



IITG HOSPITAL NEWSLETTER

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Indian Institute of Technology Guwahati

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भारतीय प्रौद्योगिकी संस्थान गुवाहाटी
Indian Institute of Technology Guwahati

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MESSAGE

I am happy to know that IITG Hospital is publishing the "HOSPITAL NEWSLETTER". It is indeed a great effort put forth by the IITG hospital to make it happen for the benefit of entire IITG community. I am sure that this newsletter will provide adequate information about our health care drive as well as awareness of the health problems.

I would like to convey my congratulations to the members associated with the Newsletter.

With best wishes.

(Gautam Biswas)

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Message from the Deputy Director, IIT Guwahati

सर्वे भवन्तु सुखिनः

सर्वे सन्तु निरामयाः ।

Let all be happy and let all be free of illness. The hospital News Letter aims at conveying this message to the IITG fraternity. I take this opportunity to congratulate the Medical Team for their noble venture.



P. K Bora

Message from the Registrar, IIT Guwahati

It gives me immense pleasure to know that IITG Hospital has decided to come up with its own version of Hospital Newsletter. I convey my best wishes to the Medical Section for this great initiative. I hope this will create a better health culture in IIT Guwahati. Let's all remember the proverbs "A healthy mind resides in a healthy body" and "Health is Wealth".

Wishing all of you a very happy, prosperous and healthy future.



Shri. U C Das

Registrar

IIT Guwahati

AIMS AND OBJECTIVES

The IIT Guwahati Hospital has been trying to put its best foot forward in providing optimum patient care. In this regard, the Medical Section has taken a noble initiative of publishing a newsletter in the interest of the IIT Guwahati community. The demand for a newsletter from the Institute Hospital has been felt for a long time and after getting the nod from the Institute Authority it has come up a noble gesture of publishing the same. The Newsletter will contain articles on health issues, medical reimbursement procedure and a photo Gallery e.t.c. Valuable opinions and feedback from the esteemed readers will be a precious asset for betterment of our endeavour.

With regards

Team, Medical Section
IIT Guwahati

Balanced Diet

I think the human race has a good idea about balanced diet when we examine diet patterns around the world.

The scientific discourse now, is to determine calorie value, percentages and milligrams of essential elements in food items, and to determine the proportions which constitute carbohydrates, protein, fats, minerals, vitamins and water in food on our plate.

These proportions to maintain good health is called a balanced diet. Good health definitions include concepts of diet, exercise, physical rest, management of stress, mental rest and leading disease free lives. It is central to the understanding of our health that a balanced diet can prevent and ameliorate disease to a great extent. Hypertension, diabetes, gout, obesity, hypothyroidism respiratory, gastro intestinal, cardiac, cerebral diseases e.t.c are accompanied by diet modification advices. The body breaks the carbohydrates into glucose and other sugars, the fats into glycerol and fatty acids and the proteins into amino acids. An average adult male require calorie with variation due to intensity of workload and range from 2000-2400 calorie Adult women require 1600-2200 calorie per day. A child requires varying calories apropos their age for eg. for a 2-3 years old male child, 1000-1200 calories may be adequate and for active ones, 1000-1400 calories would suffice. At the other end of the age spectrum, of 51 years old male, 2000-2800 calories ranges include not active ones and very active ones. For females, at 2-3 years calories requirement ranges from 1000-1400 and for 51 years old ones, 1600-2200 calories would suffice.

Dietary recommendations: 0-6 months

Exclusive breastfeeding offers ideal nutrition and is sufficient to support optimal growth and development for the first six months after birth.

Dietary recommendations: 6-12 months:

After 6 months of age the nutrient intake should be from human milk plus complementary feeding should include nutrient-dense foods in order to ensure adequate nutrient intake to meet nutritional need.

Some useful calculations are provided for the readers use.

1000 calories = 1 kilocalorie

1 g Carbohydrates = 4 Calories i.e., 1 tsf i.e. teaspoon (5 gram) of carbohydrate food will give 4x5= 20 calories

1 g Protein = 4 Calories

1 g Fat = 9 Calories, so 5 grams of it will give 45 calories.

