

## Yoga for Disease and Chronic Conditions

### General Precautions

- Participants should follow all physicians' directives, particularly for medication use and joint replacements.
- Be aware of common warning signs: pain, swelling, fatigue, breathing difficulties, muscle weakness, discoloration, disorientation, slurred speech, dizziness, numbness and profuse sweating.

### Respiration and Lung Disease

Chronic Bronchitis, Asthma, Exercise Induced Asthma (EIA) and Emphysema are common diseases of the lungs and respiratory system, collectively known as Chronic Obstructive Pulmonary Disease (COPD). Surprisingly, the chief complaint of COPD patients is difficulty with expiration rather than inadequate oxygen intake. Dyspnea, or shortness of breath, is the most common symptom, along with coughing and wheezing.

Individuals with lung disease also tend to recruit upper chest and shoulder muscles for breathing instead of using the diaphragm. Chest breathing is very ineffective because these muscles are not designed for this task. Diaphragmatic breathing however is energy-efficient; more air is drawn more deeply into the lungs where pulmonary circulation is more saturated.

- Special considerations for COPD:
  - Offer participants the option to breathe out slowly through pursed lips, shaped as if to whistle. Pursed-lip breathing creates a small amount of backpressure in the lungs that helps keep the smaller airways open for a more complete exhalation. Exhaling twice as long as inhaling (or 2:1 Breathing) helps remove stale, trapped air from the lungs and new, fresh air is mixed with a smaller volume of oxygen-poor air. This also benefits the autonomic nervous system by promoting relaxation and reducing the fear and anxiety COPD sufferers often experience.
  - Cue participants to breathe out slowly through the nose while gently contracting the abdominal muscles. This method also creates a small amount of backpressure in the lungs to facilitate a complete exhalation.



## Arthritis

Yoga can help prevent or minimize the most common form of arthritis, osteoarthritis, which results in damage to or wearing down of joint cartilage. Yoga movements can reduce discomfort in deteriorated joints, create greater ease of movement in and around joint articulations, and help participants to cope with the pain of arthritis. In addition, the cumulative benefits of yoga address some of the consequences of arthritis, like poor posture, misalignment of bones, or poor movement patterns.

Inactivity, common for participants with painful joints, causes muscles around those joints to become weaker, thinner, stiffer and tighter. This leads to further misalignment of joint surfaces, decreased joint range of movement, and further pain. Gentle yoga can “turn back the clock” by removing years of accumulated tightness and stiffness. Yoga’s full range of movement stretching also distributes lubricating synovial joint fluid.

### ■ Special Considerations for Yoga and Arthritis:

- › Move rhythmically in and out of poses instead of holding them.
- › Offer seated options or to switch feet more frequently during one-legged balancing poses, like Chair Pose, Warrior Poses and lunges. These postures may not be good options for those with severe arthritis of the hips, knees or ankles.
- › Breathe properly to promote muscle relaxation and stress reduction.
- › Avoid exercising to fatigue or exhaustion. Balance work and rest.
- › Avoid forcing a stretch.
- › Do not exercise during a flare up or in cold temperatures.
- › Help participants learn to distinguish between good and bad pain. Sudden or severe pain is a warning to stop.
- › If there is more discomfort in joints two hours after the session or the next day, help members experiencing these symptoms to modify the practice accordingly.

## Heart Disease

Heart disease is the modern world’s leading cause of death. Yoga’s proven abilities to fight stress, manage anger and its physiological effects, promote equanimity and relieve depression are of major benefit to people with heart disease.

*Asana, pranayama, meditation and deep relaxation are all integral components of Dr. Dean Ornish’s complete program for reversing heart disease. Results from his Lifestyle Heart Trial, a comprehensive program of yoga and lifestyle changes, were first published in leading medical journals in 1983. Patients who participated in the program showed impressive improvements in blood pressure, cholesterol levels, body weight and coronary blockage reduction.*

*“While it is impossible to say for sure how big a role yoga played in the program’s success, those involved in the research view it as crucial. Dr. Dean Ornish says it made it easier for people to adhere to the program’s other elements. The designer of the yoga portion, Nischala, says yoga seemed to be the catalyst for making everything else happen.” (Timothy McCall, M.D., Yoga As Medicine)*

## Heart Disease (cont.)

A study published in The Lancet in 1998 found that practicing Complete Breath (Three-Part Breathing) improved respiration in patients with congestive heart failure. As early as 1948, Aaron Friedell, M.D., studied the effects of mindful breathing and Alternate-Nostril Breathing on symptoms of angina: chest pain and shortness of breath with positive results. Yogic breathing has also been found to help prevent heart palpitations, arrhythmias and fibrillations.

*"The emphasis in yoga on slow, gentle inhalations and complete exhalations is relaxing for the heart muscle. Under chronic stress, even the muscle fibers inside the heart itself contract and hold tension."* (Dr. Mehmet Oz, Yoga Prescription for a Healthy Heart.)

### ■ Special Considerations for Yoga and Heart Disease:

- › Recommend "less is more" for "type A" personalities with heart disease. Avoid straining and overexerting.
- › Move rhythmically in and out of poses instead of holding them.
- › Cue heart patients to perform standing poses with hands on hips rather than overhead to lessen the burden on the heart.
- › Incorporate Complete Breath and Alternate-Nostril Breathing into class.
- › Lengthen the Relaxation segment to promote stress reduction.
- › Encourage participants to drink water (following physician's directives for CHF) – hydrate slowly and "sip".

