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iRecover

**Program for Active and Pro-Active
Strategies for Post-Exercise Recovery**

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Programme for Active and Pro-Active Strategies for Post-Exercise Recovery

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Project Information

"I implement post-exercise RECOVERY strategies in grassroots and amateur sports by using digital tools" (iRecover) is a two-years project co-funded by the European Commission's Erasmus+ Sport programme, with the ID: 101184238 dedicated to the researching and promoting recovery strategies in grassroots sports.

Disclaimer

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Background: about the project and its objectives

Recovery is the set of physiological, psychological, and behavioural processes that restore performance capacity after training and competition while protecting long-term health. In team and endurance sports, cumulative load across microcycles can outpace the body's capacity to adapt, producing a mismatch known as a stress-recovery imbalance; when sustained, this elevates injury risk, dampens neuromuscular output, and degrades sleep and mood [1-4]. Effective recovery planning therefore seeks not only to "undo" acute fatigue but to proactively maintain an adaptive reserve across the season [1,2].

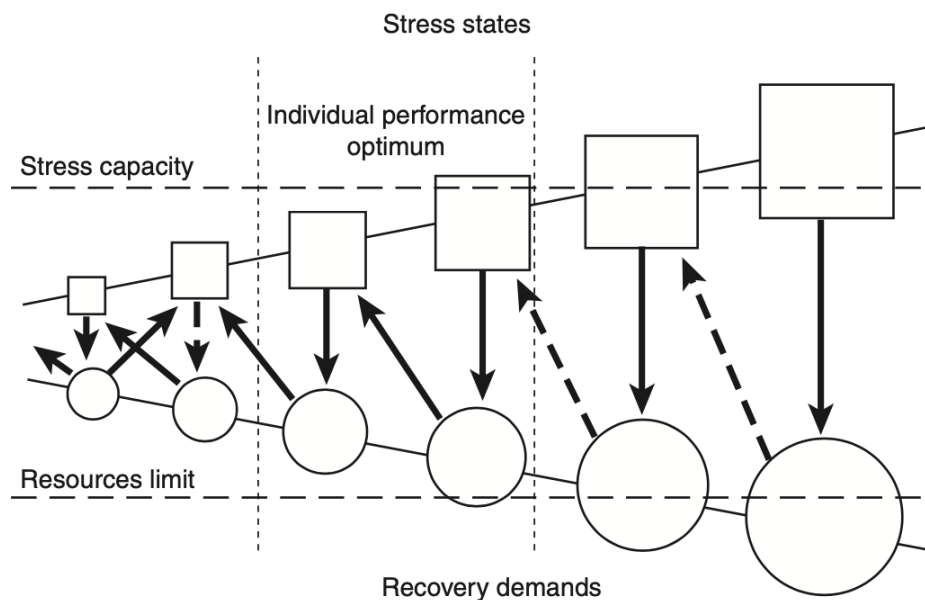


Figure 31.1 The "scissors model" of the interrelation of stress states and recovery demands. Reprinted, with permission, from Kallus, K.W., & Kellmann, M. (2000). Burnout in athletes and coaches. In Y.L. Hanin (Ed.), *Emotions in sport* (p. 212). Champaign, IL: Human Kinetics.

