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Climbing RMTs

by Ilana Horowitz '18

Earlier this year, I wrote about elite climber Marieta Akalski '11 and her career as a massage therapist. For me, rock climbing has been a central part of my life since I started 15 years ago, and it eventually helped feed my desire to change from a desk-based career (in urban planning and design) to one in massage therapy. I know a number of other RMTs who climb; with the growing popularity of the sport, I wanted to find out more about their experiences and offer a primer on climbing to our readers.

Ilana on the Niagara Escarpment

What is Rock Climbing?

Rocking climbing is scaling rock crags/cliffs (or indoor climbing walls) on predefined "routes," using harnesses, ropes, and gear attached to the wall (sport climbing) or gear placed in cracks or other features in the rock face (traditional climbing) to protect you from major falls. *Free Solo*, the blockbuster 2018 documentary film starring Alex Honnold, illustrates free soloing, a high-risk form of route climbing where there are no gear or ropes for safety, just the climber and the wall. His accomplishment was unprecedented – he completed 30 pitches (1km or over 335 storeys) in under four hours up El Capitan in Yosemite National Park on a route that typically takes climbers using ropes and gear *days* to achieve.

Bouldering is a form of rock climbing that involves ascending large boulders (or short, steep indoor walls) along predefined "problems" (short gymnastic routes), with thick mats ("crash pads") laid out on the ground and people spotting your falls, instead of ropes and gear.

Gary Siu '16 bouldering

Rocking climbing uses your entire body, involves constantly changing static and dynamic actions, and challenges muscles and joints in unusual positions.

Although it is an individual sport, rock climbing is a social activity, with a lot of time spent chatting with fellow climbers. It is also relatively egalitarian compared to other sports, with people of all backgrounds, shapes, sizes, and ages welcome and generally supported on their attempts to climb with yells of "You've got this!" "Nice!", "Allez!" coming from friends and strangers alike. Putting in your best effort, regardless of ability, is held in the highest esteem in climbing.

Growing Popularity

Climbing's popularity is increasing rapidly. Seven new gyms have opened in the Greater Toronto Area (GTA) in the last five years, bringing the total to 16 gyms. To give some context of the sport's history, the oldest rock climbing gym in Canada, Toronto's Joe Rockhead's, opened in 1990. In 2016, the IOC announced that rock climbing will be included in the 2020 Olympics. In the US, 2018 saw the highest rate of growth on record for new climbing gym openings (almost 12%), with 50 gyms opening in a single year.[1] Also In 2018, two films, *The Dawn Wall* and *Free Solo*, found mainstream success, further shining the spotlight on climbing. *Free Solo* won an Oscar for Best Documentary Feature, as well as seven Emmys.

Bouldering's popularity has particularly grown, with some new gyms being bouldering-only and many others expanding their bouldering areas. This is in part due to bouldering's relative accessibility compared to sport climbing. To do it indoors, one only needs to invest in a pair of climbing shoes and a chalk bag, and no partner is required. Outdoors, bouldering areas can be easier to get to than cliffs with sport routes. As well, climbers with children can keep an eye on their young ones if they are just bouldering a few metres off the ground, unencumbered by ropes, as opposed to climbing a route many storeys high, attached to the wall.

Common Climbing Injuries

The majority of climbing injuries are from overuse and many of them are familiar to other sports and activities, such as medial/lateral epicondylitis, glenohumeral labral (SLAP) tears, and rotator cuff impingement and tendinitis.

