

Yoga Therapy – Hip Program

Cartilage plays a dual role in the body: it is both a rather stiff material capable of helping to support the weight of the body, e.g. intervertebral discs and also serves as lubricant at the points where bone meets bones, as in hip joints.

The early fetus is composed largely of hyaline cartilage allowing a high fetal flexibility and a safe delivery for both mother and child. This cartilaginous skeleton at first resembles the cartilaginous skeletons of sharks and rays, but is then slowly transformed into the boney skeleton of the infant as it is vascularized.

Hyaline cartilage is cartilage that is hyaline (transparent). It is found on many joint surfaces. It is pearly bluish in color with firm consistency and has a considerable amount of collagen. It contains no nerves or blood vessels, and its structure is relatively simple.

The cartilage of the infant is the model for the later formation of the bones. The fetal cells known as chondrocytes generate cartilage so as to form the model skeleton. Once this is penetrated by the vascular system, bone-growth proteins become active and the chondrocytes are transformed into osteoblasts which excrete the inorganic salts that mineralize and further stiffen the cartilage, and so turn it into bone.

Like bone, cartilage is piezoelectric, and so is able to display the momentary pattern of mechanical stresses on it as a pattern of voltages. However, though bone has an extensive system of blood vessels and nerves, neither of these are found in cartilage.

Not being vascularized means that if it is in some way injured, there will be very little support for healing and repair. Injuries to cartilage (as well as to avascular ligaments and tendons) are very slow to heal.

The weight bearing-supporting tissues, i.e. cartilage, are dense tissues of great strength and high water content. In hyaline cartilage there is collagen fibers embedded in a gelatinous matrix, the whole being rather solid yet flexible. Such hyaline cartilage is found capping the epiphysial ends of bones.

The sliding of one hyaline-covered bone with respect to another is eased by the lubricating synovial fluid exuded within the joint capsule.

When the cartilage-covered surfaces of the bones in contact at a joint are sliding well, the forces are compressive only. However, if the surface becomes sticky, then there is a tendency for the forces to become more shearing in nature, and the result can be ripped cartilage.

If injured, the avascular cartilage is nourished by diffusion of nutrients via the synovial fluid. This diffusion can be aided greatly by repeated cartilage compression and release of the joint, for this pumps the surrounding fluids in and out of the pore spaces of the tissue.

When cartilage is kept under a constant load, it creeps to a region of lower compressive stress, is permanently deformed, and suffers from poor nutrition. On the other hand, cartilage health is maintained by a dynamic compression which first squeezes and then releases the cartilage.

Yoga Program

Meditation – mind directed into the joints, based on the concept that where the mind goes, energy flows. If sitting is uncomfortable and causing pain, then supine is allowed, but upright is always preferred because it is easier to keep awake and attentive.

First shift the brain wave patterns from Beta to Alpha by 5 minutes of Breath Focus/Anapana. Maintaining an erect spine and a slight Mula Bandha activation, observe the breath as it flows in and out of the nose. Do not follow the breath into the throat or lungs, but keep it corralled within the interior of the nose.

Once you feel calm and centered then direct your attention to your injured hip and 'sweep' your mind/attention/observation through it: starting from the front and moving to the back for 2 minutes, then from back to front for 2 minutes and then from side to side (good side first and injured side second). Be sure to do the same thing to your 'good' side.

To finish the meditation direct your attention back to your breath and chant OM 3 times.

Pranayama – the two most important techniques for you are Ujjayi and Nadi Sodhana. I recommend 10 rounds of Ujjayi to expand your breath to your comfortable maximum and then maintaining this rhythm, move into 10 rounds of Alternative Nostril Breathing. Initially do this without inhalation or exhalation retention. Once you are comfortable, then introduce first inhalation retention (for the same length of time as your inhalation/exhalation) and then progress to include exhalation retention.

We are doing these techniques to bring the body/mind into the lower brain wave patterns where healing takes place more effectively.

Asana – as discussed let pain be your guide. Keep a daily journal to observe cause/effect with pain.

Bhumi Namaskar/Earth Salutation x 3 (we have this available on DVD in our online yoga shop www.knoffyoga.com).

Uttanasana/Standing Forward Bend 2 minutes – emphasis the spreading of the sitting bones to facilitate the forward flexion of the sacrum plate to deepen the forward bend without overworking the hips.

Supta Padagusthasana Cycle/7 movements holding each for 1 minute – I may need to talk you through this?

1. Knee to Chest
2. Straight leg up (holding big toe or strap)
3. Bring chest/face towards leg by bending the holding arm
4. Knee bent and thigh towards floor (make sure your thigh is just outside of your ribcage)
5. Shin across the chest (holding inner knee and dorsi-flexed foot)
6. Leg out to side (holding big toe or strap)
7. Leg up, change holding hands, and then take to floor in opposite direction

Virasana/Hero Pose 2 minutes (support by placing block under sitting bones as high as you need)

Baddha Konasana/Bound Angel Pose 2 minutes (support legs with blocks or bolsters. Keep

lower back slightly concave)

Upavista Konasana/Seated Angle Pose 2 minutes (strong activation of quadriceps, pushing out through the heels to lengthen head of femur from hip joint)

Supta Virasana/Supine Hero 2 minutes (bolster starting above sacrum plate to support spine and reduce depth of pose)

Supta Baddha Konasana/Supine Bound Angle Pose 2 minutes (using strap tied about ankles and hips, with bolster under back for support)

Paschimottanasana/Seated Forward Bend 3 minutes

Chair Twist 2 minutes per side (keep hips and knees even with each other)

Viparita Dandasana/Inverted Back Bend 2 minutes (using yoga block or bolster)

Salamba Sarvangasana/Shoulder Stand 5 minutes (use this pose to create space in the hip joints)

Savasana/Relaxation 5 minutes (insert your mind into your hips and ease off the irritation and deliberately sooth them)

Important Notes:

The above asana will help with increasing your ROM (range of movement) and ensure full synovial lubrication in the hip joint.

Remember you now need to change the emphasis of your practice to therapy. Don't worry about loosing your other asanas as your body memory will keep them stored for you.

When you have a choice of sides, e.g. right or left, work the uninjured side first, so the injured side understands what is required of it, and activate 'cross' healing.

Feel free to modify the practice according to need.

You may if you wish include other asana, but make sure you do not deplete your energy so you have an abundance for healing.

Until the inflammation is gone, jumping/vinyasa is not recommended.

Write up your feelings/reaction/mind state in your daily journal

Drink plenty of filtered water both before and after your practice.

Sleep is crucial and must be placed high on your list of importance. The hours before 12 mid-night are of greater value than after!