirds of all diseases will be a direct consequence of lifestyle choices. The focus on changing such choices to prevent and treat chronic diseases like obesity, type II diabetes, CVD and cancer will therefore gather further momentum. Leading causes of death among adults remain related to physical inactivity, poor diet, tobacco use and excessive alcohol consumption.

Of concern, is the tendency for diabetes and coronary heart disease risk factors to co-exist in those who are overweight or obese, thus complicating treatment options. Therapeutic Life Style Changes (TLC) is an effective therapy targeting low density cholesterol (LDL), a risk factor for coronary heart disease. Along with lowering LDL, TLC also improves risk factors associated with metabolic syndrome and diabetes, including hypertension, high density cholesterol (HDL), serum triglycerides, blood glucose and weight status. At the same time, one-size-fits-all nutritional strategies have often missed the mark. This is because people and diseases do not respond to diet equally. Nutrition professionals need to consider how genes may interact with individual diets and physical activity patterns as this will continually impact nutrition science.

As food & nutrition experts, dieticians play a key role in educating other healthcare professionals about how increasingly food isand should be part of patient care & treatment.

Dr. Smita Vaidya
Ex Prof PGTID
Home Science Dept
RTMNU, Nagpur

ENERGY EXPENDITURE: There are three components predominantly
a) BMR (energy expenditure is high & is half of the body's total energy requirement ,eg heart beats, movement of digestive tract.)

b) TEF (thermic effect of food, energy is required to digest food, transport & store nutrients, it is app. 7-13% of a person's energy intake)

c) PAL (is any bodily movement produced by skeletal muscles resulting in energy expenditure, energy expenditure on those vary from 15-40% of total energy expenditure)

Equations for prediction of BMR

\[
\text{Age(years)} \times \text{Prediction Equation}
\]

<table>
<thead>
<tr>
<th>Age(years)</th>
<th>Prediction Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male 18-30</td>
<td>14.5 x W (kg) + 665</td>
</tr>
<tr>
<td>&gt;30</td>
<td>10 x W (kg) + 655</td>
</tr>
<tr>
<td>Female 18-30</td>
<td>14.5 x W (kg) + 437</td>
</tr>
<tr>
<td>&gt;30</td>
<td>8 x W (kg) + 447</td>
</tr>
</tbody>
</table>

Source: ICMR, 2010

Total energy requirement of an individual

Energy balance is a state of equilibrium between energy intake & total energy expenditure of the body.

Positive energy balance: Energy intake > Energy expenditure

Negative energy balance: Energy intake < Energy expenditure

BMR per kg weight of body is constant in adults. Energy expenditure in children vary with age.

Dr. Nilima Joshi
Ex. Prof. & HOD.
Food Science and Nutrition IIT Inst., Nagpur