7.2-**Best Practices**-

CARING FOR HEALTH OF STUDENTS & COMMUNITY

MOTTO-NOURISH TO FLURISH

(Activities done by the department of Home Science)

The term ‘health’ is a positive and dynamic concept. In common parlance, health implies absence of disease. However, that industrial health implies much more than mere absence of disease is clear from the following definitions of health:

The World Health Organization (WHO) has defined health as: “a state of complete physical, mental and social well-being and not merely the absence of disease or illness or infirmity”. As regards the industrial health, it refers to a system of public health and preventive medicine which is applicable to industrial concerns. Physical fitness is not the sole basis of being healthy; being healthy means being mentally and emotionally fit. Being healthy should be part of your overall lifestyle. Living a healthy lifestyle can help prevent chronic diseases and long-term illnesses. Feeling good about yourself and taking care of your health are important for your self-esteem and self-image. Maintain a healthy lifestyle by doing what is right for your body.

Power of Attitude

A positive attitude can boost your energy, heighten your inner strength, inspire others, and garner the fortitude to meet difficult challenges.

Exercise & Physical Therapy

Advice on aerobic, flexibility, strength training and balance exercises to help manage and reduce PN symptoms.Good nutrition is often the first line of defense to avoid many diseases, including peripheral neuropathy. Find advice for keeping a healthy diet, shopping and managing drug side effects.

Importance of Good Health -

Cells are the fundamental units of all living organisms. They are made up of a variety of chemical substances. Cells move from place to place. Even if the cell is not moving, a lot of repairing still goes on within it. Besides this, there are various specialized activities in our body, like the heart pumps blood, the kidney filters the urine, the brain is constantly thinking, the lungs help in breathing. This way, there is a lot of interconnectedness between the various organs in our body. For all these activities, our body needs energy and raw material. Food is necessary for cell and tissue functioning. Therefore, if you are not well, all your bodily activities start getting hampered. Health is a state of complete physical, mental and social well being. For a healthy life cycle, a person needs to have a balanced diet and has to regularly exercise. One must also live in a proper shelter, take enough sleep and have good hygiene habits. So, how do we ensure that we are doing all the right things to have a good health? Let’s spread the awareness for the importance of health:

- The health of all organisms depends on their surrounding or their environment. Our social environment is an important factor in our individual health.
- Public cleanliness is important for individual health. Therefore, we must ensure that we collect and clear the garbage regularly. We must also contact an agency who can take the responsibility of clearing the drains. Without this, you could severely affect your health.
- We need food for health and for food, we will have to earn money by doing work. For this, the opportunity to do work has to be available. Good economic condition and jobs are, therefore, needed for individual health
- We need to be happy in order to be truly healthy. If we mistreat each other and are afraid of each other, we cannot be healthy or happy. Social equality and harmony are important for individual health.

When one or more organs or systems of our body are adversely affected as in their normal functioning is interrupted, we say that we are not healthy i.e., we have a disease. Disease means something is wrong with our body and that we feel unwell or malfunction of the body.Our health is affected not only by unbalanced diet but also by diseases, infections, poverty, large family, overcrowded houses etc. The diseases are normally caused by external organisms (microbes) intersecting the body's natural barriers and invading into our healthy body. Such organisms can cause havoc if our immune system doesn't handle it right away.

Mental Health:

This refers to the mental soundness of the employees. As is physical health important for good performance, so is mental health also. Experience suggests that three factors, namely, mental breakdowns, mental disturbances, and mental illness impair the mental health of employees.

Importance of health:

The trite saying 'Health is Wealth' explains the importance of health. Ill health results in high rate of absenteeism and turnover, industrial discontent and indiscipline, poor performance, low productivity and more accidents. On the contrary, the natural consequences of good health are reduction in the rate of absenteeism and turnover, accidents and occupational diseases.

Besides, employee health also provides other benefits such as reduced spoilage, improved morale of employee, increased productivity of employee and also longer working period of an employee which, of course, cannot be easily measured.

Health Importance for College Girls-

Eating healthy food is important at any age, but it's especially important for teenagers.As your body is still growing, it's vital that you eat enough good quality food and the right kinds to meet your energy and nutrition needs.Being a teenager can be fun, but it can also be difficult as your body shape changes. These physical changes can be hard to deal with if they aren't what you are expecting. There can be pressure from friends to be or look a certain way, and this might affect the foods you eat. It's not a good time to crash diet, as you won't get enough nutrients, and you may not reach your full potential. Following a sensible, well-balanced diet is a much better option, both for now and in the long term.

As a teenager, you'll start to become more independent and make your own food choices. You'll hang out with your friends or get a part-time job so you can buy the things you like. Because you are still growing, you need to take extra care to get enough of some important vitamins and minerals to feel good and be healthy.

- What should I eat?
- Why should I eat breakfast?
- What's a healthy school lunch?
- Eating for study
- Eating for sport and play
- Achieving a healthy weight
- Eating disorders
- Preventing acne

What should I eat?

Eating three regular meals a day with some snacks will help you meet your nutrition needs. Skipping meals means you will miss out on vitamins, minerals and carbohydrates, which can leave you lacking energy or finding it hard to concentrate. Here is a guide to help you understand the value of what you eat.

1. Breads, grains and cereals are carbohydrates that provide energy for your brain and muscles. They're also an excellent source of fibre and B vitamins. Without enough carbohydrates you may feel tired and run down. Try to include some carbohydrates at each mealtime.

2. Fruit and vegetables have lots of vitamins and minerals which help boost your immune system and keep you from getting sick. They're also very important for healthy skin and eyes. It's recommended you eat two serves of fruit and five serves of vegetables a day.

3. Meat, chicken, fish, eggs, nuts and legumes (e.g. beans and lentils) are good sources of iron and protein. Iron is needed to make red blood cells, which carry oxygen around your body. During your teenage years, you'll start to menstruate, or get your period, and this leads to loss of iron. If you don't get enough iron, you can develop anaemia, a condition that can make you feel tired and light-headed and short of breath. Protein is needed for growth and to keep your muscles healthy. Not eating enough protein when you are still growing, or going through puberty, can lead to delayed or stunted height and weight. Not enough protein is common when you go on strict diets. Include meat, chicken, fish or eggs in your diet at least twice a day. Fish is important for your brain, eyes and skin. Try to eat fish 2 to 3 times a week.If you are vegetarian or vegan and do not eat meat, there are other ways to meet your iron needs, for example, with foods like baked beans, pulses, lentils, nuts and seeds.

4. Dairy foods like milk, cheese and yoghurt help to build bones and teeth and keep your heart, muscles and nerves working properly. You'll need three and a half serves of dairy food a day to meet your needs.

5. Eating too much fat and oil can result in you putting on weight. Try to use oils in small amounts for cooking or salad dressings. Other high-fat foods like chocolate, chips, cakes and fried foods can increase your weight without giving your body many nutrients.

6. Fluids are also an important part of your diet. Drink water to keep hydrated, so you won't feel so tired or thirsty. It can also help to prevent constipation.

It is better not to drink flavoured waters or sports drinks because they can lead to more weight gain.

Why should I eat breakfast?

Breakfast is the most important meal of the day. It can help with memory and concentration at school, and give you energy to study and play. Regular breakfast eaters tend to have a healthier weight than those who skip breakfast.

Look for breakfast cereals that are high fibre and low fat and with not too much added sugar or salt. Here are some healthy breakfast options:

- Porridge with honey and cinnamon
- Muesli with yoghurt
- Fresh fruit and yoghurt
- Higher-fibre cereals like Weet-Bix, Vita Brits, Mini-Wheats, Just Right, Fibre Plus, Sustain or similar
- Multigrain toast with a boiled or poached egg
- Baked beans on toast
- Raisin toast
- Pita bread with olives and feta
- Melted cheese and vegemite on toast or an English muffin
- Crumpets with jam
- Banana milkshake or fruit smoothie
- Pancakes with yoghurt and fruit.

What's a healthy school lunch?

If you don't look forward to your school lunch, then change what you are preparing. School lunches don't have to be boring. Does your mum or dad usually make your school lunch? If you don't like what they make for you, talk to them about what you would like instead. Tell them what sandwich fillings you like, or what your favourite healthy snacks are.

Here are some suggestions:

- Chicken, grated carrot, cucumber and cream cheese pita bread
- Turkey, cheese and salad on multigrain bread with cranberry sauce
- Vegetable and lentil soup in a thermos with a bread roll
- Smoked salmon, salad and cream cheese bagel
- Leftover pasta with lots of cooked vegetables
- Quiche and salad
- Cheese and salad sandwich
- Boiled egg and salad on multigrain with a smear of mayonnaise

- Ham, cheese and spinach wrap
- Cold cooked cheese, salad and lean meat quesadillas
- Chicken with avocado and salad in a grainy bread roll
- Beef, tomato and lettuce sandwich with tomato chutney or salsa

Eating for study

When at school or studying, your brain needs extra energy. Eating healthy foods is also linked to better concentration. Here are some tips for eating healthier when studying and during exams.

- Eat small frequent meals.
- Easy and convenient nutritious meals include: frozen dinners, tinned soups, peanut-butter sandwiches, breakfast cereal, cheese sandwiches, tuna or chicken and salad sandwiches, baked beans or eggs on toast.
- Snack foods like chips and lollies can cause you to feel grumpy, irritable and low in energy. That's not what you want while you are studying. Try healthier snacks such as yoghurt, nuts, dried fruit, fresh fruit, plain popcorn or vegie sticks with dip.
- People use caffeine for a 'pick me up' to feel more awake or alert. Too much caffeine from coffee, tea, cola and energy drinks can disrupt your sleeping patterns, send your heart racing, make it difficult to focus and/or cause nervousness in some people. Try sticking to one or two cups of coffee or tea a day, or try decaffeinated coffee or herbal teas as an alternative. Enjoy cola or energy drinks only occasionally as they have too much sugar and little nutritional benefit.
- Drink plenty of water. When you are dehydrated you can feel tired.
- Eat only when you are hungry. Be aware of your hunger signals, like stomach pangs, grumbling guts, dry mouth etc. If you need a study break and do not have hunger pangs, have a drink of water or go for a walk.
- Regular exercise helps to improve your blood circulation, which keeps oxygen and nutrients flowing to your body and brain helping you to concentrate.

Eating for sport and play

Eating good foods before exercise can boost stamina and endurance. The following foods will help:

- breakfast cereal with milk and fruit
- dried fruit and nuts

- yoghurt and fruit
- English muffin with peanut butter and honey
- banana and peanut-butter sandwich
- fresh fruit smoothie with milk and/or yoghurt
- low-fat muesli bar
- small muffins made with oats or wholemeal flour and fruit or vegetables
- low-fat custard and fruit
- raisin toast and cream cheese
- sushi handrolls
- fruit scone
- trail mix with dried fruit, nuts, seeds and some choc chips.

Achieving a healthy weight-It is easy to grab biscuits, potato chips, cakes, sausage rolls, pies, doughnuts or chocolate bars when you're hungry, but regularly choosing those foods will make it easier to put on excess weight. Enjoy these kinds of convenience foods, takeaway and fried foods occasionally only.

Eating disorders-People with an eating disorder experience extreme disturbances in their eating behaviour and related thoughts and feelings. They have an overwhelming drive to be thin and a morbid fear of gaining weight and losing control over their eating. Eating disorders can cause serious physical and psychological problems. They are not a lifestyle choice. Eating disorders can be effectively treated and the earlier the treatment the better the recovery. Families and friends often need support and assistance too, and are involved in the treatment process. A physical health check is essential to rule out possible medical complications that can arise from the condition. It is also very important to have the right information about your diet and about healthy eating, as there is plenty of wrong or misunderstood information about food and nutrition out there.