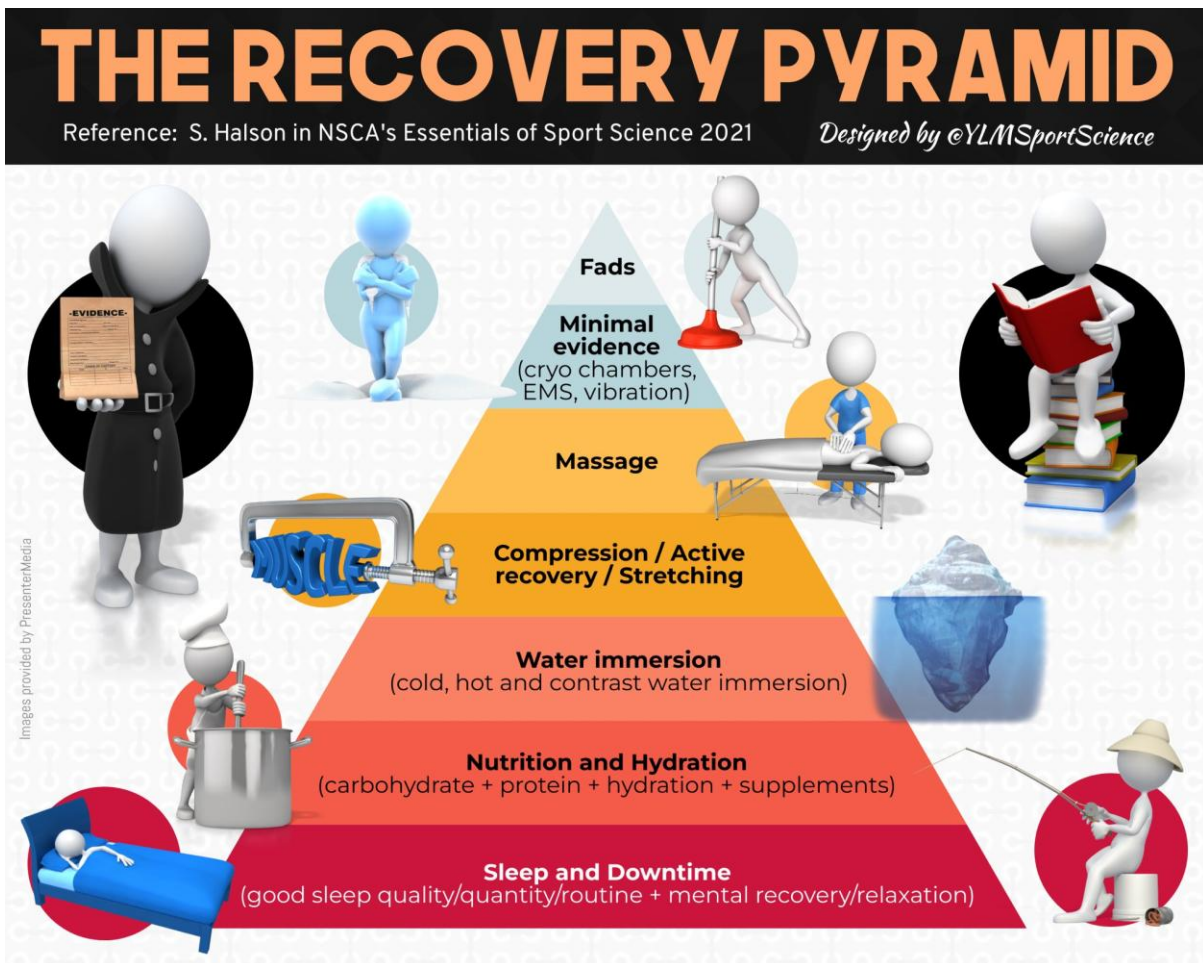
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Mechanisms and time course

Training stress perturbs homeostasis through metabolic, neuromuscular, autonomic, and cognitive–emotional pathways. Recovery unfolds on overlapping time scales—rapid autonomic rebalancing (minutes to hours), restoration of muscle function and connective tissue (24–72 h), and longer remodelling and psychological recalibration (days to weeks). Because these processes are partially independent, no single method normalizes all systems; a multimodal approach is required [5].

Core modalities.

- Sleep is the primary recovery “dose,” integrating anabolic hormone activity, immune function, and memory consolidation. Consistent duration, timing, and pre-sleep arousal control have greater impact than isolated techniques [6,7].
- Active recovery (low-intensity aerobic work, mobility, light technical drills) promotes circulation and joint range without meaningful load [8,5].
- Tissue techniques (self-myofascial release, gentle stretching) can reduce perceived soreness and improve short-term range, supporting readiness for skill work [9,10].
- Down-regulation strategies (paced breathing/HRV biofeedback, mindfulness, Yoga Nidra) target sympathetic over-activation, reduce cognitive–somatic arousal, and can improve subjective recovery and sleep quality [11–13].
- Nutrition and hydration underpin all other modalities; timely carbohydrate–protein provision and fluid–electrolyte balance support glycogen resynthesis, muscle repair, and thermoregulation [14].



