

The Need of a Strong Immune System in the Context of Indian Hospitals during the Covid-19 Pandemic

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Abstract: Covid-19, also known as Corona virus, has been designated a worldwide pandemic by the World Health Organization. There are a few crucial things that people can do to help battle this pandemic, and nations are working to address the threats that this virus presents to mankind. People with preexisting conditions including diabetes, hypertension, cardiovascular disease, or respiratory difficulties are at a higher risk of developing Covid 19 consequences. The risk increases with age since the immune system as a whole weakens with time. Covid 19 may induce a mild infection in healthy young adults, but this may be avoided by maintaining a healthy lifestyle free of hazardous habits like smoking and vaping. Multiple methods have been shown to boost immunity in scientific investigations.

Keywords: Covid-19, Health Care, Strong Immunity System

Introduction

Maintaining good health and a robust immune system are crucial in modern society. Only by engaging in regular physical activity can man enjoy a long and healthy life. The emergence of new illnesses in recent decades has had a devastating effect on the human body. Medicines are now essential to the survival of modern man. Such medications include digestive aids, laxatives, sleep aids, and so on. Man, thanks to these pharmaceuticals, has taken on the appearance of a walking robot. Is it just to throw this corpse away in this state? It's tragic that people can find the time to maintain their cars, refrigerators, and televisions, but not their own precious bodies. Mankind may have a more physically fit life with the help of physical education. Mankind's physical, mental, social, emotional, and spiritual well-being all benefit from access to quality physical education programmes. The writer's goal here is to introduce the significance of physical education in the twenty-first century. A sound body is the foundation for a sound mind. The World Health Organization has declared a worldwide pandemic due to the spread of Covid-19, also known as the Corona virus. While governments throughout the world are scrambling to deal with the threat that this virus presents to civilization, there aren't many things that regular people can do to slow it down. Hygiene practises, such as regular hand washing, are important to highlight, particularly after using public transportation. When travelling, use an alcohol-based hand sanitizer, cover your mouth and nose with a mask, and don't put your hands in your mouth or nose. Boosting your immune system is also crucial, and there are a number of ways to do it. Covid 19 Problems are more likely to occur in people who already have health problems, such as diabetes, hypertension, cardiovascular disease, or breathing problems, and the risk increases with age due to a general decrease in immunity. Covid 19 may cause a mild infection in healthy young adults if they don't take measures to strengthen their immune systems, such as quitting smoking or vaping. Here is a set of activities you may do to strengthen your defences.

Diet for Healthy Living and Improve Immunity

Obviously, we have to eat. It's vital to our survival and helps us feel our best. It provides the fuel necessary for everything we do, from working to playing sports. Our diet consists of all the foods we eat on a regular basis. A person's diet may be thought of as the sum of the many different kinds of food they eat every day. The best foods for our health and illness prevention are those that are easy to prepare and/or are found in nature. It should help maintain healthy organs. What we eat depends on our social and cultural standards, our lifestyle habits, and the kinds of activities in which we participate. What we eat, how much we consume, and the effects on our health whether we overeat or don't eat correctly all have a complex interplay.

Nutrition, nutrients, food types, balanced diet, unique dietary needs, malnutrition, and eating disorders are all topics we'll cover in this chapter as they relate to maintaining a healthy lifestyle.

Dietary Requirements of Human Body

Numerous foods from various origins make up the bulk of our diet. The ingredients might come from either animals or plants. Proteins, carbs, lipids, and ancillary components including minerals, vitamins, and water are all known to be present in food. Nutrients are the name for these parts. Body-building foods (such as milk, meat, chicken, fish, eggs, pulses, groundnuts), energy-giving foods (such as grains, sugar, roots, fats, and oils), and protective foods are all necessary for human survival (e.g. vegetables, fruits).

Balanced Diet

A balanced diet is one that provides all of the necessary elements for optimal growth and development of the body, including proteins, carbs, fats, minerals, and vitamins. A person's age, gender, and "level of physical activity will always affect the amount of nutrients they need. Table 1 provides the key elements of a healthy diet.

Table 1: Food Required for a Normal Person

Food Group	Quantity per portion/serving
Cereals	1 <i>roti</i> (25 gm wheat flour), bread, 1 <i>katori</i> rice, 25 gm raw <i>dalia</i> /cornflakes/ <i>sooji</i> or <i>rawa</i>
Pulses	25 gm raw <i>dal</i>
Milk	1 glass or 250 ml milk (low fat)
Fruits and vegetables	100 gm fruit, 100–125 (gm) raw vegetables
Fats and oil	1 teaspoon (5 gm)

Source: Health Awareness for Parliament, MOHFW; GOI: 2016

In order to better understand which foods will provide the optimal balance of nutrients, we may classify them into the six broad categories shown in table 2 below. Items from one category of food cannot be substituted for those from another. Include foods from each of these categories to ensure you're getting enough of each essential nutrient.