Talking with a professional counsellor is necessary to help change your thoughts, feelings and behaviours related to the eating disorder, and to help deal with the stressful things that might be happening in your life, like relationship problems, school issues and other things. If you have complications like severe depression or anxiety, medications may be useful. No single food causes acne, but what you eat may influence acne. For some teenagers, foods like chocolate or greasy

takeaways can have an effect on their skin. As a general rule to prevent acne, try to eat fewer processed foods, and eat and drink healthily.

Thus our college adopts this practice to take care health of students here as mostly they do belong to economically downtrodden class, but proper health can be created and maintained via low cost foods and regular health care. This message is communicated to all common students for their betterment. We have practice the motto of health care of students via the following modes-

- **Heath Assessments in regular basis as part of practical Curriculum in BSc (Clinical Nutrition & Dietetics) and BSc(Home Science) –1st Semester-**

As per UGC guidelines, we have added some basic but important parameters related to health as bio-indicators of health status of college students- Hemoglobin gm % value, Clotting time, bleeding time, Blood group, Rh factor, Blood Group. The analysis is done by Dr Seema Mishra herself.
The results are informed to the concerned students at the time of analysis, thus a significant number of first year students are well aware regarding their basic health status.(Approx-200-250).Hemoglobin gm % value is very important for any young girl, thus mostly our college students have Hb value below 8-9 gm%. They have related problems like headache, breathlessness, fatigue, blurred vision .The remedies for improving Hb gm% is informed to those students ,having low values either via Red Cross Unit, or by the faculties of Home Science Department. As the importance of good Hb level is part of their paper of Physiology & Anatomy, so they young girls at initial first year level understand the fundamentals of basic health parameters and their healthy values.

Every year 5-7 girls of first semester identified as Rh negative, being future mothers they are informed about the importance of this factor ,consequences of mismatched Rh factor as serious as Erthroblastosis Foetalis and remedies like blocking antibodies. Still in our nation health care of pregnant girls are neglected , home based deliveries are still common, Rh negative girls need to have blocking antibodies in injectable form in the initial stage of pregnancy,so those girls are informed about this , so they are mentally prepared and well informed about how to deal with this condition. This strategy not saves their lives but also protects the future generation with complication and fatal situations.

Information regarding blood group is also very important –any situation related to blood transfusion or donation, the students are informed about their bold group so the possibility of mismatched blood donation/ transfusion is curtailed via this act. Also educating a girl means educating a family, so these messages widespread in whole community regarding health care.

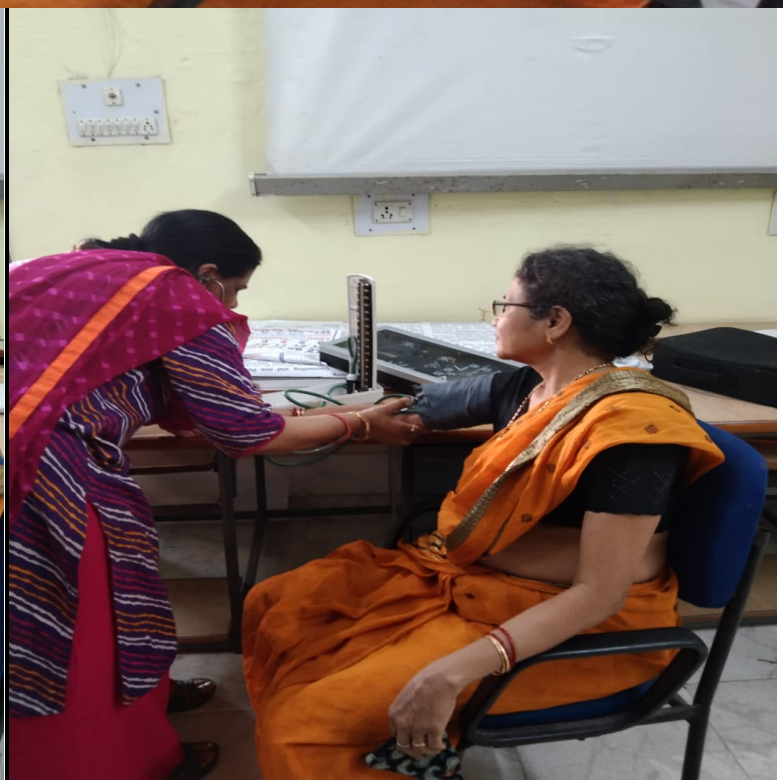
The students are also informed about the importance of blood donation via a part of their curriculum, they are motivated to maintain their Hb level in healthy range , but also motivated to donate blood . This drive is helpful to teach young generation about blood donation and organ donation. The faculty of Home Science department are registered blood donor of Red Cross , so by regular blood donation , they motivate students by scientific facts that regular donation improves Hg level.

Sickle Cell Anaemia is common problem of Sahu/ Kurmi community of Chhattisgarh , many of our students do belong to this community, so if their Hb level is found low , the girls are informed about the possible situation , their parents are called and further remedies are arranged in CIMS.

Every year some (1-3) students are identified as having clotting/ bleeding related problems , they are also informed about possibility of hemophilia / thalassemia ,further medical regime is suggested to them . We observed through our experiences of many previous years that girls having liver problems (Deficiency of Prothrombin & Fibrinogen- Hepatic Protein) and Calcium deficiency , rarely with Vitamin K deficiency , they have given related health guidelines.

- **Blood Pressure Measurement-**

Blood pressure is estimated by sphygmomanometer routinely as part of practical curriculum in UG classes. Mostly the blood pressure is observed towards lower range in students. So, they are facing health problems such as body imbalance, higher heart rate (palpitation) spasm in fingers, headache, cold sweating. These students are advised to bring back their hemoglobin level and blood volume to the normal range and to take homemade saline solution (7%), along with sugar. Lime juice with jiggery is also advised to take in such conditions. Rarely if some girl is observed to have hypertension then she is advised to take lesser table salt and to take lesser quantities of coriander, cumin-seeds, brinjal, and tomatoes.



III AND IV , V , VI SEMESTERS- The students are made acquaints about body's **biochemistry** ,Metabolic cycles , **Basic Nutrition** –Vitamins, Minerals, Micro-Nutrients , Protein, Fat , Carboce-their functions, Hypo and Hyper effects via practical . In advance classes Clinical Dietetics is main paper-the students studied Medical Nutritional Therapy of all the diseases with the latest advancements of the field. We generate keen interests of the students regarding "HEALTH", via these students the knowledge – transfer is many folds, thus we hope that by teaching **Clinical Nutrition & Dietetics** we have created a motivational atmosphere regarding importance of Health.



❖ **Health related MSc Food & Nutrition Practical-**

All the practicals are base on the health benefit of human. The practical of **anatomy& physiology** covers the saliva composition and factors affecting salivary secretion, osmotic resistance of RBCs, via use of hypo/hyper and isotonic salt solutions, making blood smear, RBCs counting, WBCs differential counting, muscular endurance, body balancing.

Practical on **food science** covers effect of salt on leafy vegetables, effect of baking soda on nutrients, gluten technology.

The **Geriatric Nutrition & Applied life Sciences** covers problems related to old age as low BMR, Hypothermia, and anemia.

The practicals of **clinical biochemistry** covers serum estimation of liver function tests, quantitative analysis of hepatic enzymes - SGPT, SGOT, mallic dehydrogenase, succinic dehydrogenase, alkaline phosphatase, renal function tests via estimating serum creatinine, serum urea, cardiac bio-indicator – creatine phosphatase, serum glucose, serum total lipid profile- cholesterol, triglycerides, HDL, and LDL is calculated via Friedweld formula (Fw formula), serum total proteins, serum albumin all these biochemical parameters are related with the health status of any individuals and thus helpful with the diagnosis of the diseases as their normal values are disturbed in disease condition. Also we've digital electrolyte analyzer we measure serum sodium, serum potassium, serum calcium levels to identify the status of hypo/hypernatremia, hypo/hyperkalemia, hypo/hypercalcemia. As in many diseases sodium:potassium is disturbed (heart and kidney diseases) so this estimation is very helpful to identify such diseases. For all the serum estimation we use biochemistry autoanalyzer modal 100. We have also

hematology blood cell counter via this machine, we can measure all the parameters related to hematology such as type of anemia, MCV, MCH, MCHC, hematocrit value, packed cell volume, megaloblasts, neutrophils, eosinophils, basophils, and platelet count.

Methods of investigation (Biochemistry Practical) We have practical related to estimation of ascorbic acid(Vitamin C) by using dye method-2,6 dichlorophenol indophenols in foods, estimation of calcium by Clark & Collic method, estimation of total protein by kjheldhal method, estimation of total lipid by Soxhlet method, amino acid identification & quantification by paper chromatography and electrophoresis.

One more practical is related tom **Institution Management** so the girls are made familiar to how the run the institutes dealing with health matters.

As all these practicals are helpful to measure health parameters diseased condition and nutrition content of foods so the students can make them acquaints with the health maintenance, health status measurement and health repairmen related basic procedures. Also all these theories and practical part curriculum develop their keen interest towards health.

In **Microbiology Practical** we grow cultures of microorganisms present in different food sources under strict hygienic conditions by wearing gloves and masks with using sanitizer, we have incubator and at different temperature we grow microorganisms also we test food adulterants and demonstrate the simple adulterant identification techniques in classrooms and during extension activities

- **<u>Mental Health related-MSc Human development</u>**

Msc human development covers the areas of mental health. The curriculum covers **mentally problematic and retarded child, behavior [problem of common people, learning disabilities, abnormal psychology, psychiosomatic disorders, neurotic behavior, hormonal imbalance and its effect on mental disorders, organic disorders, substance abuse, common mental problems suggest suicidal tendencies, anxiety and depression**. So, the girls are well aware with the aspects of mental health.

Dissertations & projects –MSc. 3rd semester students are allotted dissertations and projects based on physical and mental health topics as maternal health, stress and depression, general anxiety, interest, personality, effect of zinc on baby's weight, low birth weight babies and their problems, Tuberculosis and pregnancy, poor lactogenesis, poor galactopoiesis.

- **APNA Lab-**

The college has set "APNA Lab" through which on the cost of chemicals only, and many times in free we estimate the biochemical parameters for disease diagnosis and prevention. The estimations based on only finger pricking are done by Dr. Seema Mishra herself, but estimation based on serum analysis we take help from **Mr. Abhay Tamrakar**, Modern Diagnostic Patholab, near old bus stand, Bilaspur. The procedure of venous drainage is done by him and serum separation by centrifugation is done by us. As Mr. Abhay Tamrakar is pathologist thus the blood drainage procedure is safe and not questionable. Serum estimations are mostly done in his supervision. He has signed MOU with us in this regard. Mostly we do not pay him for all this help, but when the college is closed and practical are not started we issue our estimation machines to him for that time period only. He uses our machines and with mutual understanding he helped us time to time.

We have biochemistry auto-analyzer star 100, hematology blood cell counter, centrifuge machine for serum separation, digital electrolyte analyzer, flame photometer, bomb calorimeter, muffle furnace, sphygmomanometer, hemoglobinometer, Neubar's chamber, laminar flow, ovens, light microscope, urine analyzer, colorimeter, spectrophotometer, digital Hb meter 185, digital balance, incubator, hematology analyzer, hot air oven, digital bp monitor, haemo-cytometer, firing unit, electrophoresis supply 606, digital colony counter, and photophone in APNA lab.

