



ROYAL COLLEGE
RED CROSS SOCIETY

IMPORTANCE OF PHYSICAL HEALTH



HealthFirst

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THE HEALTHFIRST MAGAZINE SERIES

The HealthFirst Magazine series is a set of publications which are published by the Royal College Red Cross Society as a free of charge publication. This Magazine series includes 5 magazines under the topics of First Aid in Emergencies, Importance of Mental Health, Laws related to children in Sri Lanka, Importance of Physical Health and Non Communicable Diseases.

This project is being concluded to provide good knowledge about non-identical health related topics as mentioned above for students, teachers and parents in Sri Lanka as the country is going through a global pandemic. The main intention of this magazine series is to generate a new link for the community to have a healthy life. Healthy living means maintaining a healthy lifestyle and introducing habits that improve your health. It might be difficult for you to change the usual habits at once but you can always take new steps to become more healthier. An important first step is identifying less healthy habits and learning new, positive ones to replace them. The HealthFirst Magazine which consists of 5 different magazines will create a new path to be healthy for not only the students alone but also for each and every individual in the country.

HealthFirst Magazine series consists of Health tips, Health-related articles from doctors, articles from the members of the Royal College Red Cross Society and many more important health-related information and facts which will be useful for all the readers. We cordially invite you to refer to these magazines.

**Nethul Tennakoon,
Editor,
HealthFirst Magazine.**

Importance of Physical Health

Invest time on exercise... and earn a healthy life...

What is Physical Fitness?

We all talk about physical fitness and being physically fit is everyone's dream. What is physical fitness? Is it maintaining a good figure, or is it the ability to run 5km? Well, physical fitness has five major components. They are cardio- respiratory (heart and lung function), Muscular (muscle strength, power and endurance), Motor (balance, coordination, speed in movements), morphological (lean body with less fat) and metabolic (good blood glucose and cholesterol levels). So, achieving most of the above components make you a healthy or fit person.

What we can do to become physically fit?

As we all know it is mainly by being physically active and eating a good diet. Avoiding bad habits like smoking, alcohol also has a place. Exercise is the best way of becoming physically active. In order to achieve all round physical fitness goal, we have to do few different types of exercises. Aerobic exercises like brisk walking, jogging, cycling, swimming, skipping are one type. Resistance or strength training with bodyweight, resistance bands, free weights. Ex: dumbbells are the second type. Flexibility and balance are the other two types.

World Health Organization (WHO) recommendations for children and adolescents (5 years to 17 years) are that they should do at least an average of 60 minutes per day of moderate to vigorous intensity aerobic exercises such as jogging, cycling, skipping and muscle strengthening activities like push-ups, squats, crunches, planks for 2 to 3 days per week. WHO recommends the adults (aged 18 – 64 years) that they should do at least 150 – 300 mins per week of moderate intensity exercises or at least 75 – 150 mins per week vigorous intensity aerobic exercises and at least 2 –3 days of muscle strengthening exercises (body weight, resistance bands or free weights).

Everyone should do at least 2 –3 days of stretching exercises, either prior to each main exercise session or as a separate session in order to increase flexibility and prevent injuries.

Benefits of exercises...

As we already discussed, exercises would increase our physical fitness and it will be beneficial for us in many ways. As many research have found, it will improve our cardiovascular health and prevent heart attacks, diabetes, high blood pressure, high cholesterol levels. Also exercises helps our brain function, learning abilities, concentration, memory, according to researchers.

The other most important benefit is that exercise improves your Immunity, which is the ability to fight against infections. These days Immunity is very important to fight against COVID-19 pandemic.

Overweight and obesity is very common among children nowadays. Exercise and avoiding unhealthy food (short eats, pizza, burgers) can prevent and reverse it. It also helps us when we are mentally depressed and stressed and make us face challenges. In latest research exercises can reduce the risk of cancers too by nearly 10 – 20 %.

What are the exercises that we could do?

