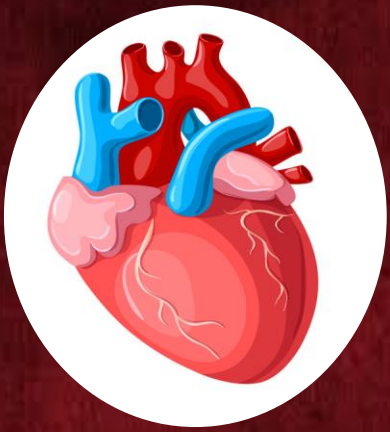
MIND YOUR HEART

" Heart Health And Nutrition"

an e-publication



In Connection with the

World Heart Day

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Department of Family and Community Science
MSc., Dietetics & Food Service Management
2019- 2021 Batch
CMS College Kottayam (Autonomous)

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FOREWORD

This is a short e- publication prepared by the students of MSc., Dietetics and Food Service Management, 2019-2021 batch, under the guidance of our teachers.

This publication includes articles and recipes with benefits related to Heart Health and Nutrition.

It is our hope and expectation that this e-publication will provide an effective learning experience and referenced resource for all people.

Enjoy reading it till the end.

CHIEF EDITOR'S NOTE

"Any task well accomplished gives satisfaction and the one just completed is no exception"

- Jim Corbett

This was the golden line that came to my mind on the day I had finally sent this e- publication for release.

Being a part of the Editorial Board of this publication, it was a proud moment for me to be its Chief Editor and Coordinator. But it was not an easy task for me to carry my responsibilities smoothly due to the vast and diverse amount of works associated in making this e-publication to the level that will be acceptable to all, keeping in mind the height of quality and legacy set by the previous books and publications from CMS College Kottayam.

I am blessed enough to get a very good support from the College Principal, HOD ,faculty members and the 19 of my Post Graduate students specially the Advisory Board of this book; an extremely good, dedicated and hardworking Editorial Board, Art and Design Team and Assisting Team Members and also a very good response from the authors of various writings to the publication.

Now, standing at the twilight of my tenure as the Editor, "MIND YOUR HEART" an e-publication for Heart Health on World Heart Day September 29th,I thank all the people who have extended a helping hand in successfully making the publication .

I wish all the Success for the Publication and a hearty congratulations to the team members. God Bless You All.

Best wishes !

- Editor-in-Chief

Mrs. Renu K Abraham

Kottayam

26/09/2020

STUDENT EDITOR'S NOTE

Let your mind help your heart become a mindful heart!

Dear readers,

You are glancing through "Mind Your Heart", an e-publication brought out by the Department of Family and Community Science, CMS College Kottayam (Autonomous).

The thrust of this publication is Heart Health and Nutrition, and we've tried to include articles and recipes related to this. We feel extremely happy that we were able to publish this in a very short period of time, and that too amidst situations of the pandemic, lock-down, lack of contact classes and the like. Nevertheless, we are eternally grateful for all the amazing people who have put in hours of hard work and dedication to see this publication online.

The one that you are reading is the result of the teamwork of a group of motivated and dedicated students of MSc., Dietetics and Food Service Management, working under the guidance of our teachers. The publication provides a platform to all readers to give shape to their lifestyles by modifying the diet patterns and becoming health conscious.

We enjoyed sifting through the articles that reached us, editing them and coming up with the final product. We have tried our best to make sure that this is informative as well as useful!

To all the readers, we hope you enjoy reading this publication. And we hope this will touch your hearts in a way you will think of having a modified and refined pattern of life, conscious of your health, and confident of a vibrant living!

With health wishes, and best wishes!

- Student editors

Chandhini Biju **Leah Anna Abraham**

Kottayam

26/09/2020

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PRINCIPAL'S MESSAGE

We are living in unprecedented times. The COVID-19 pandemic has shown a spotlight on the healthcare profession, national healthcare systems and our individual responsibilities for our own health and for the vulnerable in society.

In this fast paced world where everyone is on their pursuit of success we often tend to forget the fact that we need a healthier body and mind to keep up to the pace. Let's stress on the former and narrow down to one of the most important organ which strengthens the functioning of all the vital parts of our body, 'HEART'.

Cardiovascular disease is the number one cause of death on the planet. It has many causes: from smoking, diabetes, high blood pressure and obesity, to air pollution and some other rare and neglected health conditions. So it is very important to understand what it takes to live a heart healthy life and to act on that knowledge, changing your behavior for a better quality of life now and in the future. As an institution let's join hands with this initiative by MSc., Dietetics and Food Service Management students to educate the CMS Fraternity regarding the healthier habits to maintain a healthy Heart.

I applaud the e- publication "MIND YOUR HEART" by Family and Community Science Department of CMS College on the occasion of World Heart Day and congratulate the great efforts taken by Dr. Miriam Mani HOD, Editors, Faculty Members and students who made this possible.

In this time of COVID-19 taking care of our HEART is more important than ever before.

- Dr. Varghese C Joshua
Principal

Kottayam
28/09/2020

HOD'S MESSAGE

I take this opportunity to convey my best wishes to the editorial board for the e-publication, "Mind Your Heart" done in connection with World Heart Day, September 29th 2020.

I appreciate their sincere endeavor and wish them all success.

- Dr. Miriam Mani,
Associate Professor and Head
Department of Family & Community Science

Kottayam
28/09/2020

ARTICLES

“Start Loving Your Heart”

Start loving your heart otherwise you are going to pay for it…

The term ‘Heart Disease’ is often used interchangeably with the term ‘Cardiovascular Disease’. Heart disease describes a range of conditions that affect your heart. Diseases under the heart disease umbrella include blood vessel diseases, such as coronary artery disease, arrhythmias and congenital heart defects, among others. Cardiovascular disease generally refers to conditions that involve narrowed or blocked blood vessels that can lead to a heart attack, angina or stroke. Other heart conditions, such as those that affect your heart's muscles, valves or rhythms, also are considered forms of heart disease. In addition to heart diseases one of the major problems which affects everyone is stress, people with lot of stress may smoke, drink or choose other unhealthy ways to deal with stress.

Common responses to stress include:

- Aches and pains
- Decreased energy and sleep

Dt. Jeffriya Joby
Founder of Jofitness
Nutritionist at Nutrition Kochi

- Feelings of anxiety, anger and depression
- Impatience
- Forgetfulness

People respond to stressful situations differently. Some react strongly to a situation. Others are relaxed and unconcerned. Luckily, you can decrease the effect of stress on your body. First, identify situations that cause stress. Although difficult, try to control your mental and physical reactions to these stressful situations. Try the following to help manage stress and keep your heart healthy.

Healthy Food Choices

One of the therapeutic modalities mentioned in stress management is to adopt a nutritious diet. Proper diet can counterbalance the impact of stress by strengthening the immune system, stabilizing moods, and reducing blood pressure.

What are the important nutrients for Stress-Reduction?

1. Vitamin C

Consuming foods high in vitamin C, such as oranges and other citrus fruits, can reduce stress and boost the immune system. Intake of this vitamin can help lower the levels of cortisol, a stress hormone, and blood pressure during high-anxiety situations.

2. Complex Carbohydrates

Complex carbohydrates, such as whole grains, fruits, and vegetables, can induce the brain to increase serotonin production and stabilizing blood pressure as a way to reduce stress.

3. Magnesium

Obtaining an adequate amount of magnesium is essential for avoiding headaches and fatigue. Oral magnesium can also successfully relieve premenstrual mood changes.

Additionally, increased magnesium intake has been found to improve sleep quality in older adults. Healthy sources of magnesium include spinach or other leafy greens, salmon, and soybeans.

4. Omega-3 Fatty Acids

Fatty fish (such as salmon and tuna) and nuts and seeds (such as flaxseeds, pistachios, walnuts, and almonds) are rich in omega-3 fatty acids, which have been shown to reduce surges of stress hormones and also confer protection against heart disease, depression, and premenstrual syndrome.

Do you know exercise can also help to counteract the harmful effects of stress?

For heart health, aim for at least 30 to 40 minutes, 4 to 5 days a week. Exercise can help to improve cardiovascular health by controlling weight, improving cholesterol, and lowering blood pressure. Exercise has another benefit that lowers stress. People who exercise have a reduced physical response to stress. Their blood pressure and heart rates don't go up as high as people under stress who don't exercise. Regular exercise can also reduce the risk of depression, another risk factor for heart disease.

Stress and Heart Health

A strong support system helps you take better care of yourself too. Research shows that a lack of social support increases the chance of engaging in unhealthy behaviors like smoking, eating a high-fat diet, and drinking too much alcohol.

Long-term anxiety or emotional stress can increase the risk of sudden cardiac death. To reduce your anxiety level, try activities that reduce stress like yoga, walking meditation, traditional meditation, guided imagery, or other methods. Look for classes in your area

Alcohol, tobacco, and caffeine can increase feelings of anxiety and increase your stress and blood pressure. Cutting back or quitting these substances may help decrease your anxiety and stress. Talk with your provider if you have feelings of depression or anxiety and ask about medicines that can help.

If you think you are at an increased risk of heart disease because of stress in your life, talk with your healthcare provider. He or she may recommend counseling, classes, or other programs to help you lower your stress level and your risk for heart disease.

Start loving your heart and stay healthy…!!!

“The Amazing Tube”

- Dr.Anne George
Associate Professor
Dept Of Anatomy
Govt Medical College
Kottayam

Our heart is an amazing organ, the first organ in our body to start functioning. From that day onwards until our death it beats tirelessly rhythmically without stopping. We all know what would happen if the heart were to stop beating.

How many of us know that this awesome organ is actually formed from a simple straight tube lined by cells? It is this amazing tube called the heart tube that then folds on itself and turns in such a way that one part of the tube is in front and the other part is above and behind the other part.

The two ends of the tube form channels which carry blood. The end of the tube in front forms a channel which carries blood away from the heart. The other end of the tube forms a channel that carries blood to the heart.

We all know that the human heart has four chambers while some animals have three-chambered or two-chambered hearts.

Now partitions appear in this tube to divide it into two ventricles in front and two atria behind and above the ventricles.

The partitions are called septa, a septum to separate the right and left ventricles called interventricular septum and a septum to separate the right and left atria called the interatrial septum. Between the right atrium and right ventricle is the right atrioventricular opening. Between the left atrium and left ventricle is the left atrioventricular opening. Valves develop in these openings, the tricuspid valve in the right atrioventricular opening and the mitral valve in the left atrioventricular opening. These valves allow blood to flow only in one way from atrium to ventricle.

When we look at the human heart from the front we can see the right and left ventricles and the right and left auricles which are part of the right and left atria respectively. When we view the heart from behind we can see the right and left atria placed above the ventricles.

The atria are the receiving chambers i.e. they receive blood from other parts of the body. The right atrium receives deoxygenated blood from all parts of the body and sends it to the right ventricle while the left atrium receives oxygenated blood from the lungs and sends it to the left ventricle.

The ventricles pump blood to other parts of the body. The right ventricle pumps deoxygenated blood to the lungs while the left ventricles oxygenated blood to all parts of the body.

