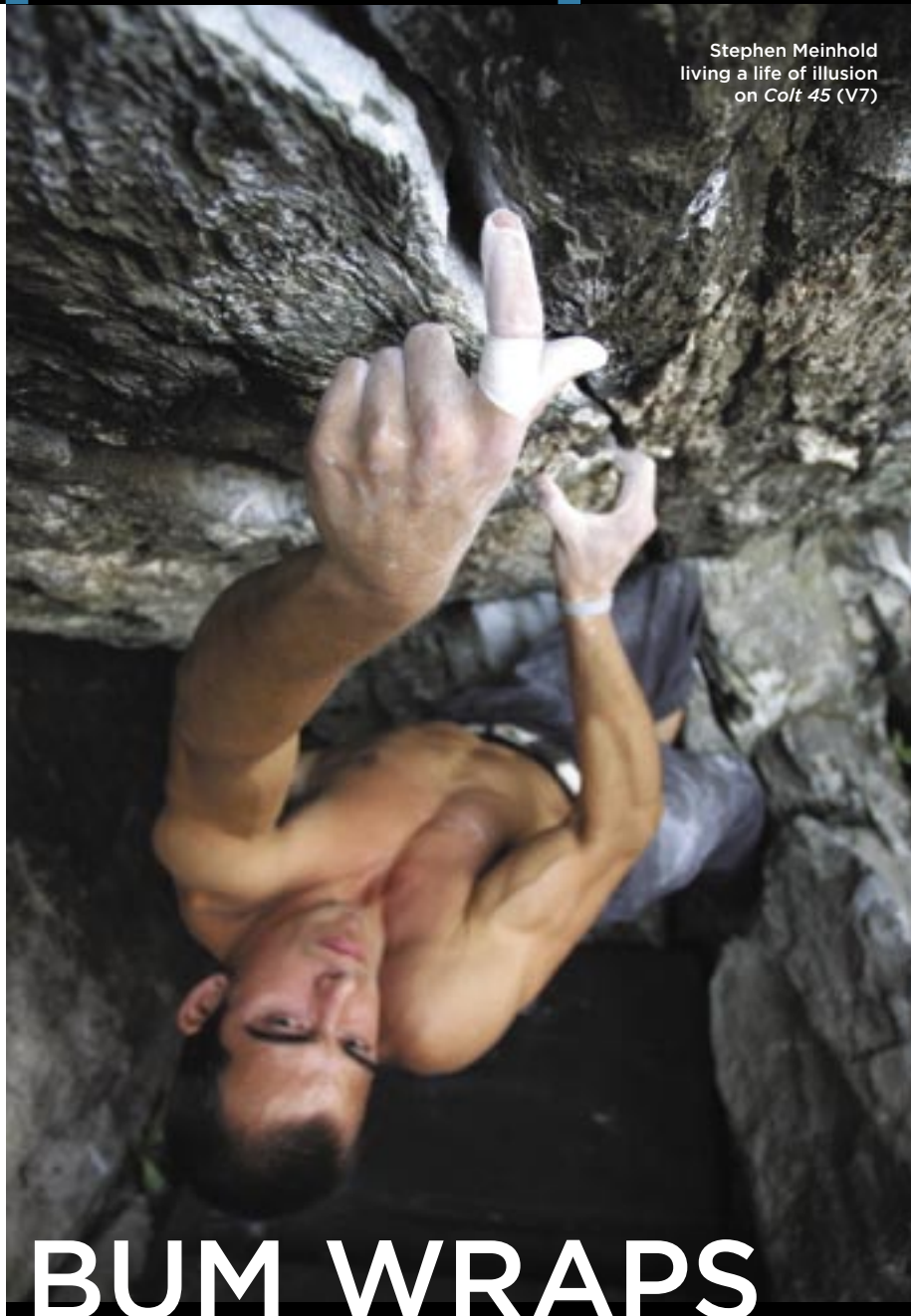


Stephen Meinhold  
living a life of illusion  
on *Colt 45* (V7)



## BUM WRAPS

### THE TRUTH ABOUT TAPING

**FINGER PULLEYS ARE EXTREMELY STRONG** in monkeys because, in their current state of evolution, they are designed to climb. We, however, have evolved away from the trees. But either no one has noticed, or we are in denial. ¶ Finger injuries are the most common malady suffered by rock climbers. Of these, the majority involves damage to what is called the pulley apparatus, a series of five annular pulley bands coded A1 to A5. These pulleys are distributed across the length of your finger, with A1 just inside the palm and A5 at the end, and they hold the tendon close to the bone.

