



Attention to Principles of Health and Fitness



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Health

- To reach a state of **complete physical, mental and social-well being an individual or group** must be able to identify and realize the aspirations, to satisfy needs, and to change or cope with environment (WHO, 1986).



Because of ill Health



The kids are high blood pressure in city, about **400 students from Chennai**, the results showed **21% of children between 13 to 17 suffer from hypertension**. The main reason is **obesity**, which is caused by **junk food and lack of exercise (Sundar, 2017)**.



India State-level Disease Burden Initiative Collaborators (2017) found to estimate the disease burden and risk factors in every state of India as part of the **Global Burden of Disease (GBD) Study 2016**. The major risk factors for NCDs, including **high systolic blood pressure, high fasting plasma glucose, high total cholesterol, and high body mass index**, increased from **1990 to 2016**.



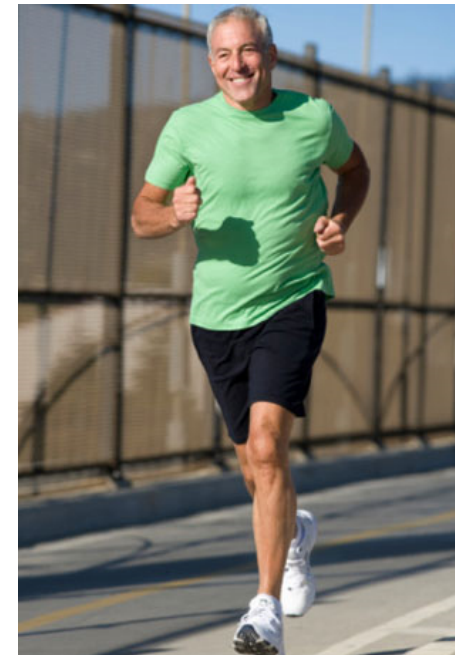
World Health Organization Global Estimates (2016) Assessed to more than **1.9 billion adults**, 18 years and older, were overweight. Of these over **650 million were obese**. **39% of adults aged 18 years and over** were overweight in **2016**, and **13% were obese**.

In **2016**, an estimated **41 million children** under the age of **5 years** were **overweight or obese**

What is Fitness?

According to the [Centers for Disease Control and Prevention \(CDC\)](#)

- “The ability to carry out daily tasks with alertness, without fatigue with ample energy to enjoy leisure-time”.





Components of Fitness

5 Components of Fitness:

Cardio Respiratory Endurance - Jogging, Walking, Cross-country skiing and Bicycling

Muscular Strength and Endurance - Weight Lifting and Push-Ups

Flexibility - Stretching (Sit & Reach) and Warm-up & Cool-down

Body Composition - Your body composition is based ***not*** on how much you weigh, but rather on how much of your weight is fat as opposed to muscle.



Why Need Fitness?

- Prathap (2016) surveyed over 17 million people die of cardio vascular disease every day. Cardio vascular disease (CVD) is the world's leading killer; CVD accounts for 29.8% of all deaths in India. World Heart Federation, at least 80% of the premature deaths, due to cardio vascular diseases can be protected by controlling

Four main risk factors

- Unhealthy diet
- Usage of tobacco
- lack of physical activity
- Excessive consumption of alcohol.

A healthy balanced diet, at least 30 minutes of vigorous exercise.

Exercise is Important...

Why Don't We Do It



I don't have enough time

I get bored!!


The gym is too intimidating

I Don't Like It!

I am too tired!!

I don't know what to do!

I need to take care of the family



Making Physical Activity a Part of Your Life.



There are 1440 minutes in every day...

Schedule 30 of them for physical activity.



Health Benefits of Physical Activity

Help in-

- Weight loss, weight maintenance and prevention of weight gain.
- Prevention of falls and better functional health for older adults
- Improved cognitive function for older adults
- Increase bone density and
- Improved quality of sleep