1 level teaspoon contain 5 grams

1 tablespoon contain 15 grams

It is clear to us that fat and oils consumption is to be restricted even if we use beneficial oils containing MUFA (mono unsaturated fatty acids) and Omega 3 & 6. PUFA or poly unsaturated fatty acids are considered less essential. Fats in diet are of different kinds, like saturated fats, monounsaturated fats and polyunsaturated fats. Vegetable oils and animal fats are a mixture of those kinds of fat. Olive oil is composed mostly of monounsaturated fat with some polyunsaturated fat. Coconut oil is mostly saturated fat. Most vegetable oils except palm oil, olive oil and coconut oil are high in PUFA while most animal fats are mostly composed of saturated and monounsaturated fat. The main dietary MUFAs, omega-3 fat and omega-6 fat, are considered essential because they cannot be manufactured by the body and they are obtained from food. The most important macro nutrients like glucose, monounsaturated fat and saturated fat can be manufactured by the body. Calories get stored in the form of fat, when not consumed as fuel by the body. For heart health an intake of low fat vegetarian diet consisting of vegetables, fruits, grains, legumes and yoghurt is ideal and non-vegetarian can eat lean meat like fish and convert to mustard oil for cooking. The fat

intake should be below 30% of total calories, and avoid excess portion of fried food. Less than 10% of the fat should come from saturated fat like milk butter, meat etc. Salt, sugar and refined flour intake should be reduced. Mustard oil is considered one of the healthiest oils due to low amount of saturated fatty acids and a high amount of monounsaturated fatty acids, which are good for health. A study by Harvard School of medicine, All India Institute of Medical Sciences (AIIMS), Delhi and St. John Hospital, Bangalore, found that chances of heart disease drop by nearly 70% on use of mustard oil as a cooking medium. Some common daily activities like sitting, sitting and knitting or embroidering, reading, typing, standing, standing and cooking all consume energy and fall within the ambit of being active and not sedentary.

The plate of food should contain: **Carbohydrate**, 200-300 gm daily but not less than 120 gm (if trying to lose weight) **Proteins** 56 grams per day for the average sedentary man and 46 grams, per day can be taken by the average sedentary woman. **Fats** intake should be less than 60 grams per day, and to select the good fats. **Vitamins, Minerals, Dietary fibres and water** complete the meal.

Fruits contain soluble, insoluble fibre, carbohydrates, minerals, water, sugar, potassium. Vegetables contain sodium, potassium, energy, fibre. Legumes & grains contain fibre, carbohydrates and protein.

All fruits and vegetables contain micronutrients all mostly in milligrams,, a few in micrograms and only dietary fibre in grams. 25 g required daily by woman and 38 g by man. Micronutrients in fruits and vegetables are protein, calorie, dietary fibre, potassium, calcium, phosphorus, B1, B2, Niacin, folate, pantothenic acid, B6, E, and K.

Some notable locally available, leafy vegetables fruits and pulses are BaahGaaj, Kardoi, Xilikha, Kochu, OuTenga, Mula, Kuji Thekera, Kumura, Bilahi, Kaldil, Kaskal, Panilao, Titakerela, Bhatkerela, Kath Alu, Kobi, Sojona, Kajinemu, Gul Nemu, Jalakia, Bhutjolokia, Patal, Bhol, Jika, Dhunduli, Rongalaw, Kathphula, Salgum, Beet Root, Allo, Urohi, Xuklati, MatiKadui, Dhekia, Lai, Paleng, Pirali Paleng, Lophu, Methi, Manimuni, Padina, Neem, Jilmil, Kolmou, Khutura, Kolposala, Paat, Lesera, Brahmi, Dhonia, Man Dhonia, Mosondari, Madhuxuleng, Noroxingha, Bhedailata, PuiBabori, Xewali, Bhringaraj, Amlakhi, Leteku, Atlos, Anaros, Poniol, Bael, Jolphai, Bogori, Nora Bogori, Aam, Kol, Kamala, Narikol, Kuhiare, Kothai, Mosum Mah, Magu Mah, Boot Mah, MatiMah, Rohar Dail, Motor Mah, Jaluk, Ada, Haladhi, Piyaj, Naharu.