The end of the tube lying in front gets partitioned into two channels by a spiraling partition (spiral septum) so that deoxygenated blood from the right ventricle can go to the lungs through one channel (pulmonary trunk) and oxygenated blood from the left ventricle can be pumped to all parts of the body by the other channel (aorta)

Imagine if there is a defect in these partitions i.e. these partitions are not properly formed. These could be a defect ("a hole") in the interatrial septum or in the interventricular septum known as interatrial septal defect and interventricular septal defect respectively.

Interventricular septal defects are the most common congenital (from birth) problems of the heart.

Defective formation of septa could also lead to two-chambered (cor bilocular) heart or a three-chambered heart (cor triloculare) where there are a single ventricle and two atria or two ventricles and a single atrium (cor trioculare biventricular).

Defects can occur in the spiral septum in a condition called transposition of the great vessels. The pulmonary trunk instead of arising from the right ventricle arises from the left ventricle and the aorta arises from the right ventricle. So all the parts of the body will receive deoxygenated blood instead of oxygenated blood.

In some cases, the spiral septum is not formed leading to a condition called patent truncus arteriosus.

There can be combined defects like Fallot's tetralogy where there is an interventricular septal defect and the aorta arises from both the ventricles.

Defects can also occur in the tricuspid, mitral, aortic and pulmonary valves.

“A Fish A Day Keep Your Cardiologist Away”

Dr. Suja N
Assistant Professor (Aquaculture)
St Aloysius College
Edathua, Alappuzha

If you are seeking heart-healthy fare to put on your plate, fish is a first-rate choice. Fish is an important part of a heart-healthy diet. A heart-healthy diet is not just for people who have existing health problems. It is good for all healthy adults and children older than age 2. Learning heart-healthy eating habits can help prevent problems in the years to come. Eating a heart-healthy diet can help you to:-

•Lower blood pressure
•Lower cholesterol
•Helps to lower risk of coronary artery disease
•Reach and stay at a healthy weight
•Prevent or control diabetes
•Reduce irregular heartbeats
•Reduce blood clotting
•Improve overall health

"Eating two servings of fatty fish per week, which averages out to about 250 milligrams of omega-3 fatty acids a day, has been linked to a lower risk of heart attack and other cardiac issues," says Harvard Medical School Professor Bruce Bistrian, who is Chief of Clinical Nutrition at Beth Israel Deaconess Medical Center.

What are omega-3 fatty acids and why are they good for your heart?

Omega-3 fatty acids are a type of unsaturated fatty acids. These are found in both marine and plant-based foods and oils.

There are three types of omega-3 fatty acids. They are:

•Alpha-linolenic Acid (ALA), found in plant oils like flaxseed, soybean, and canola oils.
•Eicosapentaenoic Acid (EPA), found in oily fish, like salmon and tuna
•Docosahexaenoic Acid (DHA), found in oily fish, like salmon and tuna.

These fatty acids may reduce inflammation throughout the body. Inflammation in the body can damage the blood vessels and lead to heart disease and strokes. Although many types of seafood contain small amounts of omega-3 fatty acids, fatty fish contain the most omega-3 fatty acids and seem to be the most beneficial to heart health.

Good omega-3-rich fish options include:

- Salmon
- Sardine
- Atlantic mackerel
- Cod
- Herring
- Lake trout
- Canned, light tuna

Omega-3-fatty acids found mainly in fish, which helps to :

1. Lower Triglycerides

The most consistent evidence for omega-3s and heart health is their ability to lower triglyceride levels. Triglycerides are a type of fat found in blood and are stored as body fat. High levels of triglycerides have been linked with a fatty build-up in the artery walls, which increases the risk of heart attack and stroke.

2. Reduced Risk of Arrhythmia

When the heart beats abnormally, it is referred to as an arrhythmia. Some arrhythmias are harmless but others, such as atrial fibrillation (AFib), can increase the risk of stroke or other serious heart issues. Some studies have shown a link between increased intake of omega-3s and reduced risk of arrhythmia, though this is not an effective medicine to treat heart rhythm problems.

3. Slower Rate of Plaque Buildup

Plaque — made up mostly of fat, cholesterol, and calcium — can accumulate in the arteries, limiting the flow of oxygen-rich blood throughout the body.

A diet rich in fish and seafood has been associated with a reduced risk of heart attack and stroke. Fish are low in saturated fat and high in omega-3 fats. Omega-3s have anti-oxidant and anti-inflammatory effects and may also improve the function of the endothelial cells that line blood vessels, so intake might have benefit for cardiovascular disease, but this has not been well-established in clinical trials yet.

4. Slightly Lower Blood Pressure

High blood pressure can lead to heart attack and stroke. The effects of omega-3s on blood pressure can be a favourable systolic blood pressure (amount of pressure in the arteries during the contraction of heart muscle) and diastolic blood pressure (amount of pressure in the arteries between beats) have both been shown to be reduced when individuals have been given higher doses of omega-3s.

Eating at least two servings of fish a week may keep your heart in good shape. That amount delivers close to the DHA and EPA levels recommended by the dietary guidelines, which average out to about 250 mg a day.

"Follow your heart… A healthy heartbeat is a wonderful treat."

“Virgin Coconut Oil A Healthy Choice For Cardiovascular Health”

Dr Bhagya D,
Assistant Professor
Dept of Home Science
St Joseph’s College for Women, Alappuzha

Cardiovascular disease (CVD) is known as the number one cause of death worldwide associated with huge health care costs and loss of productivity in the population. Poor diet is an important risk factor in CVD. There are multiple risk factors leading to the development of coronary artery disease like diabetes mellitus, hypertension, smoking, age, physical inactivity, and variation in cholesterol levels.

High cholesterol levels resulting from genetic factors, diet containing high fats and low physical activity are the major concerns. Diet rich in medium-chain fatty acids, such as virgin coconut oil (VCO), has been associated with a reduced risk of CVD. Consumption of saturated fatty acids (SFAs) rich diets have been attributed to increased risk of cardiovascular disease (CVD) and its consumption has declined over the last 20 years as people have been informed that it produces adverse effects on cardiovascular health.

Coconut oil has a multitude of health and medicinal attributes, many of which have been conclusively proven through scientific studies.

The type and amount of oil used by the society is influenced by the availability, tradition, income and to certain extend health awareness. Coconut oil especially virgin coconut oil (VCO) is now receiving attention as functional food oil and its consumption has dramatically risen in recent years.

Virgin coconut oil (VCO) is the oil extracted from fresh mature coconut kernels by wet processing at low temperature (50-55^{0}C) and without undergoing refining processes. The wet extraction process of VCO helps to retain the biological activities of the beneficial components in VCO compared with the dry method used to extract coconut oil. VCO provides immediate energy to body and brain and helps to lose bodyweight and it improves health when used in salads and heating changes the composition affecting its health benefits.

Volatile coconut oil improves antioxidant activity and in an *in vivo* study, supplementation with VCO had lowered peroxidation and increased concentration of antioxidant enzymes namely superoxide dismutase (SOD) enzyme, Catalase (CAT), SOD, glutathione peroxidase (GPx) and glutathione reductase enzymes (GR). The increased concentration of antioxidant enzymes is due to a higher content of polyphenols, Vitamin E and tocotrienols.

Higher activity of PON1 is associated with an increased concentration of high-density Lipoprotein, cholesterol (HDL) and apolipoprotein A-I (apoA-I) and decreased low-density lipoprotein which is reported to benefit cardiovascular health. Thus VCO is associated with an improvement in antioxidant activity, maintaining lipid profile, blood pressure, blood sugar and abdominal body fat which are proven to be possible risk factors. Recent studies showed an increase in HDL-C levels found among young healthy volunteers taking dietary supplements with 15 mL of VCO twice daily, without harmful side effects promoting cardiovascular risk reduction.

“Belly Fat And Broken Hearts”

Stomach fat also known as abdominal obesity increases the risk of having a first heart attack. But new research finds that having excessive fat in this specific area also increases the risk of subsequent heart attacks. Increasing stomach fat especially the "hidden fat" in your abdomen is associated with newly identified and worsening heart disease risk factors. These adverse changes in cardiovascular risk were evident over a relatively short period of time and persisted even after accounting for changes in body mass index (BMI) and waist circumference, two commonly used methods to estimate whether someone is a healthy weight or not.

Visceral fat is a type of body fat that is stored within the abdominal cavity and around a number of important internal organs such as the liver, pancreas and intestines. A growing belly can be a result of two types of fat. The fat we can feel just under the skin is subcutaneous fat, but we may also be storing significant extra fat within our abdomen where our organs reside.

Mrs. Renu K Abraham
Assistant Professor (Self Financing)
Dept. of FACS, MSc., DFSM
CMS College Kottayam

This intra-abdominal fat is called visceral fat. If controlled diet and exercise haven’t helped change the shape of your belly, it could be a sign that the visceral fat is accumulating inside your body. Visceral fat is associated with a higher risk of metabolic syndrome and a greater risk of cardiovascular events. The increased risk of diabetes because of visceral fat is explained by the fact that not many Indians fit into the obesity category by BMI (body mass index) readings but develop diabetes because of visceral fat. Hence, it is called the thin-fat.

Research shows that this type of fat plays a distinctive and potentially dangerous role, affecting how our hormones function. Storing higher amounts of visceral fat is associated with increased risks for a number of health problems, including type 2 diabetes and hypertension.

The waist-to-hip ratio is a good indicator of visceral fat. This can be obtained by simply dividing the circumference of your waist by that of your hip. If the number is greater than 1 for men and greater than 0.85 for women, it is considered excessive.

You should see a doctor if your waist circumference is higher than normal and believe you lead a stressed or sedentary lifestyle. There are no symptoms as the fat gets progressively accumulated inside the body. In fact, weight and BMI may remain in the normal range when there is circumference is higher than normal and believe you lead a stressed or sedentary lifestyle. There are no symptoms as the fat gets progressively accumulated inside the body. In fact, weight and BMI may remain in the normal range when there is accumulation of visceral fat. Tests like body composition, estimation of liver fat and para-cardiac fat pad help in assessing the visceral fat accumulation

Lifestyle's A Major Culprit

Physical inactivity, increasing sedentary lifestyle and lack of nutritious diet are all linked to weight gain, or increase in body fat, which then gets stored in the form of visceral fat. Mainly higher percentages of visceral fat are mostly seen in people in the mid-30s and older, people of any age can accumulate visceral fat and suffer from its negative health effects.

Poor diet and lack of exercise can lead to weight gain in the form of visceral fat, which is especially dangerous as you age because it increases health risks. Frequently consuming foods and beverages high in sugar and heavy alcohol consumption may cause belly fat gain. In addition, trans fat increases inflammation that may drive insulin resistance and accumulation of belly fat. A diet low in fibre and high in refined grains may also lead to increased amounts of belly fat.

A combination of proper diet and exercise is the best medicine to reduce visceral fat.

Participating in moderate to vigorous intensity exercise on a regular basis is the most effective

way to rid the body of excess visceral fat, a healthy diet (rich in fruits and vegetables and low in problem of belly processed foods and fat) and reducing stress levels to overcome the fat. Reducing alcohol intake definitely helps.

