

Activity Modification

This document lists various ways that patients can modify their activities to help manage a range of musculoskeletal conditions and presentations, which are listed in alphabetical order. Most entries also include a “related advice” section, offering additional pointers on management, but which are not intended to be a comprehensive management plan.

Activity modification is only one part of a complete home-care program. Home care can be divided into the following components: self-treatment (ice, elevation, OTCs, etc.), therapeutic exercise, activity modification (avoiding, curtailing or changing when or how common activities of daily living are done), ergonomic changes (e.g., changing the work environment, such as computer screen distance, type of chair, etc.) and general lifestyle changes (nutritional changes, smoking cessation, etc.).

NOTE: It is important to remind patients that in most cases they are to remain as active as possible. Except for acute fractures and dislocations, pain-free active range of motion should be maintained. The purpose of activity modification is to enable patients to return to their activities and combat fear avoidance behaviors, while minimizing unwanted loads on tissue. The modifications recommended in this document may need to be further individualized for a particular patient.

It is useful to touch on self-care recommendations in conjunction with activity modifications. For example, “Avoid these things, but if you do end up having to do one of these activities be sure to elevate and ice.” If a connection between activities that may increase problems and appropriate self care isn’t made, patients may not properly take care of themselves if missteps are taken with their activity modification recommendations.

The table below lists recommendations without detailed explanations. Correcting or altering specific body mechanics used during a particular sport may be necessary and is beyond the scope of this document.

| CONDITION | ACTIVITY MODIFICATION & Related advice |
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| AC Sprain (aka, AC Separation; Shoulder Separation) and AC Arthrosis | <p>Activity Modification: Avoid heavy weight lifting or pulling, reaching overhead, external rotation or any extreme or painful movements.</p> <p>Related advice: Keep in sling and restrict use until arm can be in the dependent position without pain; apply ice following 20/60 rule and avoid heat until swelling subsides.</p> |
| Achilles Tendinopathy | <p>Activity Modification: Decrease hills; stop jumping; stop speed work; avoid concrete; keep running distance if pain-free; discontinue all high impact activity if above modifications fail; consider water exercises.</p> <p>Related advice: Ice or ice massage after activities; consider night splint; avoid pressure over Achilles tendon from footwear; early stretching of calf and Achilles is recommended as tolerated; consider appropriate shock-absorbing/pronation-correcting shoes or inserts; correct leg length inequality as needed.</p> |

| CONDITION | ACTIVITY MODIFICATION & Related advice |
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| <p>Achilles Tendon Rupture</p> | <p>Activity Modification: Discontinue all weight bearing if unsupported; avoid forced or eccentric dorsiflexion.</p> <p>Related advice: Immobilize (brace) in slight plantar flexion; consider crutches for 2 days to 2 weeks but wean ASAP; refer for surgical consultation.</p> |
| <p>Ankle Sprains</p> | <p>Activity Modification: "Pain free" movement only; limited weight bearing; avoid lateral movements, uneven surfaces and ballistic activities.</p> <p>Related advice: If moderate to severe, consider crutches for days to weeks; avoid heat until swelling and bruising subside.</p> |
| <p>Bicipital Tendinopathy</p> | <p>Activity Modification: No overhead lifting, forward flexion of the shoulder (especially resisted); avoid stretching or reaching in extension and resisted or repetitive elbow flexion; avoid sleeping with arm overhead.</p> |
| <p>Bursitis</p> | <p>Activity Modification: Avoid bumping or pressure on the area of concern; avoid the offending movement or position (e.g., for prepatellar bursitis, avoid kneeling; avoid lying on affected hip for trochanteric bursitis); avoid resting or rubbing elbows on hard surface for olecranon bursitis. Avoid activities that require maximum or repeated contraction of muscle overlying the bursa.</p> <p>Related advice: Pad or protect the area if contact is inevitable; avoid heat at first.</p> |
| <p>Carpal Tunnel Syndrome</p> | <p>Activity Modification: Reduce repetitive use of fingers, hand and wrist; avoid gripping (e.g., tools); avoid jewelry/watches that apply pressure or constrict anterior wrist; avoid striking palm (e.g., stapler); discontinue use of vibratory tool or repetitive use of handled tools (e.g., hammer); avoid weight lifting and cycling; discontinue repetitive, extremes, or sustained wrist flexion, extension or ulnar deviation.</p> <p>Related advice: Wear night splint if sleeping position aggravates or with night or a.m. pain.</p> |
| <p>Chondromalacia Patellae</p> | <p>Activity Modification: Rest; avoid running or jumping, walking up and down hills or stairs; avoid resisted knee extension, repeated squatting or deep knee bends; avoid hard surfaces, stop & go, repetitive high impact activities.</p> <p>Related advice: Correct leg length inequality; consider glucosamine sulfate supplement; consider shock-absorbing/pronation-correcting shoes or inserts; also consider counterforce or other patellar support; for the athlete, consider water running.</p> |
| <p>Chronic Compartment Syndrome</p> | <p>Activity Modification: Rest; do not compress, avoid tight wraps or socks; decrease/avoid high impact activities; consider water exercises.</p> <p>Related advice: Acute compartment syndrome is an emergency requiring immediate referral. Leg elevation is appropriate in chronic but is <u>contraindicated in acute compartment syndrome.</u></p> |