Table 2: Major Food Groups

Food Groups	Food Items	Nutrients
Cereals, Millets	Rice, wheat, <i>bajra</i> , maize, <i>jowar</i> , <i>ragi</i>	Carbohydrates, proteins
Pulses	Lentil, grams, soya, peas	Carbohydrates, proteins
Milk and milk product	Milk, yogurt, cheese, <i>paneer</i> , ice-cream	Fats, proteins, minerals, water, carbohydrates, vitamins
Meat, fish and fowls	Meat, fish, chicken, nuts	Proteins, fats
Vegetables	Green leafy vegetables, roots	Carbohydrates, vitamins
Fruits	Orange, banana, apple etc.	Carbohydrates, vitamins

Figure 1: Food Pyramid for Balanced Diet

Health and Diseases

Disease and sickness are often used interchangeably in the context of health, despite their different meanings. When a person is healthy, they are functioning optimally in every facet of their existence. It may also be thought of as an indicator of an organism's functional and/or metabolic efficiency. Metabolic describes the wide variety of complex chemical reactions that take place inside ourselves and all other forms of life to provide us with the fuel and building blocks we need to keep going. Infectious diseases and other illnesses hamper these activities. Therefore, there is a connection between health and sickness. However, the absence of disease, sickness, or damage is just one aspect of health. Health is a condition of full physical, mental, and social well-being and not only the absence of sickness or disability, as defined by the World Health Organization (WHO).

What is Illness

What distinguishes sickness from disease, therefore, exactly? Illness and disease are two separate things, despite the fact that people often use them interchangeably. Illness is the subjective perception of a biomedically determined departure from normal bodily function or structure. When one or more of the body's regulatory systems are malfunctioning, this is the condition that the body finds itself in. To be ill is to experience the subjective anguish associated with being unwell or diseased. However, it is not reasonable to assume that someone is healthy just because they lack a particular disease or condition. You may have encountered persons who were afflicted with a wide range of ailments. High blood pressure, for example, has no effect on anybody save the individual who has it. But some infections, like the common cold, may spread swiftly and impact many individuals in a short time. Illnesses that exclusively affect the individual who has them are considered non-communicable, whereas communicable diseases may be passed from one person to another.

Communicable Diseases

Infectious agents, such as bacteria or viruses, are to blame for these illnesses. These may be passed on from one person to another or picked up in the environment.

Classification

Communicable diseases can be classified on the basis of the causative organisms. These are as follow:

- Bacterial: Typhoid, Cholera, Tuberculosis
- Viral: Common cold, Influenza, HIV infection, Dengue, Covid-19 (Coronavirus)

- Protozoal: Malaria, Kala azar
- Fungal: Fungal infections of nails, groins, skin, hair
- Parasitic: Infestations of intestinal worms, like round worm, or lice.

Modes of transmission: The modes of transmission can be classified as direct and indirect transmission.

(a) Direct transmission

Direct transmission of diseases takes place as follows:

1. **Direct contact or touching:** Skin and eye infections are spread by direct contact with an infected individual” such as when shaking hands.
2. **Droplet infection:** The common cold, TB, and meningitis may all be transferred by the spray of an infected person's spit or secretion.
3. **Contact with soil:** Direct contact with the disease-causing agent is dangerous since it raises the risk of contracting and developing illnesses like hookworm and tetanus.
4. **Inoculation into skin or mucosa:** There are various ways that certain illnesses may spread. The rabies virus, for instance, may jump from animals to people. It is often believed that monkey or dog bites are the root cause. Infected needles spread the virus that causes hepatitis. Sexual contact or transfusion of contaminated blood are the two most common routes of transmission of HIV (Human Immunodeficiency Virus). Mother-to-child transmission of HIV, which may lead to AIDS, is possible (Acquired Immune Deficiency Syndrome).

(b) Indirect transmission

Indirect transmission of communicable illnesses occurs through the so-called 5Fs: flies, fingers, fomites (infectious-carrying objects like towels and handkerchiefs), food, and fluid. Water, food, ice, blood, and other bodily fluids and tissues may all be vectors for the transmission of illness. Diseases like typhoid, cholera, polio, tapeworms, and infectious hepatitis are just a few examples. Food and other consumables are contaminated by fly waste.

