

# FAQ's for Cartilage Cell Therapy

## 1. What is Autologous Cartilage Implantation / CARTIGROW®?

This treatment involves use of Cartilage making Chondrocyte cells, prepared from patients own healthy Cartilage. It is an FDA-approved biologic product indicated for repair of cartilage defect (knee, ankle, shoulder) in adults.

## 2. Who would be a suitable candidate for Cartilage cell therapy?

Patients that do fit the criteria for Autologous Chondrocyte Implantation would have the following characteristics:

- Age limit of 18-65 years
- Defect Size upto 15 cm<sup>2</sup>
- Younger Patients with High activity demand are suited for ACI Treatment.

## 3. Who is a not a candidate for autologous chondrocyte implantation (CARTIGROW®)?

Those with the following conditions are not suitable to have the benefit of autologous chondrocyte implantation procedure.

- Age Less than 18 and More than 65.
- Active autoimmune connective tissue diseases.
- Patients with concomitant malignancies (A concomitant malignancy is a second illness occurring at the same time as a primary illness.
- Suitability is not yet tested in Pregnant or Lactating Women.

## 4. Why DO Cartilage Defect need such A Cell based Treatment?

Cartilage defect needs Cell Based Treatment as,

- Cartilage is Avascular, Abnormal tissue.
- Cannot Regrow and repair on its own.

## 5. What is the significance of Hyaline cartilage?

Hyaline cartilage is the original /Patent Cartilage to the knee, while we do the Cell treatment, we Regrow the Original Hyaline cartilage. The significance of Hyaline cartilage is,

- Maximum Weight Bearing
- Shock Absorbing
- Ease of a Range of Movement

## 6. How does the doctor collect my cartilage tissue how is biopsy done?

In patients undergoing ACI, the surgeon performs an initial procedure of arthroscopy -KEY HOLE SURGERY (key hole surgery -is a minimally invasive surgical procedure on a joint in which an examination and sometimes treatment of damage is performed using an arthroscope, an endoscope that is inserted into the joint through a small incision.), in which small pieces of cartilage, including cartilage cells (chondrocytes), are harvested from a non-weight-bearing area of the joint. The cartilage pieces are sent to a laboratory, where the cells are isolated and cultured (multiplied) for 3–5 weeks to obtain sufficient number of cells (usually between 12-48 million cells). It is a simple day care procedure in the hospital where discharge is given the same day after the procedure has been completed.

**7. How long does it take to grow the cells?**

It takes about 3 to 5 weeks for the cells from your biopsy to increase to approximately 12-48 million cells (1-4 vials).

**8. Where are Cells Cultured?**

After the biopsy is taken, Cells are sent to Regrow's FDA-licensed and regulated cell therapy manufacturing facility in Lonavala, Maharashtra for processing.

**9. How are the cultured cells implanted back into the damaged site?**

The surgeon first prepares and smoothens the damaged area injects the chondrocytes that have been grown in the laboratory underneath the membrane. The cells then grow and mature in the joint, and gradually replace the damaged area with living, healthy cartilage. The patient needs to be admitted in the hospital and retained for a period of 2-3 days post which discharge is sanctioned.

**10. What should I expect following my implantation surgery?**

The patient needs to be admitted in the hospital and retained for a period of 2-3 days post which discharge is sanctioned.

**11. Will I need physical therapy following this surgery?**

Yes, you will need to follow a rehabilitation program; your doctor and physical therapist will design a program for you based on the size, location, and severity of your cartilage injury.

**12. What is my Activity Level like after Cartilage Repair/ When can I start playing sports again?**

You and your doctor will decide when you are ready to return to sports. Depending on the size and location of your cartilage injury and your rehabilitation, you may resume low impact activity such as swimming, cycling, and skating as early as 6 months following treatment.

You may perform high impact sports such as jogging, running, and aerobics at 8 to 9 months for smaller injuries or 9 to 12 months for larger injuries.

**13. Are there any complications of autologous chondrocytes implantation?**

There have been more than 30,000 surgeries of Autologous chondrocyte implantation procedures that have been performed since the last 25 years worldwide. In India, almost more than 350 patients have been treated with a success rate of more than 95 %. Hence, as such no major complications have been recorded proving utmost efficacy and safety of the procedure.

**14. When Can I Return to Work?**

The time when you are ready to return to work depends on the individual as well as your type of job. As a general guideline:

- Sedentary jobs from 1 week can be allowed. We do not recommend long periods in a car for the first 1 weeks following surgery.
- Non-sedentary jobs should not be considered for 6 weeks. Your health and the condition of your leg will be reviewed at a 6-week post-operative clinic, when a decision can be made. It is likely that any return to work would be between 4 TO 6 weeks at the earliest.

**15. How well does autologous chondrocytes implantation work?**

Autologous chondrocytes implantation is utmost effective in treating cartilage defects in the knee. The regenerated cartilage and careful rehabilitation assure 90% restoration of the original strength.

**16. What are the advantages of Autologous cartilage replacement/ cartilage repair treatment?**

- It produces Hyaline-like cartilage, Exactly similar to the original knee cartilage.
- It fills defects regardless of size with functional repair tissue.
- Moderate to large defects that have failed previous intervention.
- Predictable outcome.
- It's a natural Safe biological process unlike metal or foreign material going inside the body.

**17. Will my insurance pay for Autologous cartilage replacement/ cartilage repair treatment?**

Yes, this procedure is covered under insurance. For Further enquiries, please consult your doctor and relevant authority for complete information and procedures.

**18. Can any orthopaedist treat me with Autologous cartilage replacement/ cartilage repair treatment?**

Only experienced Orthopaedists with extensive training in diagnosing and assessing cartilage injuries of the knee that have clinical expertise with CARTIGROW® may perform the treatment.

**19. Is REGROW a Stem Cell Procedure?**

NO, it is Autologous Cell Treatment is a treatment where specific Cartilage forming Chondrocytes cells are used for treatment.

**20. Where can CARTIGROW® treatment be done?**

CARTIGROW® Treatment is done PAN India, In all major cities and hospitals.

**21. Is CARTIGROW® a safe and successful procedure?**

Autologous Chondrocyte Implantation, CARTIGROW® is safe and it is India's First FDA approved Cartilage Cell Therapy.

**22. Can I do CARTIGROW® Treatment if I am Young, but have arthritis?**

If the cartilage damage is Degenerative, then you cannot do the procedure.

**23. I am a Sportsman and have a small cartilage Defect. DO I still need CARTIGROW® procedure?**

- For the defect size upto 2-3 cm<sup>2</sup>, your Ortho doctor will advise you to do Mosaicplasty /Microfracture. But these are one-time procedures, and do not produce Hyaline Cartilage. Hence joint restoration with Both Structure and Function is difficult.
- Patient usually need repeat treatments in due course of time.