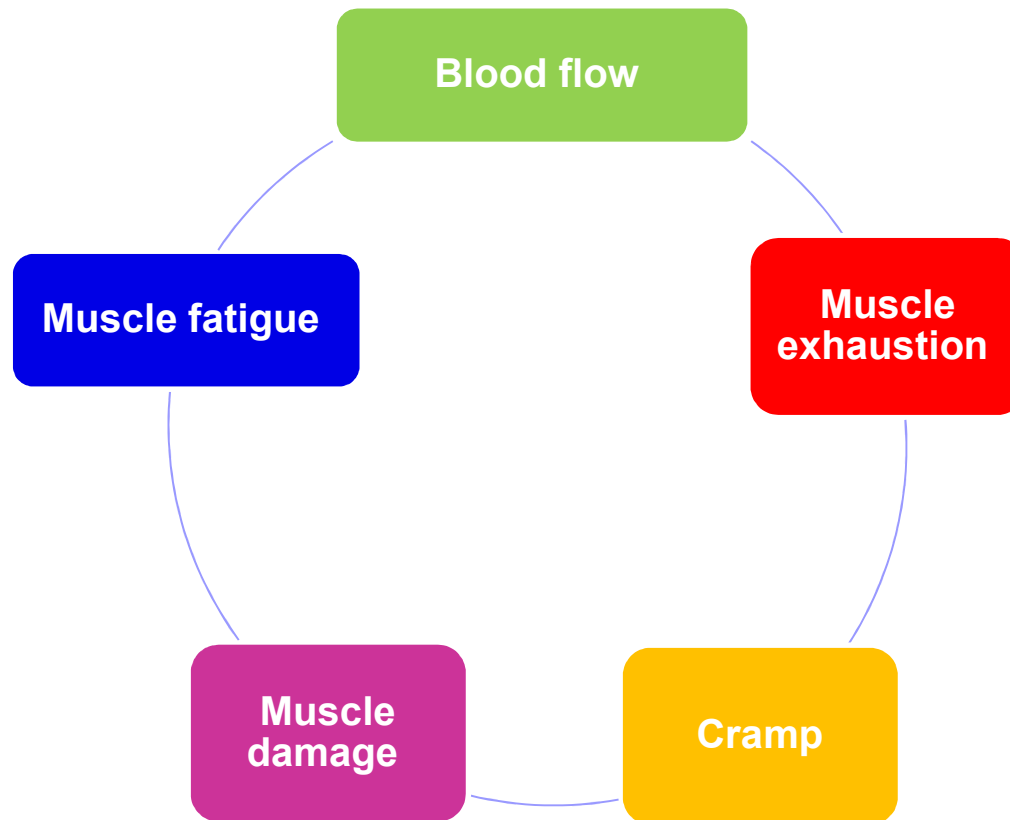
Lower Risk of –

- Premature deaths
- Coronary artery disease
- Diabetes
- High blood pressure
- hip fractures