A diet high in whole grains, fresh fruits and vegetables, and lean protein with calories set for gradual weight loss.

Cut back on added sugars and alcohol since these will more likely end up as visceral fat, as said.

Avoid saturated fats and oils, and fried foods. Opt for olive oil, lean meat, fish, etc. Boiling, steaming, baking and grilling foods will help make meals healthier and lower in fat. Swap foods made with refined grains for whole-grain options to limit visceral fat. A low-carbohydrate diet, 45-60 minutes of intense exercise per day, avoiding concentrated carbohydrates and simple sugars are some easy steps.

“Try a heart-healthy diet and see if helps you reduce the stubborn belly fat.”

“Evidence Based - Energy Drinks And Its Effect On Heart Health”

Rabia Mistry Mulla
Content writer (Health)
Consultant Dietician & Diabetes Educator – Cardinal Gracias Hospital, Mumbai

Energy drinks are promoted as a product which is capable of enhancing mental alertness and physical performance but they are different from sports drinks. The energy drinks are basically beverages that contain high levels of an ingredient which stimulates the sensory nerves, usually caffeine as well as sugar and other nutrients, such as vitamins or carnitine.

Energy drinks are different from soft drinks, which either do not contain caffeine or contain relatively small amounts of caffeine. Energy drinks are basically used to replace water and electrolytes during or after physical activity.

Although some energy drinks are considered beverages, others, namely those containing food additives e.g., taurine or other amino acids, may be marketed as dietary supplements. Examples of energy drinks are Red Bull, Monster, etc.

The manufacturers of energy drinks claim that their products boost energy levels. Those claims generally have been based on the stimulant effects of a drink, which were said to be derived from the specific concoction of ingredients. Researches indicate that the stimulant effects of energy drinks are primarily due to caffeine. Other ingredients, such as taurine and Vitamin B6 and B12, could potentially exert biological effects but have not been known to increase energy levels; the effects of some ingredients (e.g.,

glucuronolactone) are unknown. Also, levels of vitamins and certain other additives in energy drinks often far exceed recommended daily intakes.

What do studies have to say about Energy drinks and heart health?

In the early 21st century, the safety of energy drinks was an emerging public health issue. In particular, the combined use of energy drink and alcohol became popular particularly among young and college students which were linked to an increased likelihood of high-risk drinking behavior and increased risk of alcohol-related injury and other consequences

Studies in human subjects who consumed energy drinks revealed potentially dangerous effects on heart function and blood pressure that land a few in the emergency room. Discoveries were as of late published in the Journal of the American Heart Association and recommend that anybody with hypertension or heart rhythm disorder should utilize alert while consuming caffeinated drinks.

A huge study done on the impacts of caffeinated drinks on the heart and blood pressure in young healthy volunteers assessed that about 30% of young people between the ages of 12 through 17 years in the United States consume caffeniated drinks all the time, which have been connected to emergency room visits and deaths.

A study done at the University of the Pacific in Stockton, California, showed health concerns related to caffeinated drinks. Caffeinated drinks which contain a blend of caffeine and other vitality-boosting fixings have been connected to various medical issues, including abnormal heart rhythm, heart attack and sudden cardiac arrest. Be that as it may, exactly how caffeinated drinks cause the increase in health risks isn't completely clear.

To find out additional, specialists followed heart action in 34 solid volunteers who devoured two well-known brands of caffeinated drinks (or a fake treatment sugar drink) on three separate events.

The objective was to perceive how caffeinated drinks influence circulatory strain and changes in QT span, which is the time it takes the heart to revive in the middle of thumps.

The caffeinated drinks tried in the investigation contained somewhere in the range of 152 and 160 milligrams of caffeine for each can, alongside different fixings like taurine,

glucurono-lactone and nutrients. The **fake treatment drink contained just carbonated water, lime juice and cherry seasoning.**

In the wake of **monitoring members' heart rate and blood pressure for four hours in the wake of consuming the beverages, specialists found that the two caffeinated drinks fundamentally increased blood pressure contrasted with the fake treatment drink**. In the wake of devouring the caffeinated drinks, members' normal QT span was additionally 6 -7 milliseconds higher than it was in the wake of consuming the fake treatment drink. What this shows, as per creators, is that caffeinated drinks likely immediately affect both heart rate and blood pressure. These progressions could be at fault for the increase in heart risks from caffeinated drink utilization.

Thus, specialists encourage people with heart conditions and hypertension to use caution and cutoff their caffeinated drink admission. Creators likewise urge extra exploration to contemplate the drawn-out wellbeing impacts of standard caffeinated drink utilization and to help distinguish the fixings that represent a risk to heart health.

The society ought to know about the effect of caffeinated drinks on their body particularly on the off chance that they have other fundamental health conditions.

What are the other ways to boost your energy?

With regards to your energy level, probably the most significant components are rest, sustenance, hydration, stress the board, and physical activity. Indeed, even little moves can have any kind of effect.

- Focus on more and better quality rest—even 30 to 60 minutes more per every night to begin with.
- Settle on more fresh produce and avoid processed foods.
- Settle on the water as your choice of beverage.
- Evaluate a free, five-minute guided meditation application to help relieve stress.
- Lastly, discover approaches to work in development, regardless of whether that basically implies taking a stroll around the building or park.
- On the off chance that you despite everything feel like you need a moment of energy lift, attempt chamomile tea, green tea or match, which actuates unwinding without laziness.

- Stay away from add ones that can destroy the energy, like excess sugar, sugar substitutes, and ordinary dairy items.
- Six hours before sleep time, quit drinking any caffeine to avoid disturbance in falling asleep
- The way to sustained energy is keeping your body and brain in balance.
- Rather than a convenient solution in a can, get a glass of water and sit outside for a couple of moments.
- Nibble on an apple with almond spread, or veggies with hummus as opposed to a sweet alternative.
- The little advances you take to organize wellbeing will prompt more noteworthy energy payoffs both today and tomorrow. Just do not take the wrong ways.

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1. Sachin A. Shah, Energy drinks may increase risk of heart function abnormalities and blood pressure changes, Journal of the American Heart Association Report, Published: May 29, 2019

“How To Manage Stress?”

Binu Emmanuel
Assistant Professor
Dept of Clinical Nutrition and Dietetics
Alphonsa College, Pala

Stress is a physiological response to a stressor that threatens an individual’s internal physiological state or psychological wellbeing. Life is critically dependent on the control of the body’s internal state even when the external environment is constantly changing. This is called homeostasis and when it is threatened, the body undergoes a stress response. Stress can be defined as any type of change that causes physical, emotional, or psychological strain. Stress is body's response to anything that requires attention or action.

Stress is a normal part of life. There are many different things in life that can cause stress. Some of the main reasons include physical causes like lack of sleep, illness etc., emotional causes like problems in personal relationships, parenting, perfectionism and work related ones- unemployment, workload, retirement, finances, and day-to-day inconveniences.

Stress can be short-term or long-term. Both can lead to a variety of symptoms, but chronic stress can take a serious toll on the body over time and have long-lasting health effects. If left unmanaged, stress can lead to emotional, psychological, and even physical problems, including heart disease, high blood pressure, chest pains, or irregular heartbeats.

Stress itself might be a risk factor, or it could be that high levels of stress make other risk factors (such as high cholesterol or high blood pressure) worse. If stress itself is a risk factor for heart disease, it could be because chronic stress exposes the body to unhealthy, persistently elevated levels of stress hormones like adrenaline (a hormone that temporarily causes breathing and heart rate to speed up and blood pressure to rise) and cortisol. Studies suggest that the high levels of cortisol from long-term stress can increase blood cholesterol, triglycerides, blood sugar, and blood pressure. These are common risk factors for heart disease. This stress can also cause changes that promote the build-up of plaque deposits in the arteries. And it is not good for our body to constantly be exposed to stress hormones.

Even minor stress can trigger heart problems like poor blood flow to the heart muscle. This is a condition in which the heart doesn't get enough blood or oxygen. Studies also link stress to changes in the way blood clots, makes the blood stickier and increases the risk of stroke and heart attack.

Stress may affect behaviours and factors that increase heart disease risk: high blood pressure and cholesterol levels, smoking, physical inactivity and overeating. Some people may choose to drink too much alcohol or smoke cigarettes to deal their chronic stress; however these habits can increase blood pressure and may damage artery walls.

Stress can increase inflammation in body, which in turn is linked to factors that can harm our heart, such as high blood pressure and lower “good” HDL cholesterol.

Chronic stress can also affect heart in a more indirect way. When we are worried, we tend to sleep poorly. And also less likely to exercise, make healthy food choices, or watch our weight. All of these lifestyle changes can put our heart health at risk.

Research shows that acute psychological stress can elicit a cardiovascular response with concomitant increases in heart rate and blood pressure.

Epidemiological observations have demonstrated that due to the unpredictable nature of an acute stressor, it can significantly alter cardiac rhythm in susceptible individuals to such an extent so as to trigger an acute coronary event.

Experimental studies show that chronic stress is associated with sustained increases in blood pressure and vascular hypertrophy. There is also an increased risk of developing atherosclerosis with chronic stress resulting in cardiac instability and increased sensitivity to myocardial ischemic injury.

Stress-associated cardiovascular disease (CVD) begins with activation of both the sympathetic nervous system and the hypothalamus-pituitary-adrenal (HPA) axis causing an increase in the secretion of catecholamines, glucocorticoids and inflammatory cytokines.These conditions facilitate increases in heart rate and blood pressure that will eventually contribute to endothelial dysfunction.

A newly published study in The Lancet would appear to suggest that the amygdala—an almond shaped part of the brain situated in the temporal lobe that is involved in stress and has been previously implicated with post-traumatic stress disorder (PTSD), anxiety and depression—has heightened activity that leads to a greater risk of developing CVD.

Everyone feels stress in different ways and reacts to it in different ways. Some react strongly to a situation. Others are relaxed and unconcerned. One can decrease the effect of stress on one's body. First, identify situations that cause stress. Although difficult, try to control your mental and physical reactions to these stressful situations. After you have identified the cause of stress in your life, the next step is to learn techniques that can help you cope with stress while fighting heart disease.

There are many techniques you can use to manage stress which include eat and drink sensibly, assert yourself, stop smoking, relax every day, set realistic goals and expectation, get enough rest, regular exercise etc.

Aerobic excerise has been shown to release endorphins (natural substances that help you feel better and maintain a positive attitude).
In order to cope with stress, especially if you have heart disease, you need to learn how to relax. Relaxing is a learned skill -- it takes commitment and practice. Relaxation is more than sitting back and being quiet. Rather, it is an active process involving techniques that calm your body and mind. There are a number of relaxation techniques, including deep breathing, progressive muscle relaxation, relax to music, yoga etc. Once you find a relaxation method that works for you, practice it every day for at least 30 minutes. Taking the time to practice simple relaxation techniques gives you the chance to unwind and get ready for life's next challenge.

Your body is able to fight stress and heart disease better when you take the time to eat well-balanced meals. Eat a variety of foods each day, including lean meats, fish, or poultry, enriched or whole grain breads and cereals, fruits and vegetables, and low-fat dairy products.