| CONDITION | ACTIVITY MODIFICATION & Related advice |
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| Contusion | <p>Activity Modification: Rest and avoid painful activities; avoid bumping injured part; avoid ballistic, heavy lifting, or repetitive activity involving injured part; avoid early return to full duty unless 100% flexibility, 90% strength and with no associated pain.</p> <p>Related advice: Use a protective wrap or pad to protect; avoid heat, salicylates, deep tissue massage, painful stretching for about 1 week or when bruising subsides.</p> |
| DeQuervain's Tenosynovitis | <p>Activity Modification: Discontinue repetitive use of wrist and thumb (i.e., scanning, gripping, musical instruments, writing, racket sports, pinch grip, computer and other keyboarding).</p> <p>Related advice: Avoid heat for at least 1 week and wear thumb spica splint for 1-2 weeks.</p> |
| Fibromyalgia | <p>Activity Modification: Get at least 8 hours of sleep per night; reduce stress; always warm up before exercise or strenuous activities.</p> <p>Related advice: Engage in yoga, Tai Chi, Qigong, low impact weight-bearing aerobic activities as tolerated (i.e., swimming, water aerobics, walking, biking) and light-weight lifting; reduce exercise with flare-ups; suggest maintaining consistent sleep and exercise patterns; consider referral for counseling.</p> |
| Fracture | <p>Activity Modification: Keep the fracture site stable, try not to bump it (or otherwise compress, distract or bend it); use opposite extremity.</p> <p>Related advice: Immobilize and elevate injured part.</p> |
| Frozen Shoulder (aka, Adhesive Capsulitis) | <p>Activity Modification: Limit rest/avoid prolonged rest; encourage shoulder movement; avoid vigorous or ballistic activities; avoid sleeping on involved side; no buddy stretching.</p> <p>Related advice: Avoid prolonged sling (use only for short periods); avoid vigorous stretching and manipulation initially.</p> |
| Game Keeper's Thumb (aka, Skier's Thumb) | <p>Activity Modification: Avoid activities including extension and abduction of the thumb; avoid forceful gripping or lifting heavy objects with the thumb; avoid repetitive wrist movements involved.</p> <p>Related advice: Wear protective splint as directed; avoid heat until swelling subsides.</p> |
| Ganglion Cyst (wrist) | <p>Activity Modification: Avoid repetitive grasping and wrist flexion-extension; most resolve with time and do not require invasive treatment.</p> <p>Related advice: Discourage striking wrist with book or other instrument to rupture ganglion (risky and most recur).</p> |
| Glenohumeral Dislocation and/or Instability | <p>Activity Modification: Avoid overhead (> 90°) external rotation or any other extremes of movement; avoid sleeping on injured shoulder and avoid arm-raised sleeping position.</p> <p>Related advice: Keep in sling for an appropriate amount of time (variable but dependent on the severity); encourage early resumption of Codman's arm swings and isometric exercises as tolerated.</p> |