2. The Recovery Pyramid (S. Halson in NSCA's Essentials of Sport Science, 2021)

Proactive vs. reactive recovery

Reactive recovery occurs immediately after heavy sessions or matches (e.g., 10–20 minutes of cool-down, mobility, and breath work). Proactive recovery is scheduled independent of acute fatigue (e.g., weekly mobility circuits, relaxation sessions, easy swims) to prevent stress accumulation, protect sleep, and stabilize mood. Programmes that combine both—brief post-session routines plus planned weekly sessions—better maintain the stress–recovery balance than ad-hoc, symptom-driven use [1,2].

Monitoring and decision rules

A simple, low-burden system should triangulate subjective markers (sleep quality, soreness, mood, readiness), training context (session RPE, volume, intensity, travel), and when feasible objective signals (e.g., actigraphy sleep metrics or heart-rate variability trends). Decision rules map common patterns to actions—for example, “poor sleep + high soreness” escalates down-regulation and mobility while reducing next-day load; “good sleep + low soreness” maintains plan with optional light tissue work [15–20]. The goal is not to chase normality daily but to maintain favourable trends across weeks.

Individualization and feasibility. Recovery should be matched to athlete profile (training age, injury history, preferences), sport demands, and calendar constraints. Short, well-rehearsed protocols (10–30 minutes) increase adherence; pairing physical (mobility/aerobic) and psychophysiological (breathing/Yoga Nidra) elements improves coverage of mechanisms without excessive time cost. Clear checklists, consistent timing (e.g., immediate 0–20 min, MD+2, evening pre-sleep), and staff modelling enhance compliance [1,2].

Research design

Aim and Review Question

This scoping review mapped and described the evidence on active and proactive post-exercise recovery strategies and their technology-supported implementations in grassroots (tier-3) and amateur athletes, focusing on effects related to recovery, performance, and well-being. Consistent with the iRecover toolkit's adapted PIO (Population–Intervention–Outcomes) framework, the guiding question was:

“Among grassroots or tier-3 athletes, which active and proactive recovery strategies—including those enabled by digital tools—are described in the literature, and what outcomes (recovery, performance, or well-being) are reported?”

Following the project's handbook/app framework, “recovery strategies” included low-intensity active recovery, mobility/flexibility work, self-myofascial release/foam rolling, relaxation and down-regulation (e.g., breathing, mindfulness, Yoga Nidra), and sleep-support routines. “Technology-supported” encompassed smartphone apps, software platforms, and accessible digital tools that deliver, monitor, or personalize these strategies (e.g., HRV-guided readiness, guided breathing/relaxation, stretching/mobility apps, recovery-service access). These categories mirror the iRecover app taxonomy used for mapping functions to mechanisms and user pathways.

Grassroots and amateur athletes were prioritized (tier-3; McKay et al., 2015), but the toolkit specifies broad initial searches without the “tier-3” keyword to avoid missing relevant items, with eligibility enforced during screening. Evidence was charted when studies reported at least one of: recovery/readiness, performance, or well-being (including sleep or perceived recovery).

Eligibility Criteria

- Population (P): Athletes competing or training in grassroots, amateur, or community sport (team or individual). Mixed samples were eligible when the athlete-specific data was extractable. Youth and adult participants were both eligible when aligned with grassroots contexts.
- Intervention (I), Active or Pro-Active recovery strategies:
 - Light aerobic, cool-down, mobility.
 - Tissue techniques (self-myofascial release/foam rolling, stretching).
 - Down-regulation (breathing exercises, mindfulness, Yoga Nidra; relaxation techniques).
 - Sleep-support routines (pre-sleep wind-down, hygiene bundles).

- Digital/tech-supported delivery or monitoring of the above (e.g., HRV biofeedback/readiness, guided apps, service access).
- Outcomes (O). Any measure of performance, recovery/stress-recovery balance, or well-being (e.g., soreness, perceived recovery, sleep).

Study types. For a scoping purpose, we included RCTs, quasi-experimental, controlled pre–post, and relevant descriptive or feasibility studies that reported the above outcomes in eligible populations. Narrative reviews and opinion pieces were excluded unless used to snowball primary sources.

Information Sources and Databases

Included Databases are Web of Science, Scopus, PubMed, and Google Scholar. Secondary sources (for the technology-enabled component) included Google Play and Apple App Store to identify deployable tools (followed by literature verification for any app claiming scientific evaluation).