All the health related parameters are estimated under the banner of APNA lab.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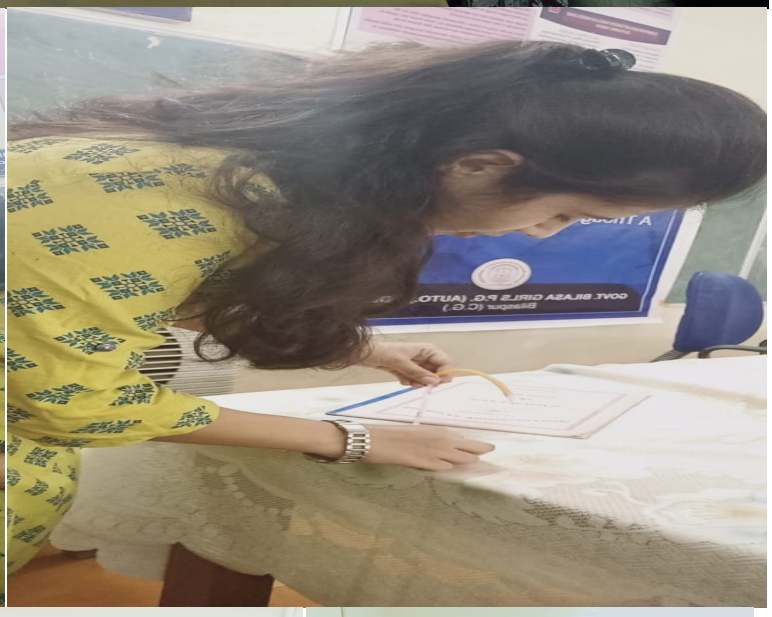
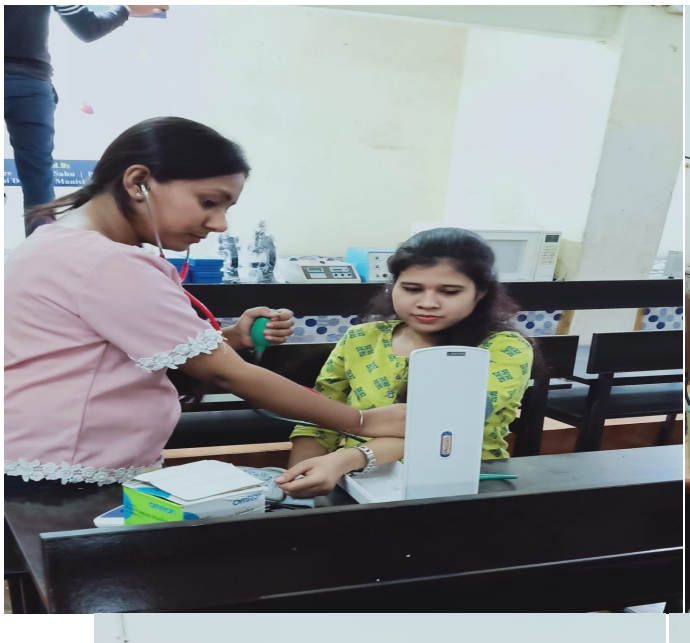
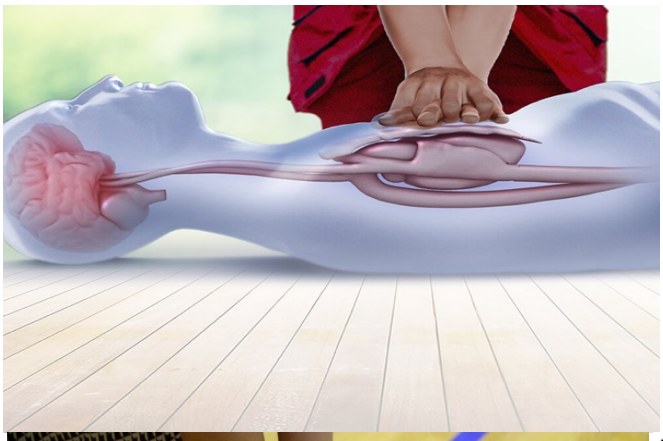


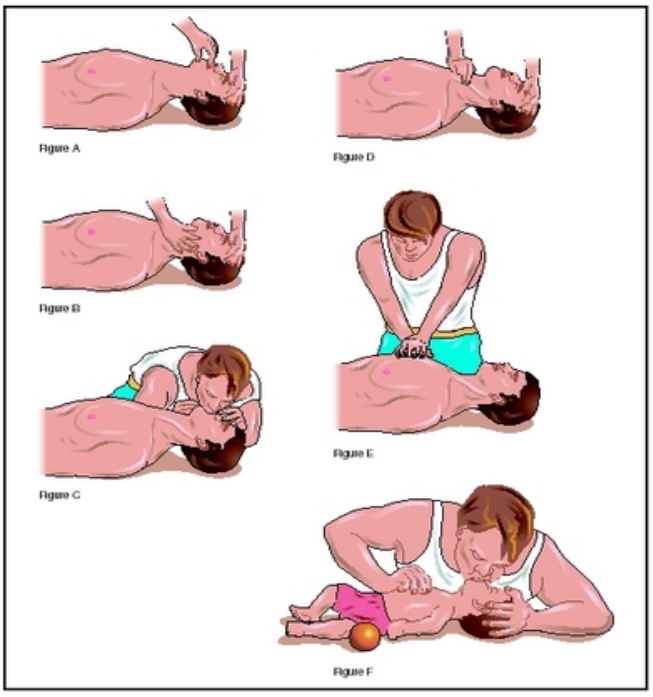




❖ **CPR technique demonstrations/Artificial respiration techniques/Thermometer reading-**

These techniques are life saving during the time of emergency. Every year in fresh batches of first year we demonstrate the techniques of cardiopulmonary respiration (CPR), and also we show them videos related to such technique and give them small tips. At the time of emergency such as loud coughing, when feeling congestion in chest, deep breathing, when feeling vertigo, the artificial respiration technique (mouth to mouth respiration) and by body rotating technique is taught by using students as modals, for safety we cover the mouth with piece of cloth to restrict cross infection. As most of our girls do belong to rural out spread area and they do not familiar with the procedure of the thermometer reading, even they do not have thermometers at their homes, we teach them the importance of thermometers at home and how to read it by looking at the lower end of the curvature of the mercury column.

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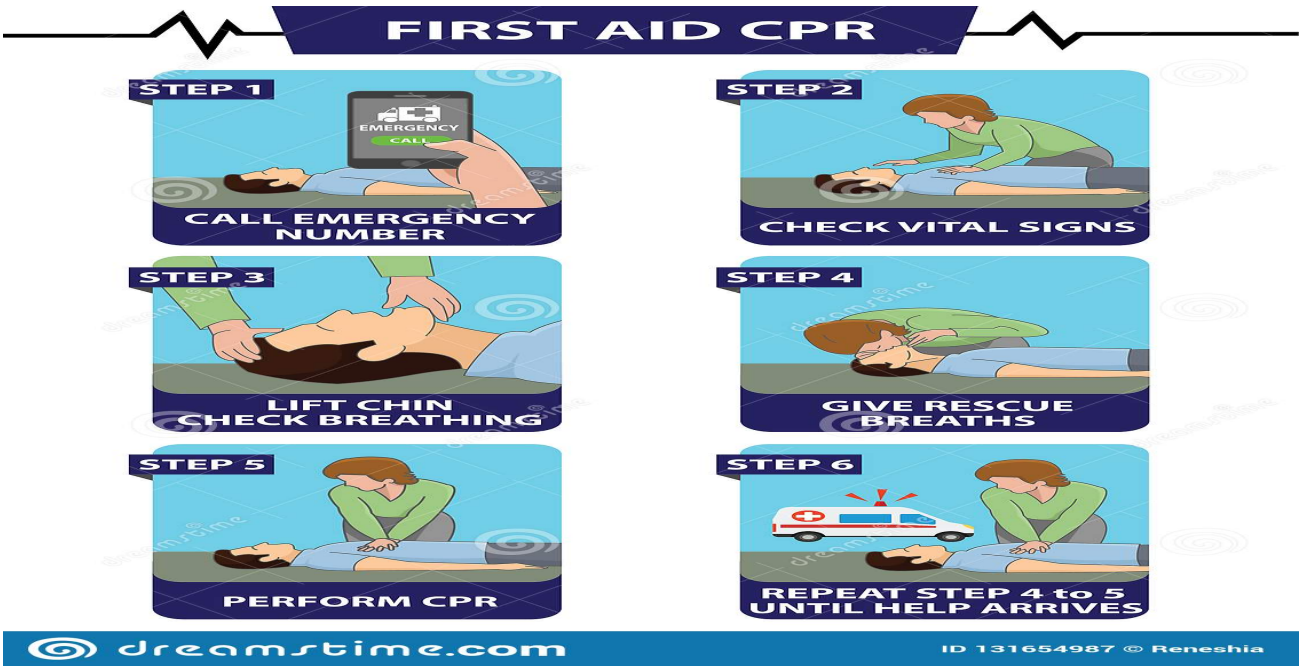
FIRST AID CPR
STEP 1
EMERGENCY
CALL
CALL EMERGENCY NUMBER
STEP 2
CHECK VITAL SIGNS
STEP 3
LIFT CHIN
CHECK BREATHING
STEP 4
GIVE RESCUE BREATHS
STEP 5
PERFORM CPR
STEP 6
REPEAT STEP 4 to 5 UNTIL HELP ARRIVES
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❖ **Therapeutic Diets-**

Therapeutic diet is one of the main subjects that are being taught to students as nutrition is an integral part of the medical therapy and adequate nutrition support is essential to prevent an extended and complicated hospital stay. Therapeutic diets are adaptation of the normal or regular diets. There are certain diseases which can be cured by food or nutrient concentrates such us deficiency diseases. In disease such as diabetes making alteration in the diet can help to control the extent of the disease and prevent the onset of complications.

Providing therapy through diet is called Diet therapy that is a branch of dietetics concerned with the use of food for therapeutic purpose. Diet therapy is a broad term used for the practical application of nutrition as a preventive or corrective treatment of a disease. It concerns with recovery from illness by giving good diet and prevention of disease. It may involve the modification of the existing dietary lifestyle to promote optimum health. For example a dietitian or a nutrition counselor may prescribe a diet therapy to an obese person to improve health. The therapy may involve including foods that improve the health condition while avoiding foods (such as fats, sugars etc.) that may make the condition worse. Basically the therapy promotes a balanced selection of foods vital for good health. The principles of diet therapy are to: • maintain good nutritional status, • correct deficiencies or disease, if any, • provide rest to the body, • help metabolize the nutrients, and • make changes in body weight, when necessary.

Diet therapy may include prescribing specialized dietary regimes or meal plans. These specialized diet regimens or meal plans are called therapeutic diets. Therapeutic diet refers to a meal plan that controls the intake of certain foods or nutrients. They are adaptation of the normal, regular diet. Some common examples of therapeutic diets include clear liquid diet, diabetic diet, renal diet, gluten free diet, low fat diet, high fibre diet etc.

