

Patient Education Series (Arthritis) – English I

❖ Arthritis ❖

Exercises and Yoga

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Yoga, one of the six great philosophies of India, is a great Indian gift for mankind. The word Yoga in Sanskrit means 'union of body, mind and soul' or 'to be one with divine'. Yoga is a lifestyle that teaches us to learn living with a balanced mind in given circumstances. Various Yogic postures increase strength and stability of our body, a prerequisite to stability of mind. Yoga has beneficial effects on body as well as mind and is therefore accepted as complementary to standard management of various chronic diseases including arthritis. It is, however, disturbing to find many people believing that Yoga and *pranayam* cure all ailments.

Ayurveda has included Yoga as a part of ideal life style. Yoga can be classified as mind-body medicine and has very wide and comprehensive potential for development of physical, mental and social health. Ashtang-Yoga is the original form of Yoga. Various experts, based on their own experiences, modified original postures leading to various forms of Yoga. Various methods of Yoga having common ultimate goal of *Samadhi*, are broadly classified into 4 streams viz. *Karmayoga* (work, service), *Bhaktiyoga* (devotion, worship), *Jnanayoga* (philosophy, wisdom) and *Rajayoga* (mind control, meditation). *Hathayoga* (*Ha*: sun, *Tha*: moon; balance of two qualities) is a part of *Rajayoga* and controls mind through *Asana*, *Pranayama*, *Mudra* (voluntary action) and *Bandh* (voluntary action to generate positive pressure).

Ashtang Yoga

All patients with arthritis should follow basic Ashtang-Yoga (eight-fold) to start with. The initial four steps are known as Bahirang-Yoga which is adequate for patients with arthritis. Yama, Niyama, Aasan and Pranayam are the four initial steps that should be mastered at the same time.

Yama is guidance for social behavior. The five constituents of *Yama* are 1. *Ahimsa* – do not injure anybody physically or mentally (nonviolence), 2. *Satya* – accept truth-facts as they are, 3. *Asteya* – do not steal anything; be content with whatever you get by honest means, 4. *Brahmacharya* – avoid obsession and restrain all senses, 5. *Aparigraha* – Avoid greed and limit possessions to what is necessary or important. The qualities of forgiving, courage, sympathy and humbleness are also included in *Yama*.

Niyama or rules for our own behavior are 1. *Shouch* – internal as well as external cleanliness of body, speech and mind, 2. *Santosh* – contentment or satisfaction in a given situation, 3. *Tapa* – to be active all the time despite hurdles, 4. *Swadhyaya* – know ourselves, 5. *Ishwar-pranidhan* – surrender to God without any expectation. Behavior according to *Yama* and *Niyama* automatically leads to peace of mind, satisfaction and happiness.

Asana means a steady pose. Classic texts describe 84 asanas. A given asana usually means a stretched pose of a peculiar pattern which is maintained for some time (seconds). Asanas can be performed in sitting, standing or lying down position. Patients with knee pain can perform asanas in sitting or lying position if they are unable to stand. Pavanmuktasana has similar knee-folding effect as Vajrasana if the later is not possible in cases with knee arthritis. Thus a variety of asanas allows one to practice whichever are possible.

Pranashakti is the power behind all functions in our body. Controlling *pranashakti* with controlled breathing is called as *Pranayama*. *Kapalbhati* (rapid breathing out using abdominal muscles with static chest) is a type of cleansing of body. It is not pranayama. Slow breathing in with one nostril (*anuloma*), holding breath for some time (*kumbhaka*) and exhaling slowly with another nostril (*viloma*) is also a cleansing pranayama. Pranayama is of eight types according to *Hatha-yoga-pradeepika*. Four important types of pranayama are *soorya-bhedana* (inhaling from right nostril and exhaling from left), *ujjayee* (making a sound while breathing in and out), *seetkari* (inhaling from mouth with upper and lower teeth

touching each other), and *sheetalee* (deep inhalation through a curled and protruded tongue followed by exhalation through nostril). *Bhasrika* pranayama (bellows breathing) means rapid breathing in and out whereas *bhramari* pranayama (humming bee breathing) means deep inhalation followed by slow exhalation with a humming sound from throat. *Moorcha* (holding breath for as long as possible) and *plavinee* (inhaling to fill stomach) pranayamas are not for beginners. All types of pranayama must be learnt from an expert yoga teacher.

Pratyahara (withdrawal of senses from all external attractions), *dharana* (stability of mind), *dhyana* (meditation) and *samadhi* (trans) are four types of *antaranga*-yoga. These are advanced steps of concentration of mind and there are no real boundaries between them. They make mind quiet and stable and reduce stress. A balanced diet and adequate sleep are also essential along with practice of yoga. Yoga practice with asanas and pranayama is incomplete without appropriate modifications of lifestyle.

Practice of Yoga poses

Asanas are of various types. One should perform asanas that are feasible according to individual health status and choice. One should learn them from a good teacher and practice at home. This requires adequate place and cooperation from family members. One should attend a nearby yoga-class or a laughter-club if this is not possible at home. One can make new friends and talk with other people at laughter-clubs which are usually meant for general fitness. Arthritis patients should ideally attend a small group where a teacher can personally look into individual problems.

The principle of 'more the better' is not applicable to asanas. Asanas are not meant for display or competition and winning prizes. One should listen to own body, find out whatever is possible and decide practicable goals for oneself. Working towards such a goal sincerely and regularly is desirable. Proper poses will be possible by regular practice though one may initially find some of the asanas

difficult to perform. The effects of Yoga are seen after 6-12 months of regular daily practice.