Disease agents, such as those responsible for malaria and the bubonic plague, must have a living host in order to survive and spread. Respiratory infections and itchy mites are only two examples of the illnesses spread by airborne infectious agents. Daily usage items, or fomites, include things like towels, handkerchiefs, toys, glassware, cutlery, and more. These fomites may cause serious diseases such as dysentery (bloody diarrhoea) and skin and eye infections. Diseases like typhoid, dysentery, and intestinal parasites are spread via our food when we touch it with our dirty hands and fingers.

Even seemingly healthy persons may be carriers for infectious diseases. In the case of typhoid, these are the individuals who may have immunity to the organisms they harbour yet may still spread the disease to others.

Prevention and Control of Communicable Diseases

In order to prevent and manage the spread of infectious illnesses, the following steps might be taken:

Personal hygiene

- Regular washings of clothing and the body help to eliminate potentially hazardous bacteria.
- Maintain a routine of trimming nails and shampooing hair.
- Two daily tooth-brushing sessions (morning and night) are recommended.
- Making sure your ears are spotless.
- Personal items such as towels, soaps, toothbrushes, combs, razors, and the like should not be shared.
- Always wash your hands before preparing or consuming food or liquids.
- Always use soap and water to clean your hands before eating, after using the restroom, and any time you come into contact with your face, eyes, or mouth.

- Many viruses, germs, and fungi may be spread from person to person simply by touching a surface with bare hands. Diseases like diarrhoea, the flu, and skin and eye infections may all be avoided with proper hand hygiene.

Non-communicable Diseases

Both hereditary and environmental variables have been implicated in the development of the NCDs. These illnesses are sometimes known as lifestyle diseases because they are brought on by a poor way of living. Lack of exercise, unhealthy eating, not getting enough sleep, stress, and harmful behaviours like smoking, drinking, and chewing tobacco are all contributors to the development of non-communicable illnesses.

An arbitrary classification of non-communicable diseases can be:

- **Lifestyle diseases**, such as diabetes, hypertension, heartdiseases, stroke and cancer.
- **Mental health diseases** in the form of despair and trauma. Below are some of the behavioural risk factors that, when combined with the physiological risk factors, may contribute to the development of the illnesses in question.

Necessity of Physical Fitness and Well-being

Being physically healthy has several positive effects on one's life. When a person makes a concerted effort to live a healthy lifestyle that emphasises physical fitness, that person's quality of life increases in the ways that follow:

- Increases the circulation of oxygen throughout the body, which benefits the heart and lungs.
- Strengthens muscular fibres;
- facilitates the development of a healthy body image and a sense of pride in one's physical self;
- promotes speedy recovery from sickness and injuries;
- reduces the possibility of developing cardiovascular disease; (like Heart attack, Asthma etc.)
- Helps you lose weight and keep it off. Maintaining a healthy weight may be achieved with regular exercise and a well-balanced diet.
- Boosts a person's stamina;
- lifts spirits by alleviating worry and stress;
- exertion-induced weariness is delayed, and recovery time is shortened; and
- Aids in overcoming adversity, boosts confidence, and slows down the ageing process.

Regardless of age, maintaining a healthy level of physical fitness is crucial. Being in good physical shape may help you take advantage of everything that life has to offer. Maintaining a healthy level of physical fitness is crucial at any age. There are several approaches one may take to improve one's fitness level. To reduce the likelihood of injury, it is important to warm up in advance of activities and to cool down afterward.

Conclusion

Boosting your immune system is also crucial, and there are a number of ways to do it. Covid 19 Problems are more likely to occur in people who already have health problems, such as diabetes, hypertension, cardiovascular disease, or breathing problems, and the risk increases with age due to a general decrease in immunity. Covid 19 may cause a mild infection in healthy young adults if they don't take measures to strengthen their immune systems, such as quitting smoking or vaping. Here is a set of activities you may do to strengthen your defences. Obviously, we have to eat. It's vital to our survival and helps us feel our best. It provides the fuel necessary for everything we do, from working to playing sports. Our diet consists of all the foods we eat on a regular basis. A person's diet may be thought of as the sum of the many different kinds of food they eat every day. The best foods for our health and illness prevention are those that are easy to prepare and/or are found in nature. It should help maintain healthy organs. What we eat depends on our social and cultural standards, our lifestyle habits, and the kinds of activities in which we participate. What we eat, how much we consume, and the effects on our health whether we overeat or don't eat correctly all have a complex interplay.

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