As we mentioned early a complete exercise schedule should include an aerobic exercise component, a strength training component, and a stretching component. Regarding aerobic activities jogging, cycling, brisk walking, dancing can be done. One would ask for a solution in a pandemic situation like nowadays. The best options are stationary bikes, high knees running in place and skipping. In fact skipping is one of the best aerobic exercises.

If you cannot do the exercise for recommended duration continuously, you can do at least 10 minutes a session, stop, rest and repeat.

Strength training exercises can be done using your own body weight, free weights or using resistance bands (picture 2). We have to train our main muscle groups like chest, shoulders, arms, back, abdomen and lower body. You can do whole-body workout or a split body work out, eg, upper body and arms 1st day and lower body back and abdomen next day. An important point to remember is we should always start with a lower weight where you can complete at least 8 repetitions in a one session (set) in order to prevent injuries. 3 to 4 sets from one exercise is recommended. Between session rest for 2 minutes. Stretching session should be done after finishing your exercise in order to prevent muscles becoming stiff and prone to injuries.

Are there risks in doing exercises?

Yes, but the benefits of exercise are far more than risks and the risks can be minimised. Most common risk is the musculoskeletal injuries. They can be acute or overuse, like acute strains, tears, stress fractures, etc. Proper warm up, stretching, correct techniques

and good guidance can minimise the injury risk. Anyone with symptoms like chest pain, breathing difficulties or past diseases should consult their doctor before starting exercises. If you have fever or diarrhoea, you should not exercise.

Tips before and during exercises

- Drink water before an exercise and during an exercise
- Avoid exercise in hot climates for longer durations.
- Don't do an exercise soon after the main meal. At least take 3 hours to start.
- Take a small snack eg, sandwich, fresh fruit juice 30 mins before an exercise. If exercise lasts more than 1 hour can take a fruit juice hourly.

Avoid Sedentary behaviour

Sedentary behaviours are sitting for longer periods, watching television, attending zoom classes. Even though you do exercise regularly, if you spend rest of your time Sedentarily you will not be benefited much. You have to limit these types of activities as much as possible and if unavoidable (online zoom classes) get up from chair and do 5 to 10 minutes activities every half an Hour.



Aerobic Exercises



Strength Training Exercises

Regular Exercises

We all know that exercise is important in our daily lives, but we may not know why or what exercise can do for us.

It's important to remember that we have evolved from nomadic ancestors who spent all their time moving around in search of food and shelter, travelling large distances on a daily basis. Our bodies are designed and have evolved to be regularly active.

In the same way that a sports car is designed to go fast, we are designed to move. If the sports car is taken out once a week for a 3-mile round trip through a town Centre then it would probably develop engine problems fairly quickly.

Over time people too develop problems if they sit down all day at a desk or in front of the TV and minimize the amount of exercise they do.



The Benefits of Exercise

There are many benefits of regular exercise and maintaining fitness and these include:

- **Exercise increases energy levels**

Exercise improves both the strength and the efficiency of your cardiovascular system to get the oxygen and nutrients to your muscles. When your cardiovascular system works better everything seems easier and you have more energy for the fun stuff in life.

- **Exercise improves muscle strength**

Staying active keeps muscles strong and joints, tendons and ligaments flexible, allowing you to move more easily and avoid injury. Strong muscles and ligaments reduce your risk of joint and lower back pain by keeping joints in proper alignment. They also improve coordination and balance.

- **Exercise can help you to maintain a healthy weight**

The more you exercise, the more calories you burn. In addition, the more muscle you develop, the higher your metabolic rate becomes, so you burn more calories even when you're not exercising. The result? You may lose weight and look better physically which will boost your self-esteem.

- **Exercise improves brain function**

Exercise increases blood flow and oxygen levels in the brain. It also encourages the release of the brain chemicals (hormones) that are responsible for the production of cells in the hippocampus, the part of the brain that controls memory and learning.

This, in turn, boosts concentration levels and cognitive ability, and helps reduce the risk of cognitive degenerative diseases such as Alzheimer's.

