

Tai Chi is also recommended for keeping the muscles active

# Ageing and Muscular Atrophy

**Muscle atrophy is a common health issue that affects the elderly. If not treated it can weaken the muscles and lead to pain and problems of balance. However, this condition is usually reversible with regular physical activity, yoga, Tai Chi, exercise and less of sedentary life, says **Krishna Moorthy**.**

**T**he process of progressively losing muscle mass is called muscular atrophy or muscle wasting. It comes from the Latin word 'atrophic' (lack of food) or the Greek word 'atrophy' (lack of nourishment). Movement is one of the best indicators of long-term health and quality of life. Those who lead a sedentary life are less healthy and happy than those who have an active life. The immediate effect of inactivity is muscular atrophy – a condition when

the body redirects the resources from the muscles we don't use to those muscles we use the most. The rate at which muscles are lost depends on a number of factors.

This includes your fitness level, age and other health problems as well as injury or ill-health or physical problems requiring long periods of bed rest. Muscular atrophy may also be caused by osteoarthritis, rheumatoid arthritis or due to some nerve problems. Poor nutrition can give rise

to muscular atrophy. Diets low in lean protein, fruits and vegetables can lead to reduction in muscle mass. Muscular dystrophy can cause muscular atrophy, but it is not the same disease. Muscular dystrophy (a faulty or inadequate nutrition or development) is a genetic condition, often inherited, which has different causes, conditions and treatment from muscular atrophy.

## Symptoms of Muscular Atrophy

- Weakness in the arms

and legs resulting in trouble for reaching high objects, difficulty in opening containers, picking objects from the ground, tying shoe laces, brushing teeth and getting up from a chair.

- Difficulty in jumping and running or climbing stairs.
- Muscle cramps and prolonged spasms and stiffening and tightening of the arm and leg muscles while walking, engaging in sports or even while carrying out daily activities.
- Balancing and coordination problems affecting the back and legs. Frequent falls.
- Asymmetry as in the muscles in one arm are thinner and you may notice the body is tilted to one side.
- Pain, stiffness and weakness in the muscles, which reduces flexibility and movement.
- Garbled or slurred speech or inability to speak.
- Sudden change in vision or loss of vision or pain in the eye.
- Enlarged calf muscles which are overused when you try to stabilise the body which can give head-

aches and pain in the legs.

- If the muscles are strong enough to hold the spine straight you may suffer from poor posture, which can lead to scoliosis over a period of time, and the spine may curve to either side of the body. This can also cause headaches and leg pain.
- If the scoliosis is severe it can lead to progressive weakness of the chest muscles, associated with breathing. Weak chest muscles affect the respiratory function, making it difficult to cough or breathe, and it can lead to increased risk of respiratory infections.
- In many forms of muscular atrophy, progressive changes in the functioning of the heart muscles may occur, with irregular heartbeat, fainting and dizziness.

### Seniors and Muscular Atrophy

Many seniors spend a lot of time on the computer, phone and watching TV programmes continuously, sitting in one place. This can weaken specific muscles.

As a person gets older, the body produces fewer proteins that promote muscle growth. The reduction in supply of protein causes the muscles to shrink, resulting in a condition called sarcopenia. A third of the people over 60 are affected by sarcopenia. Such people have difficulty in walking. The loss or weakness of muscles with age is inevitable. But heavy loss can increase the risk of falls, fractures and injuries. Certain age-related sicknesses can make one inactive. Medicines like corticosteroids or cholesterol-reducing statins can weaken the muscles. Many seniors spend weeks in the hospital beds and lose muscle strength fast. The recent pandemic has worsened the situation.

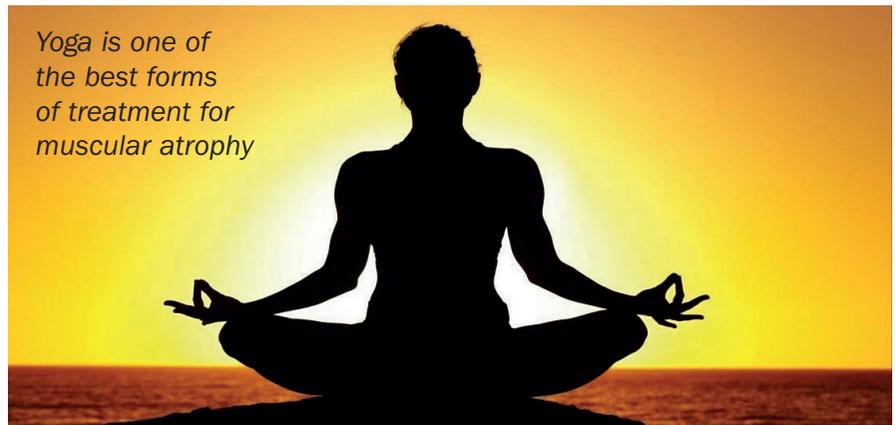
### Treating Muscular Atrophy

While technically there is no remedy for muscle degeneration, maintaining an active lifestyle can help to prevent recurrent muscle loss, especially for older adults. Physical therapy can also teach you to keep the muscles active, especially in the arms and legs, after you have

spent a long time on hospital beds. Exercises, described later, make muscle movements easier. In some cases where your tendons, ligaments, skin or muscles are too tight, a surgery may be required. If the cause is malnutrition, the doctor may suggest dietary changes. If muscle atrophy is due to serious diseases, failure to get treated can lead to serious complications and permanent damage.

### Exercises for Seniors

The exercises suggested below, done in moderation, can help to preserve and build muscle mass, besides other health benefits. They can increase your metabolic rate and over time the body burns more calories. Flexibility exercises like stretches, yoga and Tai Chi, performed at least twice a week, help improve all muscles and the tendon group i.e. neck, shoulders, chest,



trunk, lower back, hips, legs and ankles. Exercises can help to delay, if not stop, heart diseases, high BP, diabetes, stroke, Alzheimer's and bone diseases. They also make the mind sharp. Walking, besides the above benefits, builds stamina. With jogging you sweat more and the heart rate improves.

Dancing improves balance, endurance and is good for the brain since it is enjoyable. Benefits from golfing come mainly from walking, which may be as much as five miles. Tennis builds better stamina,

improves reaction time and is good for reducing the bad cholesterol (HDL). While swimming, the water offers resistance which builds muscles and bones, and the heart rate also improves. Yoga strengthens the muscles, tendons, ligaments and bones. Mindful meditation can lower high heart rate and BP, relieve anxiety and depression. Tai Chi, called moving meditation, is good for balance, eases pain in stiff joints and improves heart and bone health. It also helps you to sleep better.

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