Although the pulley apparatus is much stronger in climbers than in sedentary individuals, the stresses placed on it continually approach the maximum possible load. Hence, they regularly tear or snap, allowing the tendon to “bowstring” freely down the front of the finger. I have seen a few cases where A2, A3 and A4 have snapped simultaneously. Pop! Not a pretty noise and not a pretty sight.

If you are a climber with a sore finger, that’s a bummer. But chances are it is a strained pulley and you will recover. Even those who rupture multiple pulleys can return to their previous honed and buffed states. One of my patients popped A2, A3 and A4, and is now back to bouldering V13s.

Most often, climbers injure the ring and middle fingers. A noise like a snapping twig at the time of injury, along with palpable bowstringing of the tendon and acute tenderness, will indicate a pulley rupture. If there is no noise, it is most likely a strain or mild tear. The pulleys, especially A3, can be quite plastic and often will not rupture under load.

You may not even notice when an injury occurs and only experience tenderness after a bouldering or training session. The key to dodging injury is avoidance. If a finger hurts, stop! Or change your training habits such that you experience no pain in the tweaked pulley.

Take a quick look around the gym, or crimp-plexes such as Hueco Tanks, and you’ll likely see a plethora of taped digits. Mostly, the tape you see is like marginal gear: placebo. Taping can, however, be considerably more effective.

**WHY TAPE?** Taping to strengthen an injured pulley, and hence continue to climb, is an exercise in futility. It seems obvious, but you would be stunned at the delusional capacity of an injured climber. If you tape to shore up an injured finger you might as well offer yourself to the God of Injuries and hurl yourself into the Volcano of Degeneration, for you will surely subject yourself to a progressively worsening condition.

There are only two reasons to tape a finger: first, to limit potentially damaging finger motion; and second, to remind yourself that you have an injury. Don’t underestimate the latter as a rehabilitation tool.

Injury recovery is about letting an acute injury settle and stabilize, avoiding aggravating activity during healing, and then regaining the tissue’s original strength.

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Photo: Major Bryant

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**EFFECTIVE TAPING:** Wrap the middle knuckle to reduce motion and protect A2 and A3 strains.

Immediately following an injury, you may facilitate healing by taping the finger while you are not climbing. Don't restrict blood flow, and, depending on the severity of the injury, don't tape for more than a week.

**HOW TO TAPE** Tape does not replace your pulleys, nor does it supplement their strength. I have seen rather intricate taping methods, "figure 8" around the joint being the most popular. Essentially these techniques are a waste of tape, as they are attempting to do the job of the injured pulley system while maintaining range of movement. For tape to work like a pulley, it has to be wrapped so tightly it cuts off circulation, causing your finger to die and fall off.

Realistically, taping can only be useful for two of the many varieties of climbing-related finger injuries: trauma to the A2 and A3 pulleys. Even then, taping will not enable you to climb on an injured finger.

To be effective, correct taping of A2 and A3 pulleys must restrict the ability of the finger to bend. Think of tape as a splint. With your finger straight, tape from halfway between the first and second knuckle and finish halfway between the second and top knuckle, overlapping the tape 50 percent. With you finger taped in this way, you will quickly realize that your capacity to crimp is zero. Perfect.