Injuries to the fingers are more specific to climbing due to the enormous amount of stress put on them. "Crimping," where climbers grip small thin holds called "crimps," can particularly contribute to acute and overuse injuries. Crimping is typically in a 'closed' configuration to maximize power:

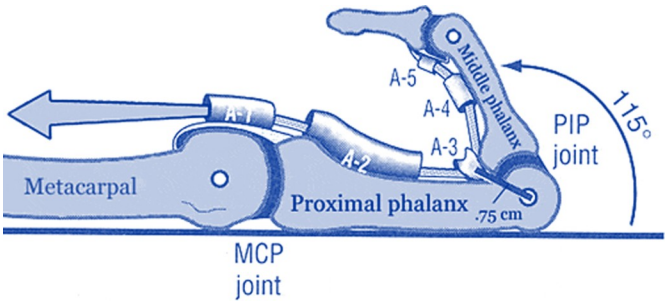
- metacarpal phalangeal (MCP) joints flexed
- proximal interphalangeal joint (PIPs) flexed, often more than 90°
- distal interphalangeal (DIPs) joints hyperextended

Closed crimping

The extra thick fingers that many climbers develop can sometimes be a symptom of capsulitis (swelling of the joint capsule), caused by crimping. Tenosynovitis, tendinitis and strains of the flexor digitorum profundus (FDP) and flexor digitorum superficialis (FDS) tendons and their sheaths are also common overuse finger injuries.

According to Dr. Volker Schöffl et. al. in the 2016 book on climbing injuries, *One Move Too Many*, the most common acute climbing injury is a pulley rupture. Like rings on a fishing rod that keep the line close to the pole as it flexes and bends, tendon sheaths are held close to the bone by ligaments called "pulleys." A closed crimp position puts all the pulleys under high tension and friction, with the greatest amount of stress on the Annular 2 pulley (A2) – up to 3-4 times the amount of load compared to the fingertip. The more flexed the proximal interphalangeal (PIP) joint, the greater force placed on the A2 pulley, which is the most common pulley to be damaged by micro-tearing or rupture.

1 Gyms and Trends 2018, *Climbing Business Journal*, April 29, 2019



The most common injury in bouldering is an ankle sprain, followed by knee injuries, as a technique called “heel hooking” (the heel, rather than the toes, is applied to a foothold or edge) stretches and loosens the anterior cruciate ligament (ACL) and regular down jumping to the mats causes multiple minor injuries to the knee joint over time.

Christy Mader heel hooking on a sport climbing route

At the Canadian Climbing Medicine Symposium I attended in Squamish, British Columbia this August, there was much discussion about epiphyseal plate injuries, typically found in the PIP joint of the middle finger of young climbers. These injuries are rapidly growing more common — epiphyseal cartilage is much weaker than its surrounding structures and is weakest during puberty. Dr. Isabelle Schöffl suggests that if a child who climbs regularly presents with finger pain, there is a 90% chance there is an injury to the growth plate, mostly likely due to crimping.

Dr. Herb von Schroeder (a Hand and Wrist Surgeon at the University of Toronto) presented a wide variety of wrist injuries that climbers may acquire. He identified the midcarpal joint as the most vulnerable part of the wrist due to its inherent instability, particularly in younger climbers. In addition to climbers, he sees many RMTs in his practice with repetitive strain injuries from being in wrist extension for lengthy periods. More specifically, these injuries include the triangular fibrocartilage complex (TFCC — a load-bearing structure between the lunate, triquetrum and ulnar head that is a stabilizer for the ulnar aspect of the wrist) and other tissues on the ulnar side of the wrist. He agreed that climbing can help RMTs with wrist injury prevention and rehabilitation by working opposing muscle groups.

With climbing now a mainstream sport, and bouldering's growing popularity, more inexperienced climbers are getting injured, particularly when they head outdoors without proper training and sufficient knowledge of safety protocols. Just this past August, for example, a woman fractured her vertebrae falling off a boulder problem in a Toronto area gym. RMTs can expect to see more climbers in their practice who have had both minor and significant climbing injuries.

RMT Perspectives

I contacted nine other RMTs who climb to hear their stories. Two are also instructors at S-C, seven are S-C alumni, and six were climbers before they became RMTs. Most climb both indoors and outdoors, all do sport climbing, five also boulder, and four do traditional climbing as well. Their climbing experience ranges from several months to over 20 years.