- **Exercise is good for your heart**

Exercise reduces LDL cholesterol (the type that clogs your arteries), increases HDL (the good cholesterol) and reduces blood pressure so it lowers the stress on your heart. Added to this, it also strengthens your heart muscle. Combined with a healthy diet, exercise lowers the risk of developing coronary heart disease.

- **Regular exercise lowers your risk of developing type 2 diabetes**

Regular exercise helps to control blood glucose levels, which helps to prevent or delay the onset of type 2 diabetes.

Additionally, exercise helps to prevent obesity, which is a primary factor in the development of type 2 diabetes.

- **Exercise enhances your immune system**

Exercise improves your body's ability to pump the oxygen and nutrients around your body that are required to fuel the cells that fight bacteria and viruses.

- **Staying active reduces the likelihood of developing some degenerative bone diseases**

Weight bearing exercise such as running, walking or weight training lowers your risk of both osteoarthritis and osteoporosis – the adage of “use it or lose it” really does apply to bones.

- **Exercise may help to reduce the risk of certain cancers**

Being fit may mean that the risks of colon cancer, breast cancer and possibly also lung and endometrial cancers are reduced. Studies by the Seattle Cancer Research Centre have suggested that 35% of all cancer deaths are linked to being overweight and sedentary.

- **Active people tend to sleep better**

Physical activity makes you more tired so you're more ready to sleep. Good quality sleep helps improve overall wellness and can reduce stress.

- **Exercise improves your mood and gives you an improved sense of wellbeing**

Physical activity stimulates the release of endorphins which make you feel better and more relaxed. These in turn improve your mood and lower your stress levels.

- **Exercise can help prevent and treat mental illnesses like depression**

Physical activity can help you meet people, reduce stress levels, cope with frustration, give you a sense of achievement, and provide some important “me time”, all of which help with depression.

- **Keeping fit can reduce some of the effects of aging**

Exercise can be fun!

Getting fit is not just about running on a treadmill for hours in your local gym, it can be a dance class or a new hobby like fencing or mountain biking. It could be a group or team activity like football or a karate class. Whatever form of exercise you choose, you'll almost certainly meet new people and may make new friends



Yoga. This is a form of exercise, but it can also be a meditation. There are many types of yoga. The ones that focus on slow movement, stretching, and deep breathing are best for lowering your anxiety and stress.

As a general goal, aim for at least 30 minutes of moderate physical activity every day. If you want to lose weight, maintain weight loss or meet specific fitness goals, you may need to exercise more. Want to aim even higher? You can achieve more health benefits if you ramp up your exercise to 300 minutes or more a week.



Reducing sitting time is important, too. The more hours you sit each day, the higher your risk of metabolic problems. Sitting too much can negatively impact your health and longevity, even if you get the recommended amount of daily physical activity.

Short on long chunks of time? Even brief bouts of activity offer benefits. For instance, if you can't fit in one 30-minute walk during the day, try a few five-minute walks instead. Any activity is better than none at all. What's most important is making regular physical activity part of your lifestyle.

By: Nirmala Warushavithana – 12M1

Balanced Diet

A balanced diet is a diet that contains differing kinds of foods in certain quantities and proportions so that the requirement for calories, proteins, minerals, vitamins and alternative nutrients is adequate and a small provision is reserved for additional nutrients to endure the short length of leanness. In addition, a balanced diet ought to offer bioactive phytochemicals like dietary fiber, antioxidants and nutraceuticals that have positive health advantages. A balanced diet should offer around 60–70% of total calories from carbohydrates, 10–12% from proteins and 20–25% of total calories from fat.



Health benefits of a balanced diet:

- Healthy eating increases energy, improves the way your body functions, strengthens your immune system and prevents weight gain.

The other major benefits are:

- Meets your nutritional need. A varied, balanced diet provides the nutrients you need to avoid nutritional deficiencies.