About 55%-60% of your daily intake of calories should come from carbohydrates, 25%-30% from fat and 10%-15% should come from protein.

Guidelines for Healthy Eating to Fight Stress :

•Eat a wide variety of healthy foods.
•Eat in moderation -- control the portions of the foods you eat.
•Reach a healthy weight and maintain it.
•Eat at least 5 to 9 servings of fruits and vegetables per day.
•Eat food that is high in dietary fiber such as whole grain cereals, legumes, and vegetables.
•Minimize your daily fat intake. Choose foods low in saturated fat and cholestrol.
•Limit your consumption of sugar and salt.
•Limit the amount of alcohol that you drink.
•Make small changes in your diet over time.
•Combine healthy eating habits with a regular exercise program.

Managing stress is a good idea for your overall health, and researchers are currently studying whether managing stress is effective for heart disease. A few studies have examined how well treatment or therapies work in reducing the effects of stress on cardiovascular disease. Studies using psychosocial therapies – involving both psychological and social aspects – are promising in the prevention of second heart attacks.

Exercising, maintaining a positive attitude, not smoking, not drinking too much coffee, enjoying a healthy diet and maintaining ahealthy weight are good ways to deal with stress, said Schiffrin, who is also the Canada research chair in hypertension and vascular research at Lady Davis Institute for Medical Research. So by effective management we can reduce the risk of cardiovascular disease.

“Exercising The Right Way”

Corona has changed the world a lot. Working from Home and learning from home has become the new normal. It has affected the world economy in a very bad way .Recovering from the effects of this pandemic will take years. One positive side of corona is that a lot of people have started getting involved in some form or the other of fitness activities as people are stuck in their homes and they have realized the importance of staying fit not only to fight against the virus but also to get rid of the diseases due to the new life style. A lot others have taken up activities like Running, Cycling ,Home workouts etc… as an alternative for their ‘Gym Workouts’ as gyms are no longer safer. The increased number of Runners, Joggers, Cyclists etc… in our roads is a welcome change but how many of them are doing it with the right load is the million dollar question.

In a recent survey conducted by a famous health magazine, 85% of the people are unaware of the ‘exercise load’ to be used while performing cardio exercise.

Luke Leon Kurian
(Certified Fitness Trainer and former Fitness Trainer with The Oberoi, Radisson and The Taj hotels)
Assistant Professor, Dept of Physical Education
BCM College, Kottayam

Cardio exercise, as the name itself says, is the kind of exercises which helps in improving your cardiovascular efficiency and is generally classified as low intensity, high volume exercise. Unfortunately most of the people who perform cardio exercises are really not exercising with enough intensity to make sufficient changes to the cardio vascular system.

What load is the right load?

Performing exercises in a certain load is very essential for gaining substantial results. The very basic principle of sports training is the

principle of adaptation. When human body is exposed to newer levels of exertion (load) in certain intervals, body adapts to the new stimulus by making necessary changes in the various systems and that is what we generally term as performance improvement.

So unless we give the heart a certain load, improvements in cardio vascular efficiency will not take place. In other words if your morning walk is a casual easy-walk, chances of getting benefit is very less, no matter how long you perform it. This is the reason why you don't lose your excess tummy despite of 'exercising for hours that too for years'. It's not the quantity but the quality of exercise that really matters.

In general, for achieving optimal results from any form of exercise we have to perform exercises in a submaximal load, i.e. just below your maximum capacity. For strength training and body building exercises, weight or resistance is the load factor, where as in cardio exercise it's the *heart rate* of the person to be considered.

Before going in detail let me introduce a few words closely associated with cardio exercises

Maximum heart rate (MHR): Theoretically, the maximum heart rate possible for a normal human being is 220 minus age. For example, the maximum heart rate possible for a 20 year old person will be 200 i.e. 220-20.

Target Heart Rate (THR): It's the heart rate to be achieved and maintained while performing an exercise. It is recommended that you exercise within 55 to 85 percent of your maximum heart rate for at least 20 to 30 minutes to get the best results from aerobic exercise.

Resting heart Rate (RHR): The minimum heart rate achieved by a person during rest. It's best taken during sleep .RHR is used as a tool to monitor your improvement. You can conclude that you are gaining cardio vascular improvements if your RHR is dropping after 4- 6 weeks of training.

Heart Rate Reserve (HRR): Maximum heart rate minus your resting heart rate will give you the HRR.

Load for cardio exercises

- Moderate Intensity

  -65% - 75% of MHR

For gaining benefits out of cardio exercises one should perform

their exercise while maintaining a minimum heart rate (aka, Target heart Rate) of 65 – 75 percentage of their maximum heart rate.

- Vigorous Intensity(recommended only for conditioned Athletes) :Seasoned athletes and people with higher level of fitness can go for 76% - 95 % of MHR for achieving peak performance and higher level of fitness
- Exercising at 70% of MHR is considered to be the safest Fat Burning Heart rate Zone.

Contraindications

Even though the above mentioned load is considered to be optimum it's not recommended in certain conditions too. For people with Cardiac problems and /or with any other serious health conditions exerting too much load to the heart can result in other fatal medical conditions like Heart Attack, Stroke etc. So it's always safe to consult with your physician to get your recommended load before getting involved in any form of exercise.

Other methods

Talk test method: In case if you are suffering from any major health related complication maintain intensity in which you can talk comfortably.

Rate of perceived exertion (RPE): It's another method widely used by fitness trainers to determine the load of their clients.

Monitoring the heart rate for Training and finding the resting heart rate

Technology has really come in hand for finding your heart rate accurately .If you are an outdoor person, a lot of wearable devices are available in the market. Less expensive fitness bands like MI band has accuracy issues but high end brands like Fit bit and Garmin and Apple I-Watch gives you accurate heart rate along with other options to monitor and train your heart. Almost all fitness watches has got the sleep tracker facility which will help you to find the RHR also.

Almost all cardio machines in a health club is equipped with heart rate monitors. The sole purpose of the heart rate monitors in your tread mill or a cross trainer is to help you monitor your heart rate so that you achieve your target heart rate

For those who don't have access to fitness trackers can rely on the 'rate of perceived exertion'. Maintain an intensity which you can rate as submaximal, i.e. above the comfort level.

Modern trends in Cardio Exercises

Till a decade ago low/moderate intensity- high volume exercises where only thought to be beneficial in achieving cardio fitness gains.

Walking, Running, Cycling, Swimming etc…continuously for a minimum of 40 minutes was considered as typical cardio training, but latest studies have found that even 20 minutes of High Intensity Interval Training (HIIT) can be more beneficial than 60 minutes of slow-continuous activity.

So training methods like HIIT/Functional training etc… are a hit among professionals who don't have much time to spend for fitness activities. HIIT workouts generally combine short bursts of intense exercise with periods of rest or lower-intensity exercise. At fitness studios and online, these workouts often mix aerobic and resistance training. HIIT is generally recommended to people with moderate to excellent level of fitness only.

For achieving maximum fitness gains your training program must include other components of fitness too. Strength training and flexibility training too should be included in any kind of fitness programs. Strengthening your muscles, especially the core muscles will help you in performing your activity smoothly and without any injuries. Rest, Recovery and Proper nutrition too is very essential for optimum results. Using the proper sportswear too is essential. The right kind of running shoes, the right sized cycle all really matters. Exercising even two times a week can also result in improvements.

“Role Of Fish In Cardiovascular Disease”

Written by,
Dr. BLOSSOM K. L.
Assistant Professor (Food Science and Nutrition)
Department of Fish Processing Technology
Kerala University of Fisheries and Ocean Studies, Panangad, Kochi

INTRODUCTION

Fish have long been recognized as an important component in the diet of humans providing nutrients needed by the human body to function properly. Fish is important food stuff and a major source of protein all over the world. In addition, fish is considered as the cheaper source of animal protein. Many populations depend on fish as part of their daily diet, and this dependence is usually higher in developing countries than developed ones. Fish is not only a source of livelihood for people, but also important for the socio-economic development of the country. They contribute to food security in many regions of the world, providing a valuable supplement for diversified and nutritious diets. The demand for high-quality fish and fishery products is growing significantly every year mostly due to their nutritional fact.

PROXIMATE CONSTITUENTS IN FISH

The proximate composition is a term usually used in the field of food or feed and its main components include moisture, ash, lipid, protein, and carbohydrate. Proximate constituents together form about 95-98% of the total weight of the tissue. A variety of many other minor constituents are also present in small quantities like vitamins, free amino acids, and non-protein nitrogenous compounds. Proximate composition of almost all the fish has been studied by different authors although variation in composition based on their nutritional quality depends largely on their feeding habits, season, adaptation temperature, age, sex, type, and state of spawning availability of feed.

The lipid content of fish varies depending on the species as well as season but generally, fish have less fat than red meats. The fat content ranges usually from 0.2 to 25% and is inversely proportional to water content. Usually, marine fish lipids differ from the other lipids due to the presence of longer-chain fatty acids, and a larger proportion of highly unsaturated fatty acids. Fish lipids are known to provide high content of lipid-soluble vitamins (A and D) and essential fatty acids viz., polyunsaturated fatty acids (PUFA). Polyunsaturated fatty acids (PUFAs) like omega-3-fatty acids and omega-6-fatty acids are considered as essential fatty acids because they cannot be synthesized by humans and therefore must be obtained from diet or supplementation. Eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), the two important omega 3 fatty acids have several beneficial impacts on human health. These include decreasing the risk of myocardial infarction, lowering blood pressure, enhancing the immune system, and sustaining proper brain function in the human body. They also protect against various psychological disorders, depression, and attention deficit hyperactivity disorder (ADHD) and cancer.

The distinction between n-6 and n-3 fatty acids is based on the location of the first double bond, counting from the methyl end of the fatty acid molecule. n-6 fatty acids are represented by linoleic acid (LA,18:2n-6) and n-3 fatty acids-by alpha-linolenic acid (ALA, 18:3n-3), respectively. Both essential fatty acids are metabolized to longer-chain fatty acids of 20 and 22 carbon atoms. The parent n-6 fatty acid, linoleic acid (LA)is desaturated in the body to form arachidonic acid (AA, 20:4n-6), while parent n-3 fatty acid alpha-linolenic acid (ALA) is desaturated by microsomal enzyme system through a series of metabolic steps to form eicosapentaenoic acid (EPA, 20:5n-3) and decosahexaenoic acid (DHA, 22:6n-3). This can be achieved by increasing the chain length and the degree of unsaturation by adding extra double bonds to the carboxyl end of the fatty acid molecule. These fatty acids are effectively synthesized only by aquatic organisms; therefore, humans can receive these fatty acids by marine and freshwater fishes. Thus, regular ingestion of fish is important in the maintenance of human health (Singh 2005; Chang *et al*. 2009.)

The small levels of lean fish that seem to reduce CHD mortality suggest that the n-3 PUFA may not be solely responsible for all underlying mechanisms. Proteins, peptides, amino acids, trace elements and minerals have been suggested to contribute, although there is insufficient experimental evidence confirming which components may be involved.

