

# Hand and Wrist Pain

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*By Dr. Derek Conte*

The human hand and wrist are probably the most sophisticated and articulate areas of the body (after the lips and the tongue), allowing us to build or manipulate almost anything from a piece of clay to a length of lumber to a slab of granite. Truly, if we didn't have hands, civilization would not exist. Our reliance on them is great and because of this, pain and injury to the hand and wrist are common.

The human hand and wrist are a complicated arrangement of 27 bones with several different types of joints such as '*hinge*', '*saddle*' and '*gliding*' joints, each with a characteristic movement. Ligaments connect one bone to the next, maintaining the proper tension and spatial relationships between the bones. Tendons snake throughout the hand and wrist anchoring muscles on either side to bones across a joint so when the muscle contracts, the angle of the bones change and meaningful work like grasping or typing can be done. '*Synovial sheaths*' surround the tendons and make their movement slippery and smooth. '*Bursae*' are soft, balloon-like sacs located at the edges of bones under certain tendons sliding around curves to prevent the irritation known as "bursitis". Other important structures such as nerves, arteries, veins and lymphatics – which usually run parallel to each other- serve to feed, cleanse, protect and sense stimulus in the area. A type of connective tissue called '*fascia*' binds things together, guides the tendons' path, gives shape to and protects the wrist and hand.

Because of this anatomical complexity, things can go wrong for many reasons. Numbness or tingling in the fingers can be caused by a displaced bone or a tight muscle, called entrapment, in the forearm or the chest, known as thoracic outlet syndrome. Pain at the base of the thumb where the wrist begins can be caused by a tight muscle in the forearm. Cold hands or fingers can be caused for the same reasons. Lumps in the wrist or hand may be cysts made of water, fat or nerve material, none usually serious in nature. Enlarged joints or sharp, unchanging angles of the fingers may be an indication of rheumatoid or osteoarthritis. If you have or suspect a problem, get a good examination. Your chiropractor should be able to perform a series of orthopedic tests to clearly delineate the problem.

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