Patients with arthritis accept Yoga as a form of exercise as it is easy and least expensive. Yoga increases awareness about own body and mind, increases confidence and helps to find goals of health. It must also be borne in mind that Yoga is complementary to medical management and one should never stop basic drug treatment. Yoga cannot be a therapy on its own. It is also incorrect to believe that a particular asana is useful for a particular disease.

It is always good to learn Yoga from an expert teacher. Teaching Yoga is an art by itself. Yoga-teacher should be like a supportive friend encouraging students. A teacher should not apply any stretch while a student is practicing particular posture. They should modify posture if a student is unable to perform. Teacher should not discuss non-Yoga matters during teaching sessions. They should not try treating diseases neither attempt selling drugs or diet supplements.

Yogasanas versus exercise

There is a vast difference between Yoga and exercise as Yoga is a particular way of living and does not consume as many calories as walking, jogging, swimming or cycling. One spends 2.17-2.5 times more energy in stretched poses of Yoga than in resting position. This is equivalent to slow walking at a speed of 3.25 kilometers/hour which is not upto international guidelines on exercise. Simple Yoga practices can be beneficial in patients with arthritis who are unable to walk or run for exercise. Yoga practitioners usually maintain proper body weight. Yoga practice reduces weight by 2-7% in 4-12 months. Lower body weight has significant benefits in patients with arthritis.

Benefits of Yoga in arthritis

Local effects: Asana is a comfortable static stretched position. Maintenance of static posture increases strength of muscles. Patients with arthritis avoid exercise due to unwanted fear of increasing pain. This leads to shrinking of joint capsule, weakness

of ligaments, and shortening of tendons and muscles. Stretching in asanas increases endurance and flexibility of muscles. Steadiness makes them stronger. Stretching also improves metabolism in bones to make them stronger. Strong muscles and bones mean less chance of injuries related to falls.

Flexibility and relaxation in Yoga postures leads to secretion of endorphins in our central nervous system. Endorphins, the natural pain and stress fighters in our body, help in reducing pain associated with arthritis. Yogasanas are particularly useful in back pain. Lot of work is underway on effects of Yoga in osteoarthritis. Work on effects of Yoga in rheumatoid arthritis has also been published.

Systemic effects: Practice of yoga makes one think about own body and mind and understand them (*Aatma-dhyana*). It leads to increased concentration and reduction in anxiety, irritability and stress. It also controls depression and brings in hope and confidence. Yoga practice improves quality of sleep and brings tranquility. The consequent benefits are increased endurance to pain and reduction in minor side effects of drugs.

Yoga has peculiar effects on nerve fibers and endocrine glands. These lead to reduction in heart rate, control of blood pressure and better lung function. Regular Yoga practice reduces blood cholesterol by 4% and sugar to some extent. Yoga practice has also shown benefits in irritable bowel and menopausal syndrome.

Adverse effect of Yoga

Blockage or rupture of blood vessels in neck, redness of eyes, rupture of lung, sciatica are some of the events reported during Yoga poses. It is possible that many cases are unreported. Strenuous attempts to perform difficult-to-do asanas and holding breath are the important causes of such complications. Prolonged vajrasana can lead to damage of knees. Patients with glaucoma and cervical spondylosis should not attempt sheershasana and other head-down-legs-up poses.

Even a minor stress releases inflammatory cytokines such as TNF α and interleukins. Interleukin levels are about 30% lower in regular Yoga practitioners. The role of these cytokines is now being established in complex diseases such as rheumatoid arthritis, systemic lupus, diabetes and heart diseases. Yoga, therefore, is now being studied in such diseases all over the world. The risk of ischemic heart disease is now established in cases of rheumatoid arthritis. Practicing yoga is thus recommended for patients of rheumatoid arthritis for prevention of heart disease.

Pranayama has been shown to improve lung capacity, reduce cardiac stress and blood pressure and decrease heart rate in college students. It is incorrect to postulate good effects of pranayama in cases of arthritis as no such evidence has been published yet.

Yoga is a lifestyle. General health is better in Yoga practitioners than in other people. The good effects of Yoga do not come in a short period. Prolonged practice of Yoga over months and years certainly leads to better outcome.



General instructions for Yoga practice

- 1.** Yoga postures should be practiced in a clean and fresh surrounding. Do the asanas on a soft and clean mattress. Use clean, light, loose and minimum clothing.
- 2.** Do the asanas in morning or evening on an empty stomach. Eat light food half an hour after completing practice.
- 3.** Warm-up, in the form of Surya-namaskar, is desirable prior to asanas.
- 4.** All movements should be gentle and controlled. Do not jerk your body. Do not over-stretch. Do not use any force to overdo.
- 5.** Watch your breathing. Breathing should be easy and natural. Exhale while you bend forwards and inhale while bending backwards. Never hold breath.
- 6.** One should be comfortable in any asana. Do whatever little you can. Do not try to overstretch to attain a pose as given in pictures. Trembling during asana implies overdoing.
- 7.** Steadiness is of utmost importance. Period of staying in a single pose will increase with practice. Try to contract only those muscles that are required for a particular pose while relaxing all other muscles.
- 8.** Draw your mind away from your body and concentrate on breathing on attaining desired pose.
- 9.** Select and practice a few asanas and try to master them.
- 10.** There should not be any pain, fatigue or sweating during asanas. Do a resting asana if any of these appear. One should feel enthusiastic after a Yoga session.
- 11.** 45 minutes of Yoga practice each day is desirable. Pranayama may also be done for a few minutes. Regularity is the key to success.