

LATERAL EPICONDYLE

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DODGY ELBOWS

CLIMBING DOCTOR JULIAN SAUNDERS' SURE-FIRE CURE FOR CLIMBING'S MOST ANNOYING AILMENT

BY JULIAN SAUNDERS

MORE RECALCITRANT THAN

Castro, though less charismatic, elbow pain is the most common and debilitating of chronic climbing injuries. It might be called golfer's or tennis elbow, but it is climbers (and professional knitters) who are most likely to suffer the travails of blown-out elbows.

How many climbers do you know who have had elbow pain for long periods? They trawl desperately through web forums into the wee hours of the morning: Someone must know something.

In fact, elbow pain is often easily explained. The bony lump on the inside of your elbow is called your medial epicondyle (Latin for small lump on inside of elbow), and the one on the outside is called your lateral epicondyle (Latin for small lump on outside of elbow). You get golfer's elbow on the inside lump (even if you don't play golf) and tennis elbow on the outside lump. I've never seen a golfer with golfer's elbow and only one person who got tennis elbow from playing tennis. Go figure!

The vast majority of pathologies that affect your elbow fall into two categories—tendonitis and tendonosis. Tendonitis is an inflammatory condition arising from acute aggravation, e.g., gardening or scrubbing holds

for a number of hours when you are not accustomed to it. Tendonosis is a degeneration of the tendon cell itself, arising from microtrauma inflicted by a muscle that is too strong. Tendonitis may be preceded by tendonitis—one morphing into the other—or it can occur separately. Unfortunately, most get diagnosed as tendonitis when they are actually tendonosis. The upshot: your elbow broods away like the bed-buddy you dropped so you could climb more in the first place.

For climbers, the cascade to injury usually starts with chronic overload. The classic scenario is a sudden increase in training. The muscle, having a greater blood supply, is able to increase its strength faster than the tendon, leaving the tendon comparatively weak. Further use leads to tendon damage and degeneration.

SYMPOMTS OF GOLFER'S AND TENNIS ELBOW

This is only a guide and self-diagnosis is always tricky at best. That said, here are some basics. Tendonitis elicits a sharp pain, felt around the medial or lateral epicondyle. It tends to worsen with activity to the point that you may have to stop the session. Left to its natural course (without aggravating activity), it should resolve in a few weeks. Tendonosis, on the other hand, is a dull ache (same place) that is felt at the start of climbing. As you warm up, the pain eases and, combined with a football-sized pill of denial, you are lulled into thinking all will

be fine: week after week after week. Alas, as you cool down, the pain of tendonosis is inexorable, returning like the rash you caught as a rampant teenager.

Unfortunately, diagnostics are rarely that simple, and the two conditions may “bunk up,” causing maximum confusion for the practitioner and exquisite pain synergism for you. Other symptoms may occur on a regular basis, though these vary considerably. For golfer's elbow it may be washing your hair, or other mundane activities. For tennis elbow—using your mouse, undoing jar lids, blah blah blah. The pain associated with these tends to be short and sharp. Note the frequency and severity of the symptoms; they will be valuable markers of how your recovery is progressing.

LOGISTICS

The two major muscles that flex your fingers and the two muscles that flex your wrist (along with quite a few more) originate from a common tendon, which attaches to your medial epicondyle. Each muscle loads the tendon quite differently. The wrist flexor on the little-finger side, called flexor carpi ulnaris (FCU), is usually the pesky one. For the avid climber this has serious ramifications.

Injury often has a lot to do with technique, and elbows are no exception. There are marked biomechanical differences in how the forearm muscles respond when crimping and open-handing. The load on the FCU when you are crimping is far greater than when slapping up slopers.

TRADING IN OPTIONS

TREATMENT ACCORDING TO DR. J



ELBOW BRACES ARE CRAP In fact, they can cause harm. They reduce pain by [a] offsetting load that would otherwise pass through the offending tendon tissue and [b] warming up the tissue faster, thereby reducing the pain when you start your session. Do you still have the problem? Of course you do. Braces are a big Band-Aid. Additionally, the neighboring tissue often becomes afflicted.

STRAPPING TAPE Though an ineffective treatment, tape looks cooler than a brace. Useless.

ULTRASOUND If you go to a physical therapist who uses ultrasound on this pathology, it is because the person either doesn't know what it is, doesn't care what it is, or thinks it is something else (for which ultrasound probably does nothing).

