PATIENT INFORMATION

Ergonomics for Arm Health

A practical guide to protecting your shoulders, elbows, wrists and hands at work, at home and in sport

Written by

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Why Ergonomics Matters for Your Arms

Your upper limbs — shoulders, elbows, wrists and hands — are designed for movement, not for sustained, fixed postures. Most modern arm complaints I see in clinic do not come from a single accident. They build up gradually from how we sit, type, lift, sleep, train and use our phones every day.

Good ergonomics is the science of fitting tasks to your body, rather than forcing your body to fit the task. When the fit is right, tendons glide freely, joints stay centred, nerves are not compressed, and muscles share the load. When the fit is wrong, small daily strains accumulate into tendinopathy, nerve entrapment, joint pain, and eventually structural damage.

This guide brings together the principles I use with my own patients. It covers the workplace, the home, sleep, sport, the gym, driving, parenting and devices. Apply what is relevant to your life. Small changes, made consistently, prevent most of the upper-limb problems I treat.

> **How to use this guide**
>
> Start with the section most relevant to your symptoms or daily activity. Do not try to change everything at once — pick two or three changes, embed them for a fortnight, then move on. If pain persists despite good ergonomics, seek a specialist opinion rather than waiting.

A Quick Tour of the Upper Limb

Understanding what is under load helps you protect it. Your arm is a chain — what happens at the neck and shoulder blade affects the wrist, and vice versa.

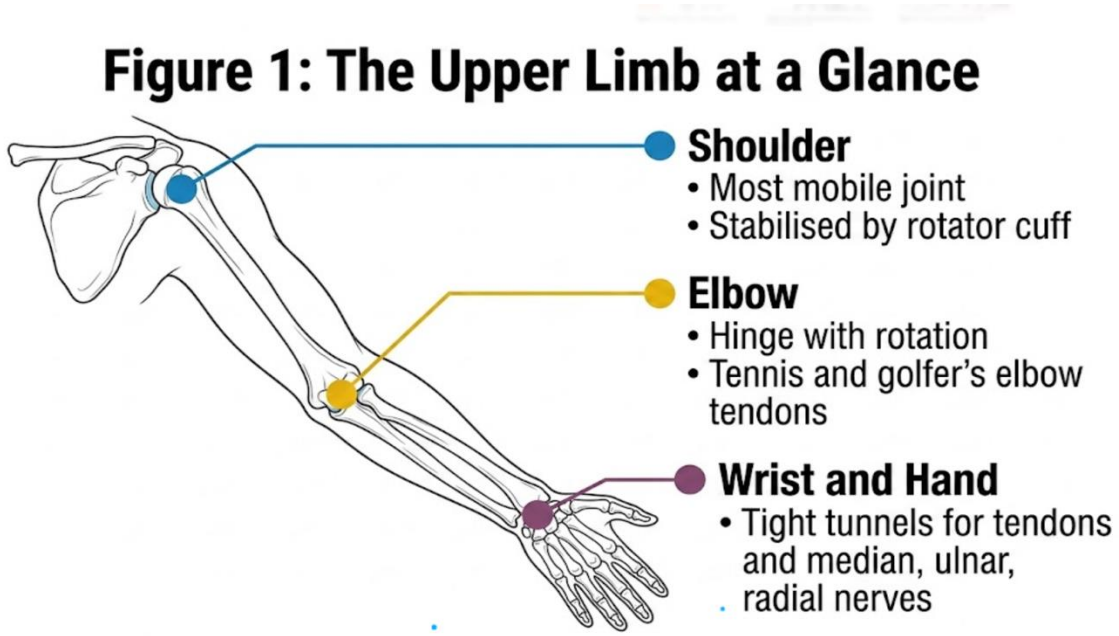

Figure 1 — The three major joint regions of the upper limb

The shoulder

The shoulder is the most mobile joint in the body. Stability comes mainly from the rotator cuff (four small muscles) and the position of the shoulder blade (scapula) on the rib cage. Slumped posture tilts the scapula forward, narrowing the space the rotator cuff tendons travel through. This is why slouched desk work so often produces shoulder impingement and rotator cuff pain.

The elbow

The elbow is a hinge with a rotational element. The tendons that bend the wrist and fingers anchor on the inside (medial epicondyle — "golfer's elbow"), and those that extend the wrist anchor on the outside (lateral epicondyle — "tennis elbow"). Repetitive gripping, twisting, and forceful keyboard or mouse use overload these anchors.

The wrist and hand

Tendons run through tight tunnels at the wrist alongside the median, ulnar and radial nerves. Sustained wrist bending — especially extension while typing or flexion while sleeping — compresses these structures. Carpal tunnel syndrome, De Quervain's tenosynovitis and cubital tunnel syndrome are nearly all worsened by predictable, correctable postures.

