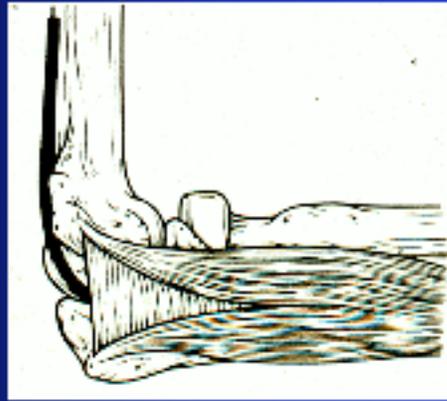
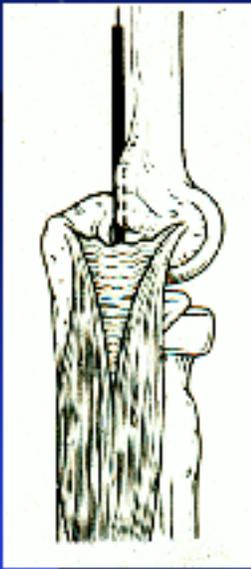


Ulnar Nerve Entrapment

The ulnar nerve supplies many of the muscles that move the fingers, particularly the little and ring fingers. Sensation from the little finger, ring finger, and the adjacent portion of the palm is also transmitted along the ulnar nerve. The ulnar nerve can be compressed at the elbow by a band of tissue that overlies the nerve as it passes into the forearm. Compression is increased when the elbow is kept bent during sleep or daily activities. Forceful gripping and direct pressure on the elbows from leaning on firm surfaces can also compress the ulnar nerve. To avoid this form of compression we recommend the following:

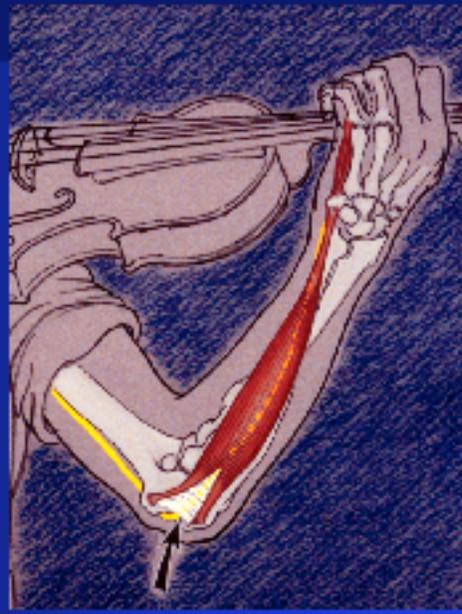
1. Wear an elbow extension splint at night. This will be made to fit your arm and should be adjusted by the therapist if the fit is not comfortable.
2. Avoid leaning on your elbows or keeping your elbows bent.
3. While writing or typing, try to keep your elbows nearly straight and do not rest your elbows on a surface.
4. While driving, avoid resting your left arm on the window or door handle. Sit back from the wheel so that your elbows are straight. Don't over-grip the steering wheel. During long drives, periodically drop one hand from the wheel and let that arm rest in your lap or at your side.
5. Avoid holding the telephone with one hand for a long time. Use a shoulder support, an earbud and microphone, or a blue tooth earpiece to talk without keeping your elbow bent.
6. Keep your elbows straight while reading. This may make it difficult to read in bed.
7. Play your instrument in small divided time segments, never exceeding 25 minutes without a 5-minute break. Straighten out your arm when possible during orchestra rehearsals or performances, especially when you are not playing.
8. Be careful to maintain good posture at all times and particularly when you are playing your instrument.
9. When sitting in an armchair, rest your hands in your lap. If you must rest your arms on the chair, keep your palms up. When your palms are down, the ulnar nerve presses against the arm of the chair.
10. Avoid carrying heavy objects with the affected arm. Use shoulder straps to carry instrument cases or light luggage.

Elbow flexion causes ulnar nerve entrapment.

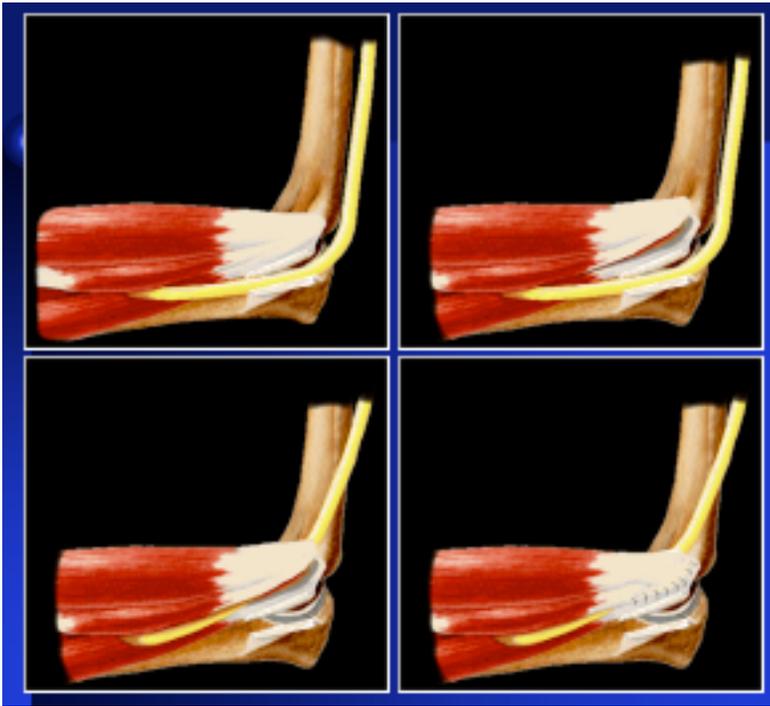


A small piece of connective tissue joins the two heads of muscle as they attach to different bones at the elbow. When the elbow is straight, the connective tissue is relaxed (left). When the elbow is bent, the connective tissue tightens, compressing the ulnar nerve in susceptible individuals. In some, the ulnar nerve also moves out of its groove when the elbow bends, causing an additional source of pressure as the nerve rides over the bony groove.

Ulnar Nerve Entrapment in Violinists



In many musicians, the bent position of the elbow is an inevitable part of holding the instrument. The connective tissue over the ulnar nerve tightens further when the little finger stretches away from the ring finger.



One common surgical procedure is shown above. The ulnar nerve is freed up and the overlying connective tissue is cut (top left). The muscle is then detached from the elbow (top right) and the ulnar nerve is moved from the back of the elbow to the front, resting underneath the muscle (bottom left). The muscle is then reattached to the bone (bottom right), securing the ulnar nerve under the muscle and on the front side of the elbow. For many, the only procedure necessary is that shown in the top left panel, where the connective tissue overlying the ulnar nerve is cut, but the nerve is not moved.

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