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| Glenoid Labral Tears | Activity Modification: Avoid extremes of motion, sustained overhead work, and heavy lifting with injured shoulder; avoid activities that produce the painful click; avoid sleeping on sore shoulder or sleeping with arm overhead. |
| Hallux Valgus | Activity Modification: Avoid kicking. Related advice: Avoid narrow-toed shoes like high-heel pumps and cowboy boots; wear wider, more supportive shoes; avoid shoes that are too short (leave 1 finger breadth of space in between toes and end of shoe); switch to pronation control shoes; avoid flexible shoes. Consider orthoses or night splint. |
| Hammer or Claw Toes | Activity Modification: Reduce walking/running mileage/duration by about 50% for 1-2 weeks. If symptoms have not improved after 1 week of reduced activity discontinue offending activity entirely. Avoid shoes or socks that aggravate. Avoid downhill running, walking or hiking. Related advice: Longer/taller toe box in shoes; allow 1 finger breadth of space in toe end of shoe; avoid abrasive socks or shoes; lubricate & protect areas prone to blisters & corns; consider a night splint to control further progression of the toe deformity. |
| Iliotibial Band Syndrome | Activity Modification: Restrict or modify offending activity; avoid hard surfaces; reduce long distance training; avoid slanted surfaces (running one way on street or banked turns); switch from running to walking, swimming or cycling (proper seat and pedal adjustments). Related advice: Ice after activity; consider shock-absorbing/pronation-correcting shoes or inserts; correct leg length inequality. |
| Infrapatellar Tendinopathy (aka, Jumper's Knee) | Activity Modification: Complete rest or activity restriction depending on severity; avoid running, sprinting, stop & go, extreme distance, resisted knee extension, deep knee bends, jumping and plyometrics; consider water running. Related advice: Consider shock-absorbing/pronation-correcting shoes or inserts; correct leg length inequality; consider patellar support. |
| Knee or Hip Osteoarthritis | Activity Modification: Replace high impact with low impact activities (i.e., cycling, swimming, walking and rowing); avoid hard surfaces and prolonged standing; exercises are encouraged but avoid heavy lifting or high resistive exercises; avoid stairs when symptomatic. Related advice: Use crutches if pain is severe or use a cane if less severe; hot baths, soaks, tubs are good most of the time, however, avoid heat with exacerbation or with increased edema (switch to cold); light weight lifting, stretching and ROM. |
| Knee Sprain/Instability | Activity Modification: Avoid pivoting, side to side motion on injured knee, deep knee bends, and hyperextension. Related advice: Consider crutches depending on severity; use ice and avoid heat until swelling and bruising have subsided; knee brace as needed; consider shock-absorbing/pronation-correcting shoes or inserts. |

