THE ELBOW JOINT

At a glance

A whole series of afflictions can be attributed to the elbow joint; diagnosis and especially therapy often take a long time.

The following paragraphs will describe two of the most common and very typical clinical pictures of the elbow joint. Our goal is to familiarize you with the essential definitions associated with this joint so that they can serve as aids for a deeper conversation with your physician or as a way to learn the basics about this topic.

1. Introduction

Narrow anatomical conditions as well heavy and constant use of one’s arms in everyday (occupational) life make the elbow joint especially prone to injury and disease. The elbow’s range of movement is often restricted by fusions and adhesions, especially following bone fractures and surgical procedures. One can expect cartilage damage and accompanying osteoarthritis.

2. Anatomy and physiology

The elbow joint is a hinge joint – in other words, it can be bent and stretched. Since this movement takes place between the upper arm (humerus) and the cubitus (ulna), we speak of the so-called humeral-ulnar joint.

However, the elbow joint is also a rotary joint that allows the lower arm to turn outward (supination) and inward (pronation); this movement takes place in the joint located between the ulna and the radius. There is also a joint between the humerus and radius. Here, a ring-like ligament holds the small radial shaft at the ulna, allowing rotation.
3. Tennis elbow (lateral epicondylitis)

Incorrect and excessive straining of the joint, especially while playing tennis, often can cause tennis elbow. However, many other everyday strains and activities (such as piano playing, typing, screwdriver use, etc.), overstrain the muscles of the forearm and their tendinous points of attachment to the bone, causing pain. Age-related changes of the tendon tissue are another cause.

Pain starts on the external side of the elbow, exactly above the lateral upper arm knuckle (the lateral/radial epicondyle), where the muscles are directly attached to the bone.

The affected person feels intense and stabbing pain, especially when grasping something or shaking hands. The clinical examination may reveal swelling sensitive to pressure. An X-ray should be taken in order to rule out other changes in the joint such as osteoarthritis. Even a neurological examination may be a good idea to find out whether the pain comes from (and therefore radiates from) the cervical spine.

Tennis elbow is initially treated without surgery with a success rate of up to 90%. Initially, the patient is ordered to rest and avoid activities that trigger pain. In many cases, local application of ice and compression bandages will reduce or relieve pain.

Elbow supports, acupuncture and physical therapy measures help alleviate pain.

In addition, the area can be treated with cortisone injections or a local painkiller. Elbow bandages or lower arm splints that encompass the wrist can also alleviate pain, as well as a whole range of physical therapy measures. The use of ultrasound or shock waves also helps.

If all measures described here are not successful, surgery to cut or notch the affected tendon is the only remaining alternative.

4. Golfer’s elbow (medial epicondylitis, pitcher’s elbow)

1. Cause(s)

Much like tennis elbow, patients develop golfer’s elbow due to chronic overuse of the muscles that bend the hand joint and the fingers, causing pain at the inside of the elbow.

2. Therapy essentials

Same as for tennis elbow.