Early Warning Signs You Should Not Ignore

Your body usually warns you before it breaks down. Listening early is the difference between a fortnight of self-management and months of treatment. Watch for the following:

- Aching in the shoulder, forearm or hand at the end of the working day that resolves overnight
- Numbness, tingling or "pins and needles" in the fingers, particularly at night or on waking

- Weak or clumsy grip — dropping cups, struggling with jar lids or keys
- Pain that flares with specific tasks (using a mouse, lifting a kettle, reaching to a high shelf)
- Stiffness in the morning that takes more than a few minutes to ease
- A clicking, catching or “locking” sensation in the shoulder or thumb
- Persistent neck or upper-back tightness accompanying arm symptoms

When to seek specialist review

Book an assessment if any of the following apply:

> Symptoms persist beyond 4–6 weeks despite ergonomic and activity changes
> Night pain disrupting sleep, or pins and needles waking you
> Visible weakness, muscle wasting, or loss of function
> Sudden injury with significant pain, swelling or deformity

Setting Up Your Desk and Workstation

The desk is where most upper-limb overuse injuries are made. Aim for a posture that is **neutral, supported and varied**. Neutral means joints are mid-range. Supported means gravity is not your only ally. Varied means you change position regularly.

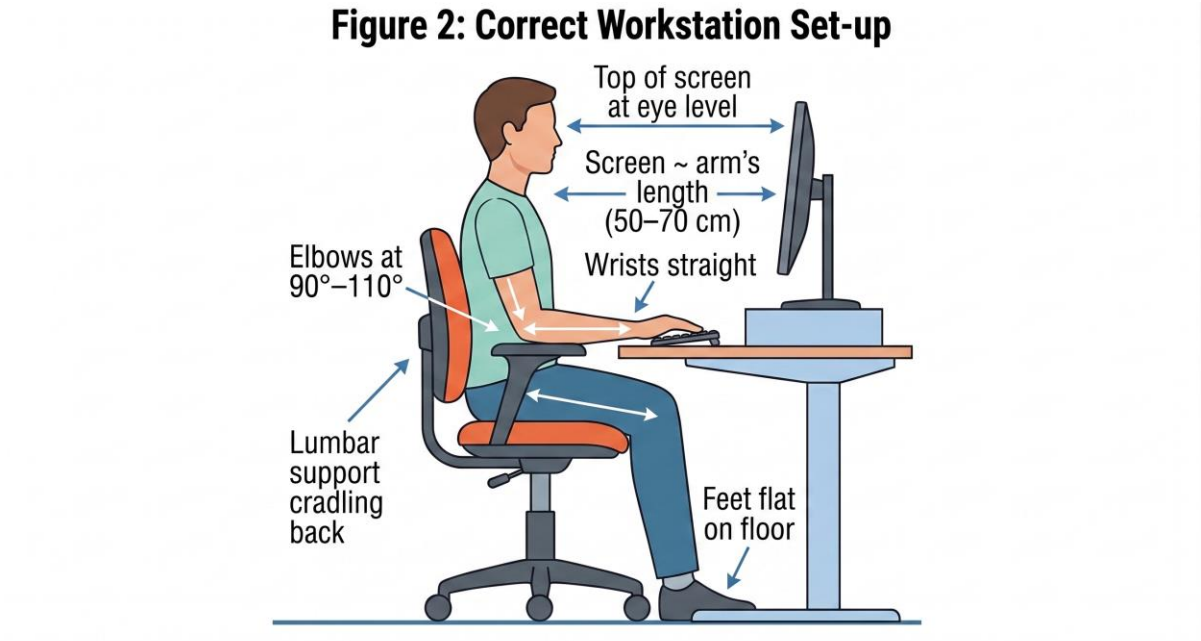

Figure 2 — Correct workstation set-up. The screen sits at eye level, an arm's length away, with elbows at 90°–110° and wrists straight.

The Foundation: Chair, Feet and Pelvis

1. Sit fully back in the chair with the lumbar support cradling the small of your back.
2. Set seat height so your feet rest flat on the floor (or a footrest) with thighs roughly parallel to the floor.
3. Hips should be very slightly higher than knees — this opens the front of the pelvis and reduces slumping.
4. Leave a two-finger gap between the back of your knees and the seat edge to protect circulation.
5. Armrests should support the elbows so the shoulders relax — never shrug up or push down.

Screen Position — The Single Biggest Lever

Forward head posture is the most common cause of shoulder and neck pain in office workers. Every 2.5 cm (1 inch) the head moves forward of the shoulders adds roughly 4–5 kg of perceived load on the neck and upper trapezius.