A therapeutic diet is a quantitative/qualitative modified version of a basic nutritious diet which has been tailored to suit the changing nutritional need of a patient/disease condition. The modified diet may reduce symptoms, make the patient more comfortable or improve the quality of life such as-

1. **Diabetes-** Diabetes is a group of metabolic diseases characterized by hyperglycemia resulting from insulin resistance or insulin deficiency. Diabetes leads to a wide range of complications and, when poorly controlled, contributes to significant morbidity and mortality. Type 1 diabetes, which accounts for approximately 5-10% of all cases, is caused by the autoimmune destruction of the insulin-producing beta-cells of the pancreas resulting in absolute insulin deficiency and hyperglycemia. Type 1 diabetes requires insulin treatment, along with therapeutic lifestyle interventions that are aimed at minimizing insulin doses and protecting against vascular complications.
2. **Type 2 diabetes**, which accounts for more than 90% of diabetes cases, is characterized by insulin resistance and relative, rather than absolute, insulin deficiency. Complications include cardiovascular

disease, nephropathy, neuropathy, retinopathy, peripheral vascular disease, and cerebrovascular disease, as well as damage to musculoskeletal, hepatic, and digestive systems, and impaired cognitive function and mental health. The condition begins with the accumulation of lipid particles in muscle and liver cells, coming largely from the diet. This accumulation of intra-myocellular lipid and hepatocellular lipid causes insulin resistance in which muscle and liver cells are less responsive to insulin's action and less able to remove glucose from the bloodstream. People with type 2 diabetes may present with classic symptoms of hyperglycemia or may be asymptomatic or have only mild symptoms, such as intermittent blurred vision or nocturia. Diabetes in these patients may be diagnosed during a routine examination. Type 2 diabetes is often accompanied by hypertension and lipid abnormalities, conditions that, like hyperglycemia, are amenable to dietary interventions. People with type 2 diabetes may present with classic symptoms of hyperglycemia or may be asymptomatic or have only mild symptoms, such as intermittent blurred vision or nocturia.Type 2 diabetes is often accompanied by hypertension and lipid abnormalities, conditions that, like hyperglycemia, are amenable to dietary interventions.

While type 2 diabetes is commonly and mistakenly described as the result of sugar consumption, it actually starts as insulin resistance resulting from intramyocellular and hepatocellular lipid accumulation. This process can occur in normal-weight individuals, but about 60-80% of patients are overweight. Prevalence in children is increasing rapidly due to poor dietary habits and increasing weight problems among children.nutrition, exercise, and other lifestyle interventions are essential parts of treatment for all forms of diabetes. Low Carbohydrate, low fat, protein diet is advisable in diabetes. Fibres and minerals along with vitamins are also important. Plant-based dietary patterns rich in fruits, vegetables, legumes, and nuts are the most effective approaches to the prevention and management of type 2diabetes. Refined sugar, saturated fat and carbohydrates in simple forms are advised to avoid. Glycemic index should be considered before planning a diet for a diabetic person.

3. **Chronic Liver Disease**- Liver is the largest organ of our body. Its functions include **Bile production (**Bile helps the small intestine break down and absorb fats, cholesterol, and some vitamins), **Absorbing and metabolizing bilirubin(**Bilirubin is formed by the breakdown of hemoglobin. The iron released from hemoglobin is stored in the liver or bone marrow) Fat metabolization: Bile breaks down fats and makes them easier to digest.Metabolizing carbohydrates: Carbohydrates are stored in the liver, where they are broken down into glucose and siphoned into the bloodstream to maintain normal glucose levels. They are stored as glycogen and released whenever a quick burst of energy is needed.Vitamin and mineral storage: The liver stores vitamins A, D, E, K, and B12. It keeps significant amounts of these vitamins stored.Production of albumin: Albumin is the most common protein in blood serum. It transports fatty acids and steroid

hormones to help maintain the correct pressure and prevent the leaking of blood vessels. Synthesis of angiotensinogen: This hormone raises blood pressure by narrowing the blood vessels when alerted by production of an enzyme called renin in the kidneys. Thus obstruction of liver's function harm to the body in many different ways and requires medical therapy as well as modification in diet to heal. The most common are toxic/metabolic (alcohol, non-alcoholic fatty liver disease, hemochromatosis), viral (hepatitis B and C), and autoimmune (autoimmune hepatitis, primary biliary cholangitis, primary sclerosing cholangitis). Less common etiologies include biliary (atresia, stone, tumor), vascular (Budd-Chiari, cardiac), genetic (cystic fibrosis, lysosomal acid lipase deficiency), metabolic (alpha-1-antitrypsin deficiency, galactosemia, Wilson's disease) and iatrogenic (biliary injury, drugs) conditions. Patients with chronic liver disease may also develop complications involving other organ systems, including renal failure due to hepatorenal syndrome, hypoxia caused by hepatopulmonary syndrome, pulmonary hypertension secondary to portopulmonary hypertension, or heart failure secondary to cirrhotic cardiomyopathy. The diet of patients with chronic liver disease is based on a standard diet with supplements addition as necessary. Restrictions may be harmful and should be individualized thus dietary treatment management aims towards maintaining an adequate protein and caloric intake and correcting nutrient deficiencies. Patients with hepatocellular disease are more susceptible to protein deficiency. Cirrhotic patients have a higher risk of micronutrient deficiency. Early recognition of micro or macronutrient deficiencies is essential, because the use of nutritional supplements has been proved to be associated with a reduced risk of infection, and improved liver function. Patients suffering from cholestatic liver disease are more susceptible to calorie deficiency and have an increased risk of fat-soluble vitamin deficits. Therefore based on the disease diet therapies are given that work along with medical treatments and help to improve patient's health.

4. **Chronic Kidney Disease-** Chronic kidney disease (CKD) is a progressive syndrome in which the kidneys lose their ability to filter blood, concentrate urine, excrete wastes, and maintain electrolyte balance. The kidneys remove wastes and extra water from the blood and make urine. To keep the body working properly, the kidneys balance the salts and minerals—such as calcium, phosphorus, sodium, and potassium—that circulate in the blood. The kidneys also release hormones that help make red blood cells, regulate blood pressure, and keep bones strong. Renal diseases obstruct these functions and damage kidneys which causes adverse effect in the body. CKD may occur quickly or may develop over years with few, if any, symptoms until residual renal function is no longer sufficient to maintain homeostasis. Presenting signs and symptoms can include anorexia, weakness, malaise, fatigue, pruritus, nausea, vomiting, and altered mental status. Other signs of CKD can include fluid retention, hypertension, anemia, and electrolyte disturbances. Severe renal

dysfunction can present as uremia, a condition which often affects the central nervous system, causing decreased mental status and, in some patients, seizures. Thus, the presence of reduced kidney function and development of chronic kidney disease (CKD) requires specific dietary adaptations. These adaptations are focused on avoiding the retention of specific micro- and macronutrients to toxic levels and to retard kidney damage and slow progression to end-stage renal disease (ESRD). Also increased prevalence of malnutrition in advanced CKD stages needs dietary modification. Dietary Sodium and phosphorus restriction should be the initial step to manage hypernatremia and hyper phosphatemia. Corrected calcium levels should be monitored, and if found to be low, may be supplemented as needed. Vitamin D levels should be assessed and are often low in CKD patients since the kidneys play a vital role in vitamin D synthesis**.** The acute ingestion of proteins influences the renal hemodynamics, increases the renal plasma flow, the intraglomerular pressure, and glomerular filtration rate. This physiological effect aims to increase the excretion of products derived from the protein metabolism through the kidneys. In healthy individuals, a high intake of protein in the long-term does not seem to promote deleterious effects on renal function; however, increased protein intake was associated with a lower glomerular filtration rate (GFR) in individuals with some degree of CKD. Hyper phosphatemia, hyperkalemia and hypocalcemia as well as anemia are the conditions which call for modification in intake of phosphorus, potassium, calcium, protein and iron as well as some vitamins.

5. **Cardiovascular disease-** A wide array of problems can arise within the cardiovascular system, a few of which include endocarditis, rheumatic heart disease, and conduction system abnormalities, coronary artery disease (CAD) which is also referred to as coronary heart disease (CHD), cerebrovascular disease, peripheral artery disease (PAD), and aortic atherosclerosis.In cardiovascular diseases it is observed that patients can improve their lipid profiles and reduce the rate of cardiovascular events by adding specific foods to their diets and substituting saturated fatty acids to monounsaturated fatty acids. Along with ω-3 and ω-6 fatty acids it is seen that appropriate dietary changes can decrease atherosclerotic plaque formation, improve endothelial vasomotor dynamics, reduce oxidation of low-density lipoproteins and enhance thrombolytic activity. Monounsaturated fats found in olive oil or canola oil, polyunsaturated fats, found in certain fish, avocados, nuts and seeds, low carbs, low fat and limited amount of sodium in diet help to prevent cardiovascular diseases.

6. **Anemia-** Anemia is a medical condition in which the red blood cell count or the hemoglobin is less than normal. In men, anemia is typically defined as hemoglobin level of less than 13.5 gram/100 ml and in women as hemoglobin of less than 12.0 gram/100 ml. it is caused by either a decrease in production of red blood cells (decreased erythropoiesis) or hemoglobin, or an increase in loss

(usually due to bleeding) or destruction of red blood cells. Some of the more common reasons of anemia are such as Loss of blood due to injury or trauma, Nutritional deficiency such as Iron, Vitamin B12, Folate deficiency. Diet therapies are intended to supplement the diet with varies micronutrients, alone or in combination, at higher doses, to immediately improve nutritional deficiencies and anaemia, increasing food variety through nutrition education and provision of foods rich in minerals and vitamins such as fruits, vegetables, and iron-rich foods (i.e. read meat, proteins). Primarily, folic acid, vitamin A, and vitamin B_{12} supplements, given alone or in combination with iron supplementation, are used to prevent and control for nutritional deficiencies in conjunction with anaemia.

7. **Protein energy malnutrition-** Protein-energy malnutrition (PEM) is classically described as 1 of 2 syndromes, marasmus and kwashiorkor, depending on the presence or absence of edema. Each type may be classified as acute or chronic. Additionally, marasmus can precede kwashiorkor. Many patients exhibit symptoms of both disease states.An imbalance between the supply of protein and energy and the body's demand for them to ensure optimal growth and function. It is a major public health problem in India. It affects particularly the preschool children (<6 years) with its dire consequences ranging from physical to cognitive growth and susceptibility to infection. This affects the child at the most crucial period of time of development which can lead to permanent impairment in later life. PEM is measured in terms of underweight (low weight for age), stunting (low height for age) and wasting (low weight for height). The majority of children suffering from undernutrition are the mild and the moderate forms which go unnoticed and the early ages are affected more which makes the process irreversible. Maternal nutritional status has a direct relation to the child's nutritional status. An undernourished mother gives birth to a low birth weight baby who grows up with compromised feeding and infections to a stunted child and adolescent and carries this vicious life cycle approach by giving birth to an underweight child. Also the vicious cycle of infection and undernutrition go hand in hand. With inadequate dietary intake, the immune response gets weaker and increases susceptibility to infections. A single episode of infection is easy to regain but if the child suffers from repeated infections without adequate dietary intake, it becomes difficult to regain normal growth. Infection was commonly diagnosed in children suffering from undernutrition.

Marasmus, or PEM without edema, is defined as inadequate intake of all nutrients, but especially energy. Its extreme form is characterized by muscle wasting and depletion of body fat stores. Other findings may include hypothermia, bradycardia, hypotension, decreased metabolic rate, loss of skin turgor, and constipation.

Kwashiorkor, or PEM with edema, is characterized by muscle atrophy, maintenance or gain of body fat, and peripheral edema. Other characteristics include anasarca (generalized edema), hepatomegaly, dry and peeling skin, anorexia, hypothermia, and apathy.

- Ms. Twinkle Sahu, students of MSc. Previous is working with LABEL BLIND INTERNATIONAL COMPANY. She is helping in calculation of energy value of various foods.

❖ Medicine distributions-

Under the banner of this best practice we distribute common medicines as during the time of COVID infection we distributed Zincovit to those college faculties who are of above 55 to buildup immunity, not only in the college but also in community, downtrodden people in slums in old age homes, and even in hospitals we distributed zincovit. We also distributed immunity boosting Succi 50 mg, Soyabean bari as protein source, fresh fruits and vegetables, ragi packets, sattu packets, and sometimes eggs. We also distribute dexorange (iron supplementation capsules) among adolescent college girls and in villages during the time of extension works. Many times we distributed Neurobion Forte tablets to the elderly of old age home. Calcimax forte, Basitone forte is also distributed. We also distributed bottles of sanitizers and masks at the time of COVID infections.