- Prevent and treat certain diseases. Healthy eating can prevent the risk of developing certain diseases such as diabetes, cancer and heart disease. It is also helpful in treating diabetes and high blood pressure.
- Following a special diet can reduce symptoms, and may help you better manage an illness or condition.
- Feel energetic and manage your weight. A healthy diet will assist you to feel higher, provide you with more energy, and help you fight stress.
- Food is the mainstay of many social and cultural events. Apart from nutrition properties, it helps facilitate connections between individuals.

Here are some general guidelines for healthy eating:

- The most important rule of healthy eating is not skipping any meal. Skipping meals lowers your metabolic rate. Normal eating includes 3 major meals and 2 snacks between meals. Also, never skip breakfast. It is the foremost vital meal of the day.
- Learn simple ways to prepare food. Healthy eating doesn't have to mean complicated eating. Keep meal preparation easy, eat more raw foods such as salads, fruits and vegetable juices, and focus on the pleasure of eating healthy food rather than the calories.

- It is important to stop when you feel full. This will help you maintain your weight to an extent. This also will help you remain alert and feeling your best.
- Drink lots of water. Keep a bottle of water near you while working, watching TV, etc.
- Variety of foods should be used in the menu. No single food has all the nutrients.
- To improve the cereal and pulse protein quality, a minimum ratio of cereal protein to pulse protein should be 4:1. In terms of the grains, it will be eight parts of cereals and one part of pulses.
- Eat five portions of fruit and vegetables every day.
- Keep a supply of healthy snacks to hand. This will stop you from eating an unhealthy snack when hungry.
- Remove all visible fat from food before you cook it – take the skin off chicken and trim the white fat off any meat.
- Limit stimulants such as caffeine, alcohol and refined sugar.
- Limit the number of times you eat out to once a week. Take your own packed lunch to work.
- Only eat things you like the taste of find what works for you and don't force yourself to eat things just because they're good for you.

Healthy Cooking Tips:

With today's fast life, cooking a meal in the traditional style is extinct. People mostly opt for eating less healthy fast foods, ready to eat meal packets, etc. To make a healthy meal, the most important thing is to cook it at your home, rather than opting for outside cooked food. Explore healthy ways to add variety to your meals as repetition can cause boredom. Infuse your diet with the excitement and good taste you crave for.

Here are a few suggestions for cooking healthily.

Having to choose healthy food does not mean you need to give up on your favorites. Think of how you can turn your favorites into a healthy option.

For instance:

- Decrease the meat and add more vegetables to your dishes.
- Use whole wheat flour instead of refined flour when you bake.
- Blot your fried foods to take off the extra oil.
- Use low-fat yogurt instead of mayonnaise.
- Add cut fruits to your curd, rather than having flavored yogurt.
- Try to skim milk instead of a normal one.
- Use non-stick cookware to reduce the need for oil to cook.

- Microwave or steam your vegetables rather than boiling to avoid loss of nutrients.
- Fats in your foods should be maintained a minimum.
- Choose lean meats and skim dairy products. Fats are good in the form of nuts, seeds, fish, olives when they are accompanied by other nutrients. Some amount of fats while cooking is good as to help the body to absorb fat-soluble vitamins.
- If you wish to use oil, try cooking sprays or apply oil with a pastry brush. Cook in liquids (such as vegetable stock, lemon juice, fruit juice, vinegar or water) instead of oil. Use low-fat yogurt, low-fat Soymilk evaporated skim milk or cornstarch as a thickener instead of cream.
- Choose to scrub the vegetables than peel as there are many nutrients in the skin. When you have to boil the vegetables, retain the vitamin-rich water and use it as a stock in another preparation.
- Switch to a reduced salt whole meal or wholegrain bread.
- Being away from alcohol and smoking.
- For sandwiches, limit your use of spreads high in saturated fat like butter and cream cheese; replace with scrapings of spread or alternative nut spreads or low-fat cheese spreads or avocado. Choose reduced-fat ingredients like low-fat cheese or salad dressing.