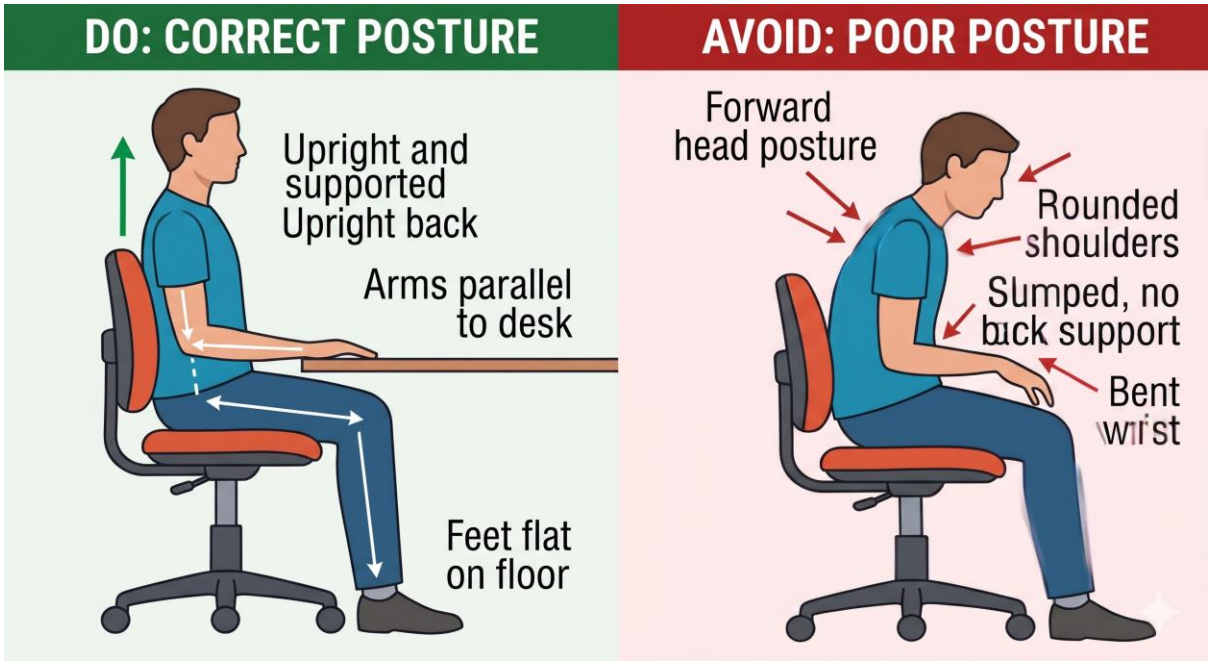

Figure 3 — Correct posture (left) compared with the typical slumped, forward-head desk posture (right).

- Top of the screen at or just below eye level when sitting tall
- Screen approximately an arm's length away (50–70 cm)
- Tilted slightly back (10–20°) so you look at the centre, not the top
- Laptops should always be raised on a stand and used with a separate keyboard and mouse
- If using two monitors, place the primary one directly in front of you, not angled

Keyboard and Mouse

The keyboard and mouse together generate the highest cumulative load on the elbow, wrist and thumb of any modern activity. Get this right and you prevent a large proportion of upper-limb overuse syndromes.

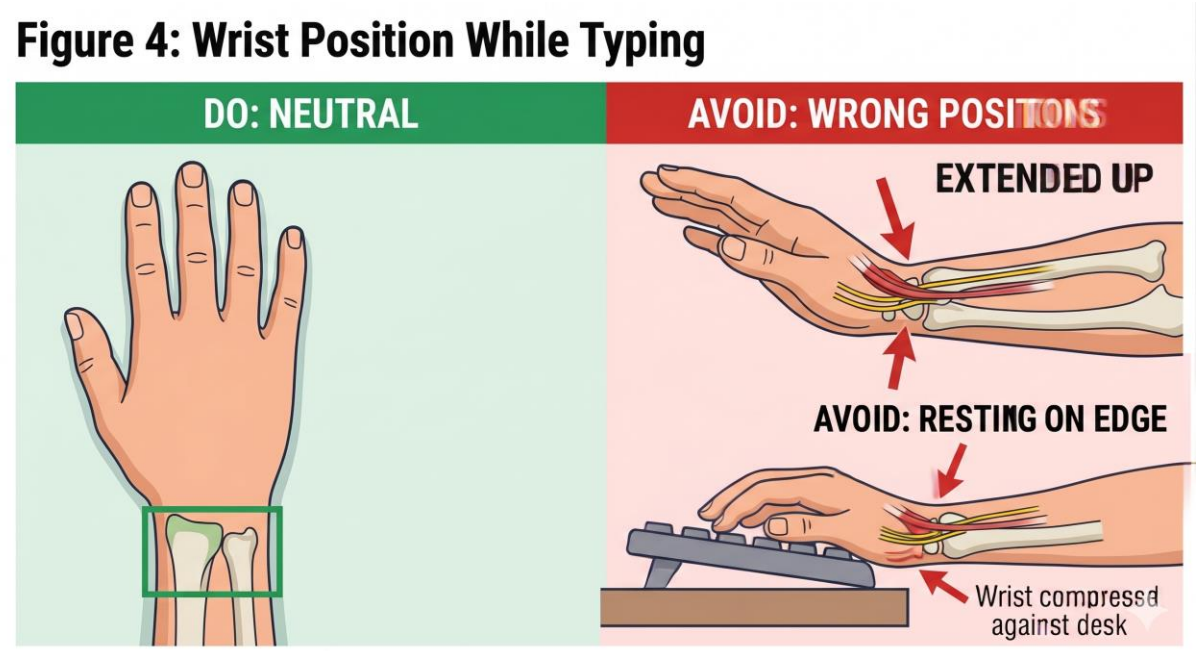

Figure 4 — Wrist position while typing. A neutral wrist (left) protects the carpal tunnel; bending up or resting on the desk edge compresses it.