That alone is Knowledge which
leads to liberation.


That alone is Knowledge which
leads to liberation.


SHOT ON POCO X3

❖ **<u>Distribution of Magic Laddoos</u>**-The department of home science developed a cheap but highly nutritional laddoos by using soybean flour, green gram flour (besan), black lentils, jaggery, peanuts, roasted with vegetable oil. We distributed these laddoos among children of small age orphanages, aanganbadies, old age homes, maternity section of district hospital, we have done a research regarding the effect of supplementation on the health status of supplemented malnourished children of Chingrajpara, near SECL area, Bilaspur. And we observed a beneficial

effect of such supplementation on the health status. So, we routinely made laddoos and distributed them. The cost of one laddoo is comparatively low but the nutritional value is high as Threptin Diskette.

❖ Nutritional education-

Good nutrition prolongs independence by maintaining physical strength, mobility, endurance, hearing, vision, and cognitive abilities. A large number of population have one or more chronic diseases that can be improved by nutrition therapy, including cancer, chronic lung disease, heart disease, dementia, diabetes mellitus, high blood cholesterol, high blood pressure, osteoporosis, obesity and overweight, and failure to thrive.

Nutrition education can be defined as any set of learning experiences designed to facilitate the voluntary adoption of eating and other nutrition-related behaviors conducive to health and well-being. It is an integral part of providing nutrition services to older persons. Nutrition education should include information on physical activity in addition to nutrition. In recognition of the importance of physical

activity on health and the prevention of disease, the Dietary Guidelines for Indians recommend being physically active each day. Regular physical activity sustains the ability of older adults to live independently, and benefits individuals with arthritis and those with depression and anxiety. It may reduce the risk of cognitive decline in older adults, and is effective in helping to manage many chronic diseases.

1. Nutrition Education Goals
    a. To create positive attitudes toward good nutrition and physical activity and provide motivation for improved nutrition and lifestyle practices conducive to promoting and maintaining the best attainable level of wellness for an individual.
    b. To provide adequate knowledge and skills necessary for critical thinking regarding diet and health so the individual can make healthy food choices from an increasingly complex food supply.
    c. To assist the individual to identify resources for continuing access to sound food and nutrition information.

The increase in obesity and chronic diseases such as diabetes and heart disease worldwide reflects the complex interactions of biology, personal behaviour and environment. Consequently there has been a greater recognition of the importance of nutrition education.Nutrition education has been defined as “any combination of educational strategies, accompanied by environmental supports, designed to facilitate voluntary adoption of food choices and other food and nutrition- related behaviors conducive to health and well-being; nutrition education is delivered through multiple venues and involves activities at the individual, community, and policy levels.The Dietary Guidelines, which include maintenance of a healthy weight, daily physicalactivity, food safety, and moderation of alcohol intake should serve as the framework for all nutrition education activities. A nutrition education program makes available information and guidance pertaining to:Food, including the kinds and amounts of food that are required to meet one's daily nutritional needs.Nutrition, including the combination of processes by which the body receives substances necessary for maintenance of its functions and for growth and renewal of its components, i.e., ingestion, digestion, absorption, metabolism, and elimination.

. Behavioral practices, including the factors which influence one's eating and food preparation habits.

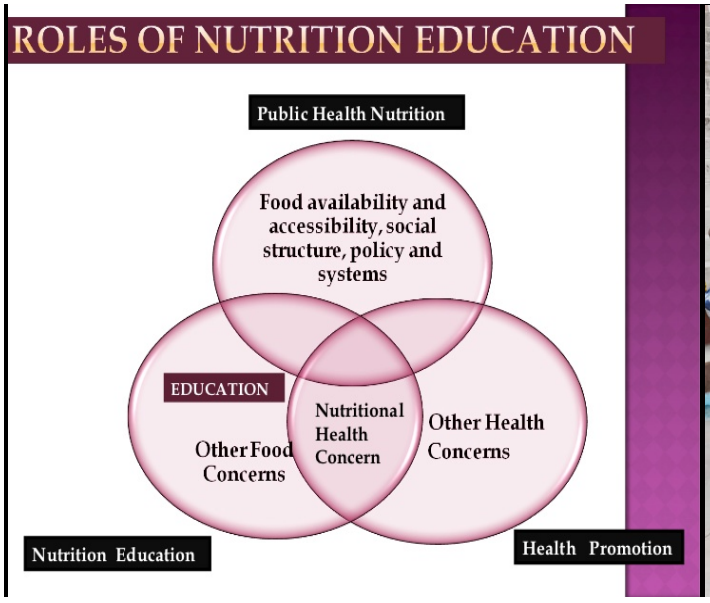
a. Consumer issues, including the management of food purchasing power to obtain maximum food value for the money spent.

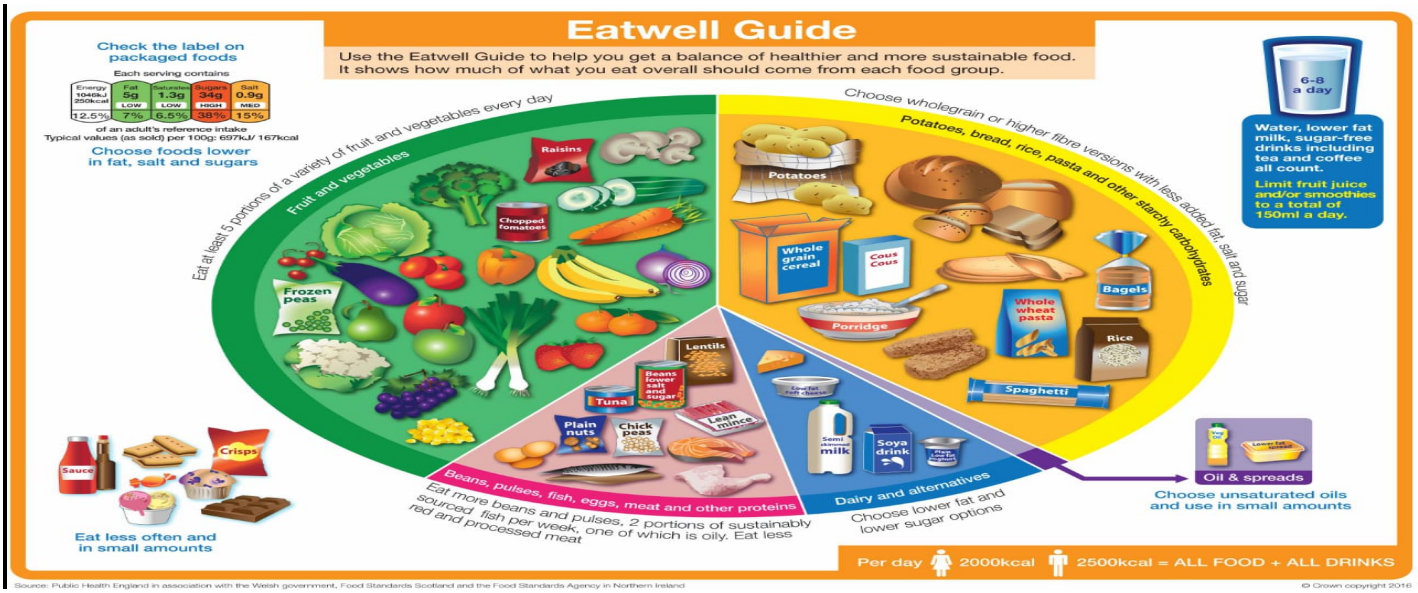
b. Information on physical activity.

c. Information on the roles of nutrition and physical activity in maintaining health and independence, and preventing or managing chronic diseases such as diabetes, heart disease, high blood pressure, osteoporosis, and arthritis.

Nu

trition Education Activities -Nutrition education consists of activities which provide visual and verbal information and instruction to students. Examples of nutrition education activities include: presentations, cooking classes, food preparation demonstrations, field trips, plays, panel discussions, planning and/or evaluating menus, food tasting sessions, question and answer sessions, gardening, physical fitness programs, videos, etc.