We also used citation chaining and website checks to surface additional items relevant to grassroots implementations and to capture grey or hard-to-index outputs. These pathways are summarized in the PRISMA-style flow (Figure 1).

Search Strategy

The toolkit prespecified keyword families for P, I, and O; Boolean combinations were constructed and adapted across sources. Representative blocks included:

P	"individual sport" OR athletes OR sport OR athletics OR box OR "track and field" OR swimming OR tennis OR ski OR cycling OR "tennis table" OR triathlon OR "team sport" OR football OR soccer OR "American football" OR baseball OR basketball OR volleyball OR "water polo" OR rugby OR futsal OR "indoor soccer"	#1	#7	
I	"active recovery" OR stretching OR "self-myofascial release" OR "self myofascial release" OR "foam roll" OR "foam rolling" OR "light intensity" OR "low intensity" OR "cool down" OR "cool-down" OR "upper body training" OR "upper body" OR "proactive recovery" OR "relaxation techniques" OR "self-regulation" OR "self regulation" OR "psychological skill training" OR "psychological skills training" OR detachment OR "breathing exercise" OR "progressive muscle relaxation" OR yoga OR mindfulness OR "self talk" OR "self-talk"	#2	#4	#6
	"post exercise" OR "after exercise" OR "post match" OR "after match" OR "post activity" OR "after activity" OR "post training" OR "after training" OR "post game" OR "after game"	#3		
O	performance OR "stress recovery balance" OR recovery OR "well being"	#5		

Table 1. Search Strategy

Searches were iteratively refined using pilot runs to confirm sensitivity and ensure alignment with the project's recovery modalities and tech categories defined in the handbook/app manuscripts. Exact strings and filters per database are archived in the project folder.

Study Selection and Flow

Deduplication preceded a two-stage screening (titles/abstracts → full-text) by two independent reviewers using piloted forms. Disagreements were resolved by discussion; a third reviewer adjudicated unresolved conflicts. Reasons for exclusion at full text (e.g., design, wrong population/age, language) were logged verbatim.

The PRISMA-style identification, screening, eligibility, inclusion counts are documented in Figure 1 (final: 9 studies included; 6 via databases + 3 via other methods). This reflects the project's transparency standard while recognizing that the product is a scoping map rather than a meta-analytic estimate.