- Add a lot of vegetables to your sandwich to make it healthier.



By: Induwara Gunawardana–After O/L

Being away from Alcohol and smoking

Alcohol

Alcohol affects both the body & mind. Learn why there are physical and psychological consequences to over-drinking for both social drinkers or those diagnosed with alcohol use disorder.



Short-Term Effects of Alcohol

Although a person may not be abusing alcohol regularly, they can still experience its short-term effects on the mind and body. The liver can metabolize about one standard drink of alcohol per hour. However, this can vary depending on a number of factors, including the individual's age, weight, liver function, and gender. Typically, consuming more than one beverage per hour can lead to intoxication, raising an individual's blood alcohol content (BAC) with each drink. The effects of alcohol can range from mild, such as skin flushing, to more severe symptoms such as passing out or vomiting.

Other short-term effects of alcohol can include:

- Lowered inhibitions, leading to poor social judgment.
- Trouble concentrating.
- Loss of coordination.
- Loss of critical judgement.
- Dulled perception, especially vision.
- Mood swings.
- Reduced core body temperature.
- Raised blood pressure.
- Passing out.
- Vomiting.

Long-Term Effects of Alcohol

Drinking too much over time can cause chronic physical and mental health issues. Heavy drinking can cause or contribute to liver damage, cardiovascular disease and multiple types of cancer.

Long-term effects of excessive drinking may include:

- Diminished gray matter and white matter in the brain.
- Memory loss.
- Loss of attention span.
- Trouble learning.
- Alcoholic hepatitis.
- Liver fibrosis.
- Steatosis (i.e., fatty liver).
- Throat, mouth, larynx, breast, liver, colorectal, or esophageal cancer.
- High blood pressure
- Cardiomyopathy
- Stroke
- Irregular heart beat

Alcohol Poisoning

Drinking too much can lead to alcohol poisoning.

Signs of alcohol poisoning include:

- Confusion.
- Nausea and vomiting.
- Slowed or irregular breathing.
- Cyanosis, or a blue-tinted skin.
- Pale skin.
- Low body temperature, or hypothermia.
- Unconsciousness.
- Seizures.

Alcohol poisoning can cause permanent brain damage and even death. A person's BAC can keep rising after they stop drinking and even after they pass out.

Effects of Alcohol Abuse on the Body

Chronic heavy drinking is associated with many serious health problems. Below are some of the ways alcohol may affect the body:

Liver: One of the possible severe medical consequences of chronic alcohol abuse is liver disease. Over time, with consistent alcohol abuse, the liver may become inflamed and/or scarred. Conditions such as fatty liver, alcoholic hepatitis, fibrosis, and cirrhosis may develop. A person may also develop liver cancer

Digestive system: Alcohol can wear down the lining of the stomach and increase the production of stomach acid, which can contribute to ulcers. Alcohol may also alter nutrient breakdown, absorption, transportation, storage, and excretion, leading to nutrient deficiencies and/or trouble fully using nutrients. For example, thiamine deficiency is common and can lead to serious neurological issues. Alcohol can also impair blood sugar control.

Pancreas: Alcohol prompts pancreatic production of harmful substances, which can lead to pancreatitis. Pancreatitis is inflammation of the pancreas that impairs digestion.

Central nervous system (CNS): Thiamine, or vitamin B1, deficiency associated with chronic heavy drinking can lead to Wernicke–Korsakoff syndrome. Symptoms may include confusion, impaired coordination, learning problems, and memory difficulties. Liver disease can also harm the brain, resulting in symptoms such as sleep changes, alterations in mood, personality changes, depression, anxiety, impaired concentration, and incoordination. Too much alcohol may also hinder new brain cell growth.

Cardiovascular (CV) health: Drinking alcohol has complicated impacts on cardiovascular health. In 2016, alcohol-related CV diseases caused an estimated 593,000 deaths globally. Consuming too much alcohol is linked to high blood pressure, irregular heartbeat, trouble pumping blood through the body, blood clots, stroke, cardiomyopathy (sagging, stretched heart muscle), or heart attack. Excessive alcohol use, both directly and through malnutrition, can also lead to anemia.