Joint	Target position	Common error to avoid
Shoulder	Relaxed, not shrugged; upper arm vertical	Hunched up to reach a high desk
Elbow	Bent 90–110°, close to the body	Reaching forward or out to the side
Forearm	Parallel to the floor or sloping slightly down	Forearms angled up to a high keyboard
Wrist	Straight, not bent up or down or sideways	Resting on the desk edge while typing
Hand	Fingers curved naturally over keys	Flat-handed pounding or stretching for keys

DO	AVOID
Keep the mouse next to the keyboard at the same height	Resting wrists hard on the desk edge while typing
Move the mouse from the shoulder, not the wrist	Pinching a small mouse with cramped fingers
Use a vertical or contoured mouse if you have wrist pain	Stretching far to reach a number pad — switch sides
Try keyboard shortcuts to reduce mouse use	Using a laptop trackpad for long sessions
Consider a split or tented keyboard for chronic forearm pain	Typing with long, unsupported fingernails

DO	AVOID
Take micro-pauses every 20–30 minutes	Working through pain — it is a warning, not weakness

Standing Desks — Used Well

A standing desk is not automatically better than a sitting one. The benefit comes from *alternating* between the two. I generally suggest 20–30 minutes standing for every 30–45 minutes seated, with the same neutral arm and screen position in both modes. Standing badly — locked knees, leaning on one elbow, screen too low — is worse than sitting well.

The 20–20–20–2 Rule

> **A simple rule for desk-based workers**
>
> **Every 20 minutes —** look at something 20 feet (6 m) away for 20 seconds, and stand or change posture for 2 minutes.
>
> *This protects the eyes, resets the neck and shoulder girdle, and breaks the static load on the forearm tendons.*

Sleeping Postures and Your Arms

Sleep is when tissues recover — but only if you are not loading them for seven hours. Frozen shoulder, rotator cuff pain, carpal tunnel symptoms and cubital tunnel syndrome are all influenced by how you sleep. Many patients with night-time numbness are surprised that the cure begins with a pillow.

Figure 5: Sleep Postures

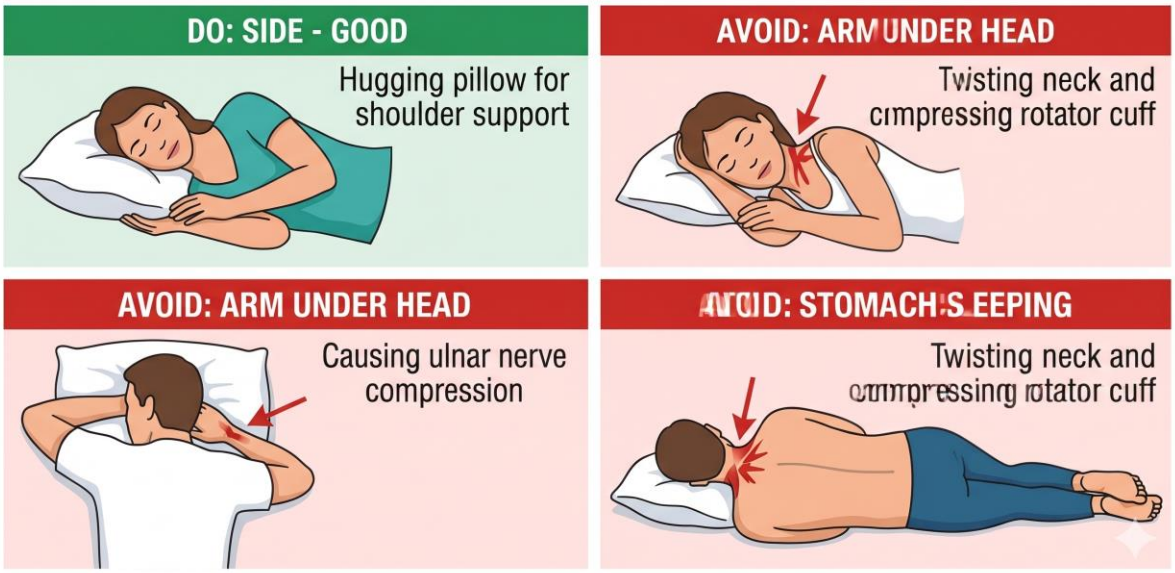

Figure 5 — Sleep postures. Side sleeping with a pillow (left) is well-tolerated; arm under the head and stomach sleeping both compress nerves and the rotator cuff.