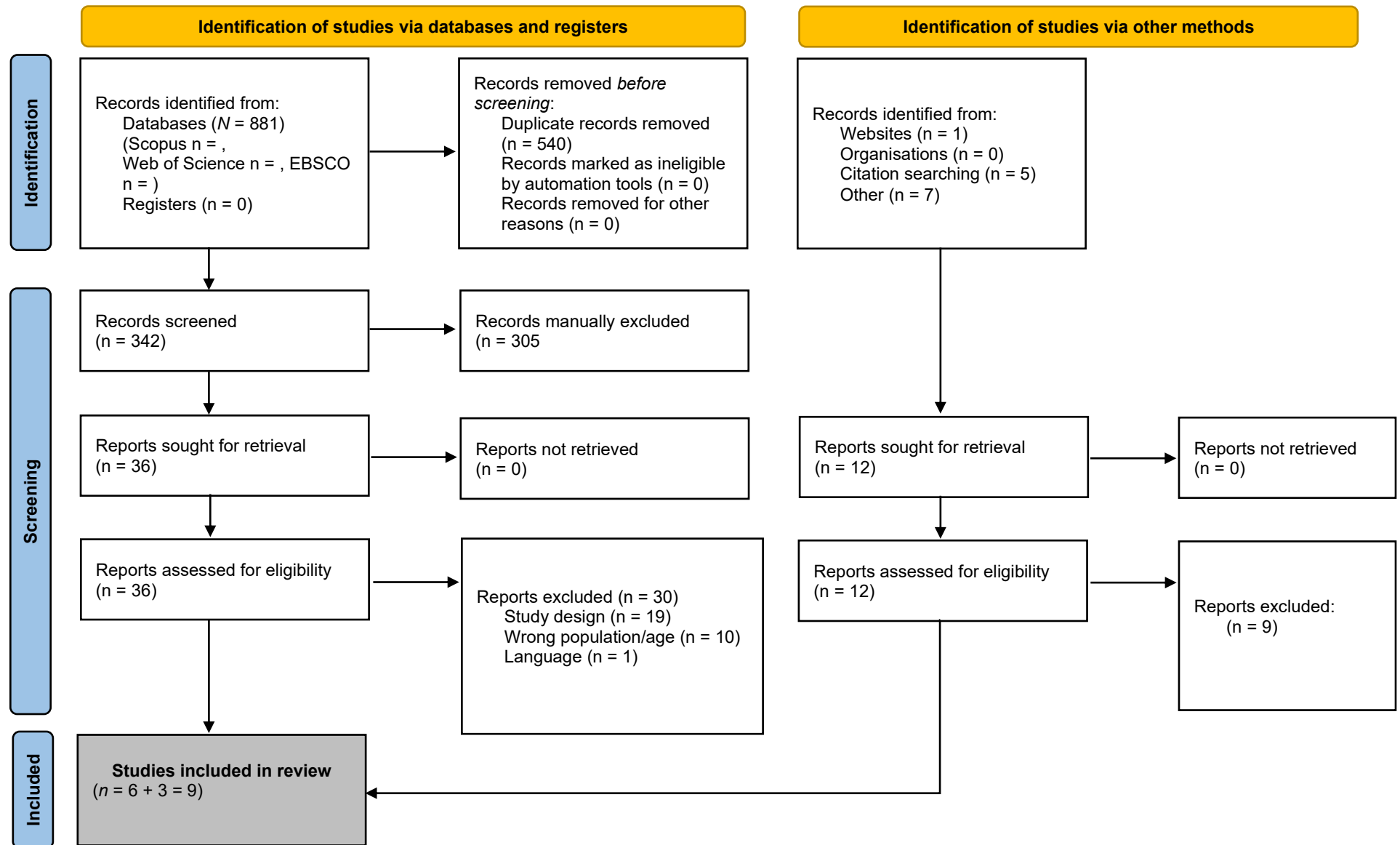


Figure 3. PRISMA flow chart of data extraction from the literature search

Data Chart

Given the scoping aim, we used a standardized charting form (piloted and revised) derived from the iRecover guideline and app manuscript categories to capture:

- Study descriptors: year, country, sport/discipline, setting, sample (size/sex/age).
- Intervention taxonomy: strategy type (active, tissue, down-regulation, sleep-support), dose (session length/frequency), timing (immediate 0–20 min; delayed 24–72 h; proactive/weekly; evening/pre-sleep), supervision/delivery mode, tech enablement (e.g., HRV-guided readiness, guided breathing, stretching apps).
- Outcomes & measures: performance tests, perceived recovery/fatigue/soreness, sleep measures, HR/HRV when available, adherence/feasibility.
- Comparators/contexts: usual practice, alternative modality, or none (descriptive/feasibility).
- Key findings: direction/magnitude (narrative), implementation notes, and reported harms/adverse events (if any).

Where articles evaluated or referenced specific apps/tools, we cross-checked features and intended mechanisms against our function-based app taxonomy to harmonize labels (e.g., HRV readiness; breathing/biofeedback; mobility/stretching; relaxation/sleep; recovery-service access).

Results

We organized evidence by modality and by timing window, and flagged technology-supported implementations within each modality. For each cell (e.g., down-regulation → evening/pre-sleep), we summarized (Table 1):

- The types of interventions and delivery modes encountered (in-person vs app-guided);
- The dominant outcomes assessed (e.g., perceived recovery or sleep quality);
- The overall direction of effects (e.g., positive/mixed/unclear), considering sample characteristics and feasibility.

This matrixed narrative synthesis supports the handbook's "ready-to-use" recovery menus and the app's user flows while staying faithful to the breadth-mapping purpose of a scoping review.