Reproductive health: Consuming too much alcohol can lead to reproductive problems, including erectile dysfunction and irregular menstruation. Both men and women may have reduced fertility with long-term, heavy drinking.

Women who drink while pregnant are at increased risk for miscarriage, stillbirth, or having a child with a fetal alcohol spectrum disorder (FASD).

Bones: Alcohol abuse can cause a calcium imbalance in the body, which is an important nutrient to maintain healthy bones.

Consuming too much alcohol can also cause a disruption to the production of vitamin D, which is needed for calcium absorption. Lack of calcium increases the risk of osteoporosis. Osteoporosis increases the risk of bone fractures, which can cause serious pain and disability.

Smoking

Smoking and physical health

Tobacco smoke contains more than 7,000 chemicals, including at least 69 chemicals known to cause cancer (carcinogens). When you breathe in cigarette smoke, these chemicals enter your lungs and spread through your body. Many smokers are addicted to nicotine, one of the main chemicals in tobacco smoke.

Nobody expects to develop a serious smoking-related illness, but the truth is, no smoker is safe. Smoking harms nearly every organ of the body and can cause many serious and disabling conditions. Tobacco smoke can also impair reproductive fertility and if you're pregnant it can affect your baby's development.



Smoking and Cancer

Tobacco smoking is the most common cause of cancer and is responsible for 1 in every 5 cancer deaths. If you smoke, you increase your risk of at least 16 different types of cancer including lung, mouth (oral cavity), throat (pharynx), esophagus, stomach, bowel, liver, pancreas, nasal cavity and sinuses, voice box (larynx), cervix, ovary, bladder, kidney, ureter and bone marrow (myeloid leukemia).

Quitting is one way to reduce your risk of developing cancer. If you are diagnosed with cancer, quitting can reduce side effects from chemotherapy, surgery and radiation, decrease the risk of secondary cancers and improve your recovery and survival, compared to people who continue to smoke.

Smoking and Cardiovascular Disease

Cardiovascular Disease (CVD) includes heart stroke and blood vessel diseases. When you smoke, the chemicals in tobacco smoke are absorbed into the bloodstream, damaging blood vessels and leading to a build-up of cholesterol and other fatty deposits on artery walls. This narrows the arteries, making it harder for blood to move around your body and reducing the amount of oxygen in your blood.

Compared to people who have never smoked, smoking can:

- At least double your risk of a heart attack, stroke and heart failure;
- Almost triple your risk of a fatal heart attack; and
- Increase your risk of peripheral arterial disease by five-times, which can lead to complications like gangrene.

Over one-third of CVD deaths before the age of 65 are caused by smoking. The good news is that quitting at any age will benefit your cardiovascular system – but the earlier the better.

Smoking and Lung Disease

As tobacco smoke passes through your airways and lungs, your respiratory system is exposed to high levels of the toxic chemicals found in cigarette smoke. Exposure to these chemicals can aggravate asthma, impair the lungs' ability to fight infections and increases your risk of developing bronchitis, influenza and pneumonia. Tobacco smoking is also the leading cause of chronic obstructive pulmonary disease (COPD), a condition where lung tissue is damaged over time and mucus builds-up in the airways. This leads to a painful cough and agonizing breathing difficulties.

Chronic bronchitis and emphysema are two types of COPD that are most commonly caused by smoking. Whether you're a pack a day smoker or just have one every now and again, every cigarette increases your risk. Quitting is always the best action you can take to slow the progression of COPD.

Other ways smoking can harm your body

There is no such thing as a safe cigarette or a safe level of smoking, as even younger smokers can experience serious health problems. To reduce your risk, the best option is to quit smoking. You'll feel the health benefits almost straight away.

By: Ashwin Srikantha – After O/L

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