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| Lateral Epicondylalgia (aka, Tennis Elbow, older name Lateral Epicondylitis) | <p>Activity Modification: Improve backhand technique; reduce time using hammer or tennis racket; avoid long periods with elbow statically flexed (reading newspaper, sleeping).</p> <p>Related advice: Use larger racket head; decrease string tension; string shock absorbers; avoid fiberglass hammer handles and sledges; reduce hammer size; switch to shock-absorbing handle.</p> |
| Legg-Calve-Perthes | <p>Activity Modification: Make sure to not bear weight; use cast or crutches.</p> <p>Related advice: Orthopedic consult necessary.</p> |
| Low Back Pain, acute | <p>Activity Modification: Hold neutral pelvis, hip hinge, and perform abdominal bracing during transitional movements; may need to use log roll to get out of bed; advise on sleep position; avoid/curtail activities with sustained bending, a lot of whole body vibration (e.g., long car rides), prolonged periods of immobility/inactivity, and avoid <i>prolonged</i> sitting.</p> <p>Related advice: May require orthopedic support/devices.</p> |
| Low Back Pain, general | <p>Activity Modification: Avoid/curtail flexion activities the first hour or two in the morning; if mall walking, stroll at a faster pace (2.1 mi/hr or 3.4 km/hr) with good arm swing; when pushing or pulling heavy objects, arm should be at the level of center of gravity (in the area of the waist); do light stretches instead of rest; squatting/lifting advice to include bracing the torso, bending the knees and keeping the back straight; get help with heavy loads; modify sitting/rising, carrying, lifting, bending; breathing re-education.</p> |
| Low Back Pain, mechanical sensitivity in extension | <p>Activity Modification: Avoid standing for more than 20 minutes without changing position; alleviate extension during standing postures by periodically leaning on a counter and/or placing a foot up on a step; avoid/curtail working with arms above head, lifting heavy objects off of counter tops; ask for help carrying heavy loads.</p> |
| Low Back Pain, mechanical sensitivity in flexion | <p>Activity Modification: Limit sitting or change sitting posture to reduce flexion; hip hinge during transitional movements (keep lordosis); avoid or curtail or use hip hinge when squatting, lifting, or bending forward; rise from chair by perching on the edge, keeping back straight/braced and using arms to push off of chair.</p> <p>Related advice: Perform Brügger's position, McGill's microstretch, etc.</p> |
| Low Back Pain, mechanical sensitivity in rotation | <p>Activity Modification: Avoid/curtail asymmetrical loads (vacuuming, sweeping, pulling and pushing with one arm); use two hands to push or pull; use legs; change hands so that rotation occurs in a non-painful direction.</p> |
| Neck Injury, mechanical sensitivity in extension | <p>Activity Modification: Avoid sustained neck extension (looking up—stand on a stool or step ladder); take periodic breaks from the activity/position; avoid sustained or repetitive chin poking (e.g., poking one's face closer to a computer screen, performing exercises while leading with the chin).</p> <p>Related advice: Perform Brügger's position every 20-30 minutes.</p> |

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| Neck Injury , mechanical sensitivity in flexion | Activity Modification: Avoid sustained neck flexion (e.g., reading in bed, long periods of looking down reading). |
| Medial Epicondylitis (aka, Golfer's Elbow, medial epicondylalgia) | Activity Modification: Avoid heavy gripping on injured side, repetitive and/or sustained flexor usage; reduce hard over-hand swings with tennis racket, hammer, sledge or maul; consider changing to lighter weight tools/hammers; change to appropriate size and shock-absorbent handle; consider switching to appropriate pneumatic tool (i.e. nail gun instead of hammer). Related advice: Avoid use of counter-force brace (elbow sleeve is okay). |
| Meniscal Tears | Activity Modification: Complete rest from painful or high impact activity for 4-6 weeks; slow return to high impact; avoid pivoting, deep knee bends or squatting; avoid hills and stairs; avoid heavy lifting and reduce distance training; switch from running/jumping to walking/cycling; water training as tolerated. Related advice: Start with isometric exercises and pain-free AROM. |
| Metatarsalgia | Activity Modification: Avoid prolonged weight bearing on hard surfaces. Related advice: Avoid high heels, narrow and/or offending footwear; do not switch to negative heels if you are accustomed to higher heels; use metatarsal pad or toe crest. Consider foot orthoses. |
| Metatarsal Stress Fracture | Activity Modification: Avoid painful ambulation; resume walking unaided if not painful; discontinue any activity if it is painful; most heal in 6 weeks and thereafter resumption of unrestricted activity is permitted if pain-free. Related advice: Use crutches as needed; wear cushioned yet rigid shoes (avoid flexible shoes); appropriate shoes and insoles are necessary when returning to high impact activities. |
| Morton's Neuroma | Activity Modification: Reduce weight bearing and hard surfaces; replace high impact activities with low impact; avoid load bearing on metatarsal heads (high heels, bicycle pedals, stair-steppers); avoid uphill walking/running; avoid kneeling on ball of foot. Related advice: Avoid high-heeled, narrow-toed, or poor-fitting shoes; consider metatarsal bridge but avoid metatarsal pad if it aggravates; cushioned shoes and insoles are recommended. |
| Overuse Running Injuries | Activity Modification: Consider varying shoes, running terrain, reduce mileage; find alternative activities/cross train (i.e., swimming, bicycling). |
| Overuse Syndromes in general | Activity Modification: Often requires temporarily stopping the activity, then a graded return (when training or returning to training, one should not increase time or distance more than 10% per week); consider changes in how the activity should be performed. Related advice: Use braces to protect area during activities and sleep; may require orthopedic support/devices. |