The Assamese diet consist of a wide variety of grains, legume, fruits, vegetables, leafy vegetables, roots and tubers, fish, poultry and meat, vegetables & fruits available in Assam to provide one a nutritious balanced diet.

Acknowledgments:

- i. Govt. Of India, Ministry of Health & Family Welfare
- ii. National Institute of Nutrition, India
- iii. Public Health Institute of India
- iv. NIH USA
- v. ICMR

First Aid

First aid may be defined as the initial help given to a sick or injured person by anyone nearby till full medical treatment is available.

First aid in case of accidents

1. Airway -maintaining a adequate airway is the first priority.
 - Gloves should be worn and two fingers 'sweep' must be used to clean solid material from the mouth and pharynx if any
 - Subsequently, maintain airway with a jaw thrust maneuver or by lifting the mandible forward.
2. Cervical spine- Cervical spine should be held steady in all cases of road traffic accidents until investigations prove that there is no injury to that part. A simple way to do it is to place two sand bags or pillows on both sides of the neck and apply strapping on the forehead. Semi rigid neck braces if available should be applied immediately.
3. Expose the chest and look for any penetrating wound. If present it should be covered immediately.
4. Bleeding- Any visible bleeding can be controlled by applying pressure and pack.. Digital pressure properly applied can stop serious bleeding .Epistaxis (bleeding from nose) can be controlled by two finger pressure.
5. Splintage- Obvious fracture of the limbs as seen by gross swelling and deformity should be immobilized by splintage-which can include wooden board or bamboo sticks.
6. Transportation Arrange for immediate transportation of the patient to the nearest hospital.

First aid in case of burns

1. Stop burning process—Flame burn can be put off by wrapping the patient with a blanket. Electric burn –any live current source should be switched off. Rescue workers should not touch the electrocuted person with bare hands if the current is not already switched off. A dry wooden or bamboo stick may be used to dislodge the patient.
2. Cool the burn surface- Immediate cooling of the burn surface is beneficial and the process should continue for twenty minutes. Irrigation with cold tap water is best particularly in scalds and chemical burns. Hypothermia should be avoided. Ice or iced water should not be used. Ideal temperature of the irrigating fluid is 15 °C, but temperature between 8 -25 °C is effective.
3. Burned or water soaked clothes should be removed .The patient should be wrapped in clean linen or plastic and immediately transported to the hospital
4. Raw potato crushed and applied over the burn surface gives immediate relief of burning sensation as well as prevents blister formation.

First aid in drowning

1. As soon as patient is rescued, medical help should be called for.
2. Meanwhile note if the patient is breathing then turn the head to one side to allow any water in the nose or mouth to drain out.
3. Bring the head back to the centre.
4. In case the person is not breathing, strongly breathe four times into the victim's mouth after pinching above the nose.
5. Even after that if the patient is not breathing, start CPR. This is by 30 chest compression followed by 2 rescue breath. Keep continuing CPR until medical help arrives.

First aid in choking..

A choking person can be recognized by the fact that he holds his hand around the throat and tries to cough. Lips, skin or nails may turn blue

First aid measures include

1. Make the patient cough with force.
2. Back blows- Stand besides the patient so that you face the patient on one side. Support the patients chest with one hand and make them lean forward. Make sharp back blows with the other hand between the shoulder blades. Repeat for 5 times.
3. Abdominal thrust- Stand behind the person and place one fist with the thumb projected at the upper abdomen. With the other hand apply sharp upward and inward thrust. Repeat 5 times.
4. Repeat steps 2 and 3 alternately for 3 cycles.
5. If no relief call for medical help and start CPR.

First aid in fainting attack/convulsion.

