

## **Tennis elbow - Treatment**

Treatment lasts from 6 to 12 weeks depending on the duration of the ailments. It aims at reducing pain ailments, limb restoration and increasing muscle strength. In the first place, we need to cool the elbow, use analgesic and anti inflammatory drugs. They reduce pain but don't treat the cause. In addition, we use physiotherapy: ultrasounds, ionophoresis and massage. Also, the decrease of stress onto muscle attachment with properly put elastic bands is recommended. When it comes to drugs, we apply steroid multipoint injection with barbotage (multiple puncture) of the attachment, 0,5-1ml in a few punctures. Orthopaedists recommend temporary immobilization to reduce bearing and injections with anti inflammatory drugs. Nowadays the following are being administered:

- Explosive Shock Wave Therapy (ESWT) - a method used, among others, for transcutaneous lithotripsy.
- growth factors injections, eg. Recover System - Biomet, ACP - Arthrex system.
- mini invasive coblation - Topaz (Artrocare) with the use of an electrode generating radio wave energy.

The above methods stimulate the process of damaged tendon restoration, yet about 10% of cases require more excessive and invasive surgical procedures:

- arthroscopic - tissues affected with inflammatory changes are removed and then the healing of extensor muscles is stimulated.
- open, mini invasive - tissues affected with inflammatory changes are removed, the healing of the humeral bone with distal relocation of the extensor muscle attachment with anchors is stimulated.

One thing is certain: the treatment of the tennis elbow requires a lot of doctor's and therapist's precision and patient's consistency and patience.

### **FOR VERY INTERESTED - THE TREATMENT OF THE TENNIS ELBOW**

American Lexington Sports Medicine Centre specializing in rehabilitation of tennis players has come up with a recovery programme. This programme is based on a thesis that all tissues are responsive to therapy and rehabilitation. It consists of three phases:

1. acute phase - final healing of the damaged tissue occurs;
2. reparative phase - overstressed tissues and tissues with a biomechanical deficit are taken care of;
3. strengthening phase - patients are prepared to do professional sports again with reducing the risk of reinjury.

### 1 - ACUTE PHASE

#### We aim to:

- bring back the pain-free range of motion,
- stop muscle atrophy of the limb,
- gain neuromuscular control of the scapula in neutral position,
- reduce pain and inflammatory process,
- strengthen the remaining elements of the kinetic chain.

#### Range of motion:

**Dependent** – mobilization of the humeral joint, clavicle and the scapulo thoracic joint

- stretching the capsule by hand and transverse independent massage, pendulum exercises
- block exercises

**Back** – rotative movements, flexion/extension

#### Muscle atrophy / neuromuscular control

**Locally** – isometric exercises, control of the scapula, movements in a closed kinetic chains

**Distant** – open chain for intact joints (elbow, back), concentric/excentric

**Exercises** – aerobic/anaerobic

#### Pain and inflammation

Non steroid anti inflammatory drugs – about 3-4 days

Joint mobilization

Joint protection

In the end active and passive stretching exercises.

#### PROGRESS CRITERIA

Lack of swelling, 2<sup>nd</sup> pain level, about 75% of muscle strength, control of the scapula in neutral position, 75% spine flexibility

### 2 - REPARATIVE PHASE

#### We aim to:

- regain and improve muscle strength of the upper limb,
- improve neuromuscular control of the upper limb,
- normalize kinematics of the shoulder in a single movement plane,
- improve the active/passive range of motion,
- normalize the movements of the spine and hips.

#### Strengthening:

Dependent – improve the proprioceptive activity of scapula muscles and of the shoulder.

Independent single plane movements – isotonic concentric and excentric isokinetic exercises; isolated exercises of the rotator cuff; hip rotation; spine flexion/extension. Neuromuscular control.

Proprioceptive neuromuscular exercises.

Stress on strength pairs: scapula retraction/protraction.

Shoulder elevation/lowering.

Shoulder external/internal rotation.

Spine/corpus rotation.

### **Arthrokinematics**

Joint mobilization, kinetic chain movements pattern.

### **PROGRESS CRITERIA**

Full pain-free range of motion of the scapulo thoracic joint, almost full pain free movement in the shoulder, normalization of the scapula stabilization, lateral asymmetry less than 0.5cm, normal spine movement, 75% strength of the rotator cuff muscles, physiological throwing movements.

### **3 - STRENGTHENING PHASE**

**We aim to:**

- improve strength and endurance of the upper limb,
- improve physiological multi plane neuromuscular control.

[Tennis elbow \(find out more\)](#)

## **Ulnar nerve groove syndrome - Treatment**

In the first phase of treatment it is recommended to avoid exercises and movements that require flexion of the elbow joint. In early stages patients need to avoid excessive elbow flexion and outer pressure (compression bands, misfitted stabilizers or cushions, etc). Some scientists recommend neuromuscular stimulation (PNMS) in order to regain limb function in cases of muscle atrophy after the compression syndrome. Also, in order to avoid elbow flexion, shoulder orthoses are used. Should ailments increase, surgical treatment needs to be considered. There are various kinds of surgical procedures during which doctors need to pay particular attention to avoid vascular damage to the ulnar nerve.

Surgical procedures are divided into:

1. opening of the elbow canal with nerve decompression
2. neurolysis
3. anterior nerve transposition
4. medial epicondylectomy

[Ulnar nerve groove syndrome \(find out more\)](#)

## **Ulnar cannal syndrome (Guyon's canal) - Treatment**

The Guyon's canal is treated by wrist immobilization, physiotherapy and analgesic drugs. This treatment however is often ineffective as it brings about short-term relief. Surgical nerve decompression is the most effective method of treatment.

[Ulnar cannal syndrome \(find out more\)](#)

## **Ulnar bursitis - Treatment**

Ulnar bursitis is an inflammatory process of fluid space that prevents friction and crumpling of the protruding bones area, eg. of the ulner bursa. This inflammation should be 'muffled'. We need to avoid the compression on the sick area and joint flexion. Patients should compress the elbow area with elastic bands and then see an orthopaedist. Basic treatment includes anti inflammatory drugs and physiotherapy. If swelling holds, doctor punctures the ulnar bursa and removes fluid, often injects a corticosteroid anti inflammatory drug. Should this treatment be ineffective, the ulnar bursa can be removed during either an open surgery or an arthroscopic procedure.

[Ulnar bursitis \(find out more\)](#)

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