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| Patellar Dislocation | <p>Activity Modification: Avoid weight bearing; avoid pivoting especially with knee bent; avoid deep knee bends, running/jumping until pain-free; avoid walking/running on uneven surfaces, ballistic stop & go, and change of direction until rehab is complete.</p> <p>Related advice: Use crutches for first week or two; knee immobilizer especially use at night, and during high risk activities.</p> |
| Patellar Tracking Injuries (Patellar-Femoral Pain Syndromes) | <p>Activity Modification: Avoid deep knee bending; avoid prolonged hip rotation (habitually sitting cross legged on one side but not the other); avoid unguarded full extension; avoid stairs; avoid walking with foot flare.</p> |
| Piriformis Syndrome | <p>Activity Modification: Reduce sitting, especially on hard or cold surfaces; avoid sitting with leg and hip flexed (i.e. driving with seat set too far back) or with legs crossed or thighs flared; reduce long distance running, sprinting and kicking; avoid use of worn out or inappropriate shoes; no wallet in back pocket.</p> <p>Related advice: Use a seat cushion; correct leg length inequality.</p> |
| Plantar Fasciae Syndrome (aka, Plantar Fasciae Disease, older name Plantar Fasciitis) | <p>Activity Modification: Rest; avoid sleeping with sheets tucked in or anything that produced prolonged plantar flexion; consider water running and swimming.</p> <p>Related advice: Ice in acute stages; sleep with foot in neutral position (90° to leg) with aid of special sock, splint or tape for 2-6 weeks; avoid high heels but don't switch to negative heels either; avoid shoes that irritate bottom of heel; short foot exercises as tolerated; consider shock-absorbing/pronation-correcting shoes or inserts; recommend home stretching of calf/Achilles and isolated plantar fascia stretches.</p> |
| Rotator Cuff Injury | <p>Activity Modification: Keep as mobile as possible; avoid heavy and long-lever lifting; avoid repetitive or painful over reaching or other painful movements or positions; avoid sleeping on injured side.</p> <p>Related advice: Sling in acute phase (discontinue sling ASAP and avoid for more than 1 week); avoid heat for 2 weeks following injury; start pain-free AROM exercises (i.e., Codman's) as soon as possible.</p> |
| Sever's Apophysitis | <p>Activity Modification: Discontinue high impact, ballistic and repetitive activities for 5-7 days (i.e., jumping, running, sprinting, stop & go); return to sport/activity with restrictions as needed; ebbs & flows over several years; when worse, resume activity modifications described above; also, avoid vigorous stretching of the calf until it resolves; longer warm-up with light stretching is recommended.</p> <p>Related advice: Avoid shoes that are too short, have a tight heel counter or that irritate; a tuli in the heel counter or shock-absorbing heel lift bilaterally may help.</p> |
| Shin Splints | <p>Activity Modification: Rest; longer warm-up; reduce mileage; avoid downhill running; discontinue ballistics (sprints, stop & go, jumping); avoid kicking; avoid training in cold weather (or wear warm-up pants, lycra tights or shin sleeve).</p> <p>Related advice: Avoid worn-out shoes or unsupportive shoes; consider shock-absorbing/pronation-correcting shoes or inserts; avoid walking/running on hard surfaces.</p> |