1. In case of fainting attack make the patient lie down in a horizontal position. Do not hold up the head or upper part of the body.
2. If the person do not recover in a few moments make sure he is not in a dangerous place.
3. Stay with the victim and meanwhile call for help.
4. In case of convulsion note the time the seizure started.
5. Do not hold the patient down and do not put anything in their mouth.
6. After the convulsion stops, gently check the mouth to see that food articles, loose tooth, etc are not blocking the airway. In case respiration is laboured call for medical help immediately.

First aid in snake bites-

1. Ask the victim to stay calm.
2. Try to see if the snake is poisonous or not.
3. Do not apply tourniquet.
4. Do not cut the part to make it bleed.
5. do not give caffeine or alcohol containing drinks.
6. Get immediate medical help.

First aid in insect bite

1. Brush away the insect and if possible try to remove the sting.
2. Cool the part by placing a towel over it and putting ice on top of the towel. Do not put ice directly over the part.
3. Apply a cream containing hydrocortisone.
4. Take an antihistaminic tablet if available.
5. If bite is extensive or over a large area of the body, or if the patient develops shortness of breath, severe itching etc call for immediate medical help.

FIRST AID KIT

1. Band aid, adhesive plaster, roll bandage
2. Cotton roll.

3. Antibiotic and hydrocortisone ointment.
4. Gloves.
5. Scissors ,tweezers etc
6. Triangular bandage, towel etc.

The above are just first aid guidelines to be given before expert help arrives. Patient should be taken to the medical centre as soon as possible for further treatment.

DR. ANUJ KR. BARUAH

MADHUMEHA

Madhumeha, in English we call it Diabetes, a very familiar term for us. Greek physician Arateus, coined the term *diabetes*, meaning "siphon," to explain the "liquefaction of the flesh and bones into urine". Our great Indian ancient surgeon Sushruta, (in 400 B.C.) described diabetes (madhumeha) as a disease characterised by passage of large amount of urine, sweet in taste, hence the name "madhumeha" — honeylike urine. He goes on to say that diabetes primarily affects obese people who are sedentary and emphasised the role of physical activity in amelioration of diabetes.

And, today diabetes is an important cause of mortality and morbidity worldwide. Globally, it is estimated that about 382 million people suffer from diabetes, in particular type 2 diabetes, is on increase. It has been predicted that the global burden of diabetes will increase by 55% by 2035. Diabetes is rapidly achieving the status of a potential epidemic in India with more than 62 million diabetic individuals currently diagnosed with the disease. In the previous decade (2000), India dominated the world with the highest number of people with diabetes.

What is diabetes?

Diabetes is a chronic progressive disease that occurs either when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces. Insulin is a hormone that regulates blood sugar. Hyperglycaemia, or raised blood sugar, is a common effect of uncontrolled diabetes and over time leads to serious damage to many of the body's systems, especially the nerves and blood vessels.

Type 1 diabetes

Type 1 diabetes is characterized by deficient insulin production and requires daily administration of insulin. The cause of type 1 diabetes is not known.

Symptoms include excessive excretion of urine, thirst, constant hunger, weight loss, vision changes and fatigue. These symptoms may occur suddenly.

Type 2 diabetes

Type 2 diabetes results from the body's ineffective use of insulin. Type 2 diabetes comprises 90% of people with diabetes around the world, and is largely the result of excess body weight and physical inactivity.

Symptoms may be similar to those of Type 1 diabetes, but are often less marked. As a result, the disease may be diagnosed several years after onset, once complications have already arisen.

Gestational diabetes

Gestational diabetes is hyperglycaemia with blood glucose values above normal but below those diagnostic of diabetes, occurring during pregnancy. Women with gestational diabetes are at an increased risk of complications during pregnancy and at delivery. They are also at increased risk of type 2 diabetes in the future.

Impaired glucose tolerance (IGT) and impaired fasting glycaemia (IFG)

Impaired glucose tolerance (IGT) and impaired fasting glycaemia (IFG) are intermediate conditions in the transition between normality and diabetes. People with IGT or IFG are at high risk of progressing to type 2 diabetes, although this is not inevitable.

What are common consequences of diabetes?

Over time, diabetes can damage the heart, blood vessels, eyes, kidneys, and nerves.