Role of n-3 polyunsaturated fatty acids in cardiovascular disease

Atherosclerosis and thrombosis are two major mechanisms behind CVD. The anti-atherogenic role of n-3 PUFA consists of their ability to alter blood lipids, slightly reduce blood pressure, and inhibit the growth of atherosclerotic plaques. Documented alterations in blood lipids involve reduced serum concentration of triglycerides (TG), apolipoprotein B [Apo (B)] and very-low-density lipoprotein (VLDL) cholesterol, small increases in plasma concentrations of high-density lipoprotein (HDL) cholesterol and occasional increases in low-density lipoprotein (LDL). The antithrombotic mechanism of n-3 PUFA is partially mediated by the ability of the n-3 PUFA to reduce the production of the vasoconstrictive and prothrombotic thromboxane A2 (TXA2) from arachidonic acid in the platelets. n-3 PUFA also increases the production of prostacyclins, which are vasodilators and antithrombotic factors. Fisher and Weber (1983) formulated the hypothesis that reduced platelet aggregability and increased bleeding times after EPA ingestion may be due to the formation of prostaglandin I3 (PGI3) and TXA3 in association with reduced synthesis of TXA2. The suggested antiarrhythmic effect of n-3 PUFA might explain the beneficial effect on sudden death. n-3 PUFA, particularly DHA, can reduce the risk of ventricular tachycardia and fibrillation. The anti-inflammatory effect that has been documented for the fish-derived n-3 PUFA is mediated through eicosanoids, thromboxanes, prostaglandins and leukotrienes produced from these fatty acids, which are less inflammatory than those produced from n-6 fatty acids, such as arachidonic acid.

Omega 3 fatty acids in some fish species

Depending on the fat content, the fish species are classified as lean (up to 2% fat), medium fat (2-7% fat), fat (7-15% fat), and very fat (over 15% fat) (Tang *et al*. 2009). The fat content of a fish species varies depending on the season, if it is sexually mature and spawning and what the fish eats. In farmed fish, the fat content is strongly dependent on what feed it receives. In most cases, the amount of n-3 fatty acids is related to the total fat content of the species. The darker fleshed fish species (such as herring, salmon, mackerel, and bluefish) in general contain a higher total fat content than the leaner, lighter colored flesh species, such as cod, flounder, and pollock. Thus, dietary intake of EPA and DHA from fish and shellfish is strongly dependent on the species consumed (Mahaffey *et al.* 2011)**.** The levels of EPA and DHA in seawater fish are higher than those in freshwater fish (Tang *et al*. 2009). The saturated and monounsaturated fatty acids are generally abundant in fish from warm or temperate regions, whereas PUFAs show higher levels in fish from cold regions**.**

In fact, the content of fatty acid in the fish tissues reflects the fatty acid content of their diet. Some studies have shown that the farmed fish contain more fat and a lower percentage of n-3 fatty acids than the wild fish. However, the farmed fish shows more constant rates of EPA and DHA synthesis, probably because the feed is controlled and balanced throughout the farming period.

Recommendations for EPA and DHA intake

The World Health Organization (WHO) recommends the consumption of between 0.3-0.5 g/day, while the International Society for the Study of Fatty Acids and Lipids (ISSFAL) advocates 500 mg/day, and the North Atlantic Treaty Organization (NATO) recommends 800 mg/day. The American Heart Association and Academy of Nutrition and Dietetics recommend an intake of two 4-ounce servings of fish, preferably fatty fish, per week (especially, n-3 fatty acids can be found in fatty fish, such as salmon, tuna, anchovies and sardines, other marine life such as algae). This amount of fish intake correlates roughly to 500 mg of EPA and DHA per day (Candela *et al*. 2011). It is significant to maintain an appropriate balance of n-3 and n-6 PUFAs in the diet, as these two substances work together to prevention of coronary heart disease and possibly other chronic diseases. Intake of omega-3 fatty acids is much lower at the present time because of the decrease in fish consumption and the industrial production of animal feeds rich in grains containing omega-6 fatty acids, leading to production of meat rich in omega-6 and poor in omega-3 fatty acids. Therefore, the diets of Western countries tend to contain 11 to 30 times more omega-6 than omega-3 fatty acids. In contrast, the current Mediterranean diet is made up of a healthier and more appropriate balance between n-3 and n-6 fatty acids (Dhikav *et al*. 2004). The amount of PUFAs/SFAs (Saturated Fatty Acids) and the ratio of n-6/n-3 are known to be of nutritional importance as it is the key index for a balanced synthesis of eicosanoids in the body. In order to prevent cardiovascular disease, the ratio of PUFAs/SFAs consumed should be less than 0.45 and within the PUFAs, and the n-6/n-3 ratio should not exceed 4.0 (Juszczak and Szymczak 2009; Abedi and Sahari 2014).

However, several issues remain to be elucidated. First, no evidence has been found for the optimal dosage, ratios of DHA to EPA, and ratios of omega-3 to omega-6. Second, whether dietary intake or therapeutic supplements are the best sources of omega-3 fatty acids is yet to be determined. These issues remain to be clarified in future studies.

However, several issues remain to be elucidated. First, no evidence has been found for the optimal dosage, ratios of DHA to EPA, and ratios of omega-3 to omega-6. Second, whether dietary intake or therapeutic supplements are the best sources of omega-3 fatty acids is yet to be determined. These issues remain to be clarified in future studies.

Inspite of all the health benefits, some epidemiological studies have raised concern about the adverse effects of toxic contaminants such as methyl mercury, an environmental contaminant found in certain fish (not in fish oil since can be removed during the process) that may diminish the health benefits of omega 3 fatty acids. As a general rule for fish selection, keep in mind that young fish are better than old fish and vegetarian fish are better than carnivorous fish because both mercury and PCBs accumulate with age and are much greater if a fish consumes other fish rather than plants. King mackerel, shark, swordfish, tilefish (from the Gulf of Mexico), Tuna (bigeye) are rich in mercury. So, the selection of fish is very important and hence fish with fewer contaminants should be chosen to avoid deleterious effects.

Fish oils

Fish oil derived from the tissues of oily fish contain the omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), precursors of certain eicosanoids that are known to reduce inflammation in the body and improve hypertriglyceridemia. Fish oil and omega-3 fatty acids have also been studied in a wide variety of other conditions such as clinical depression, anxiety, cancer, and macular degeneration, yet their benefit in these conditions has also not been verified.

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“Language With A Heart of Its Own”

Prof. Jacob Eapen Kunnath

Dept. of English

CMS College Kottayam

‘Heart’ is a word employed well in a language in many different ways, and has found its way into many expressions and idioms. Take the three elements of the human constitution: the body, mind and soul. Each of the three claims the ‘heart’ to be something of its own. The body sees the heart as a muscular organ, a machine that pumps blood without rest. For the mind, the heart is the seat of emotions and feelings; that red/ rose thing represented in love symbols. And the soul considers heart as that part of the individual which signifies a relation with the divine – as we find in expressions such as “I gave my heart to God!”

“I cordially welcome you all” is something we hear in meetings. The word ‘cordial’ has its root in ‘cor’, the Latin for heart; a situation of disagreement is thus ‘discord’; feelings of unity is indicated as ‘concord’.

And we can also trace a relation for cordial with the Greek word ‘cardia’, something that is more familiar to us through its use in the medical circles. Well, if you want to leave out the Greek and Latin, just say, “I heartily welcome you all”- The heart is still there!

“Heart” finds its way into many idioms in the English language. Someone with a “heart of stone” has no kindness or sympathy; one with “a big heart” has love and compassion overflowing. When you see the question paper, “your heart may skip a beat” – which just means you panicked a bit. But sure, if many of the questions appear strange to you, it is natural that you will “lose heart” – you get discouraged. But “take heart!” (don’t lose hope) this is just a class test, and your teachers are not that “heartless”. Classrooms and lectures are sometimes boring, but let’s have our Association inauguration or Onam celebration: then you are in it “heart and soul” – yes, with all energy and enthusiasm.

If you are a bit interested to get more such examples, just google for “heart idioms” – and I promise, you will get enough and more, “to your heart’s content”!

“My heart, My mind, My soul – 2020”

“ Believe in Your Heart, Believe in your heart that you are meant to live a life full of passion, purpose, magic and miracles”-ROY T.BENNETT, Author of The Light in the Heart

Shibin Bino
3rd year, Medical Student
AIMS KOCHI

Life as we know it is the rhythm by the pumping of the muscle box in our chest along with the flow of current and responses of the intellectual brain. Both protected deep in the body. We can make a decision with our heart when your brains don’t have the answers. We can protect another heart or throw away ours. In all the choices we make, the heart is the organ and the friend who takes us on the roller-coaster ride of life.

Life begins in joy, then we play – the stages of life, we are mortals and merely player on the stages of the world, then we meet our demise. We move on, who knows maybe there is this so-called “Afterlife” but who knows.

September 29th is World Heart Day, to remember to love, protect and cherish the organ protected by our ribs and kept alive by our blood made from our ancestry. In the year 2020, 17.8 million people are not able to prolong their ancestry. They fall prey to various diseases or malformation of the heart that life offers to unlucky few. The modern medicine and advanced possibilities of life it possible to save the unlucky inhabitants of the earth.

The Covid-19 virus shows the flu-like characteristic but without care can lead to the deadly “silent hypoxia”. A fatal condition affecting the heart, yet totally preventable with proper care and health knowledge.

- Proper food and water can save you because your immunity is preserved which protect you against the virus.
- Social distancing and hygiene.
- Courage to face the pandemic and belief of cure.

Seems simple but to practice this we need the ability to let our belief and our life change according to the flow of life.

We need to be aware that COVID-19 is the most common cause for stress, anxiety and depression not only in health worker but in public as a whole. Combined with the financial crisis which we all are facing put us in front of most stress-related lifestyle disease which are-

1. Heart diseases
2. Accelerated ageing

3. Obesity
4. Gastrointestinal problem
5. Depressions
6. Headache

Researchers find that stressed-out Type A people have a higher risk of elevated blood pressure and heart problems. Initial years, the importance of health is forgotten. Fast food twenties. Either we are not aware or we are ignorant. By the time we realise our ignorance, we are already on the blue bed in the operation room.

The change is acceptance of our life and its limits. We often blind ourselves, believing we are lucky enough that no disease will ever catch us. As a mortal being, who falls at every step he takes before he learns to walk. Cardiovascular disease is something that can happen to anyone. Lucky or not we are all vulnerable to the realities of life.

Is there a way to safeguard the life we have, to have to fail free protection against heart diseases. To create an unbailable heart, a heart that you can trust and depend upon. I believe that it is possible, why do you think sportspeople tend to live longer? Why do you think Spain is the most healthy country in the world? Why do you think Japan has the world's highest life expectancy (Life span – 73 years) in the world?

I believe the answer is in the culture and lifestyle of the people.

We can't change our cultures or believes but we can change a few basic aspects of our life. Our sleep, food habits, mindset, lifestyle, all this is being made from the choices we make every day, overtime formed habits.

There are 4 main aspects we need in our lives –

Sleep- A regular sleep habit. You need to find out how long you need to sleep, some people are short sleepers while others are long sleepers. Sleep well, a well-rested mind is more responsive mind and productive.