ANTI-INFLAMMATORY DRUGS

[CORTISONE AND NON-STEROIDAL] Tendonosis is not inflammatory, so why use anti-inflammatory drugs? As for tendonitis, these drugs can be effective. However, if it is pure tendonitis then it will go away of its own volition if you just stop pissing it off.

BLOOD (AUTOLOGOUS) INJECTIONS This is the jailbait of medical interventions ... young, looks good and is low maintenance. Unfortunately no one is sure if it works.

PROLOTHERAPY A lot of web pages espouse the benefits of injecting a sugar/water solution into the tendon (supposedly to increase blood perfusion), with very little peer-reviewed science. I would try blood injections before I tried this.

CREAMS Tiger Balm and all subspecies are skin irritants that increase blood flow to an area, making it all warm and fuzzy. More blood is arguably a good thing. Does it make a difference? In this case, probably not.

MAGNETS Some people swear they had overnight recovery, while others just attracted a lot of scrap metal.

ACUPUNCTURE Dunno. 2,000 years of refinement is in your favor.

FISH OIL OR OTHER NATURAL/NUTRITIONAL THERAPIES Expensive urine is all the rage in the last decade. Supplements undoubtedly have a place in many conditions. Are they a cure? No. The fashionable Omega-3 rich fish oils, and the chic new kid on the block, glucosamine, may be of assistance. But it is theoretical only. Would I take them? Sure.

SURGERY Even the surgeons don't recommend this one.

Translation for the afflicted (or soon to be)—decrease the amount you crimp. A lot!

Two groups of people crimp: beginners—because it feels stronger—and those who never grew out of it. Two groups of people crimp significantly less: those who naturally evolved, and those who injured themselves crimping.

Some very specific training can help strengthen the affected tendon (see sidebar). Besides

reducing the propensity for injury, climbing open-handed will automatically give you greater endurance (that's another article on its own). Thus the benefit to your climbing career will be twofold.

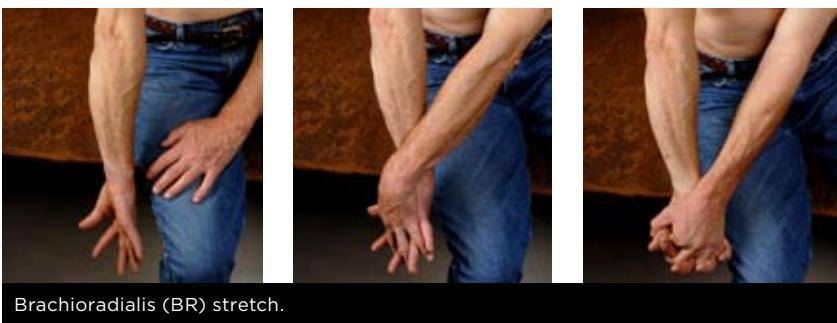
Tightness in the upper forearm, specifically the brachioradialis (BR) muscle (see illustration), can also be a concern. Pain that is dull in nature, annoying rather than debilitating, and is

MEDICINE

over the upper and outer aspect of your forearm, is usually a chronically strained BR. Get a friend (enemies are more effective ... up to a point) to give it a good old ironing out with their elbow. Better still, pay someone (massage therapist, roller, chiropractor) who knows how to do it; things that are free are usually worthless. Stretch your BR out a few

times a day (see the photos below that look like sadomasochistic ju-jitsu). Be careful not to let your elbow bend during the stretch. Hold for 25 seconds and repeat three times.

Other conditions afflicting the elbow are mostly rare and not worth mentioning. That said, they do exist and can be nasty. ... No, they can be extremely nasty. If



Brachioradialis (BR) stretch.

you are concerned, see a doctor, or see another one.

One hundred percent of climbers who have attended my clinic for manual therapy and monitoring, in conjunction with the exercise program, have recovered. I have, at times, e-mailed the program to grovelling overseas climbers. Of these, about 60 percent recover. The program needs to be individually tuned, predisposing physical factors corrected, and bad climbing habits dropped.

Fine-tuning the exercises is paramount. The angle of your wrist and elbow can dictate success or failure. If the exercises are not aggravating the condition (that is correct, you read "aggravating") while you are doing them, change the angle of your elbow. Somewhere between 90 and 135 degrees should make you purse your lips, narrow your eyes and mutter a familiar "Oooohhhh."