Reduction of –

- Obesity
- Feelings of depression and anxiety

After Exercise Short Term Effects

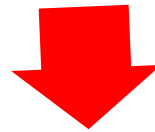


After exercise Long Term Effects

Muscle size



Muscle coordination



Blood supply



Fitness Training



- It is regular



- Structured activity



- Designed to promote a health

Functions of Exercise

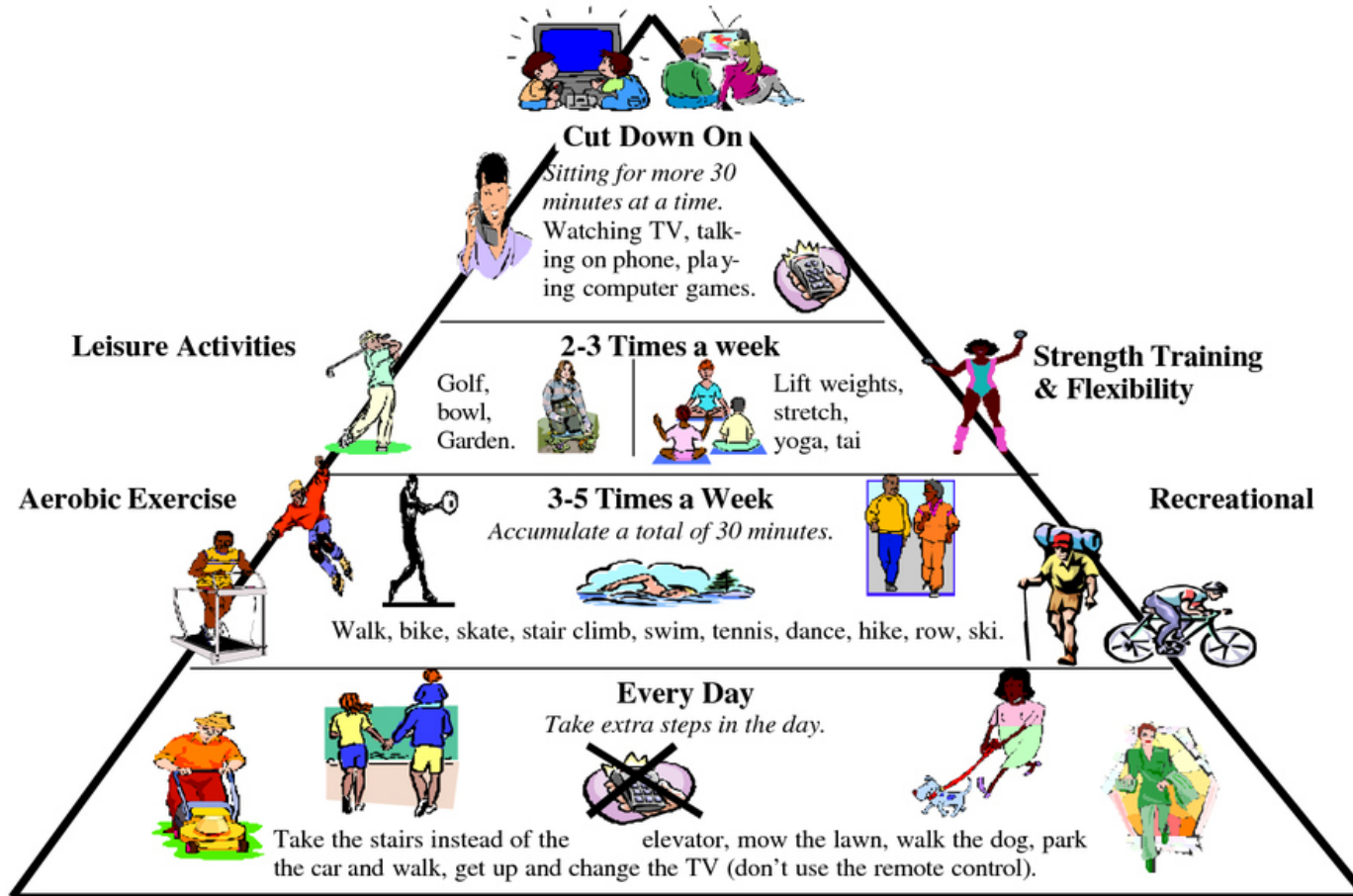
Anaerobic

- lactic acid can build up and reduce muscle performance.
- helps your muscles get energy from anaerobic conditions.

Aerobic

- Improves the delivery of oxygen to the muscles.
- It increases the heart pumps the blood
- muscles extract oxygen from the blood.
- glucose is converted into energy.
- slow buildup of anaerobic metabolism in your muscles

PHYSICAL ACTIVITY PYRAMID



How hard should you work

Training Intensity

Depends on the individual person
The intensity with which the person exercises

Thirty minutes of training at 85% maximum heart rate may be of more benefit than 15 minutes
A lower level helps you keep general cardiovascular health



Method of Training

Warming Up

- Stretching Exercises
- 10 min

Respective Exercises

- Depends upon the Age, Training and method of Training

Warming Down

- Relaxing the muscles-10 min

Have u Know the **FIIT** Formula

Frequency

- Number of exercise sessions per Week (3-5 times per week)

Intensity

- How hard a person works

Time

- Duration or length of the activity

Type

- Mode of exercise being performed

To achieve and maintain the fitness individual must exercise on a regular basis

Intensity Zones



THE KARVONEN FORMULA

Target Heart Rate = (Heart Rate Reserve X % Intensity) + resting Heart Rate

Step 1: Find out the Maximum Heart rate

$$\text{Maximum Heart Rate} = 220 - \text{Age}$$

Step 2: Find out the Resting Heart Rate

Step 3: Find out the Heart Rate Reserve

Heart Rate Reserve = Maximum Heart Rate - Resting Heart Rate

Step 4: Find out the Target Heart Rate

Target Heart Rate = (Heart Rate Reserve X % Intensity) + Resting Heart Rate

Target **Heart** Rate

Are you training at the right pace?

$220 - 36 = 184$ (MHR) $184 \times .60 = \mathbf{110}$ (low) $184 \times .80 = \mathbf{147}$ (high)

My range is 110 – 147 (60-80%) (18 – 24)

Training Zones:

Warm-up Zone: 50-60%

Fat Burning Zone: 60-70%

Aerobic Zone: 70-80%

Anaerobic Zone: 80-90%

Red Line Zone: 90-100%





Intensity Zones

Magnitude of Resistance	Intensity zone	Speed	Heart rate
30 to 50% of maximum weight lifted	Low	30 to 50% maximum running speed	130-140 beats/mm
50 to 70%	Light	50 to 60%	140-150
70-80%	Medium	60 to 75%	150-165
80-90%	Sub maximum	75 to 85%	165-180
90-100%	Maximum	85-100%	180

“We are what we repeatedly do.”

— Aristotle



Exercise Your Body & Mind

Yoga

- Reduce Stress
- Increase strength
- Increase Flexibility
- Increase Energy



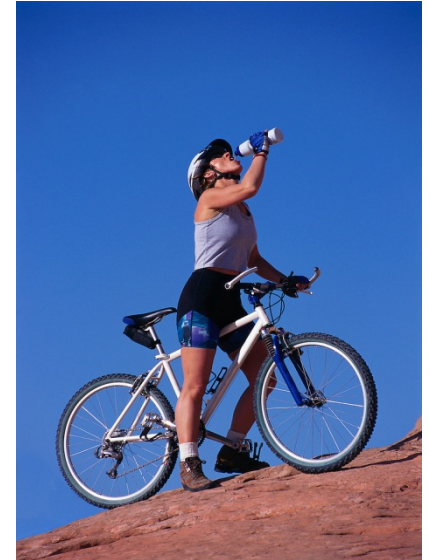


Final Tips For Being More Active

- Park the car farther away from your destination.
- Take the stairs instead of the elevator.
- Play with children or pets. Everybody wins.
- Take fitness breaks
- Perform gardening or home repair activities.
- Keep a pair of comfortable walking or running shoes in your car and office.

Exercise Safely and Wisely

- Drink extra water
- Always warm-up & cool-down before and after your workout
- Wear comfortable clothing
- Pay attention to any discomfort you may feel during exercise
- Balance diet
- Taking nutritional food



Believe...



...anything is possible!