Side sleepers

- Avoid sleeping directly on the painful shoulder. If you must, place a thin folded towel between the shoulder and the mattress to fill the gap.
- Hug a pillow with the upper arm to keep the top shoulder from rolling forward.
- Keep the elbows softly bent — not fully flexed under the chin (this compresses the ulnar nerve and causes "little finger" numbness).
- Wrists should be straight; a soft wrist splint at night can transform carpal tunnel symptoms.

Back sleepers

- Place a small pillow under each forearm so the shoulders are not pulled back and down.
- Avoid sleeping with arms above the head — this compresses the rotator cuff and the brachial plexus nerves.

Stomach sleepers

- This is the worst position for the neck and shoulders. Try to transition to side or back sleeping.
- If you cannot change, at least keep the arms by the sides rather than overhead.

Pillow height

The pillow should fill the gap between your head and the mattress so the neck stays in line with the spine. Too high tilts the head sideways and irritates the nerves that supply the arm; too low collapses the neck and overloads the upper trapezius. A contoured memory-foam pillow suits most patients with chronic neck or shoulder symptoms.

Phones, Tablets and Handheld Devices

"Text neck," "texter's thumb" and "gamer's wrist" are not jokes — they are real conditions I see weekly. The hand is exquisitely designed for variety, and modern devices ask it to do one repetitive thing for hours.

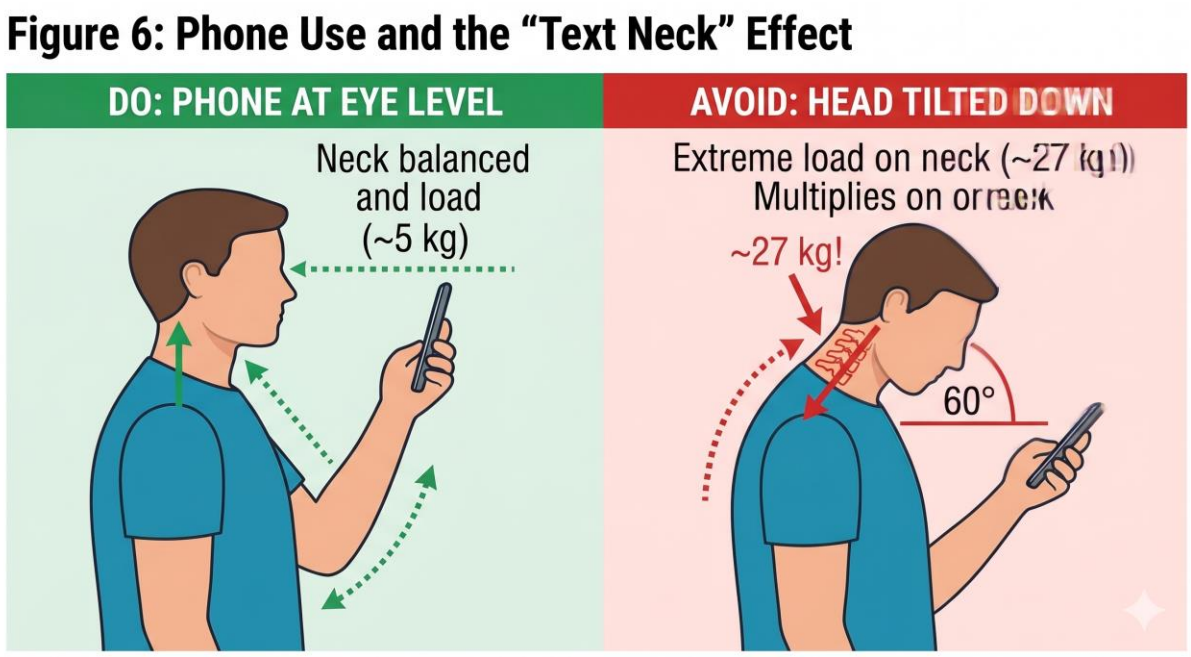

Figure 6 — Holding the phone at face level keeps neck load near body weight. Tilting the head down at 60° multiplies the load fivefold.

Phone use

- Bring the phone up to eye level rather than tilting your head down. Yes, it looks odd. Your neck will thank you.
- Use both hands and both thumbs — alternate which thumb takes the load.
- Use voice dictation for longer messages.
- If you read in bed, prop the phone against a stand or pillow rather than holding it up.

Tablets and e-readers

- Always use a stand or case that props the tablet up — never lay it flat on a table to read.
- Pair a Bluetooth keyboard for any session longer than 15 minutes.
- Avoid prolonged single-finger scrolling — it overloads the thumb base joint.

Gaming and controllers

- Bring the controller close to the body — do not hold it forward against gravity.
- Sit supported, not slouched, with elbows resting at 90°.
- Take a five-minute movement break every 45 minutes.
- If using a mouse and keyboard, follow all the desk principles above.

