

## PHYSICAL ACTIVITY

### Ques.- What are the benefits of being physically active?

**Ans.** Physical activity is essential to maintain ideal body weight by burning excess calories and is of vital significance for health and prevention of diseases. Consistent epidemiological evidences identify that physical activity is a major modifiable risk factor in reduction of non-communicable chronic diseases. Physical activity is essential for the reduction of morbidity and mortality due to several chronic diseases and may reduce the risk of falls and injuries in the elderly.

- Exercise is a prescriptive medicine.
- Move your body as much as you can
- Physical activity of moderate intensity has been recommended for health and well-being since the time of Hippocrates (460–370 BC).

### Ques. - How much of physical exercise is needed?

**Ans.** It is recommended at least 45 minutes of physical activity of moderate-intensity for at least 5 days in a week. This amount of physical activity may reduce the risk some chronic diseases.

**To lose weight**, experts recommend that at least 60 minutes of moderate- to vigorous-intensity physical activity to be taken on most days of the week. In addition, one should follow a nutritious eating plan and consume fewer calories. Therefore, it is essential to remember that the body weight is affected by the balance of “calories-consumed” and “calories-burned.”

Those, who are on low calorie diets for body weight reduction should have moderate to vigorous intensity physical activities at least for 60-90 minutes daily. Physical activity is essential for successful long-term weight management and will depend on current BMI and health condition.

### Ques. - What are the Levels of Physical Activity?

**Ans.** There are two basic levels of physical activity:

1. **Moderate:** This includes walking briskly (about 3½ miles per hour), climbing, gardening/yard work, dancing, walking short distances for fetching milk and vegetables, bicycling (less than 10 miles per hour), and weight training (a general light workout), yogasnas and pranayama, playing with children.
2. **Vigorous:** Examples are running/jogging (5 miles per hour), bicycling (more than 10 miles per hour), swimming (freestyle laps), aerobics, brisk walking (4½ miles per hour), weight lifting (vigorous effort), competitive sports, and heavy yard work, such as digging, cutting wood.

**The approximate energy costs of various physical activities in different intensities for a 60-kg person are given below:**

**Ques. – What are the recommendations for exercise and physical activity patterns for different age groups?**

**Ans.** Individuals over the **age of 20 years** should undertake a minimum of 30-45 minutes of physical activity of moderate intensity (such as brisk walking 5-6 km/hr) on most, if not all, days of the week. Greater health benefits can be obtained by engaging in physical activity of longer duration or more vigorous intensity (such as jogging, running, cycling and swimming).

**Sedentary people** embarking on a physical activity programme should undertake a moderate intensity activity of short duration to start with and gradually increase the duration or intensity. Other day-to-day activities like walking, housework, gardening, will be beneficial not only in weight reduction but also for lowering of blood pressure and serum triglycerides. It also elevates HDL (good) cholesterol in blood. Simple modification in lifestyle like deliberately climbing up the stairs instead of using the lift and walking for short distance instead of using a vehicle could also immensely help in increasing our physical activity.

Exercise programme should include 'warm up' and 'cool down' periods each lasting for 5 minutes. During exercise, the intensity of exercise should ensure 60-70% increase in heart rate.

**Previously inactive men over the age of 40 years, women over the age of 50 years and people at high risk for chronic diseases like heart disease and diabetes** should first consult a physician before engaging in a programme of vigorous physical activity such as running and swimming.

**Children and teenagers** need at least 60 minutes of physical activity every day.

In the case of **pregnant women** 30 minutes or more of moderate-intensity physical activity every day is recommended. However, it should be undertaken in consultation with her physician.

Like all adults, **geriatric population (elderly people)** would also be benefitted considerably by physical activity, which will help in the reduction of functional impairment and improve lean body mass.

**Ques. What are the different types of physical activities?**

**Ans.** If a physical activity does not increase the heart rate, it is not intense enough to be counted in the category of "45 minutes of exercise a day".

- Activities that do not increase the heart rate include walking at a casual pace, grocery shopping, and doing light household chores.
- A minimum 30-45 minutes brisk walk/physical activity of moderate intensity improves overall health.
- Forty five minutes per day of moderate intensity physical activity provides many health benefits.

These activities are very beneficial to health.