	Participants				Recovery			
Authors, year, & country	Sample size (<i>n</i>)	Age (Mean, <i>SD</i> , Range)	Sport & Level	Study design	Recovery strategy	Recovery timing	Recovery outcome	Findings
Sedano and Maroto-Izquierdo, 2025 Spain	n = 22 female	16.2 ± 0.6 years old	Soccer U17 - Tier 3	Randomized control trial with three active group during 14 official matches	1) Passive stretching 2) Foam rolling 3) Lumbopelvic mobility exercise	10 min after each match,	CMJA Perceptual recovery: Wellness questionnaire (sleep, fatigue, soreness, stress)	All protocols ↑ CMJA (post & +5 h, <i>p</i> < 0.001). Mobility > Stretching & Foam rolling for CMJA improvements. Foam rolling & Mobility > Stretching for wellness (24 h). Mobility = Foam rolling for wellness (no difference).
di Fronso et al., 2024	N = 1 female	19 years old	Elite karate athlete Tier 4	Case Study Pre-post-follow-up design:	Yoga Nidra (YN): 10 guided sessions (30 min each, 2/week for 1 month), including body awareness, breathing, visualization, Sankalpa (intention).	Intervention: evening, before sleep Assessments: Questionnaires: T0, T1, T2; Actigraphy: 5 days at T0, T1, T2; Daily monitoring: Total Quality Recovery (TQR) & RPE	RESTQ-Sport-36 (recovery-stress balance), I-PPS (perceived stress), TQR, PSAS (pre-sleep arousal), PSQI (sleep quality), FS & FAS (acute affect/arousal) Actigraphy sleep measures (latency, efficiency, total sleep time, WASO, awakenings) EEG-based individual alpha peak frequency (iAPF) during stress task	Perceived stress ↓ after intervention, but ↑ again at follow-up. Pre-sleep arousal ↓ (less cognitive anxiety) and sleep quality ↑ (better PSQI and actigraphy at T1). Perceived recovery (TQR) ↑ during the intervention, with best values the morning after YN sessions. Acute effects: improved mood (FS) and ↓ anxiety (FAS). iAPF modulation: indicated better stress control after YN.
Pernigoni et al., 2023 Lithuania	n = 22 male	15.9 ± 0.3 years old	Basketball U16 Tier 3	crossover design: 90-min training sessions,	AR: 15 min jogging at ~75% HRmax (~60% VO ₂ max)	20 min after training, lasted 15 min	CMJ height Heart rate variability (Ln-rMSSD), salivary cortisol,	No differences between AR and SS at matched time points.

				each followed by one recovery intervention separated by 1 week	SS: 14 exercises (quadriceps, hamstrings, glutei, gastrocnemii, hip adductors, hip flexors, paravertebral, abdominals) 4 × 15 s each	Outcomes assessment: pre-session, post-session, post-recovery, and 24 h post	testosterone, T:C ratio Muscle soreness (VAS), perceived recovery (TQR)	CMJ ↓ post-recovery only in SS, recovered at 24 h. HRV (Ln-rMSSD): delayed return to baseline in AR (next morning), immediate in SS. TQR ↓ post-session & post-recovery in AR Muscle soreness ↓ at 24 h in both; no AR vs SS differences. Hormones: no changes.
Renaghan et al., 2023 USA	n = 38 male (mindfulness = 35 rest = 36 no-intervention = 33	19.9 ± 1.4 years old range: 18–23	American football NCAA Division I (starters)	Repeated-measures non-randomized within-group design with 3 high-intensity Monday sessions during preseason, one week apart	15-min guided mindfulness (supine, dark room breathing + body scan) Vs 15-min seated rest (lighted room rehydrate/refuel/talk) Vs no-intervention (usual post-training activities - listening to music, showering, eating, standing around, horseplay)	Immediately post-training for 15 min (pre/during/post measures)	Immediate post-training autonomic recovery measured through HR, respiration rate (RR), HRV (SDNN, rMSSD)	Mindfulness and rest (quiet) > no-intervention for lower post-intervention HR/RR and higher HRV (SDNN, rMSSD) mindfulness > rest (HR 77.0 vs 89.9 vs 120.1 bpm RR 15.0 vs 19.3 vs 23.6 SDNN 46.9 vs 42.9 vs 33.1 ms rMSSD 17.9 vs 16.7 vs 13.8 ms)
Sorgente et al., 2023 Italy & Spain	n = 50 (25 male, 25 female)	15 ± 1.1 years old	Swimmers (50m–400m, all four strokes) Tier 3	Randomized control trial – Acute experimental study comparing two active protocols after competition	1000m total volume, mixed intensities ("easy," "moderate," "hard"), structured rest intervals, use of kickboard. Vs 800m total volume, self-paced, steady swimming, arbitrary rest times	1. Post-competition phase (immediately after the race, +1 min out of the pool) 2. Post-recovery phase (immediately after completing the recovery protocol, ~20 min duration)	Blood lactate (BL), Heart rate (HR), Rate of perceived exertion (RPE)	Both protocols ↓ BL, HR, RPE post-race. Experimental > Coach-prescribed for BL clearance ($p < 0.05$). No differences for HR, RPE.
Trecroci et al., 2021 Italy	9 (8) Male soccer players with	17.7 ± 0.55 years old	Soccer U19 National League	crossover design: two period with 4-	SST: Sport-specific training session of 60 min (warm-up, SSG,	Intervention at +48h (MD+2) Outcomes	Perception of recovery: muscle soreness (VAS 0–10), Total Quality of Recovery scale (TQR, 6–	AR vs SST: Faster restoration of soreness and CK by +72 h (time×intervention for