This method works for both A2 and A3 injuries. If you cannot bend the middle joint, the A3 pulley is directly protected. In general, if you cannot bend this joint, then you won't bend the one below it, thereby indirectly protecting the A2 pulley. Even if the A3 is taped, there are times when you can still stress the A2, for instance, pulling

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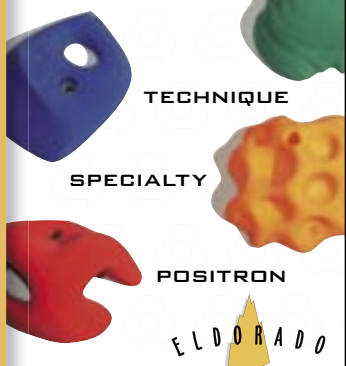
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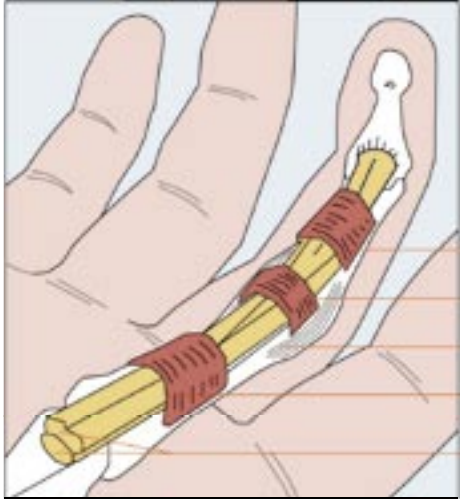
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THE THREE PULLEYS PREDOMINANTLY INVOLVED IN FINGER INJURIES.

- Annular pulley (4)
- Annular pulley (3)
- Collateral ligament
- Annular pulley (2)
- Flexor tendons

on a flat jug with the full length of your fingers. If your injury involves an A2 pulley, avoid this action.

Recovery is a process. Consider pain as an index of damage. If a movement is not painful, (including during your warm up) you are probably fine. Reduce the tightness of the tape slowly over a number of weeks depending on whether your finger hurts following each session.

**FINALLY...** Hard pulling interspersed with rest generates strength; overload without rest causes degeneration.

All climbers will be injured at some point—it is our nature to try too hard and climb too much. Your injury has two enemies. The first is your ego, which will tell you that you, too, can do 1-5-9 on the campus board just like Blah Blah. The second, ironically, is the same passion that drives you to climb in the first place: you won't want to back off and give the injury time to recover because you're obsessed, like the rest of us, with climbing.

You can open the gates to recovery by a combination of physical therapy (by you or a professional) and smart adaptation. Those who pig-headedly forge on are likely to become roadkill on the highway to levitation. Alter the way you train and climb, and above all, give your injuries every opportunity to heal.

**NOW FOR THE WAIVER** Without seeing your injury I cannot say what you have done to your poor finger. Any recommendations here assume that you will see a medical professional for diagnosis and explanation. Self-diagnosis is a minefield. Armed with a little

PROACTIVE RECOVERY

Aside from taping your finger, you could reasonably ask, "What else?" In short, anything you can do to increase blood flow is good for your injury. Over the years, many miracle cures, some with flashing lights and spinning dials have promised quick cures, but are they really any better than a bowl of hot water? Here's the low down on four miracle cures from the time tested to the new age.

**ULTRASOUND** has been used as the musculoskeletal panacea of the 20th century. It isn't. One thing is for sure: ultrasound is a great placebo, but most research shows it to have low or no effect on tendon injuries.

**LASER** is the next generation of electromodalities for the lazy practitioner. That said, it does seem to work better than a placebo. Not exactly a rousing approval. Laser therapy does appear quite effective for some forms of arthritis. With regard to pulley tears, however, your guess is as good as mine.

**MASSAGE** is tried and tested. Like the rest, however, it is but a single wall in the house of cards that you must negotiate to recover. Massage is an adjunct that may speed up recovery.

**STRETCHING** People with stiff finger joints are more likely to injure pulleys, probably due to uneven loading. Stretch your fingers regularly, such as while sitting at traffic lights.

I would rather roll across broken glass with an open fly than have surgery. Too many complications. Even climbers with multiple ruptures have a very good chance of returning to their previous levels and beyond simply by resting and, of course, the judicious use of tape.

information self-diagnosis can be a nuclear minefield.

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

STUART PARTRIDGE