Eatwell Guide
Use the Eatwell Guide to help you get a balance of healthier and more sustainable food. It shows how much of what you eat overall should come from each food group.
Check the label on packaged foods
Each serving contains
Energy 1046kJ 250kcal 12.5%
Fat 9g LOW 7%
Saturates 1.3g LOW 6.5%
Sugars 34g HIGH 38%
Salt 0.9g MED 15%
of an adult's reference intake
Typical values (as sold) per 100g: 697kJ/ 167kcal
Choose foods lower in fat, salt and sugars
Eat at least 5 portions of a variety of fruit and vegetables every day
Fruit and vegetables
Raisins
Chopped tomatoes
Frozen peas
Choose wholegrain or higher fibre versions with less added fat, salt and sugar
Potatoes, bread, rice, pasta and other starchy carbohydrates
Potatoes
Whole grain cereal
Cous Cous
Porridge
Whole wheat pasta
Bagels
Rice
Spaghetti
6-8 a day
Water, lower fat milk, sugar-free drinks including tea and coffee all count.
Limit fruit juice and/or smoothies to a total of 150ml a day.
Lentils
Beans lower salt and sugar
Tuna
Plain nuts
Chick peas
Lean mince
Beans, pulses, fish, eggs, meat and other proteins
Eat more beans and pulses, 2 portions of sustainably sourced fish per week, one of which is oily. Eat less red and processed meat
Semi skimmed milk
Soya drink
Dairy and alternatives
Choose lower fat and lower sugar options
Oil & spreads
Choose unsaturated oils and use in small amounts
Sauce
Crisps
Eat less often and in small amounts
Per day 2000kcal 2500kcal = ALL FOOD + ALL DRINKS
Source: Public Health England in association with the Welsh government, Food Standards Scotland and the Food Standards Agency in Northern Ireland
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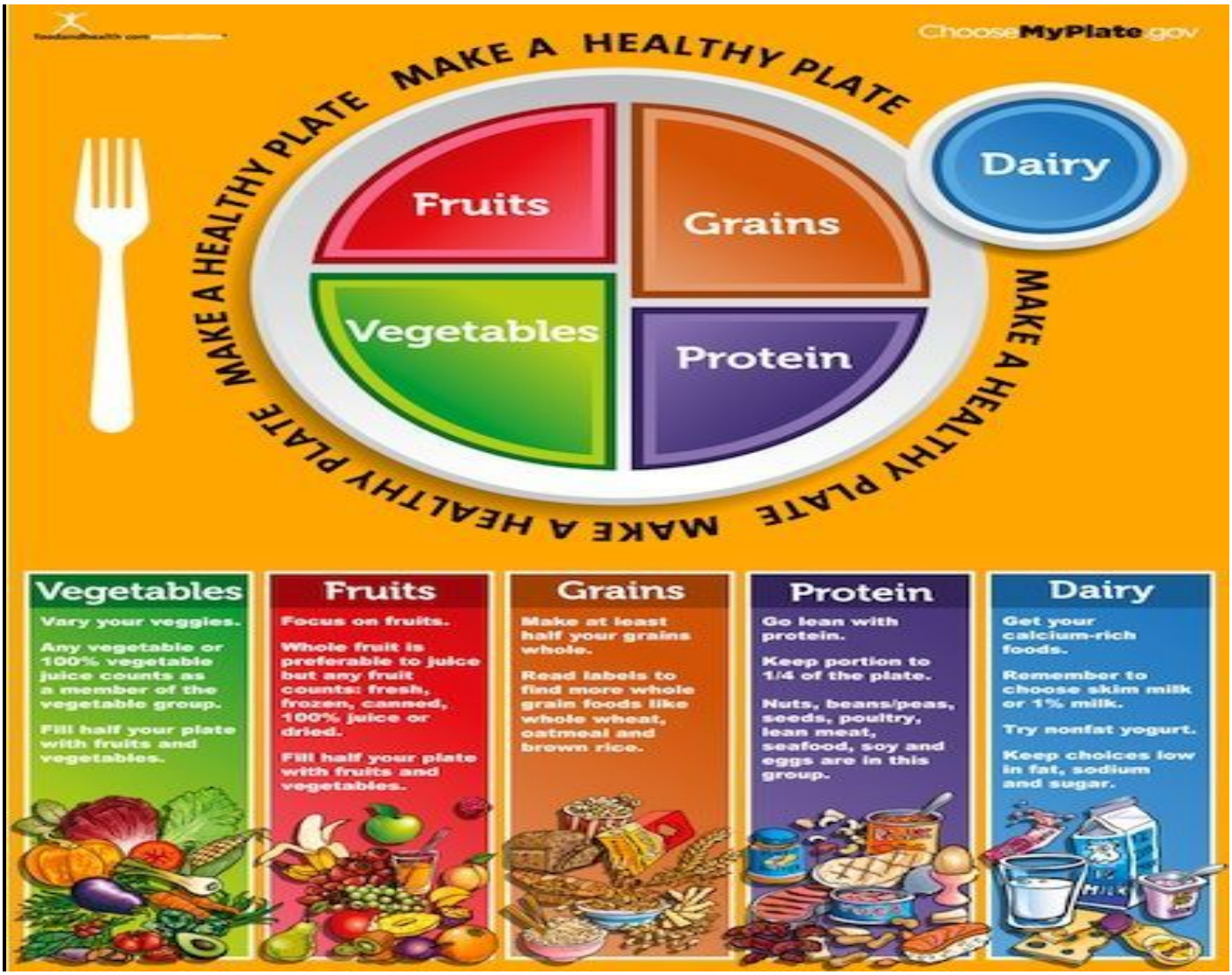
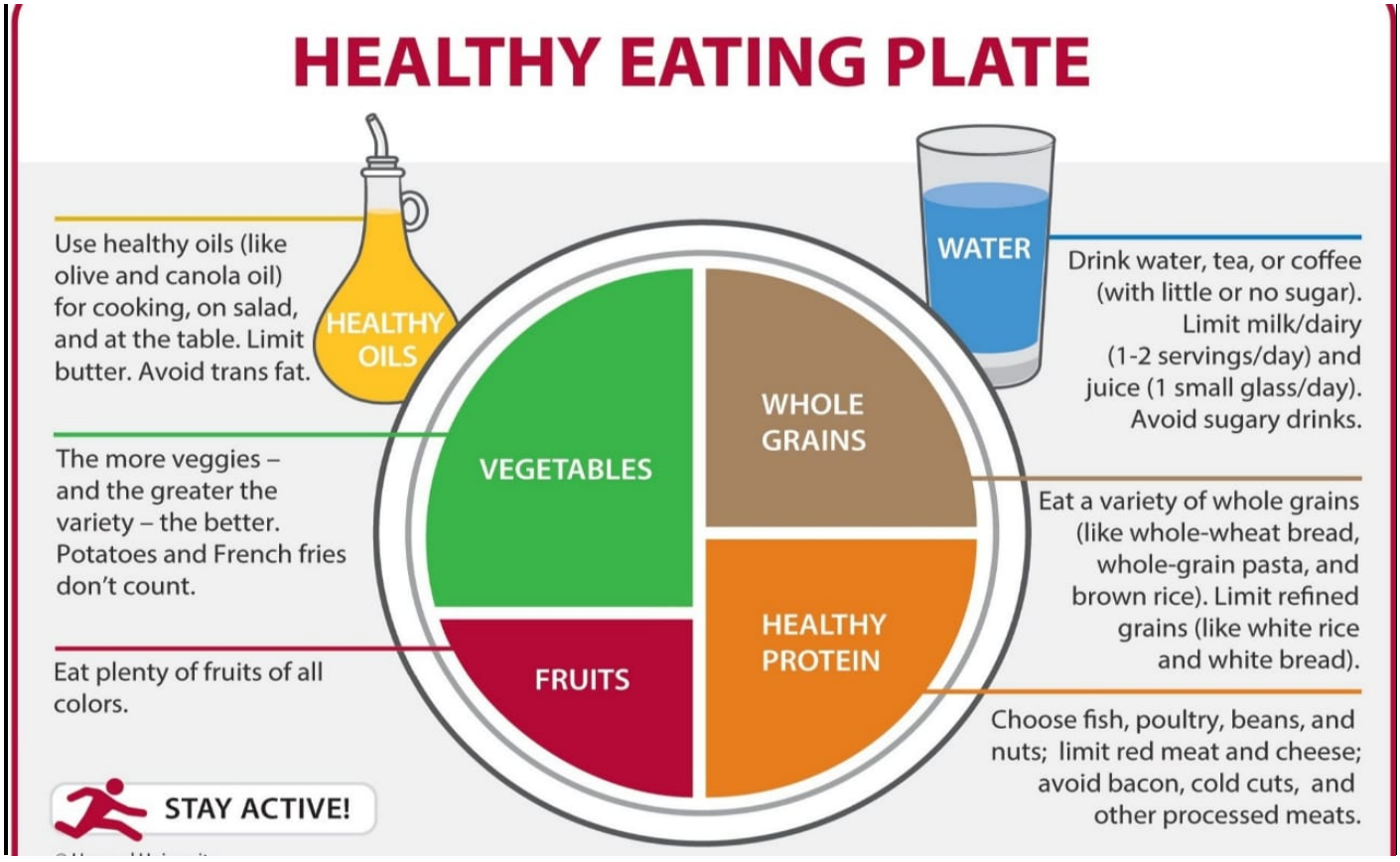
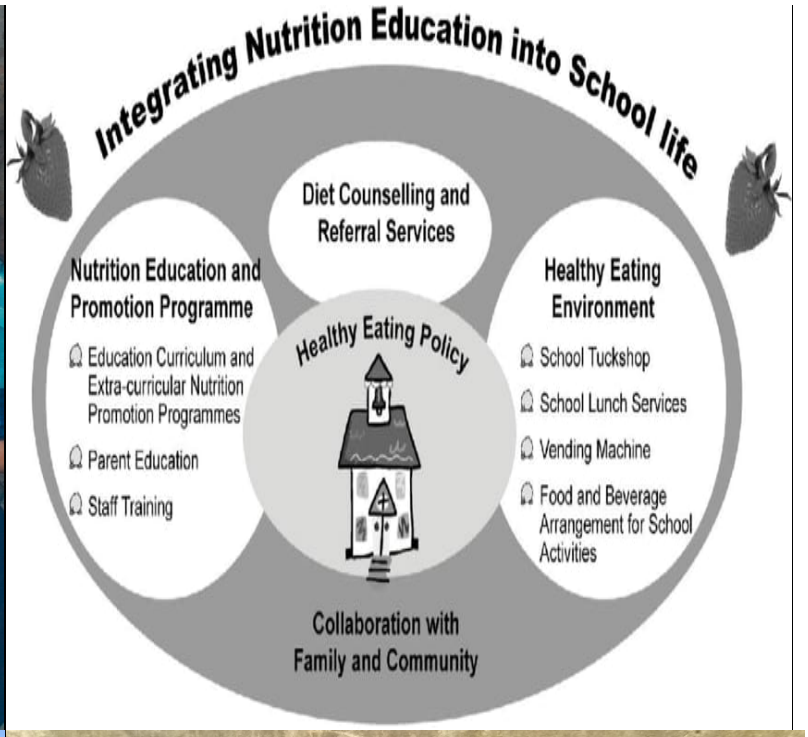

ChooseMyPlate.gov
MAKE A HEALTHY PLATE
Fruits
Grains
Dairy
Vegetables
Protein
Vegetables
Vary your veggies.
Any vegetable or 100% vegetable juice counts as a member of the vegetable group.
Fill half your plate with fruits and vegetables.
Fruits
Focus on fruits.
Whole fruit is preferable to juice but any fruit counts: fresh, frozen, canned, 100% juice or dried.
Fill half your plate with fruits and vegetables.
Grains
Make at least half your grains whole.
Read labels to find more whole grain foods like whole wheat, oatmeal and brown rice.
Protein
Go lean with protein.
Keep portion to 1/4 of the plate.
Nuts, beans/peas, seeds, poultry, lean meat, seafood, soy and eggs are in this group.
Dairy
Get your calcium-rich foods.
Remember to choose skim milk or 1% milk.
Try nonfat yogurt.
Keep choices low in fat, sodium and sugar.


HEALTHY EATING PLATE
Use healthy oils (like olive and canola oil) for cooking, on salad, and at the table. Limit butter. Avoid trans fat.
HEALTHY OILS
WATER
Drink water, tea, or coffee (with little or no sugar). Limit milk/dairy (1-2 servings/day) and juice (1 small glass/day). Avoid sugary drinks.
The more veggies – and the greater the variety – the better. Potatoes and French fries don't count.
VEGETABLES
WHOLE GRAINS
Eat a variety of whole grains (like whole-wheat bread, whole-grain pasta, and brown rice). Limit refined grains (like white rice and white bread).
Eat plenty of fruits of all colors.
FRUITS
HEALTHY PROTEIN
Choose fish, poultry, beans, and nuts; limit red meat and cheese; avoid bacon, cold cuts, and other processed meats.
STAY ACTIVE!


Integrating Nutrition Education into School life
Diet Counselling and Referral Services
Nutrition Education and Promotion Programme
Education Curriculum and Extra-curricular Nutrition Promotion Programmes
Parent Education
Staff Training
Healthy Eating Policy
Healthy Eating Environment
School Tuckshop
School Lunch Services
Vending Machine
Food and Beverage Arrangement for School Activities
Collaboration with Family and Community


2021/3/6 15:26


2021/3/6 15:27


❖ Miracle powders-

We developed some powders with very high content in any specific nutrient such as **Iron Rich Powder** made up of garden cress(chia seeds) mixed with black lentil (Kala til), raisins(munakka), and dates (khajur). Likewise we developed **Fibre Rish Powder** made up of ani-seed(saunf), mixede with cumin seed(jeera), dried fenugreek(kasuri methi), cardamom(ilaichi), pipli, oatmeal, and cinnamon(dalchini) in proper proportion. We have also developed **Calcium Rich Preparation** made up of tofu (soy paneer), groundnuts and ragi. We have also developed **Vitamin A Rich Powder,** made up of drumstick leaves, dried grated carrots, oven dried bathua leaves and oven dried cabbage. These miracle powders are good sources of specific nutrients but as they are made up of locally available low cost materials so these miracle powders are supplements for costly medicinal or food supplements, specially vitamin A deficiency is very much prevalent among Indian population and maximum blinds reside in India and the cause of blindness is vitamin A deficiency. So these powders are very much helpful for the eradication of specific nutrient deficiency. We made them and after sensory evaluation by the students and departmental faculty and observing no adverse effects these powders are distributed in community via our students.

❖ **Health Based Patents-**

The faculty of the institute has filed four patents based on the treatment of prevalent diseases in Chhattisgarh, such as **renal failure, hyperphosphatemia, and under and no dialytic renal patients and patients suffering from hypercoagulations(repeated thrombosis**).