	at least 8 years of experience			week washout during in-season	tactical drills, higher internal and mechanical load) Vs Acute recovery of 30 min (low-intensity technical drills, dynamic stretching, straight-line jogging)	assessed at 72h before, immediately after, +72h (MD+3)	20). Biochemical: Creatine kinase (CK, U/L), C-reactive protein (CRP, mg/dL), interleukin-6 (IL-6, pg/mL), uric acid (UA, mg/dL), serum creatinine (sCr, mg/dL), cortisol (µg/dL), white blood cell count and differential (WBC, neutrophils, lymphocytes, monocytes; 10 ³ cells/mL).	soreness P=0.004; CK P=0.04). No differences for CRP, IL-6, UA, sCr, cortisol, WBC or subsets. most markers showed time effects.
Pooley et al., 2017 UK	10 elite youth male soccer players (English Premier League academy)	16 ± 1 years old	Soccer Elite youth academy	Crossover design with each player completing ≥ 3 competitive 80-min matches per condition (SS vs PR) Measures pre, post (≤30 min), and +48 h	Static stretching (SS): 2×15 s static stretches of gastrocnemius, hamstrings, quadriceps, glutes, hip flexors, adductors, abductors Passive rest (PR): 10-min passive seated rest	Immediately post-match with assessments pre and post match, (30 min before and 48h after)	Biochemical: CK Performance: CMJA Perceived: muscle soreness (VAS 0-10) Morphological / edema: tight girths – two gastrocnemius	Match play increased CK and soreness and reduced CMJA. Static stretching showed no clear benefit vs passive rest: only absolute CK at +48 h was lower with stretching; soreness, CMJA, oedema showed no advantage
Trecroci et al., 2019 Italy	9 male soccer players	17.6 ± 0.5 years old; range 17-18	Soccer U19 National League	Crossover design: 4-week washout between friendly matches to induce fatigue Measures before (72 h), immediately after (0h) and after (+72 h)	SST (60' higher load): 10' FIFA-11+ running + 5' dynamic stretching + 4×3' 4v4 SSG on 18×24 m with 3' recovery + 15' tactical drills (attacking/defending) + 10' set plays AR (30' lower load): 15' circle drills + 5' dynamic stretching + ~10' straight-line jogging (8× ~20 s runs from one penalty area to the opposite, ~40 s walk between runs).	Intervention at +48h (MD+2) Outcomes measured at +72h (MD+3) Baseline measured -72 h than match and immediately post match (0 h)	Physical performance: 30-m sprint time; repeated-sprint ability (best and mean sprint times). Neuromuscular: Isometric maximal voluntary force (MVF) of knee extensors (120°) and knee flexors (90°)	No between-intervention differences for 30-m sprint, RSA (best/mean), or knee extensor MVF. Knee flexor MVF recovered more after AR than SST at +72 h (time×intervention p=0.036; AR ~+25.7% vs SST ~+9.4%).