Diet- What you eat is what you are. It's that simple. Eat well, eat good and eat healthy. Most important is the regular interval in eating your food. Timely food, warm and well cooked food is the way to be healthy in the shortest time.

Exercise- Be active in your life. What it means is to have a good 30 minutes long exercise. It can be a walk, jogging or mere cleaning your room. Being active keeps your body and mind fresh.

Mind-set- Health is a mind-set change. It involves deliberate choice we make. It can be simple like going for a salad or even going complete carb free diet a week. But remember the ultimate aim is to have better health. So built a mind-set to be healthy before you jump in to those heavy diets.

All this seems easy and everyone can do it. The real idea of health is experimenting and finding out what is good for you. People and internet might say a lot of things about your health, but it is you who lives with it .So take control and take responsibility about your health. Most importantly, take it slow. With time you can fly.

Take care of your health, take care of your heart. Be at peace with yourself and your world.

RECIPES

AVOCADO MOUSSE

Elizabath Justin
2nd year, MSc., DFSM
CMS College Kottayam

BENEFITS

Avocados are high in total fat, but the majority of the fat in an avocado is monounsaturated fat, which may help lower LDL ("bad") cholesterol. They also contain lots of dietary fibre, vitamins, minerals and antioxidants, which also help to keep your heart healthier.

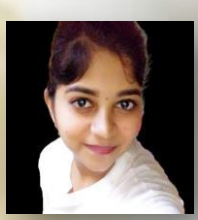
INGREDIENTS

1. Avocado(Skin removed) = 1 large
2. Non- fat milk(Boiled) = ½ cup
3. Vanilla extract = 1 teaspoon
4. Non-fat yogurt = ¼ cup
5. Sweetener = 2 small packets

METHOD OF PREPARATION

- Place all ingredients in a food processor.
- Pulse until smooth, wiping down the sides and stirring as needed.
- Place in a bowl and chill until ready to use.
- Avocado mousse is ready to serve.

FLAXSEED PARATHA



Rajalaksmi P S
Lakshmi Hospital
Erankulam
Trainee

BENEFITS

Flax seeds are a rich source of the omega-3 fatty acid ALA. Plant-based ALA fatty acids are proven to have heart health benefits and are linked to a lower risk of stroke.

INGREDIENTS

1. Wheat flour =100g
2. Garlic – 4 pieces
3. Amaranth =100g
4. Flax seed = 15g
5. Onion = 20g
6. Gram masala = ¼ teaspoon
7. Turmeric powder = ¼ teaspoon
8. Green chilli = 2 number
9. Salt = a pinch
10. Ginger = 10g

METHOD OF PREPARATION

- Mix the dough
- Slice green chilli, ginger and garlic.
- Sauté the ginger and garlic.
- Pour 2 teaspoon oil and sauté ginger, garlic and green chilli. Add salt, gram masala and turmeric powder to it.
- Add amaranth and sauté for 10 minutes.
- Roll the dough into round shape.
- Add flaxseed to the prepared mixture.
- Stuff the rolled roti with the base mixture and cook the roti in a tawa.

AVOCADO - BERRY SMOOTHIE

Miriyam Sebastian
2nd year, MSc.,CND
Alphonsa College, Pala

BENEFITS

Avocado is prized for its high nutrient value and is added to various dishes due to its good flavour and rich texture. Avocados do not contain any cholesterol or sodium and are low in saturated fat.

INGREDIENTS

1. Frozen Mixed Berries, (Blueberry, Raspberry, Blackberry) = 1 ½ Cups
2. Fresh Spinach = 1 Cup
3. Dairy Or Non Dairy Milk = 1 Cup
4. Ripe Medium Avocado = ½ cup
5. Maple Syrup = 1 tablespoon

METHOD OF PREPARATION

- Place all ingredients in a blender and blend on high speed until smooth and creamy, about 1 minute.
- Pour into 2 glasses and serve immediately.

AVOCADO CUCUMBER SALAD

Lincy Liyochen
2nd year, M Sc., DFSM
CMS College, Kottayam

BENEFITS

This salad is loaded with veggies; Creamy avocado, crisp cucumber, juicy tomatoes and the coriander leafs and lemon juice makes the whole salad so fresh and flavourful! And also having good fats and fibers, which means they are helpful for the heart health.

INGREDIENTS

1. Tomatoes = 2 number
2. Cucumber = 1 number
3. Medium onion sliced = ½ number
4. Avocados diced = ½ cup
5. Olive oil or sunflower oil = 2 tablespoon
6. Fresh lemon juice (from 1 medium lemon) = 2 tablespoon
7. Coriander leaf, chopped = ¼ cup
8. Salt = 1 teaspoon
9. Black pepper = 1/8 teaspoon

METHOD OF PREPARATION

- Place chopped tomatoes, sliced cucumber, sliced onion, diced avocado, and chopped coriander into a large salad bowl.
- Drizzle with 2 tablespoon olive oil and 2 tablespoon lemon juice.
- Toss gently to combine.
- Just before serving toss with 1 teaspoon sea salt and 1/8 teaspoon black pepper.

HIBISCUS TEA

Vidya Sahu
2nd year, MSc., DFSM
CMS College Kottyam

BENEFITS

One of the most impressive and well-known benefits of hibiscus tea is that it may lower blood pressure. Hibiscus tea doesn't have any caffeine on its own. The dried flowers of this plant make a tea with a distinct red color and a somewhat tart, lemony taste.

INGREDIENTS

1. Dried Hibiscus Flowers - 1 teaspoon
2. Boiling Water
3. Honey, Sugar, Or Your Preferred Sweetener (To Taste)
4. Tea Bag (Optional)
5. Cinnamon Stick (Optional)
6. Mint Leaves (Optional)
7. Lime Wedge (Optional)

METHOD OF PREPARATION

- Set a pot of water on the stove to boil. Wait until it gets hot.
- Put the dried hibiscus flowers into an empty teapot according to your strength.
- Pour the boiling water into the teapot.
- Add a tea bag to the water.
- Leave the tea to steep for 5 minutes.
- Let the tea steep longer for a stronger flavor. Let it steep for less time if you want a weaker flavor.
- Strain the tea as you pour it.
- Add cinnamon, mint, or lime wedge as garnish. The flavor and aroma of these substances complement hibiscus tea for three different delicious combinations.

BEETROOT- CHAYAMANSA SOUP

Merin Roy M
2nd year, MSc., DFSM
CMS College Kottayam

BENEFITS

Chayamansa is a green leafy shrub also known as 'tree spinach'. It helps to prevent and treat such diverse conditions as inflammation, diabetes (there is strong evidence for this benefit), obesity, heart disease (it lowers LDL-cholesterol and high blood pressure), fever, kidney stones, varicose veins, gastro-intestinal diseases etc. And beetroot is one of the richest dietary sources of nitrates, which help improve blood flow and heart health. As such, the nitrates in beet juice may help improve blood flow and exercise ability in patients with heart failure.

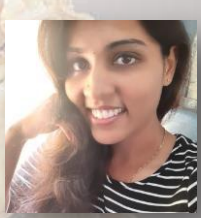
INGREDIENTS

1. Butter = 1 teaspoon
2. Bay leaf = 1 number
3. Clove garlic = 2 numbers
4. Onion (chopped) = 2 numbers
5. Ginger = 1 inch
6. Chayamansa (finely chopped) = ½ cup
7. Beetroot(cubed) = 1 ½ cup
8. Carrot (cubed) = ½ cup
9. Salt = ½ teaspoon
10. Water = 2 cup
11. Pepper crushed = 1 teaspoon
12. Mint for garnishing

METHOD OF PREPARATION

- Firstly, in a pressure cooker take 1 teaspoon butter and saute 1 bay leaf until it turns aromatic.
- Add in 2 clove garlic, 1-inch ginger, 2 onions and saute until it shrinks slightly.
- Additionally, add 1&1/2 cup beetroot, 1 ½ cup carrot, 1 cup chayamansa .
- Add salt and saute for 2 minutes.
- Now add 2 cup water and pressure cook for 2-3 whistles.
- Drain off the water cool completely.
- Take the pressure cooked vegetables into a blender and blend to smooth paste.
- Transfer the beetroot - chayamansa leaf paste into a large kadai.
- Pour in the water left out while cooking vegetables.
- Mix well adjusting consistency as required.
- Once the soup comes to a boil add 1 teaspoon pepper and mix well.
- Finally, enjoy beetroot soup garnished with mint.

DATES AND NUTS CRUNCHY BAR



Krishna TK
2nd year, MSc., DFSM
CMS College Kottayam

BENEFITS

The main ingredients in this recipe are heart friendly. Dates can prevent atherosclerosis, heat attack and strokes. Almonds can reduce cholesterol. Potassium in raisins will reduce blood pressure. Rice flakes are lactose free and also heart friendly. Antioxidants rich honey can also improve heart health.

INGREDIENTS

1. Dates = 50g
2. Almonds = 15g
3. Raisins =15g
4. Rice flakes = 30g
5. Honey = 15g

METHOD OF PREPARATION

- Roast the rice flakes in a pan and make it crispy
- Remove the seed from the dates and slightly crush it using mixer grinder.
- Cut the almonds, raisins and rice flakes well with honey
- Shape the mixer into rectangular bars

EXOTIC SALAD

Minnu Alex
2nd year, MSc., DFSM
CMS College Kottayam

BENEFITS

Many vegetables and fruit are particularly rich in vitamin C and in beta-carotene, which is a form of vitamin A. These work as antioxidants in our body, helping to slow down or prevent atherosclerosis by reducing the buildup of plaque from cholesterol and other substances in the arteries.

INGREDIENTS

1. Mushrooms Sliced Thinly = 2 numbers
2. Red Bell Pepper = 1 number
3. Yellow Bell Pepper = 1 number
4. Carrots = 1 to 2 numbers
5. Apple = 1 numbers
6. Pomegranate Seeds = ¼ cup
7. Cucumber = 1/4 cup
8. Babycorn = 1/4 cup
9. Brocolli = 1 cup
10. Lime Juice = 1 tablespoon
11. Chilli Flakes = 1/2 teaspoon
12. Dried Oregano = 3/4 teaspoon
13. Minced Garlic = 1/4 teaspoon
14. Salt to taste
15. Honey = 1 tablespoon
16. Black Pepper to taste

METHOD OF PREPARATION

- Properly wash all vegetables and fruits. Chop into desirable slices.
- Add the lime juice and chilli flakes to the sliced mushrooms. Cover and keep aside in the refrigerator for 30 min.
- Take a pan and add olive to it then add the sliced veggies, sauté for 5 minutes and move to a salad bowl.
- Then take a pan and add olive oil, mustard sauce, oregano, salt and black pepper. Toss the sauce into the chopped salad vegetables.
- Mix the contents in the salad bowl thoroughly. Just before serving, add honey and lemon juice over the salad.
- Enjoy exotic salad in dinner.

VEGGIE FISH SOUP

Anna Reenu Shaji
2nd year, Msc., CND
St. Theresas College, Ernakulam

BENEFITS

Fish contain many essential nutrients, such as omega-3 fatty acids and high-quality proteins, moderate consumption (including pregnant women and young children) of a variety of fish is recommended. In addition, fish soup can be a source of nutrients such as omega-3 fatty acids. And vegetables accompanied by fish would enhance its taste and give additional nutritional benefits.