**Aerobic Activities:**

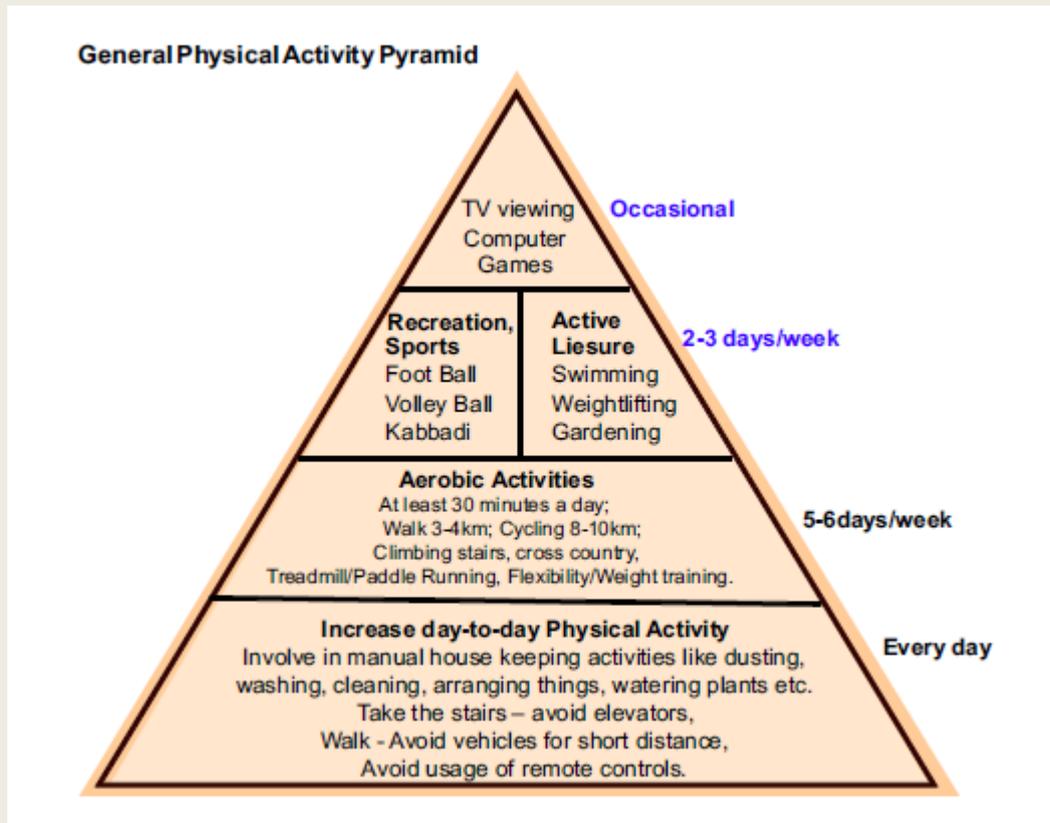
These speed your heart rate and breathing while improving heart and lung fitness. Examples: brisk walking, jogging and swimming.

### Resistance, Strength Building, and Weight-Bearing Activities:

These help build and maintain bones and muscles by working them against gravity. Lifting weights, carrying a child, and walking are a few examples.

### Balance and Stretching Activities:

Dancing, gentle stretching, yoga, martial arts, and tai chi reduce risk of injuries by improving physical stability and flexibility.



**\*ENERGY EXPENDITURE ON VARIOUS PHYSICAL ACTIVITIES (Kcal/hr)**

Activity	Kcal/hr	Activity	Kcal/hr
Cleaning/Mopping	210	Shuttle	348
Gardening	300	Table Tennis	245
Watching TV	86	Tennis	392
Cycling		Volley Ball	180
15 (Km/hr)	360	Dancing	372
Running		Fishing	222
12 (Km/hr)	750	Shopping	204
10 (Km/hr)	655	Typing	108
8 (Km/hr)	522	Sleeping	57
6 (Km/hr)	353	Standing	132
Walking 4 (Km/hr)	160	Sitting	86

\* Approx. energy expenditure for 60 Kg reference man. Individuals with higher body weight will be spending more calories than those with lower body weight. Reference woman (50 kg) will be spending 5% less calories.

**Ques. – How many calories are used while performing daily activities?**

**Ans. The usage of calorie depends on the intensity of the activity and weight of the person for example a 60-kg man will use the number of calories listed doing each activity below.**

A person who weighs more will use more calories, and someone who weighs less will use fewer calories.

**Energy Cost of Physical Activity**

Activity Zones	Examples of Activities	Energy (Kcal/min)
1	Sleeping, Resting, Relaxing	1.0
2	Sitting, Sitting (Light Activities); Eating, Reading Writing, Listening, Talking	1.5
3	Standing, Standing (Light Activity); Washing Face, Shaving Combing, Watering Plants	2.3
4	Walking (Slow), Driving, Dusting, Bathing Dressing, Marketing, Childcare	2.8
5	Light manual work, sweeping, cleaning utensils, washing clothes, other house chores	3.3
6	Warm-up & recreational activities, walking up/ down stairs, cycling, fetching water	4.8
7	Manual work (moderate pace), Loading/unloading, Walking with load, Harvesting, Carpentry, Plumbing	5.6
8	Practice of Non-competitive sport/ Games, Cycling (15 kmph), Gymnastics, Swimming, Digging	6.0
9	High intense manual work & sports activities–Tournaments, Wood cutting, Carrying heavy loads, Running, Jogging	7.8

**Note:** Forty five minutes per day of moderate intensity physical activity provides many health benefits. However, even greater health benefits can be gained through more vigorous exercise or by staying active for a longer time. This also burns more calories. Regardless of the activity being selected, one can do it all at once or divide it into two or three parts during the day.

**Ques. – What are the Health Benefits of carrying out regular Physical Activity?**

**Ans.** There are numerous health benefits of performing regular physical activity, some of these have been mentioned as under:

- Controls body weight and composition.
- Reduces the risk of chronic diseases, such as Type 2 diabetes, high blood pressure, heart disease, osteoporosis, arthritis and some cancers.
- Builds strong muscles, bones and joints.
- Improves flexibility.
- Wards off depression.
- Improves mood, sense of well-being and self esteem.

**Ques. – What are the recommendations for general population before beginning an exercise program?**

**Ans.** Most adults do not need a doctor's check-up before exercising at a moderate level. Exceptions include people with heart disease, high blood pressure, diabetes, asthma, osteoporosis and obesity. Men over 40 and women over 50 should see their doctor or health care provider before starting a vigorous physical activity program. Include 'warm-up' and 'cool-down' periods, before and after exercise regimen.