## High Blood Pressure

Also known as hypertension, this condition affects approximately 20 percent of adults in the United States and damages the body by placing a greater strain on the heart and blood vessels. The risks for uncontrolled hypertension include stroke, heart attack, kidney failure and dementia. Optimal blood pressure is **under** 120/80.

A regular yoga practice positively affects blood pressure by lowering stress levels. Stress often results in poor lifestyle choices like unhealthy eating, use of alcohol and cigarettes, and skipping exercise – all of which contribute to high blood pressure.

Yoga's promotion of equanimity (calmness under stress) enables the nervous system to respond to emotional and physical strain with less agitation.

Yoga's emphasis on self-awareness and self-study enables individuals to evaluate factors that affect blood pressure readings. A regular yoga practice can also result in weight loss; even a few pounds can make a significant difference in blood pressure.

*"A Yale University School of Medicine study involving 33 subjects who took a six-week yogameditation program found that blood vessel function improved by 17 percent in the volunteers. At the beginning of the study the average blood pressure was 130/79 mmHg. After six weeks the average blood pressure reading was 125/74 mmHg. This is a significant decrease with yoga and meditation classes."* (Satish Sivasankaran, M.D., Nov, 2004)

(continued)

## High Blood Pressure (cont.)

- Special Considerations for Yoga and High Blood Pressure:
  - › Maintain smooth, even breathing to stabilize blood pressure.
  - › Emphasize lengthened exhalations to release physical and mental tension.
  - › Move rhythmically in and out of poses instead of holding them.
  - › Use Bee Breath, Chanting and Spinal Rotations to calm the nervous system.
  - › When moving from a position where the head may be in line with the heart to a standing position, transition slowly.

## Diabetes

Type II diabetes accounts for 90 percent of all diabetics. Although Type II diabetics may produce a normal amount of insulin, their blood sugar levels still rise because cells have become insulin resistant. Diabetics usually die younger with more years of disability prior to death.

Yoga's most important contribution to moderating the impact of diabetes is through stress reduction. High levels of the stress hormones adrenaline and cortisol raise blood sugar levels and increase the risk of stroke, heart attack, kidney failure, blindness and amputations. Cortisol also promotes overeating and the accumulation of visceral abdominal fat, which increases insulin resistance and is a known risk factor for heart attacks.

Many diabetics develop *diabetic neuropathy* - damage to the peripheral nerves in the legs leading to numbness and/or burning sensations. A regular yoga practice can improve nerve function and conduction.

- Special Considerations for Yoga and Diabetes:
  - › Encourage participants to move past the initial feelings of lethargy to become more active, lively and healthy.
  - › Practice modified Sun Salutations and other *vinyasas* to excite energy.
  - › Emphasize that wearing shoes in SilverSneakers Yoga is absolutely required. Instruct members to distribute weight evenly across the bottoms of the feet to prevent foot ulcerations.
  - › Use the chair for support in balancing poses to reduce the risk of falling.
  - › Incorporate Alternate Nostril Breathing and A-E-I-O-U Breathing; however, avoid an increase in heart rate with all *pranayama*.
  - › When moving from a position where the head may be in line with the heart to a standing position, *transition slowly*.
  - › Instruct members to maintain their regular schedules for eating and taking medication rather than following the usual yoga recommendation not to eat for several hours prior to practicing.
  - › Participants should monitor blood sugar on a regular basis and try to exercise at the same time each day.

## Cancer

All cancers begin as DNA damage resulting in uncontrolled, abnormal cellular growth. Many are related to diet, genetics, environmental factors and abnormalities in the immune system. Though the number of diagnoses continues to rise, improved screening methods and treatments create a greater chance for survival depending on the type of cancer present.

Abnormal cells regularly form in the body; a healthy immune system may discharge these cells before a tumor develops. Thus, a healthy lifestyle is important for reducing the risk of developing cancer as well as for helping to mitigate the effects of the disease.

Yoga's primary role for **cancer** patients is as a tool to manage stress, depression, pain and other side effects of the disease both during and after treatment. Yoga's emphasis on self-awareness teaches people with cancer to listen to their bodies' physical and emotional messages. Selfstudy helps in reassessing values and tuning into inner wisdom and spirituality. Practicing yoga provides tangible steps to overcoming feelings of powerlessness and loss of control.

*"Yoga teaches that by heightening your awareness – even of something painful – you can lessen its impact."*  
(Jnani Chapman RN, RYT)

### ■ Special Considerations for Yoga and Cancer:

- › Recommend gentle yoga, restorative poses, *pranayama*, relaxation and meditation over a more vigorous yoga practice.
- › Use slow, flowing movements to release mental and physical tension. This can often be more effective than quiet relaxation.
- › Stretch muscles commonly associated with stress: neck and shoulders.
- › Practice Lengthened Exhalation Breath, Bee Breath and Alternate Nostril Breathing.
- › Remind participants to pace themselves and progress gradually.

## Obesity

Research on obesity and aging is gaining momentum as "baby boomers" turn 65 and stress the Medicare health care system with the needs for services due to the condition. Years of sedentary lifestyle, chronic disease and/or musculoskeletal conditions create a greater need for yoga as a healthy weight management strategy because it offers gradual and progressive success in increasing muscular endurance, respiratory control and balance.

### ■ Special Considerations for Yoga and Obesity:

- › Consider postural modifications for a larger body. Range of motion may be limited, so be prepared with meaningful alternatives.
- › Encourage gradual, progressive increases in intensity.
- › Encourage rests, especially in one-legged postures or cue for seated balance poses.