


**ALL IS WELL**

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# Spotlight on Your Joints

**The only known physiological way of maintaining health of articular cartilage — an elastic tissue at the ends of the long bones — is regular exercise and movement**

**T**he mobile joints of the limbs and spine are covered by a shining, smooth and elastic articular cartilage. Depreciation and degeneration of this tissue results in the well known condition, osteoarthritis which commonly affects the joints of the knee, spine, ankle, shoulder and less commonly, the hips among the Indian population. Activity-related pain and stiffness are the common symptoms.

Joint replacements have offered lasting pain relief and improved the quality of life to the suffering elderly population of arthritis. While joint replacements are a solution for advanced joint destruction in the elderly, many a young person having joint pain has had no lasting remedy to his ills. The investigation and management of the young patient with arthritis is a challenge to many orthopedic surgeons.

Articular cartilage is the lining firm and elastic tissue at the ends of the long bones. In normal life there is a balance between the synthesis and destruction of articular cartilage. The capacity to regenerate articular cartilage diminishes with aging (fourth decade). When articular cartilage is damaged, there is little chance for its repair. Damaged cartilage sets the ball rolling to a sequence of degenerative changes leading to osteoarthritis of the joint and the need for arthroplasty (a total joint replacement).

The only known physiological way of maintaining health of the articular cartilage is regular exercise. A recent study reported that individuals who exercise regularly have a higher dGMERIC index

(denoting higher cartilage content) than those who are sedentary. This is a fillip to those who keep fit by exercise.

Once a diagnosis of articular cartilage damage is made, most commonly by special MRI technique or arthroscopic examination, the orthopedic surgeon is confronted with two options — To do or not to do (treat it or ignore it).

Longer term studies may indicate that it may be better to treat larger sizes of these lesions in active individuals. The surgical options to treat focal cartilage loss fall under two headings, a) a reparative one and b) a restorative one.

The restorative technique involves substitution of areas of focal articular cartilage loss by the same tissue. It can be obtained from a cadaveric source (allograft) or be harvested from the patient's own body (autograft). In a cartilage transplant, a rice size piece of articular cartilage is harvested at an arthroscopic operation from the patient's knee and sent to the laboratory for culture.

After a gap of six weeks, the multiplied cartilage cells grown in the culture tube are re-implanted into the patient's joint at an open operation. This procedure is called autologous chondrocyte implantation (ACI). In a restorative technique a reparative tissue is generated by surgery. There are a number of techniques involved and some can be done

through key hole incisions (arthroscopic surgery). They have been proved to confer lasting pain relief in younger patients and are a worthwhile low cost surgical option to consider. The patient must be willing to undergo an extended recovery process in both techniques. In addition, the background scenario responsible for articular cartilage damage must be set right.

This means correction of mechanical mal-alignment by an osteotomy and ligaments reconstruction to restore stability.

*(The writer is a consultant orthopaedic surgeon at Chennai Meenakshi Multispeciality Hospital)*

## Tips to maintain healthy joints

### Do's

- Regular exercise
- Shake off the excess kilos if you have joint pain.
- Put your joints through a full range of movement daily
- Diet – Include milk, eggs, fish, tomatoes and oranges
- If you have Vitamin D deficiency, exposure to sunlight in addition to oral intake of supplement.
- Consult your doctor if knee pain lasts for months.

### Dont's

- Avoid activities that cause knee pain like squatting, Indian toilet
- Smoking is bad for joint health
- Self-medication
- Use heat over joints as it causes damage to cartilage. Use ice instead.