Driving Ergonomics

Long drives are an underrated source of shoulder and elbow problems, particularly in commuters and professional drivers.

6. Sit with your back fully into the seat — adjust lumbar support to fill the curve.

7. Set the seat distance so your knees are slightly bent when the pedals are fully depressed.
8. Adjust the backrest so when your shoulders touch it, your wrists rest comfortably on top of the steering wheel with elbows softly bent.
9. Hold the wheel at the “9 and 3” positions, not “10 and 2” — this lowers shoulder load.
10. Relax the grip. White-knuckling the wheel is a leading cause of lateral epicondylitis in drivers.
11. On long journeys, stop every 90–120 minutes to walk and shake out the arms.
12. Avoid resting the elbow on the door frame — sustained pressure compresses the ulnar nerve.

Lifting, Carrying and Daily Tasks

Most household and shopping injuries to the shoulder and elbow are not from one heavy lift, but from awkward angles, twisting, and carrying loads at arm's length.

Figure 7: Lifting Technique

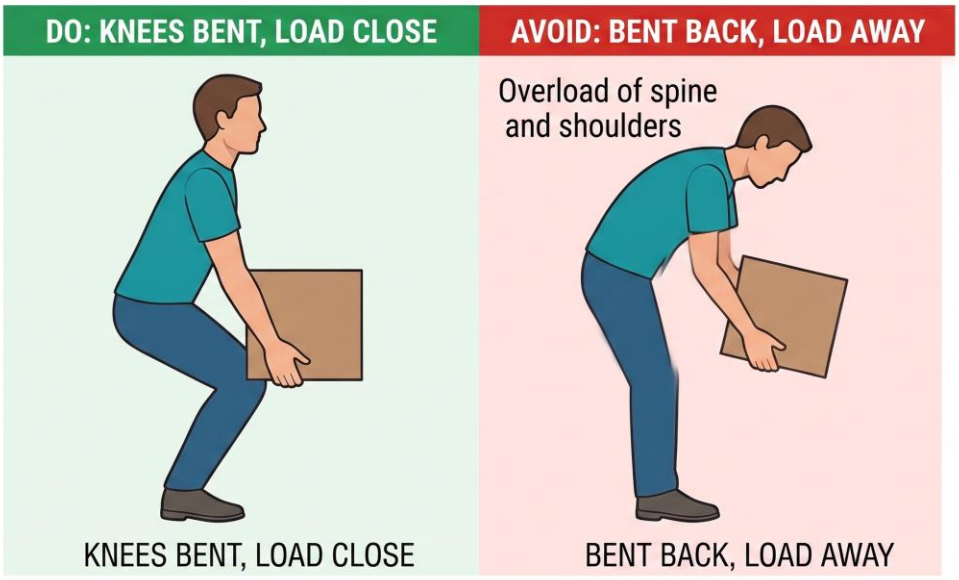

Figure 7 — Lifting with bent knees and the load close to the body (left) protects the spine and shoulders. Bending forward with straight legs (right) overloads both.

Lifting principles

- Keep the load close to your body — every centimetre away from the trunk multiplies the shoulder load.
- Bend the knees and hinge at the hips. Use the legs, not the arms, to lift from the floor.
- Test the weight before committing — slide it first, then lift.
- Do not twist while lifting. Move the feet to turn.
- Two smaller trips are nearly always better than one heavy one.
- Avoid lifting overhead in one motion. Place the load on a midway surface first.

Carrying loads

- Distribute weight between both hands — one heavy bag is far worse than two balanced ones.
- Use a backpack with both straps for any load over 4–5 kg.
- Avoid hooking shopping bags on a single bent finger — this is a common cause of trigger finger and thumb-base pain.
- Wheeled trolleys for shopping, luggage and laundry are not "for old people" — they are smart engineering.

Reaching and overhead tasks

- Use a step stool to bring overhead work down to chest level.
- Break long overhead tasks (painting, cleaning, hanging items) into 5-minute blocks with rest.
- Hold tools close to the body. A long-handled tool keeps work in front of you, not above you.

In the Kitchen and Around the Home

- Counter height should allow chopping with elbows at roughly 90° and wrists straight. Most counters are too low — use a thick chopping board to raise the work surface if needed.
- Use sharp knives. A blunt knife forces you to push harder and bend the wrist — a leading cause of wrist tendinopathy in keen home cooks.
- Choose pans with two handles for anything heavy — distribute the load across both arms.
- Pour kettles by tilting from the elbow, not by lifting the whole kettle. Smaller, lighter kettles protect the wrist long-term.
- Open jars with a rubber jar opener or by running the lid under hot water — repeated forceful gripping causes thumb arthritis flares.
- When vacuuming or mopping, swap hands every few minutes and keep the work in front of you.
- Gardening: kneel rather than bend, use long-handled tools, and wear padded gloves.