The Four patents from the institute are-

1. **Corrective Effect Of Supplementating Herbal Mixture Nutritional Bar On Severity Of Polycystic Ovary Syndrome.**
2. **Whole Pumpkin Seeds And Whole Green Peas (Fresh) Mixture As source Of Niacin For The Treatment Of Hyperphosphatemia And Related Complications Related With End Stage Renal Disease (Esrd)**
3. **Whole Pumpkin Seeds As Source Of Immunocompetent Nutrient- Zinc For The Control Of Infections In Renal Dialysis Patients**
4. **Beneficial Effect Of Adding Herbal Mixture In Medical Regime Of Hyper-coagulation Suffering Patients**

❖ **Honours Courses-** As per motto of the department we have introduced HONOURS courses based on Organ Specific Nutrition , the students can pick these courses extra paper of 75 marks after III semester, only when any student has no back in previous semesters and having marks above 60 %. Now days it is well accepted that diet is Mega Doses of Nutrients , capable for the maintenance and even repairmen of organs and whole body, thus nutrients are treated for having preventing and therapeutic effects .

Hepato Nutrition (III Semester) is based on total Anatomy, Physiology, Histological details , functions of Liver mainly metabolic , Detoxification related .The liver diseases and their treatments are studied in details – Viral Hepatitis, Jaundice, Cirrhosis, Alcoholic Liver Damage, Fatty Liver Disease, Non Alcoholic Fatty Liver Disease, Hepatic Transplantations along with relevant Nutritional Care Processes are taught .

Cardio- Nutrition is teaches in IV Semester , which covers the total Anatomy, Physiology, Histological details of Heart and whole Cardio- vascular system. Composition of Blood and Lymph, regulation of Blood Pressure , osmotic pressure maintenance are part of syllabus. Electrocardiogram interpretations are specially taught. Cardiac diseases as Atherosclerosis, Cardiac failures, Hypertension, Low Blood Pressure, Hyperlipidemias , Brown Atrophy of Heart are taught with their detailed diet therapy with main focus on Sodium , Potassium, Lipids, Branched Chain Amino Acids etc.

Reno-Nutrition is taught in V semester– which covers total Anatomy, Physiology, Histological details of Kidneys . All technical details like Counter current Multiplier system, reabsorption, absorption against increasing concentration gradient, Effect of Vessopression, Maintenance of Acid- Base balance via kidneys are part of curriculum. Nephrosis, Nephritis, Nephrosclerosis, Renal Failures of different grades, Renal stones (Nephrolithiasis) –it is specially covered as Chhattisgarh is Stone belt area. Diet is very much important before, during and after dialysis , thus every details are covered . Role of immunity boosters nutrients as Zinc, Selenium are also added in syllabus. Renal transplants, effect of medications on kidneys, Azotemia like medical emergencies are part of teaching.

Diabeto-nutrition is taught in VI semester, As India is Diabetic Capital of world , so knowledge about this most prevalent disease is taught. Type of Diabetes –Type-1, Type -2, which is common among Indian population, relation with obesity, Insulin Index, Glycemic Index of foods, Identification techniques, Diet during Insulin supplementations, types of Hypoglycaemic agents , Types of Insulins, Effect of Zn on Insulin supplementations, Role of PUFA & MUFA are also added.

The practical part of Honours courses covers diagnosis technology, interpretation of biochemical data , diet therapy , effects of disease related drugs on nutritional status. Latest disease related recopies are collected and informed .

These courses not only covers every basic details , but also very advancements related to these organs are added regularly . Now a days super-specialty hospitals are in trend, so such organ based courses help students suitable to work in such hospitals . Many of our students are working in almost all the prominent hospitals of the state and outside as dietitian.

Cancer hospitals are increasing in number with the increasing numbers of patients , so we designed and applied for Onco-Nutrition certificate courses , which will make our students experts not only every details of the disease , but about the related therapies.

Special feeding procedures are theoretically taught here as Enteral and Parenteral nutrition , but as the practical experiences are not possible here, so we have signed MOUs with various hospitals as Sanjivini Hospital, Vegas Hospital, Unity Hospital, Chhattisgarh Institute of Medical Sciences, , Modern Diagnostic Center, Nutricare Diet Clinic, Nourish Diet Clinic.

Psychological Counselling Center- Nowadays psychological problems are increasing tremendously, in a study by WHO in 21st Centre Depression, Anxiety become epidemic and every third person of the world population will suffer from these diseases. Also most of the organic diseases have psycho-somatic origin. In Indian population talking about mental illness is related to "Madness" and mental imbalances, thus people do not talk about their psychological problems in public. Thus as these problems are significantly increasing among Indian youth due to increasing Competition, lonely families, virtual world of friends –a center in educational institute is needed where the students can freely talk about their such problems. To express about not-talked problems not only give them relief but by getting such space they share the problems of their parents, relatives. A chain is created now which spreads in community .Keeping this matter in view, the faculty of Human Development – Mrs Pratibha Vajpai and Ms Sushma Ghai started Guidance & Counselling cell in 2005. Also the faculty of Human Development started PG Diploma in Guidance & Counselling in 2006, keeping in view the increasing demand for such counseling. The students give counseling in community. After that the faculty started –Counselling Center,solely working on the theme of wellness of mental profile of students. The center worked in association with State Mental Hospital, Sendri ,Bilaspur . The details of problems of students are kept confidential, but with code documented. Many students are benefited till date.

- **Internship-** To add more applied aspects we have added compulsory Internship as per UGC curriculum guidelines. The duration of Internships is 45 days. The Msc –II Semester students of Human Development are sent to various Physiotherapy centers and State Mental Hospital for the same-Shree Clinic, Kayalya Physiotherapy Clinic, Tiwari-Physio therapy Clinic, District Hospital Raipur, Arogya Hospital, Jatan District Shigra Hastakshap Kendra, Raigarh ,Mundra Hospital, Bilaspur . The student experiences the applied part of the theory they have learnt.

  MSc II Semester students of Foods & Nutrition have also compulsorily to do Internships for 45 days , which is hospital based as Apollo Hospital Bilaspur, Chhattisgarh Institute of Medical Sciences, Choithram Hospital, Indore, Sanjivini Hospital, Bilaspur ,Shri Hirdayanath Manheshkar Hospital, Pune, PGI Chandigarh, Narayani Hospital, Raipur. Also students have to do Internships for about 6

months and 2 years , mostly students do this in prominent hospitals of State and outside. Internships make students acquaints regarding today's medical scenario and medical nutritional therapy of diseases with latest advancements in the field. Internships add keen interests of students in the field of nutrition.


ANEMIA
E ROOTS OF
SITY RUN DEEP
TOGETHER WE CAN CREATE A HEALTHIER FUTURE

❖ **<u>Community interaction-</u>**Through health based extension activities, the faculty and the department spreads knowledge regarding Medical Nutrition Therapy of various diseases, not for the prevention but for the therapeutic purposes also. Students distributed immunity booster foods as prevention and intervention programme under health based extension activities.


क्र. नाम लिंग पद
1 रमिली यादव म. अध्यक्ष
2 देवला यादव म. उपाध्यक्ष
3 झुमावती यादव म. कोषाध्यक्ष
4 बेलकुवर यादव म. सदस्य
5 सीबाई साहु म. —\\—
(1) विद्यामती राठिया म. अध्यक्ष
2 सीता राठिया म. उपाध्यक्ष
3 पुष्पा साहु म. कोषाध्यक्ष
4 पार्वती यादव म.
5 डिलेश्वरी यादव म.
6 दसमती भगत

- **Diet Plans**- The faculty guides students for the diet plans which is as important as medicines use for the prevention and treatment of diseases. The students plan meal plans in free and distributed among other students and community people. As the students of this department is working as Dietitian in Apollo Hospital, Bilaspur, AIIMS Raipur, AIIMS Bhopal, MECAHARA Raipur, so we provide them new advancements regarding Medical Nutrition Therapy .
- **Low Cost Diets –** As most of the college students do belong to lower middle socioeconomic status thus the department adopts a strategy to transfer knowledge and technology which is related to maintenance of good health via low cost but highly nourished food items. Mostly the students are having iron deficiency hypochronic-microcytic anemia, so we suggested them to take gud/jaggery-peanut mixture every day, soybean as source of protein and chandrasur seeds as source of iron. Here vitamin A deficiency is also very much prevalence we suggested them to take dried powder of drumstick leaves, or to boil some drumstick leaves everyday along with rice, papaya leave juice, to increase platelet count, small quantity edible lime as calcium supplementation, oatmeal as a source of fibre, deshi chana, amla and lime as a source of vitamin C, potato and banana skins as source of potassium, tomatoes as source of lycopine (antioxidant).
- **Quiz-** We conducted regular Health based quiz /year and used to give good amount of cash prizes, which also motivates students to be alert about health related matters. This quiz is open for all students of the college.

- **MOUs-** We have signed MOUs with various hospitals and practicing dietitians for knowledge and technology transfer with various hospitals and educational institutes.
- **Health extensions -** The department use to cover the nearby villages for such activities in Hatband, Tusma, Lokhandi, Khurdur, Sarisati, Dhobghatti, Dholgi, Jhaphal, Budhwar, Lakhasar, Darwaja, Saraipatekh, Didaul, Lachhanpur, Khudia, Panchsakra, Pendritalab, Dongaria, Seepat, Darrighat, Nayapara, Sargaon, Sakari Brochures. We make the villages aware about importance of health,

educate them how to maintain health by proper nourishment, maintaining hygiene, importance of vaccination, low cost but nutritious foods, and distributed them some materials like magic laddoos, soy milk, peanut milk, miracle powders, to motivate them in this very aspects.


Rehabilitation Center
स्तनपान - अमृतपान
शिशु पोषण का यही है वरदान
छः माह तक सिर्फ स्तनपान करायें
बच्चे की रोगप्रतिरोधक क्षमता बढ़ायें
पहले घंटे में ही स्तनपान
बचाए लाखों बच्चों की जान


BHSc
Final
Year


AND NUTRITION ASSOCIATION
GOVT. GIRLS POST GRADUATE COLLEGE
BILASPUR
Breast-Feeding Week
(1 ~ 7 Aug)
Post Graduate College
M.H.Sc
Final
Year

Bilaspur Dietician & Nutritionist Association

Nutrition Awareness Program

WEBINAR

DATE : 10/10/20

TIME : 4 - 5.30 PM

DR.SEEMA MISHRA

PRESIDENT BDNA

HOD PG DEPARTMENT & RESEARCH CENTER NUTRITION

KAVITA PUJARA

SECRETARY BDNA

SR. DIETICIAN

SPEAKERS

GI DISORDER

DRISHTI GUPTA

DIETICIAN

factशाला

PRESENTS

PREVENTION FROM CYBER CRIME


NATIONAL
NUTRITION
WEEK
THEME
Bilaspur Dietition &
Nutritionist A iation
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बिलासपुर डायटीशियन एन्ड न्यूट्रीशनिस्ट
एसोसिएशन
"राष्ट्रीय पोषण सप्ताह"
spur Dietition &
ciation

Clinical Nutrition excellence ACADEMY

WEBINAR

HEXAGON NUTRITION

Friday, 19th March 2021 **3.00 PM to 4:30 PM (India Time)**

Nutrition in Kidney Disease

Speakers :

Refeeding Syndrome in Hemodialysis (Case Based approach)

Dr. Prawash Kumar Chowdhary

Senior Consultant & Renal Transplant Physician
Ramkrishna Care Hospital, Raipur(C.G)

Nutrition in AKI and Critically Ill Patients

Dr. Shilpa Kulkarni

Consultant Intensivist
HOD (Intensive Care) Ruby Hall Clinic Wanowrie.

