I-ONE therapy brings together proven electromagnetic stimulation technology with a lightweight portable device.

REFERENCES


think long ahead to preserve
**Rational of use**

**Biophysical Chondroprotection: Mechanism of Action**

Activation of the A2A receptors by adenosine is the mechanism by which the body controls inflammatory phenomena.

Molecules with A2A agonist activity have shown to prevent articular cartilage degeneration when experimental septic arthritis is induced, thus these drugs are considered chondroprotectors.

In 2002, an in vitro study, with human neutrophils, showed that pulsed electromagnetic fields of defined intensity and physical characteristics (I-ONE therapy), demonstrated an adenosine agonist effect for A2A receptors. This observation suggests that I-ONE therapy might be used to control joint inflammation and ultimately protect articular cartilage.

**Cartilage Protection**

Severe joint inflammation following trauma, arthroscopic surgery or infection damage the articular cartilage.

Every effort should be made to protect cartilage from the catabolic effects of pro-inflammatory cytokines and to stimulate cartilage anabolic activities.

**Long Term Benefits**

I-ONE therapy has a long-term effect. Pre-clinical studies have shown that I-ONE therapy protects articular cartilage from the catabolic effects of pro-inflammatory cytokines. I-ONE therapy prevents cartilage degeneration, finally resulting in chondroprotection.

**Clinical benefit after arthroscopy**

I-ONE therapy: action after microfractures (Zorzi et al. KSSTA 2007)

- % Patients with complete recovery three years after the therapy
  - Without I-ONE therapy: 12.5%
  - With I-ONE therapy: 62.5%

I-ONE therapy: action after ACL reconstruction and meniscectomy (Benazzo et al. KSSTA 2008)

- % Patients with complete recovery three years after the therapy
  - With I-ONE therapy: 26%
  - Without I-ONE therapy: 75%

Antinflammatory drugs use

- Functional recovery
  - 2 months
  - 6 months

I-ONE therapy can be applied immediately after arthroscopic surgery, without side effects, to improve functional recovery, pain control, reduce use of anti-inflammatory drugs.

**I-ONE Therapy Provides Surgeons With:**

- A unique chondroprotection device that helps protecting cartilage from the catabolic effect of pro-inflammatory cytokines
- Faster recovery of their patients
- Improved patient satisfaction

**For Patients, Using I-ONE Therapy Means:**

- Pain control
- Joint swelling control
- Faster functional recovery
- Decreased use of anti-inflammatory drugs
- Light portable device, fully compatible with daily activities

**Indications for I-ONE Therapy**

<table>
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<th>As a preventive treatment</th>
<th>After Surgery</th>
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<tr>
<td>Early stages of osteoarthritis</td>
<td>Ligament reconstruction</td>
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<tr>
<td>Articular inflammation</td>
<td>Cartilage repair (ACT, subchondral bone microfractures, osteochondral grafting)</td>
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<tr>
<td>Bone marrow edema</td>
<td>Meniscectomy</td>
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Daily treatment time: four hours, treatment duration: 30-60 days