Parenting and Childcare

“Mummy’s thumb” and “daddy’s elbow” are real. New parents lift, twist and carry far more than they realise, often in awkward postures and with sleep deprivation reducing their tissue tolerance.

- Lifting a child from a cot: lower the cot side first, bring the child close, then lift with both hands under the trunk — never under the armpits with extended thumbs.
- Carry babies on the body (sling, baby carrier) rather than in the arms whenever possible. Alternate the side with hip-carries.
- Feeding: bring the baby to you with pillows or a feeding cushion. Do not hunch down to the baby.
- Pram and pushchair handles should be at hip-to-waist height — adjust them, do not stoop.
- Car seats: turn the seat to face you before lifting the child in, rather than twisting in.
- Watch for De Quervain’s tenosynovitis (pain at the thumb side of the wrist when lifting baby) — early splinting and technique change usually resolves it.

Sport, Training and the Gym

Exercise is medicine for the upper limb — but only when programmed sensibly. Most sports-related arm injuries I see are caused by **training error**: too much, too soon, with too little recovery. The tissue is not the problem; the dose is.

General principles

- Warm up specifically for what you are about to do — five minutes of progressive movement beats any static stretch.
- Progress load by no more than 10% per week.
- Balance pushing and pulling exercises — most desk workers need more pulling (rows, pull-aparts, face pulls) and less pressing.
- Train the rotator cuff and scapular muscles directly, not just the big movers.
- Sleep, hydration and protein intake all influence tendon recovery — train the lifestyle, not just the muscle.

Weight training — common errors

Exercise	Risk	Better technique
Bench press	Shoulder impingement	Tuck elbows ~45°, retract scapulae, full-range with control
Lat pulldown / pull-up	Shoulder pinching	Pull to upper chest, not behind the neck
Upright row	Rotator cuff impingement	Limit elbow height to shoulder level, or replace with face pulls
Dips	Anterior shoulder pain	Avoid if shoulder pain; keep depth shallow
Heavy biceps curls	Distal biceps & elbow strain	Control the lowering phase; avoid swinging
Press-ups (push-ups)	Wrist pain	Use push-up handles or fists; keep elbows close

Racquet and overhead sports

- Tennis elbow is overwhelmingly a technique and equipment problem — not just a “use” problem. Check grip size, string tension and stroke mechanics with a coach.
- A grip that is too small forces you to squeeze harder; a grip too large overloads the forearm extensors.
- In golf, “golfer’s elbow” often comes from gripping too tightly and casting from the top. Lessons are cheaper than physiotherapy.
- Throwing athletes should follow a structured pitch / throw count and never throw through shoulder pain.

Climbing, calisthenics and gymnastics

- These sports load tendons more than almost any other. Progress volume gradually.
- Add antagonist training (push-ups, finger-extension bands) to balance heavy gripping.
- Pulley injuries in climbers are often preceded by weeks of mild finger discomfort — respect early warnings.

Microbreaks and Movement Snacks

Tissues fed by movement do not tolerate stillness. The single most powerful intervention I recommend, after sorting the workstation, is the habit of brief, frequent movement breaks. Below is a routine that takes under two minutes and addresses the common trouble spots.

Movement	How	Reps
Chin tucks	Sit tall. Glide chin straight back, keeping eyes level. Hold 3 seconds.	10
Shoulder rolls	Roll shoulders up, back, and down — feel the shoulder blades settle.	10
Doorway pec stretch	Forearm on door frame, step through. Hold 20 seconds each side.	2 each
Wrist flexor stretch	Arm out, palm up, gently pull fingers down. Hold 20 seconds.	2 each
Wrist extensor stretch	Arm out, palm down, gently pull fingers down. Hold 20 seconds.	2 each
Median nerve glide	Arm out, palm up; tilt head away as you bend the wrist back gently.	5 each
Scapular squeezes	Pinch shoulder blades down and back, not up.	10

Set a movement timer

An hourly phone or smartwatch alarm to “stand and move” is the cheapest, most effective ergonomic intervention available. The point is not the stretch — it is breaking up the static load.

Self-Care for Early Symptoms

If you have caught a problem early, the following measures — alongside ergonomic correction — resolve most cases over 2–6 weeks.

Relative rest, not complete rest

Reduce the aggravating activity, but keep the limb moving. Complete immobilisation stiffens joints and weakens muscles. Modify, do not eliminate.

Ice and heat

Ice (10–15 minutes, wrapped in a cloth) helps acute, swollen, painful flares. Heat helps stiffness and chronic aches. Most people find heat more useful for ongoing tendinopathy and ice for acute irritation.

Splints and supports

A wrist splint at night for carpal tunnel, an elbow strap for tennis elbow, or a thumb spica for De Quervain's can be transformative — but they are an adjunct to changing the activity, not a replacement.

Anti-inflammatory medication

Short courses of paracetamol or, where appropriate, anti-inflammatory medication can help break the pain cycle. Always check with your pharmacist or GP if you have other health conditions or are taking other medications.