A good osteopath or physical therapist will be able to address any bio-malfunctions in your rig. Tightness in your shoulder, for instance, can lead to overload at your elbow.

Manual therapy involves *deeeeep* tissue massage from the medial epicondyle down through the muscle belly. It will make you screw your face up as if you just ate a lemon.

The campus board is an elbow-consuming, reptile-devouring device. Do it if you must. But when your elbows have had the life siphoned from them, get the rubber hose that respectable gyms keep behind the front counter, and beat yourself Fight Club style, all the way to the ER. ■

Dr. Julian Saunders is an Australian climber and osteopath specializing in climbing injuries.

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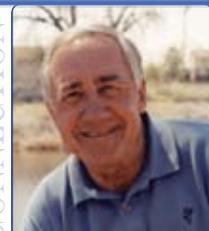
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THE PROGRAM ▶ Recovery usually takes several months. Most people have had the condition for years, so this is a small investment. Compliance with the regimen is essential.

Procure yourself a dumbbell. They tend to breed under beds, hibernate in closets, lie in wait for unsuspecting toes under reams of laundry, and gracefully age in the garage.



MEDIAL EPICONDYLOYSIS ▶ For medial epicondylitis, place your wrist, palm up, over the arm of a sofa, or better, the edge of a desk, with enough clearance for your hand to lower and not touch anything. Take the dumbbell and tilt it so that your little finger is slightly higher than your thumb, and your wrist is fully flexed. With your arm and shoulder relaxed, lower the weight as far as you can. This should take about five seconds. Relax your grip and, with the other hand, lift the weight back into position. *Do not use the hand you are exercising.* We

are interested in an eccentric load (a.k.a. negative contraction) only. This will stimulate the tendon to strengthen without putting too much duress on the muscle. How? The muscle is about 40-percent stronger when contracting eccentrically. Hence, it is not stimulated to strengthen to the same degree as the tendon. Because the tendon has a vastly smaller blood supply, gains in strength take longer.

Note that your thumb is on the same side of the bar as your fingers. Gripping the dumbbell in the usual manner with such a

heavy load can give you an overuse condition called DeQuervain's tendonitis, which causes swelling on the back of your forearm, just above your wrist.

Most male climbers use between 15 and 25 pounds, depending on size and strength. This is not a competition, so park your ego in the garage. The best climbers don't necessarily lift the heaviest weight. The only important factor is that you are tired at the end of 10 repetitions. Do three sets in the morning and three sets at night. Take two days off per week.



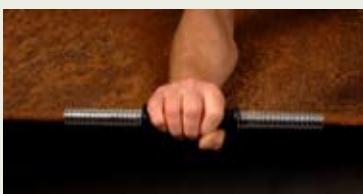
MEDIAL EPICONDYLOYSIS ▶ There is another brand of the same condition. Instead of an affected FCU, the culprit is pronator teres, the muscle that turns your forearm so the palm faces down. If you are shaking somebody's hand, try to turn your hand palm down while they resist. Try this with



your elbow at 90 and 150 degrees. Resistance of this motion will often produce a sharp pain. With your arm on the desk and weight only on the top end of the dumbbell, lower it from vertical, going no further than horizontal. With the other hand, lift it back into position. Do not use the hand you are exercising. This exercise is more sensitive to elbow angle so be sure to refine the position for maximum aggravation. For both exercises, you will need to refine the position regularly, though it will probably not change too much. The resistance can be altered by your hand position on the dumbbell; higher up, less resistance. Again, you want to be fatigued at the end of each set.

LATERAL EPICONDYLOYSIS ▶ This is the same as for the FCU variety, except your palm faces down during the exercises, and you can grip the dumbbell with your thumb on the opposing side of the bar. This condition is not really a climbing injury.

It may be aggravated slightly by climbing, usually pinching, but it is primarily a computer and mouse injury. I see one of these for every 20 cases of medial tendonitis, and they are almost exclusively victims of technology.



CONCLUSION ▶ After the evening exercises, ice the elbow for a few minutes a few times. There is no evidence that any specific ice protocol works better than another, so please yourself. Every study I have ever read said sex was good, so I assume it to be beneficial for this injury as well.

If you have had tendonitis once, it typically means you have a predisposition for the condition. Doing the exercises two or three times a week should keep it at bay. If you feel it returning, up the frequency.



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