Climbing is important to these RMTs. Marie Schmitt '15 has been climbing for seven years and is now based in Canada's climbing mecca, Squamish. Like me, she met her partner through climbing, and it "will always be an essential part of our relationship." For Andy Leung '17, climbing is paramount. He began climbing and route-setting eight years ago, and recently put his massage registration on hold to be a full-time route-setter for a new climbing gym in Cincinnati. Although she's only been climbing since this February, Monica Noy '03, instructor at S-C, says it's "pretty important." She got the necessary gear and established a training schedule right away to fit it into her life.

Andy Leung

Recurring themes related to physical, mental, and social benefits emerge when RMTs are asked about what attracts them to climbing. Sahra Featherstone '16 loves the sport because "there is always something new to learn" and she enjoys "challenging her mind and body." Tara Norton '98, the "Ultra Woman" who Bruce McKinnon '90 wrote about in the February FingerPrint, also climbs. She notes that since stopping racing as a professional triathalete, climbing has been a "new and exciting sport" for her to learn and is a "good mental and physical challenge" that is also a "social event" which helps her "stay stronger without the monotony of lifting weights." Christy Mader, an RMT and climbing coach based in Victoria, BC, loves "the problem-solving aspect of climbing, both the mental and physical pieces." Sorin Darie '16, instructor at S-C, started climbing at the same time as studying massage therapy and feels that the "physical, mental and social components" make a "wonderful mix, as it really challenges you to develop all sorts of skill sets." Marie Schmitt lists "problem-solving, [spending time in] the outdoors, and the wide array of movements" as climbing's allure.

How does climbing inform massage therapy practice and vice versa? Jeremy Bissonette, an RMT practicing in Kitchener and climber of 22 years, says that climbing has given him "strong hands and back" and "a better understanding of the body for injury prevention, recovery and training." About 40% of Christy Mader's practice involves treating climbers. She feels that understanding the sport and "knowing how to rehab an injury makes all the difference in recovery time and return to sport."

Sahra Featherstone, who found that climbing has helped with her chronic pain, notes that climbing makes it possible to have a physically demanding career in massage therapy by keeping her strong and conditioned. She's also been doing personal training sessions at the climbing gym "for general fitness and also specific to my climbing goals, which have not only helped me achieve my own goals while avoiding injury, but added valuable knowledge and insight into my massage therapy practice." Strength from climbing has "lessened the sense of wear/tear on my hands and forearms when I treat" and "having general anatomical knowledge and integrating it into my athletic activities helped prevent injuries," according to Sorin Darie.

Andy Leung thinks "climbing complements massage therapy very well," particularly since it develops strong fingers and grip strength. Because she works with so many climbers, Christy Mader has incorporated the use of a dynamometer (a tool that measures grip strength) into her practice to add some objective results to treatment outcomes. She's seen grip strength increase from 5%-45% in one treatment focusing on nerve glides, which is useful knowledge for climbing and non-climbing RMTs alike.

Marie Schmitt

I have heard both massage therapy and rock climbing described as a dance. Monica Noy used to dance when she was younger and says that climbing for her isn't just about muscling through, it is "about choreographing myself up the wall" aiming for "finesse and grace."

Based on my long climbing and relatively brief massage therapy experience, I echo these comments from RMTs. Climbing outdoors takes me to spectacular places, and being in a physical profession now has improved my climbing and my enjoyment of those places. Massage therapy keeps me more generally active and has specifically improved my leg strength, flexibility, and endurance. Being in a lunge or sumo squat position when I treat has made it much easier for me to 'high step' (requiring increased hip flexion, abduction and external rotation) in climbing. And because my career is now relatively low stress, I have more mental energy to challenge myself to overcome my fears while climbing.

While rock climbing may not be for everyone, it can be a fun and beneficial activity for RMTs to pursue. It is useful for RMTs to understand its nature and common injuries because of its growing popularity, and because, as Marie Schmitt says, "climbing is awesome!"