

Your Opportunity to  
Return to Activity  
Faster!

# Natural Help for Injuries

ACP or ACP Tendo Therapy



## Musculoskeletal Injuries



Our musculoskeletal system consists of a complex composition of different structures that allow us to move purposefully. In addition to the skeletal musculature, tendons play an important role as the connecting element between muscles and the bony skeleton. As force transmitters, they make purposeful movements possible. Ligaments, in turn, serve to strengthen and secure our joints.

All of these structures are subjected to enormous mechanical stresses on a daily basis, which often result in injuries. The main causes are permanent unequal load distribution, overloading and external violent impact, such as wrong movements and accidents.

## Where and How Do Injuries Occur?

### **Muscles:**

Jerky movements, excessive stress and sudden muscle tension often lead to muscle injuries and tears.

### **Ligaments:**

Falls, impact and compression often cause injuries to ligaments and the joint capsule as well as ligament straining and stretching.

### **Often Affected:**

- Ankle, knee<sup>1</sup> and wrist

### **Tendons:**

Since tendons consist mainly of collagen fibers, they can tear during jerky, fast movements. Prolonged unilateral or excessive stress can also cause micro-injuries with persistent pain and functional impairment.

### **Often Affected:**

- Tennis and golfer elbow<sup>2,3</sup>
- Achilles tendon and calcaneal spur<sup>4,5</sup>
- Shoulder and biceps tendon<sup>6</sup>
- Jumper's knee<sup>7</sup>

## How Does One Recognize These Injuries?

- Swelling and pain in the affected area
- Loss of function
- Limited mobility of the joint
- Feeling of instability in the affected joint

## Natural Therapy for Injuries

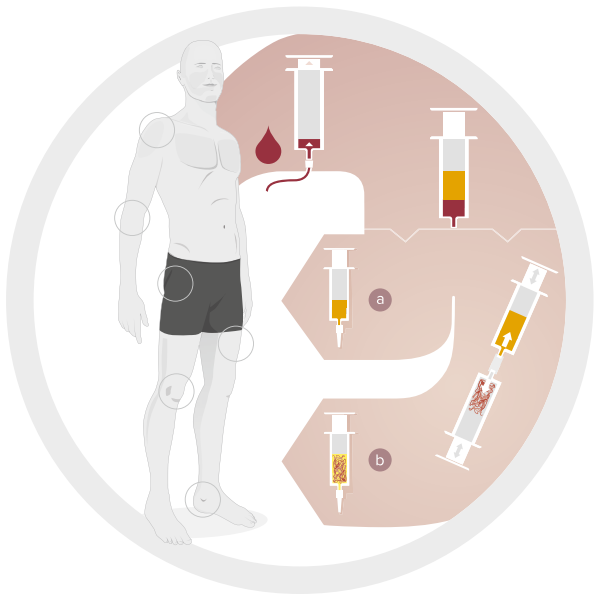
Complex and well-regulated natural processes take place in the body during recovery. Special proteins, the growth factors, are involved, which come from small blood components, the platelets. Platelets circulate inactive in the bloodstream and become activated when injuries occur. They collect at the injured site and release these proteins, which in turn promote the healing process.<sup>8</sup>

### **ACP Therapy**

ACP therapy is based on this principle. The body's self-healing powers are utilized by obtaining high concentrations of these special proteins<sup>9</sup> and then injecting them. The form and frequency of administration of these proteins may vary depending on the type of injury. Together with your physician you will design a personalized treatment plan that may schedule several injections in weekly intervals.

### **ACP Tendo Therapy**

For structural injuries such as tendon tears, these special proteins can be mixed with an innovative collagen carrier material and injected into or at the injured site (ACP Tendo). The collagen is degraded within 4 weeks but in the meantime serves as a scaffold, so the cells that close the injury can grow in better. In addition, the collagen serves as a protein deposit. In this way, the healing process can be optimally supported. ACP Tendo therapy usually only involves one injection.



### The Treatment Process

1. Blood is drawn from a vein in the arm
2. Separation process to obtain the body's active substances (proteins) in concentrated form
3. Administration
  - a ACP:  
These substances are injected into the affected area
  - b ACP Tendo:  
Mixing of ACP and collagen;  
subsequent injection into the affected region

### Benefits of the Treatment

- Outpatient procedure
- Fast process (< 30 min.)
- Endogenous biological agents with good tolerability
- Personalized treatment interval
- Customized to your needs

# Studies

1. Koch M et al: Intra-ligamentary autologous conditioned plasma and healing response to treat partial ACL ruptures; Archives of Orthopaedic and Trauma Surgery, 2017; 138(5): 675 - 683
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3. Farkash U et al: First clinical experience with a new injectable recombinant human collagen scaffold combined with autologous platelet-rich plasma for the treatment of lateral epicondylar tendinopathy (tennis elbow). J Shoulder Elbow Surg, 2018, Vol 28(3):503-509
4. Chew KT et al: Comparison of autologous conditioned plasma injection, extracorporeal shockwave therapy, and conventional treatment for plantar fasciitis: a randomized trial. PM&R. 2013; 5(12): 1 035 - 43
5. Boesen AP et al: Effect of High-Volume Injection, Platelet-Rich Plasma, and Sham Treatment in Chronic Midportion Achilles Tendinopathy; [HYPERLINK \l „Am J Sports Med. 2017; 45\(9\): 2 034 - 2 043](#)
6. von Wehren L et al: The effect of subacromial injections of autologous conditioned plasma versus cortisone for the treatment of symptomatic partial rotator cuff tears; Knee Surg Sports Traumatol Arthrosc 2016; 24(12): 3 787 - 3 792

7. Zayni R et al: Platelet-rich plasma as a treatment for chronic patellar tendinopathy: comparison of a single versus two consecutive injections. *Muscles Ligaments Tendons Journal*. 2015; 5(2): 92 - 8
8. Mazzocca A et al: The positive effects of different platelet-rich plasma methods on human muscle, bone, and tendon cells. *The American Journal of Sports Medicine*. 2012; 40(8): 1 742 - 9
9. Mazzocca A et al: Platelet-rich plasma differs according to preparation method and human variability. *Journal of Bone & Joint Surgery*. 2012; 94(4): 308 - 316

For information on the studies please contact your physician.

## Do You Have Any Questions?

Your Physician Will Be Happy to Provide Further Information.



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