

# CoDon Spherox Autologous Chondrocyte Implantation Rehabilitation Protocol

## After Biopsy Procedure

- During the first week after the biopsy procedure, partial weight-bearing with forearm crutches is recommended.
- After approximately one week, motion and full weight-bearing without forearm crutches is possible.
- The mobility of the joint can be exercised directly post-operatively.
- The healing process may be actively supported by the use of an ergometer (at the surgeon's discretion).
- Muscle strengthening is recommended.
- Individual adaptation of the rehabilitation programme to the patient's physical capacity is required.

## After Transplantation of Spherox

- To avoid strain on the cartilage, extensive flexion or resistive extension exercises from flexion positions  $>60^\circ$  has to be avoided for 6 – 8 weeks after transplantation (or longer).
- Depending on the location, size and containment of the treated defect, the exercises may need to be continued for longer than 8 weeks. Partial weight-bearing on the knee joint is normally recommended for 6 – 8 weeks after the transplantation.
- Antibiotic prophylaxis (perioperative), analgesia and thrombosis prophylaxis are recommended following the surgical procedure. The type, dosage and duration of such treatment should be based on the surgeon's clinical judgement.

### Day 1 to 3

- Post-operatively, the joint should be immobilised for 24 to 48 hours in a brace.
- Mobilisation with partial weight-bearing may be started immediately after the surgery.
- Following removal of the fixed brace, physiotherapy controlled, initially passive and later active movement therapy (if applicable adjustment of orthosis to restrict range of motion) shall be commenced.
- Antithrombotic prophylaxis
- Continuous passive motion (CPM).

### Day 4 to 6 weeks

- Isometric tensioning exercises.
- Work on leg control.
- Walking with two forearm crutches with partial weight-bearing (10-15 kg).
- Passive mobilisation up to maximum extension, flexion is determined by defect location.
- Continuous passive motion (CPM).
- If necessary, ultrasonophoresis, cryotherapy, manual lymphatic drainage.

### 7<sup>th</sup> to 8<sup>th</sup> weeks (and beyond)

- As before, but gradual mobilisation to full flexion.
- Physiotherapy in an exercise pool
- Use of an exercise bike
- Coordination exercises.

### All phases

- \_Development of a physiological gait with full loading. Gradual increase of loading. Use of forearm crutches/walking aids only for walking longer distances (> 15 min).
- \_Plenty of exercises such as swimming and cycling, with the patient avoiding carrying his/her own body weight to the greatest extent possible

### ALL Phases

The rehabilitation programme should be adapted to the patient's physical capacity. The aim should be to avoid joint irritation by the reduction of load and the use of analgesic and decongestive therapy procedures such as ultrasonophoresis, cryotherapy and manual lymphatic drainage as necessary. Additional accompanying electrostimulation for pain relief and swelling reduction as well as muscle strengthening is recommended. In case of irritation or pain, weight-bearing shall be reduced.

**Originator:** <https://www.codon.de/en/therapy/#c366>.

**Ratified by:** Mr M McNicholas, Consultant Orthopaedic Surgeon.

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