INGREDIENTS

1. Fish = 25g
2. Salt to taste
3. Pepper powder = 1 teaspoon
4. Coriander leaves = 50 g
5. Onion (big) = 1 number
6. Tomato = 1 number

METHOD OF PREPARATION

- Chop onion and coriander leaves.
- Add chopped onion in a pan until golden brown and add tomato puree to it.
- Mix ingredients well and let it come to a boil.
- Stir it in between, until the mixture becomes thick.
- Now transfer it to a blender jar and blend it on high speed to make a puree (make sure no lumps are remaining in the soup).
- Transfer the pureed soup again into a pan place it over medium flame.
- Wash, clean the fish remove the bones from it and slice it to small pieces.
- Add fish to the above mixture and cook well. Sprinkle salt, pepper powder and mix it well.
- Serve the soup garnishing with coriander leaves.

GARLIC VEGETABLE SOUP FOR HEALTHY HEART

Shilpa Babu
2nd year, MSW
Rajagiri College of Social Sciences, Kalamassery

BENEFITS

Most vegetables are naturally low in fat and calories. Vegetables are important sources of many nutrients, including potassium, dietary fiber, folate (folic acid), vitamin A, and vitamin C.A number of studies have found that benefits of garlic include tackling high blood pressure, reducing high cholesterol, and protecting against heart disease and atherosclerosis (when fatty deposits build up in the arteries, increasing your risk of heart attack and stroke.

INGREDIENTS

1. Finely chopped garlic = 2 teaspoon
2. Chopped and boiled mixed vegetables (french beans, carrots, green peas and cauliflower) = 1 cup
3. Oil = 1 teaspoon
4. Finely chopped onions = ¼ cup
5. Salt and freshly ground black pepper to taste
6. Chopped coriander = 2 tablespoon

METHOD OF PREPARATION

- Heat the oil in A deep non-stick pan, add the garlic and onions and sauté on a medium flame for 1 or 2 minute
- Add the mixed vegetables, 3 cups of water, salt and pepper, mix well and cook on a medium flame for 2 minutes, while stirring occasionally
- Add the coriander, mix well and cook on a medium flame for another one minute and serve hot.

GREENY AVOCADO PULAO

Chandhini Biju
2nd year, MSc.,DFSM
CMS College Kottayam

BENEFITS

Avocado increases the levels of nutrients, lowers the risk for heart disease and diabetes, and gives less belly fat and more "good" cholesterol. Rice has its own benefits: It's good for skin, aids in regulating blood sugar, and even helps keep body energized. Spinach is one of the most nutrient dense foods you can get. The fiber lowers cholesterol levels, whilst the lutein aids arteries. Eating spinach fresh is best, so add it to salads or smoothies to complement heart healthy diet.

INGREDIENTS

1. Avocado = 1 number
2. Carrot = 1 number (chopped)
3. Rice = 1 cup (soaked)
4. Spinach = 1 cup (shredded)
5. Cumin seed = 1 tablespoon
6. Onion = 2 medium (sliced)
7. Ginger = 2 tablespoon (grated)
8. Green chilly = 2 numbers
9. Tomato = 2 numbers
10. French beans = 1/2 cup
11. Garam masala powder = 1/2 teaspoon
12. Chilly powder = 1/4 teaspoon
13. Coriander power = 1/2 teaspoon
14. Salt to taste
15. Olive oil = 2 tablespoon

METHOD OF PREPARATION

- In a cooker heat 2 tablespoon olive oil and add whole spices (bay leaves, cinnamon sticks, cloves and cardamom)
- Add 1 tablespoon u cumin seed and sliced onion. Once the onion changes its color, add 1 tablespoon of grated ginger, green chilly, chopped tomato, chopped carrot , 1/2 cup of french beans and mix well. Then add mashed avocado.
- Then, add 1 cup of shredded spinach.
- After 2 minutes, add 1 cup of soaked rice, 1/2 teaspoon garam masala, 1/4 teaspoon of red chilly powder, 1/2 teaspoon coriander and cumin seed powder and salt to taste. Mix it well.
- Add coriander leaves and 2 cups of water.
- Cover it and cook for 15 minutes.
- Ready to serve.

TRICOLOUR PUTTU

Leah Anna Abraham
2nd year, MSc., DFSM
CMS College Kottayam

BENEFITS

Ragi has high fibre content and makes our heart healthy by getting rid of the bad cholesterol (LDL) from our body and thus avoids clogged arteries and assures normal flow of blood to heart and all parts of the body. It is gluten-free and a great substitute for those with lactose intolerance. Sprouts increases the Antioxidant content which helps to bind toxins and flush out from our system. Cashews contain no cholesterol and promote optimal blood circulation. Carrots are an excellent source of potassium and help to maintain a healthy cholesterol level and reduce the risk of heart disease and stroke.

INGREDIENTS

1. Ragi Flour- ¼ Cup
2. Sprouted Green Gram- 2 tablespoon
3. Grated Carrot-2 tablespoon
4. Scrapped Coconut- 2 tablespoon
5. Cashew Nuts And Dried Raisins
6. Water- As Required
7. Salt- To Taste

METHOD OF PREPARATION

- Take ¼ cup ragi flour in a mixing bowl, add little salt and mix well.
- Then sprinkle ⅓ cup water all over and mix the flour well with the water with your fingertips.
- To get the correct texture, gently press a small portion of the flour between your palms. It should form a lump and when you press this flour lump more, then it breaks and crumbles.
- Break all the tiny lumps in the flour with your fingertips.
- Now pour 2 to 3 cups water in a puttu maker, keep on stove top and let it get heated

OATS AVO PANCKE

Riswana Thasni M
2nd year,
MSc., Nutrition And Dietetics
KAHM Unity Women's College

BENEFITS

The antioxidants present in oats are beneficial for heart disease and the dietary fibers help lower the bad cholesterol (LDL) without affecting the good cholesterol (HDL).

INGREDIENTS

1. Oats- 1 Cup
2. Avocado - 1 Medium Sized.
3. Skimmed Milk-3/4 Cup.
4. Almonds- handful
5. Maple syrup - as needed.

METHOD OF PREPARATION

- ❖Powder the oats and keep aside.
- ❖Take the avocado and mash well.
- ❖Add the oats powder into it.
- ❖Mix well and add skimmed milk into it.
- ❖Make a thick batter for pancake.
- ❖Now heat the pan and make pancakes.
- ❖The simple meal for healthy heart is ready.

AVOCADO CHIA SEED PUDDING

Liza Benny
2 year, MSc., DFSM
CMS College Kottayam

BENEFITS

Avocado is a healthy, versatile, fitness – friendly fruit. They ‘re packed with good fats and fiber. Avocado consumption helps to lower LDL level

INGREDIENTS

1. Medium ripe avocados, peeled and pitted = 2 numbers
2. Unsweetened almond milk = ½ cup
3. Unsweetened cocoa powder = ¼ cup
4. Fat-free, plain yogurt = ¼ cup
5. Dates (pitted) = 3 numbers
6. Vanilla extract = 1 teaspoon
7. Chia seeds = 2 tablespoon
8. Unsalted, chopped almonds or walnuts (optional) = ¼ cup + 2 tablespoons

METHOD OF PREPARATION

- In a food processor or blender, process all the ingredients except the almonds until smooth.
- Transfer the pudding to serving dishes. Cover and refrigerate for at least 1 hour to allow the chia seeds to thicken.
- Just before serving, sprinkle with the almonds if desired.

NAVARATHNA SOUP

Jincy Joy
2nd PG, MSc., DFSM
CMS College Kottayam

BENEFITS

Spinach is one of the most nutrient dense foods. The fiber lowers cholesterol levels, whilst the lutein aids arteries. Amaranth leaves is high in iron content and dietary fiber, it is good for anemic patients, and reduces cholesterol and risks of cardiovascular diseases. Eating pumpkin is good for the heart . The fiber, potassium, and vitamin C content in pumpkin supports heart health.

INGREDIENTS

1. Spinach leaves = ¼ cup
2. Amaranth (red) leaves = ¼ cup
3. Pea leaves = ¼ cup
4. Fenugreek leaves = ¼ cup
5. Pumpkin leaves = ¼ cup
6. Mint leaves = ¼ cup
7. Drumstick leaves = ¼ cup
8. Curry leaves = ¼ cup
9. Coriander leaves = for garnish
10. Olive oil = 2 teaspoon
11. Ginger = 1 teaspoon
12. Onion = 2 numbers
13. Garam masala-1 teaspoon
14. Clove = 2 numbers
15. Cinnamon = 2 numbers
16. Garlic = 3 numbers
17. Black pepper = 1 teaspoon
18. Salt according to taste

METHOD OF PREPARATION

- To make Navarathna Soup, wash the leaves for 2 or 3 times in water and chop it in small size.
- Heat olive oil in a pan
- Add chopped garlic and onion and sauté on a medium flame till the onions turn translucent. Then add ginger and clove.
- Add cinnamon and garam masala and then add the chopped leaves, sauté it for 2 minutes.
- Add 2 cups of water to the mixture and cook on a medium flame till it thickens, while stirring continuously using a whisk
- Lastly, add black pepper to enhance the taste.
- Add salt according to the taste.
- Delicious and nutritious hot soup is ready to serve.

OATS SESAME SEED BALLS

Sreelakshmi P Thampy
2nd year, MSc., DFSM
CMS College Kottayam

BENEFITS

The antioxidants present in oats are beneficial for heart disease and the dietary fibre help to lower the bad cholesterol (LDL) without affecting the good cholesterol (HDL). And some studies suggest that regularly eating sesame seeds may help decrease high cholesterol and triglycerides — which are the risk factors for heart disease

INGREDIENTS

1. Oats = 200 g
2. Jaggery = 20 g
3. Olive oil = 10 ml
4. Almond = 12 numbers
5. Dates = 15 numbers
6. Walnut = 10 numbers
7. Cashew nuts = 20 numbers
8. Cumin seed =10 g
9. Black and white sesame seed = 20 g

METHOD OF PREPARATION

- Saute sesame seeds and cumin seed without oil.
- Then add chopped cashew nuts, almonds, walnuts in it and saute.
- Add oats, olive oil and mix well
- Then turn off the flame.
- Add the dates and jaggery syrup.
- Mix well and make it into balls.

SPINACH HALWA

Aparna VR
2nd year, MSc., DFSM
CMS College Kottayam

BENEFITS

Spinach is one of the most nutrient dense foods you can get. The fiber lowers cholesterol levels, whilst the lutein aids your arteries. Eating spinach fresh is best, so add it to your salads or smoothies to complement your heart healthy diet.

INGREDIENTS

1. Spinach puree- 1 cup
2. Maize flour - 2 tablespoon
3. Milk powder- 3 tablespoon
4. Cardamom powder- 1/2 teaspoon
5. Sugar -1/2 cup
6. Pure ghee- 2 tablespoon
7. White choco chips for decoration

METHOD OF PREPARATION

- Take a pan and heat little ghee.
- Add the maize flour and roast it until become golden colour.
- Now add spinach puree and roast it on medium flame till it thickens. Then add sugar and mix well.
- Add milk powder and cardamom powder and roast it for about 5 minutes.
- Garnish with white choco chips and serve hot.