Loaded tendon rehabilitation

Tendinopathy responds to **gradually loaded exercise**, not rest. A physiotherapist can guide a progressive programme — slow, heavy, and short, typically 3 sessions per week. Pain up to about 4/10 during exercise is acceptable provided it settles within 24 hours.

Special Considerations

Working from home

- Sofa working is the single biggest cause of new neck and shoulder pain since 2020. Even a basic dining-table set-up with a laptop stand, separate keyboard and a cushion in the lumbar curve outperforms a sofa every time.
- Define a workspace, even if small. Pack it away at the end of the day to enforce a stop.

Pregnancy and postnatal

- Hormonal changes in late pregnancy and breastfeeding increase laxity in the wrist tunnels, raising carpal tunnel risk. Night splints are very effective and safe.
- Pay attention to feeding posture — see the parenting section above.

Older adults

- Maintaining shoulder range of motion is the single best protection against falls-related upper-limb fracture.
- Resistance training (with appropriate guidance) preserves bone density and grip strength — both predictors of independence.

Manual workers and tradespeople

- Vibration tools should be used with anti-vibration gloves and frequent breaks.
- Tool selection matters — a heavier tool with a better grip may be less fatiguing than a lighter one with a poor grip.
- Rotate tasks where possible — symmetry of load across the day matters.

Musicians and performers

- Practise in shorter, more frequent blocks rather than long marathon sessions before performance.
- Address the chair, stand, and instrument height with the same rigour as a desk set-up.
- Performance-related pain warrants early specialist input — the consequences of ignoring it are career-defining.

Your Quick-Reference Checklist

Print this page. Tick what you already do. Pick two unchecked items this week and embed them.

- [ ] Top of monitor at eye level, an arm's length away
- [ ] Laptop on a stand with separate keyboard and mouse
- [ ] Chair supports the lumbar curve; feet flat on the floor
- [ ] Elbows at 90–110°, wrists straight, shoulders relaxed
- [ ] Mouse moved from the shoulder, not the wrist
- [ ] Movement break every 30 minutes
- [ ] Phone held up to face level, not chin-down
- [ ] Both straps used on backpacks; loads close to the body
- [ ] Sleeping on side or back, not stomach; pillow fills the neck gap
- [ ] Driving with relaxed grip and elbows softly bent
- [ ] Twice-weekly resistance training including pulling and rotator cuff work
- [ ] Two minutes of mobility work daily — neck, shoulders, wrists
- [ ] Sharp knives, jar openers, raised chopping surfaces in the kitchen
- [ ] Pram and trolley handles adjusted to hip–waist height
- [ ] Plan to seek review if symptoms persist beyond 4–6 weeks

Frequently Asked Questions

Is it really my desk that is causing my shoulder pain?

In the great majority of cases, yes — at least in part. The shoulder is exquisitely sensitive to sustained postures. A correctly set-up workstation will not cure every shoulder problem, but no shoulder problem in a desk worker improves while the workstation remains badly set up.

Should I use a wrist rest?

Wrist rests are for resting between bursts of typing, not during typing. Typing with the wrists planted on a rest bends them and concentrates pressure on the carpal tunnel. Float the hands while typing; rest them when pausing.

Are vertical mice worth it?

For people with established forearm or wrist pain, yes — they put the forearm in a more neutral "handshake" position. They take a few days to adapt to. A vertical mouse alone will not solve a problem caused by an otherwise poor set-up.

How long should I wear a wrist splint at night?

Most patients with carpal tunnel symptoms benefit from nightly use for 4–6 weeks, alongside daytime ergonomic changes. If symptoms persist, escalate to a specialist review rather than wearing splints indefinitely.

Is cracking my knuckles harmful?

Knuckle cracking has not been shown to cause arthritis. It does not cause meaningful damage. If it is uncomfortable, stop; if it is just a habit, you can leave it alone.

My pain is worse at night. Is that significant?

Yes. Night pain disrupting sleep, or pain that wakes you, is one of the features I take most seriously. It often points to rotator cuff disease, frozen shoulder, or nerve compression — and warrants a specialist assessment.

Should I "push through" pain when exercising?

Sharp pain — never. A dull ache up to about 4/10 during loaded tendon rehabilitation, that settles within 24 hours, is acceptable and often necessary. Pain that lingers, intensifies, or reappears the next morning means you have done too much.

Can poor posture cause permanent damage?

Posture itself rarely causes structural damage. What it does cause is repetitive overload of specific tissues — and that overload, sustained for years, drives tendinopathy, nerve compression and eventually arthritis. Correct it early and the changes are reversible.

A Final Word

Most upper-limb problems are not caused by what you did once — they are caused by what you do every day. The good news is that this also makes them eminently preventable. Small, consistent changes to how you sit, move, sleep and train will protect you for decades.

If your symptoms are not settling, do not wait. Early assessment by a specialist almost always means simpler, less invasive treatment, faster recovery, and a better long-term outcome.

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