REGISTER NOW


2021/3/6 15:26


2021/3/6 15:27


नाम
लिंग
पद
रमिली यादव
अध्यक्ष
उपाध्यक्ष
कोषाध्यक्ष
सदस्य
सीता राठिया
पुष्पा साहू
पार्वती यादव
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note 1


Shot on
note 1


NARMADA DRINKS PVT.LTD.

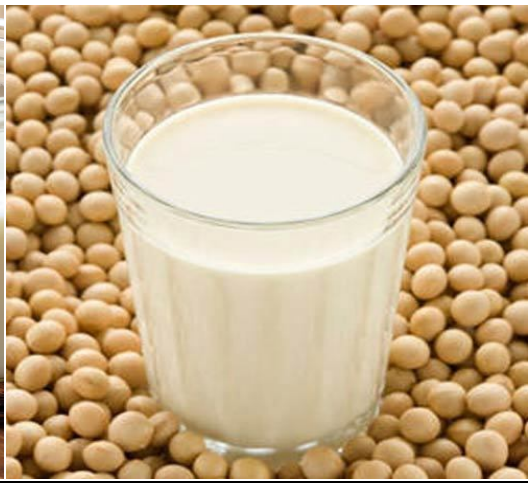

B.H.Sc.
Final
Year
Govt Girls Post Graduate College
Deptt of
Home Science


संचालक

❖ **<u>Blood donation</u>-** The students are informed regarding the medical fact that once any one can donate 470 ml of blood, which is only 8% of adult's blood volume and can be replenished within 4-5 weeks. This practice motivates students regarding blood donation, the faculty members also donated blood to encourage students for the same.

❖ **Consultancy**- Health related consultancy is provided in free of cost, but if any body is ready to pay as donation, the minimum amount is taken. Consultancy is open for all the students of the college and also for their family members. Mental and diseases related consultancy is available.

- **<u>Tofu, peanut milk, soyamilk</u>-** As these preparations are low in cost , but very high in Nutritional Values , thus we used to teach students how to make, consume and preserve these foods. Regular consumption of these food items significantly improves the nutrition status of the family members of the students, especially children.

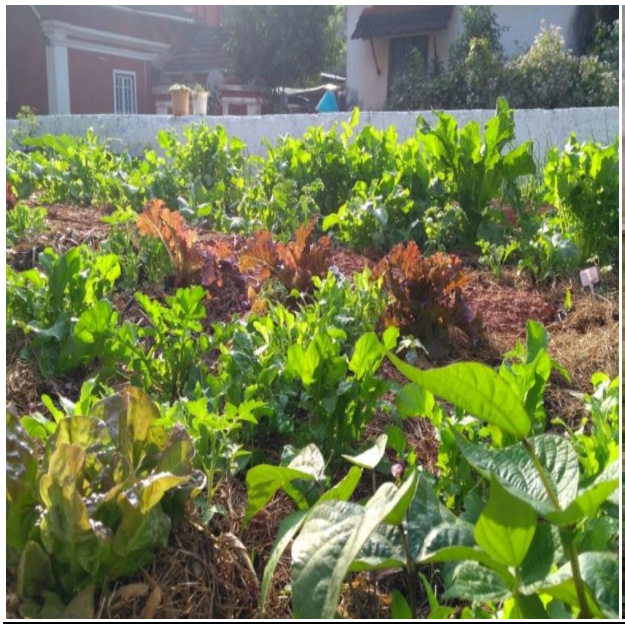



❖ **In Vivo Projects-** We have assigned some projects to MSc III students almost every year , funded by the department itself for the purchase of estimation Kits only. These projects are based on health related matters related with the college students /community –

As –

- **Albendazol supplementation increases Iron absorption and brings back hemoglobin level within normal range.**
- **Effect of supplementing Iron as Dexorange –comparison with costly preparations.**
- **Calcium supplementation as edible Lime –benefit equal to Calcium Lactate/ Calcium Citrate**
- **Stress as etio-pathological cause of high TSH level and Hypothyroidism in adolescents girls**
- **Low Serum Glucose level and adverse effect on short term memory status**
- **Etiopathological effect of stress to precipitate PCOD in college students.**
- **Zincovit supplementation –beneficial effect on incidences of upper respiratory tract infection and allergic bronchitis**
- **Rh factor test in college girls and related counseling.**
- **Serum Cholesterol level –biomarker of MDD (Major Deep Depression)**
- **CKD-Stage V and precipitating CVD**
- **Insulin supplementation as cause of Cardiac Diseases**
- **Intstional infections as precipitating case of joint problems –Arthritis.**
- **Myoasthenia in Chronic Kidney Patients.**

❖ **KITCHEN GARDEN –** Nowadays kitchen gardens are becoming more than a hobby and a source of fresh fruits and vegetables. It is also helpful to save money and get organic food at home, thus we suggested our students to prepare their private kitchen gardens at home and advised them to grow useful vegetables and fruits and herbs as like, tulsi, and aloevera. KITCHEN GARDEN



❖ **Future patents-**

- Future patents will be related with the herbal mixture for the treatment of ulcerative colitis.
- The prevention and treatment of heavy metal intoxication by reducing their absorption via gut.

❖ **Research papers on health** – The department has published 60 research papers, all are related to mental and physical health. We even made these research papers available to dieticians and nutritionists to help them in their profession and to help society in general, regarding the health issues.

❖ **Institution Management** – As it is essential to understand how an institute runs to work in them, we teach our students the process of how to manage an institute, such as laying out plans, organizing man power, resource management and strategic management. It helps students to understand structure and principles of management of institutes like hospitals, and other institutions.

1) **Title-**

Best utilisation of human resources and financial help for the betterment of the institute.

2) **Goal-** The focus of the college administration is strongly towards the multifaceted growth of the college for attaining this goal. The principal is not looking for the financial help from the government head but acting as a strong motivator he motivates the faculty to arrange financial resources of their own to construct structures for creating better infrastructure here. Especially during the COVID crisis phase when students couldn't turn-up in the college premises this time was used as opportunity for creating infrastructural facilities through our own resources. For this through motivational words inspired the whole faculty for donating handsome amount for the construction of the useful structures. The manpower especially daily wage workers along with permanent class four staff constructed the structure via "Shramdan".
3) **The Context –**Now a days due to financial scarcity because of corona crisis any Government institute must not depends on government resources only. Self generated resources should be used for the betterment of colleges now, because academic up liftment is now endless process in this era of global competition**.**
4) **The Practice -**A long concrete road from the main entrance gate to the entry of library gate is constructed. Not only the road is of good quality but as it is constructed through our own resources so we have a personalized affection for maintenance of the road. Also by using the donated amount by the college faculty and "Shramdan" by the college workers a good quality drivers rest room is constructed near the entry of the main gate with all basic facilities as electrification, fan, sink with hand-wash facility, toilet facility, although these constructions are minor constructions but they set very good example that the institutes of higher education should not depend on government resources but institutes can create facilities themselves if they keenly wanted to create and uplift the standard of their institute. As these two structures are completed successfully other examples are also set not only the institute is benefitted but also during COVID crisis phase the daily wage workers are not terminated from their jobs and their labour is used for this constructive work. During constructions the female labours not only actively involved for the labour work but also they cooked meals in the hostel for the labours (Daily wage workers) as they stayed and worked round o' clock. Thus this best practice is not only exemplary for the institutes of higher education but also financially gainful for the needy workers.

   The faculty became highly motivated and the alumni faculty along with other outside members donated an advanced sound system with table mikes for the conference room. Actually a positive constructive institute friendly vibes is generated via such pious works and now not only propagated among college administration but also among the whole college family. We adopt this best practice for other constructive works in the premises as making of sports ground, stage in the sports ground, cleaning of weeds from the premises and the gardens here. One extraordinary work is also done via practicing this best practice – for the construction of two big soakpits in the premises, one in front of the teaching room complex behind the main building, and one in the open ground in front of the "Mukt Rangshala".

2. **Creation of alternative sources of energy by installation of solar units in the premises -**

One of the most troubling issues of today is the rising cost of energy. Energy costs are on the rise as Earth's resources are being depleted little by little. Luckily, technology has provided new resources from natural entities, such as solar energy. Though demand for energy continues to rise, there are things every homeowner can do in order to lower their costs and help the environment. Solar energy is one of those renewable resources that is great for the environment. When you work with a renewable energy company, you are getting your power from renewable resources, solar energy being one of them. This type of energy doesn't produce greenhouses gas and it doesn't pollute water or air. It is self-sufficient and a good way to provide energy to your home or business. When you work with a regular utility company, your prices are likely on the rise at all times. But when you are on the grid with a renewable energy company, you have much steadier rates. They use renewable energy such as solar energy, and that helps level the rates. Plus, they often only charge you for what you use and not variable rates that are in effect with other electricity providers. When you support renewable energy companies, you are creating jobs that lead to the installment of systems that create more energy from renewable resources. It's a positive cycle that you can really stand behind. The more people who use renewable resources, the more people the companies will need to sustain the clean energy systems. When it comes to renewable energy resources, you can be confident that your home is being powered through domestic energy production. You don't have to take energy from another part of the world in order to get what you need. That also helps keep the prices down and at steadier levels. The more people who use renewable resources through a renewable energy company, the less blackouts you will see. When more people use power generated through natural resources, the grid will be more secure. It will be less likely to have natural or human-caused issues because it is a more natural process that is harder to interrupt.

Using renewable resources like solar power will cause there to be more reason to use land that has been underutilized until now. Most areas still have a lot of land if you look away from the big cities and that land is being used for nothing. With renewable resources in play, that land can create great value. There are many advantages to using solar energy through a renewable energy company in both big and small ways. Consumers have questions, but as they do research, they see the benefits. Many homeowners want to weed through their questions first and then make a decision on whether or not solar energy with a renewable energy company is right for their home and family.

For practicing this best practice – using alternative resources of energy which are eco-friendly, our college has installed four solar units each of 10 KV capacities. These units not only curtailed our electricity expenses but also these units assure continuous power supply even during power failures. We need continuous power supply in our autonomous section as continuously this section arranges assessments of the students which is quite a time taking work as our student strength is above 4000 and we are having semester system for under graduation and post graduation classes both. We have four faculties – Science, Arts, Commerce, and Home Science, thus more than 315 question papers are prepared, printed, and sent for valuation, accordingly more than 12000 copies are evaluated per semester under the supervision of our autonomous cell. As round 'o' clock work is required there so continuous power supply is utterly needed in autonomous cell of the college. A connection with sufficient capacity from our solar system is provided in autonomous cell of the college. Also we have one separate nodal centre with 40 computers; this is also connected with our solar unit. Most of our students belong to economically down trodden class, and they have to submit their assignments and projects, for which they require computers. So, shift wise our nodal centre is busy – in morning hours students of commerce faculty use nodal center, in day time arts, science, and home science students use that center. Connection with solar system assures continuous and steady supply of electricity there. One unit is installed in bunch of ten classrooms behind the main building of the college, not only these rooms are engaged for taking CLASSES from 8 am till 5 pm but also these rooms are

used for conducting various prestigious competitive exams as UPSC, PSC, Judicial services and various exams conducted by VYAPAM, so as this unit is also connected with solar system mostly continuous and steady power supply is ensured. Our hostel has also one solar unit, near about 200 students reside there, they are selected on the basis of merit of marks, so these meritorious students used to study during night hours, also for their assignments and projects a continuous power supply is needed because these students are not freely allowed to go outside of the campus. Connection with solar system helps them for their studies and timely completion of their assignments. We have installed solar lamps in our front garden area so in night hours our garden area is properly enlighted, and ensures the safety of our campus.