| CONDITION | ACTIVITY MODIFICATION & Related advice |
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| Shoulder Injuries in general | <p>Activity Modification: Avoid hiking the shoulder when raising the arm during work or recreational activities; support arm in sleeping positions. Keep shoulder at or below 90 degrees of elevation in acute phase.</p> <p>Related advice: Consider exercises to stabilize scapula; early pain-free home exercises to include Codman arm swings/wand exercises and isometrics ASAP.</p> |
| Slipped Capital Femoral Epiphysis | <p>Activity Modification: Discontinue all weight-bearing ambulation.</p> <p>Related advice: Use crutches or wheel chair; same day referral to ER or orthopedist; <u>hip manipulation, mobilization, or stretching is contraindicated.</u></p> |
| Suspected Scaphoid Fracture (Trauma Induced Snuff Box Pain) | <p>Activity Modification: Discontinue use of hand completely for 2 weeks or until it has been proven unequivocally that no fracture exists.</p> <p>Related advice: Thumb spica cast for 2 weeks and repeat x-rays; orthopedic referral advised if fracture or instability confirmed on x-ray.</p> |
| Tennis Leg (Upper Calf Strain) | <p>Activity Modification: Avoid long walks or running until pain-free; avoid heavy lifting/toe raises until pain-free; gradual walk, jog, run progression.</p> <p>Related advice: Crutches for 2 days to 2 weeks as needed; start pain-free AROM as soon as tolerated; avoid heat and deep tissue massage for approximately 1 week or until edema and bruising subsides.</p> |
| Thigh Strain | <p>Activity Modification: Rest and avoid painful ambulation; avoid hiking, running, sprinting, jumping and especially stop & go; reduce forward swing of leg (hamstrings) or backward swing (quadriceps/iliopsoas) when walking; avoid returning to full duty, heavy lifting, ballistics until full flexibility and 90% strength has been restored and the activity is pain-free.</p> <p>Related advice: Use crutches for 2 days to 2 weeks as needed; taping and wrapping thigh is okay, but avoid applying it too tightly; avoid heat, deep tissue massage, aggressive stretches until bruising, swelling and pain subsides.</p> |
| TMD (Temporal-Mandibular Disorder) | <p>Activity Modification: Avoid chewing hard objects (hard candy, ice); avoid chewy foods (e.g., gum, steak, bagels); avoid opening the mouth wide (e.g., yawning wide); avoid poses that include resting chin on hand.</p> <p>Related advice: Consider night splint.</p> |
| Ulnar Neuropathy | <p>Activity Modification: Discontinue repetitive use of elbow and wrist; avoid pressure on the palm of hand and posteromedial elbow; avoid resting elbow on hard surface (chair arm or arm rest); avoid resting palm on hard surface (handle bar); reduce grasping; avoid reaching up and back (behind head).</p> <p>Related advice: Wear elbow pad; wear padded glove.</p> |

| CONDITION | ACTIVITY MODIFICATION & Related advice |
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| Varicose Veins | <p>Activity Modification: Avoid long periods of standing and standing on hard surfaces (i.e., concrete); avoid long periods of sitting, especially with legs crossed; avoid constricting clothing or supports around any part of lower extremity; switch from high impact activities to low impact like swimming, walking and cycling; reduce coughing, sneezing or bearing down (i.e., on the toilet or when lifting); elevate leg to relieve edema but avoid resting leg/knee/thigh on hard or sharp, hard-edged surface.</p> <p>Related advice: Switch to support hose; improve shock-absorbing shoes and insoles; warm baths/compresses are okay.</p> |

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