SPINACH MUSHROOM EGG WHITE OMELETTE

Rinnu Roy
2nd year, MSc., FSN
Mount Carmel College, Bengaluru

BENEFITS

Spinach is rich in vitamin A, C & K, magnesium, iron. Eating this leafy green veggie may benefit eye health, reduce oxidative stress and reduce blood pressure. It also contain lutein that prevent thickening of walls of arteries ,thus reducing the risk of heart attacks.

INGREDIENTS

1. Egg Whites = 1/3 cup
2. Spinach = 2 cups
3. Sliced Mushrooms = ½ cup
4. Tomatoes = 1/4 cup
5. Avocado = 1/3 portion
6. Olive Oil
7. Salt And Pepper = A Pinch

METHOD OF PREPARATION

- Spray a small pan with little olive oil and heat the pan with a medium flame.
- Add the mushrooms and cook it for 2-3 minutes and add tomatoes and spinach.
- Cook until spinach wilts and remove from pan.
- Pour egg whites and cook for 3-5 minutes covering with lid.
- When fully cooked add cooked veggies and fold in half. Season with salt and pepper.

SPROUTED GREEN GRAM SALAD

Revathi GM
2nd year, MSc., DFSM
CMS College Kottayam

BENEFITS

Sprouted Green Gram are rich in vitamins and minerals. It may have properties that can lower LDL cholesterol.

INGREDIENTS

1. Sprouted Green Gram = 1 cup
2. Cucumber =½ cup
3. Tomato =½ cup
4. Grated carrot =½ cup
5. Capsicum =½ cup
6. Spring onion =½ cup
7. Salt = ½ cup
8. Lemon juice = ½ cup
9. Peanuts =½ cup

METHOD OF PREPARATION

- Firstly take 1 cup sprouted Green Gram
- And add cucumber, tomato , carrot, capsicum, spring onion
- Mix well making sure everything is well combined
- Finally , serve sprouted Green Gram salad garnished with roasted peanuts

MORINGA ROTI

Mrs Swetha. S
Staff Nurse
Peter Lougheed Centre, Canada

BENEFITS

The powerful antioxidants found in Moringa extract might help to prevent cardiac damage and has also been shown to maintain a healthy heart. Moringa is touted for its high concentration of antioxidants, as well as its ability to lower blood sugar, improve heart health, and reduce inflammation.

INGREDIENTS

1. Moringa Leaves
2. Salt = ½ teaspoon
3. Whole Wheat/ Atta = 1 Cup
4. Turmeric Powder = ½ teaspoon
5. Cumin Seeds = ¼ teaspoon
6. Ajwain = ¼ teaspoon
7. Chilli Powder = ½ teaspoon
8. Grated Ginger = ¼ inch
9. Water

METHOD OF PREPARATION

- Firstly, wash and rinse the moringa leaves and then chop the moringa leaves finely.
- Add 1 cup of whole wheat/ atta and add salt.
- The moringa leaves are slightly bitter to taste so to balance them, add turmeric powder, cumin seeds, ajwain, chilli powder and grated ginger.
- Then mix them and add water little by little and kenned them well.
- Then cover them and put it 10-15 minutes.
- Make them into small balls and roll it into round shape.
- Place it on hot pan and cook it.
- Moringa roti is ready to serve.

MASOOR DAL VEGETABLE KHICHDI

Vinita Kaka
Nutritionist
Navi Mumbai

BENEFITS

A diet which is low in sodium and high in potassium can help control hypertension and lower your risk of cardiovascular disease and death.The recipe below is an appropriate meal for a heart patient fulfilling all the requirements & maintaining the taste factor as well . this masoor dal vegetable khichdi is an excellent way to incorporate both protein and carbohydrates in your meal!

INGREDIENTS

1. Masoor dal = 30gms
2. Rice = 45gms
3. Corn = 25gms
4. Peas = 50gms
5. Oil = 5gm
6. Can add other vegetables as well (optional)

METHOD OF PREPARATION

- Wash and soak the rice for half an hour. Wash the lentils properly.
- In a pressure cooker, heat one tablespoon ghee/oil
- Fry the onion slices till translucent. Fry the other vegetables corn, peas and any other vegetables.
- Add the lentils and rice. Fry or saute them for a while. Add salt (minimum quatity as mentioned) and four cups water . Pressure cook till done. The kichidi is ready to be served hot.

VEGGIE SALMON FRIZZLE

Vishnupriya M S
Alumini, B.Sc. Mathematics
2017-2020 batch
CMS College, Kottayam

BENEFITS

The vitamin B12 in salmon keeps blood and nerve cells humming and helps you make DNA. But for your health, the true beauty of salmon is its wealth of omega 3 fatty acids. They can lower the chances of cardiovascular disease, some types of cancer, dementia etc.

INGREDIENTS

1. Salmon = 1 kg(cut into small pieces)
2. Spinach = 10-12 leaves
3. Cabbage chopped = 1 bowl
4. Beans chopped- ½ bowl
5. Tomatoes = 1 or 2 chopped into small pieces
6. Olive oil = 1millilitre
7. Mustard seed = 1 tablespoon
8. Green chilli = 5-6 numbers
9. Pepper = 1 tablespoon
10. Chilli powder = 1tablespoon
11. Turmeric powder = 1 tablespoon
12. Salt = pinch

METHOD OF PREPARATION

- Heat 3 tablespoons of olive oil in a pan and splutter mustard seed.
- Add spinach, chopped green chillies, cabbage and beans. Cook it for some time and then add chopped tomatoes into it .
- Add sufficient amount of salt .Now allow to cook for 10-15 minutes.
- Take another bowl with salmon pieces and add pepper, chilli powder, and turmeric powder.
- Take a frying pan and add olive oil needed for frying salmon.
- When it is cooked well, add those cooked vegetables into it and wait for 2 minutes .Then transfer it into a serving bowl.

GARLIC-OATS VEGETABLE SOUP

Melin Thomas
2nd MSc., CND
Alphonsa College, Pala

BENEFITS

Garlic is to reduce chance of heart diseases from curing a cold to lowering blood pressure and cholesterol levels. It contains vitamins C and B6, manganese and selenium. Garlic and vegetables included in this recipe are functional foods rich in antioxidants, hypo-cholesterolemic and phytochemicals helps to protect against heart diseases.

INGREDIENTS

1. Oats = 2 tablespoons
2. chopped garlic = 2 teaspoons
3. 1 cup chopped and boiled mixed vegetables : French beans , Carrots and Cauliflower
4. Oil = 1 teaspoon
5. Finely chopped onions = ¼ cup
6. Salt to taste
7. Quick cooking rolled oats = 2tablespoons
8. Chopped coriander = 2 tablespoons

Method of preparation

- Heat the oil in a deep non-stick pan, add the garlic and onions and saute on a medium flame for 1 to 2 minutes.
- Add the mixed vegetables and 2 tablespoons of oats and 3 cups of water, salt and pepper, mix well and cook on a medium flame for 2 minutes, while stirring occasionally.
- Serve the garlic vegetable soup hot.

GREEN CHAPATTI

Ms. Nimmy Reghu
2nd year, MSc., FSN
Avinashilingam Institute for Home Science & Higher Education for Women, Coimbatore

BENEFITS

Leafy green vegetables are high in vitamin K and nitrates, which can help reduce blood pressure and improve arterial function. Studies show that a higher intake of leafy greens is associated with a lower risk of heart disease.

INGREDIENTS

1. Whole wheat flour – 250 g
2. Garlic – 20 g
3. Fenugreek – 10g
4. Drumstick leaves – 50ng
5. Spinach - 100g
6. Kale – 50 g
7. Water – 500 ml
8. Salt – to taste

METHOD OF PREPARATION

- Grind the green leafy vegetables along with fenugreek and garlic.
- Kneed the whole wheat flour by adding the grinded ingredients, salt and water and make it in to an elastic consistency.
- Keep the dough for 15minutes.
- Then make the dough into small portions and spread it into round shape.
- Bake both sides of the raw chapatti in a hot tawa.
- Now the chapatti is ready for use. It can eat directly or with side dish

ZERO OIL OATS CHUTNEY

Sruthy S.
2nd year, MSc., DFSM
CMS College Kottayam.

BENEFITS

High blood pressure, a daily dose of oats will help combat this problem and in turn, lower risk of hypertension. "The antioxidants present in oats are beneficial for heart disease and the dietary fibers help lower the bad cholesterol (LDL) without affecting the good cholesterol (HDL)“

INGREDIENTS

1. Oats- ½ cup
2. Dry red chilli powder- 1 teaspoon
3. Coconut powder or grated coconut
4. Rasam powder- ½ tsp
5. Asafoetida – a pinch
6. Curry leaves- few
7. Salt

METHOD OF PREPARATION

- Add all these ingredients in a blender and grind into a smooth paste by adding some water.
- Adjust salt as per taste.
- Zero Oil Oats Chutney is ready to serve.

APPLE CINNAMON SOYA SHAKE

Daya Wilson
2nd MSc.,CND
Alphonsa College Pala

BENEFITS

Shakes and smoothies can literally be elixirs of good heart health. They allow mixing a variety of healthy ingredients to make a healthy beverage that tastes great and offers a nutritional punch. The antioxidants flavonoids from soya, fiber from apples and bioactive compound from cinnamon helps to avoid a quick rise in blood sugar levels and low fat milk gives calcium while avoiding the unnecessary fat

INGREDIENTS

1. Apple Cubes (Unpeeled) – 3 cups
2. Cinnamon Powder - ½ teaspoon
3. Chilled Soya Milk (Unflavored) - 1 cup
4. Chilled Low Fat Milk; 99.7% Fat Free - 2 Cups
5. Sugar Substitute (Optional) - ½ teaspoon

METHOD OF PREPARATION

- Combine all the ingredients in a mixer and blend till smooth and frothy. Serve immediately

SPECIAL THANKS

1. **Mr. George Abraham Kallivayalil**
   Associate Editor & Chief of Bureau, Deepika Daily in New Delhi

2. **Mr. Shifas Sulaiman**
   Asst. Regional Manager, The Hindu, Kottayam

3. **Prof. Jacob Eapen Kunnath**
   Faculty, Dept. of English, CMS College Kottayam (Autonomous)

4. **Midhun R Mohan**
   Website Administrator, CMS College Kottayam (Autonomous)

5. **Mrs. Faseela Mohammed Rasheed**
   Faculty, Dept. of Family and Community Science, CMS College Kottayam (Autonomous)

6. **Mrs. Veena S Panicker**
   Faculty, Dept. of Family and Community Science, CMS College Kottayam (Autonomous)

7. **Ms. Salini Saji**
   Graphic Designer, Working As A Freelancer In Graphic Designing

8. **Ms. Nancy Thomas**
   Freelance Front End Designer

CMS COLLEGE KOTTAYAM (AUTONOMOUS)

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