



Yoga and Exercise

KK Dang

Consultant Physician, Agra.

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YOGA

The word yoga means “Union with the divine” in essence is a very scientific part of god realization. Sage Patanjali, the author of the yoga sutras, was the first to systematize the practices of this technical yoga.

Patanjali defined yoga as “Chitta-Vriti-Nirodha.” Chitta means, “mind”. Vriti means “modification or vibrations.” Nirodh means “stoppage or suppression or restraint”. According to sage patanjali, the “union with the divine” means “stoppage of the vibration or modification of the mind.”

Yoga can be achieved by various processes known as eight-fold path namely: Yama, Niyama, Asana, Prayanama, Pratyahara, Dharna, Dhyana and Samadhi.

- Yama means rules of social behavior.
- Niyam means the code of personal conduct.
- Asana means a posture suitable for meditation.
- Prayanama consists of inspiration (Purakha), retention (Kumbhaka) of breath and prolonged expiration (Rechaka). This exercise is supposed to be done under the proper guidance of master or Guru.
- Pratyahara means retraction on withdrawal of the sense organs from sense objects.
- Dharna means the fixing of mind on any object.
- Dhyana means meditation.
- Samadhi is the final stage. He or she who meditates ultimately attains Samadhi. In that state, the mind loses its complete identity and assumes a formless state. In Samadhi the devotee realize the ultimate truth

The question is sometimes asked weather the system is scientific. The ancient rishis who evolved it, had no laboratories at their disposal but from the apparent effect that they were aware of all the vital functional of the body.

It is for the common men or women living a normal life whatever his profession, class, religion, nationality or age. Its aim is to develop through gradual stages, a quality of mind, which can perceive reality and acquire self-knowledge through the healthy functioning of the mind and emotions.

The purpose of the yoga way of analysis is an overcoming of the limitation of both subjectivity and objectivity and a union of the deepest within us and the deepest in the cosmos.

EXERCISE

The word exercise comes from the verb “exert” which means ‘to strive or to endeavor’ and the general meaning of exercise is ‘ an activity to develop a faculty.’ Begin the day with nasal nourishment rather than oral nourishment.

The interest in exercise is now much greater than many years ago, as it makes one feel better physically and mentally, gives one a feeling of accomplishment and discipline. It helps with weight control and generally improves health. It is now certain that those who are physically active have a lower rate of cardiovascular disease and osteoporosis and those who are inactive have a higher rate. Exercise has a direct effect not only on one’s weight, but also on hypertension, blood levels of HDL cholesterol, LDL cholesterol and triglycerides.

There are mainly two types of exercise:

Aerobic

Using the same large muscle group, rhythmically, for a period of 15 to 20 minutes or longer, while maintaining 60-80% of your maximum heart rate. Think of aerobic activity as being long in duration yet low in intensity. Aerobic activities include walking, biking, jogging, swimming, and aerobic classes.

Anaerobic

Anaerobic activity is short in duration and high in intensity. Anaerobic activities include racquetball, weight lifting, sprinting, soccer and football.

Aerobic means with air or oxygen. You should be able to carry on a short conversation while doing aerobic exercise. If you are gasping for air while talking, you are probably working anaerobically. When you work anaerobically, you will tire faster and are more likely to experience sore muscles after exercise is over. Anaerobic exercise involves short bursts of exertion followed by periods of rest. Bodies develop stronger muscles as the result of anaerobic exercise. Although anaerobic exercise does not burn fat, its muscle-building results complement aerobic exercise (and bigger muscles burn bigger calories). Examples of anaerobic exercise include push-ups, stomach crunches, pull-ups, and lifting weights.

Cardiovascular Benefits

Aerobic exercise conditions the heart and lungs by increasing the oxygen available to the body and by enabling the heart to

use oxygen more efficiently. Exercise alone cannot prevent or cure heart disease. It is only one factor in a total program of risk reduction. Examples of other factors are high blood pressure, cigarette smoking and high cholesterol level.

Additional Benefits of Aerobic Exercises

In addition to cardiovascular benefits, other benefits of aerobic exercise include:

- Control of body fat (Aerobic exercise in conjunction with strength training and a proper diet will reduce body fat).
- Increased resistance to fatigue and extra energy.
- Toned muscles and increased lean body mass.
- Decreased tension and aid in sleeping.
- Increased general stamina.
- Psychological benefits - exercise improves mood, reduces depression and anxiety.

HOW MUCH SHOULD ONE EXERCISE?

It should be enough to make difference. It should be of sufficient duration, intensity and frequency, for one to expend at least 1000 calories/week. If one's exercise is less intense, it burns fewer calories, so one needs to do it for a longer period of time, and if one chooses more intensive exercises like running or jogging, one will need less time to expend the same calories.

Achieving Sufficient Intensity

It is sufficient if one is slightly out of breath during the entire period of the exercise or one should determine one's target heart rate.

One should learn to measure the heart rate i.e. one's pulse. $220 - \text{one's age}$ is one's maximum heart rate. At the beginning

one's target heart rate should be 70% of one's maximum heart rate e.g. for a 40 years old. Maximum heart rate $= 220 - 40 = 180$. 70% of 180 are 126. After more experiences one can increase one's target heart rate to 80-85% of one's maximum rate i.e. up to 155.

All exercise should be done before meals and no meal should be taken at least one hour prior to exercise.

To summarize the exercise norms

1. A low level of fitness and physical activity is associated with a higher rate of death from CAD.
2. Regular aerobic exercise with sufficient duration, intensity and frequency can make a difference.
3. Before any aerobic exercise, get clearance from the physician.
4. Regular aerobic exercise will lower one's blood pressure, lower blood cholesterol, LDL cholesterol, triglycerides and blood sugar. It will increase HDL cholesterol.
5. Helps maintaining body weight.
6. It should be part of lifelong management.
7. Although it is not of proven fact that physical activity will decrease the rate of CAD, but it does control few risk factors.
8. Diet schedule of low fat, low cholesterol and high fibre diet must be followed.

A periodic evaluation of cardiovascular risk factors notably blood pressure, blood levels of cholesterol, triglycerides, LDL, HDL and family history will depict if the diet and exercise programme is sufficient or one needs intensive treatment in terms of drugs or procedures.