- Diabetes increases the risk of heart disease and stroke. About 50% of people with diabetes die of cardiovascular disease (primarily heart disease and stroke).
- Combined with reduced blood flow, neuropathy (nerve damage) in the feet increases the chance of foot ulcers, infection and eventual need for limb amputation.
- Diabetic retinopathy is an important cause of blindness, and occurs as a result of long-term accumulated damage to the small blood vessels in the retina.
- Diabetes is among the leading causes of kidney failure.
- The overall risk of dying among people with diabetes is at least double the risk of their peers without diabetes.

How can the burden of diabetes be reduced?

Prevention

Simple lifestyle measures have been shown to be effective in preventing or delaying the onset of type 2 diabetes. To help prevent type 2 diabetes and its complications, people should:

- achieve and maintain healthy body weight;
- be physically active – at least 30 minutes of regular, moderate-intensity activity on most days. More activity is required for weight control;
- eat a healthy diet of between 3 and 5 servings of fruit and vegetables a day and reduce sugar and saturated fats intake;
- avoid tobacco use – smoking increases the risk of cardiovascular diseases.

Diagnosis and treatment

Early diagnosis can be accomplished through relatively inexpensive blood testing.

Treatment of diabetes involves lowering blood glucose and the levels of other known risk factors that damage blood vessels. Tobacco use cessation is also important to avoid complications.

Interventions that are both cost saving and feasible in developing countries include:

- moderate blood glucose control. People with type 1 diabetes require insulin; people with type 2 diabetes can be treated with oral medication, but may also require insulin;
- blood pressure control;
- foot care.

Other cost saving interventions includes:

- screening and treatment for retinopathy (which causes blindness);
- blood lipid control (to regulate cholesterol levels);
- Screening for early signs of diabetes-related kidney disease.

These measures should be supported by a healthy diet, regular physical activity, maintaining a normal body weight and avoiding tobacco use.

To conclude, diabetes is a chronic progressive disorder and is rapidly achieving the status of a potential epidemic in India with more than 62 million diabetic individuals currently diagnosed with the disease. It has also been predicted that by 2030, diabetes may afflict up to 79.4 million individuals in India. So it is high time for us to teach people about diabetes and its prevention. Diabetes education should reach to our school children also, so that we can hope for a better future.

HEALTH SNIPPETS**(1)CHUTNEY RECIPE:****Amla-garlic chutney**

Chutney recipes are an integral component of Indian cuisine. Indian meals are seemed to be incomplete without chutney, raita, and pickles. Amla-Garlic chutney has many health benefits. Amla (Indian goose berry) is extremely rich in vitamin C. Amla is a powerhouse of anti-oxidants and thus helps in fighting off free radicals in our body. Garlic helps in lowering blood cholesterol and enhances digestion. This recipe lowers blood sugar and increases the energy level of the body. It is good against cold and cough and helps to overcome respiratory problems. The recipe boost immune system and also beneficial against diabetes, cancer and asthma. It is effective in combating virus and bacteria. In northern India, it is generally used in rainy season with roti or rice. This chutney is an easy and quick way to include Amla and Garlic in our daily meal.

Ingredients:

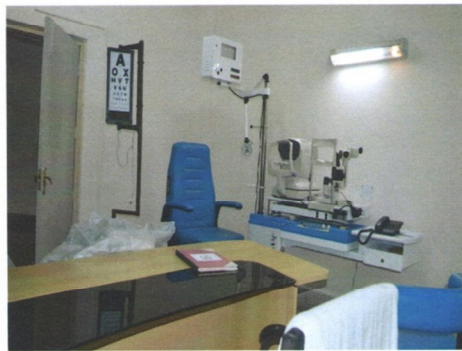
Amla (Big size)	2
Garlic	3 – 4 cloves
Green Coriander leaves	½ cup
Mint (Pudina), chopped	1 cup
Green chilly	1
Salt	To taste

Method:

Mix all the ingredients and blend it in chutney mixer and serve fresh.

Photo Gallery of IIT Guwahati Hospital







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