<p>Marín et al., 2012 Spain</p>	<p>16 high-level junior male soccer players, divided in WBV (n=8) and Control (n=8).</p>	<p>17.1 ± 0.9 years old</p>	<p>Soccer high-level juniors (national-team players)</p>	<p>Randomized parallel-group post-exercise recovery after a soccer-specific RSA test Outcomes at baseline, post-RSA (pre-intervention), post-intervention, +24 h, +48 h, +72 h</p>	<p>Traditional cool-down with or without WBV WBV used 35–50 Hz at 1.15–2.41 mm peak-to-peak while performing the same positions/stretching as control</p>	<p>Cool-down immediately after the RSA Follow-up at +24/+48/+72 h</p>	<p>Perceptual: Lower-limb muscle soreness (VAS 0–10) across multiple muscles. Performance: Countermovement jump (CMJ, % change). Neuromuscular: Maximal voluntary isometric contraction (MVIC) of knee extensors.</p>	<p>WBV: no significant benefit in muscle pain (VAS) at 24–72 h and CMJ recovered by 24 h Control: pain increased 161–215% and CMJ still depressed at 24 h MVIC unchanged between groups.</p>
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Results by timing

Immediate (0–20 min)

Objective: Circulation, gentle range of motion, and down-regulation.

Menu (choose 1–2):

- 10–15' easy jogging or pool easy-swim (RPE 2–3)
- 10' mobility circuit (spine, hips, ankles, shoulders)
- 8–10' foam rolling (quads, adductors, calves, glutes)
- 10–15' quiet room mindfulness / breath-led wind-down

Delayed (+24–72 h; typically MD+2)

Objective: Reduce residual soreness; restore force.

Menu: low-load aerobic + light technical work, dynamic stretching, mobility.

Weekly

Objective: Protect sleep, mood, and readiness; prevent overload.

Menu: 20–30' Yoga Nidra or mindfulness, 20' mobility circuit, 15–20' easy swim.

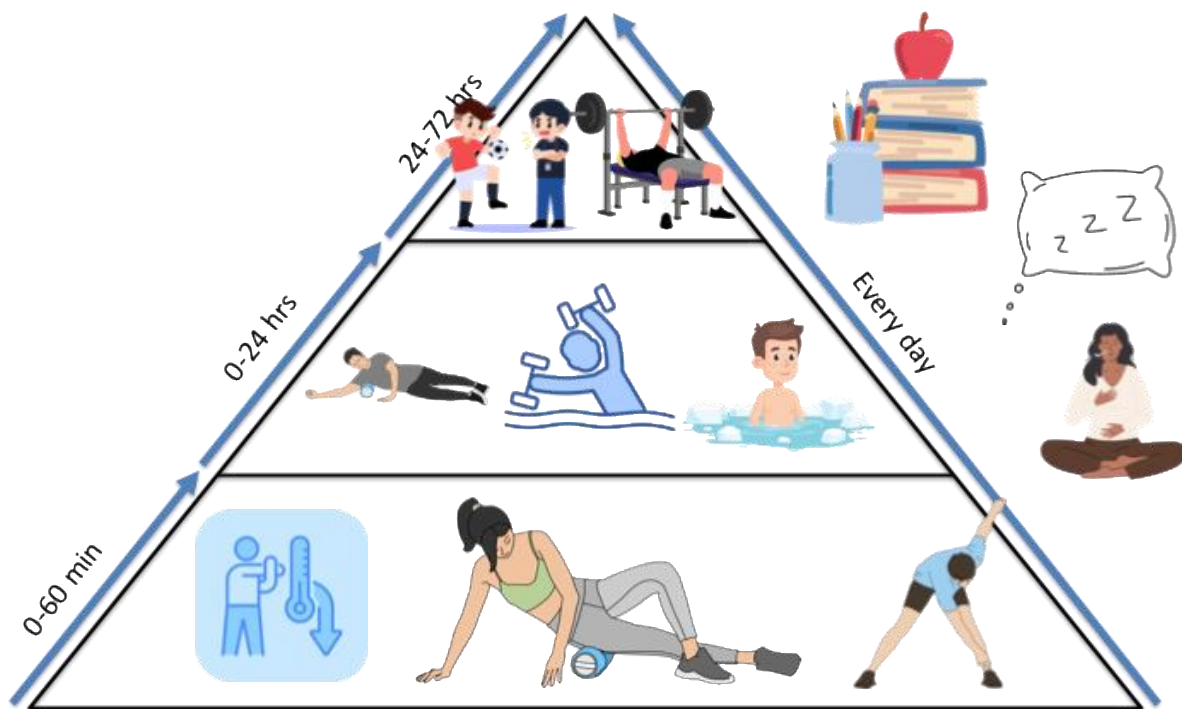
Evening / Pre-sleep (most days)

Objective: Lower pre-sleep arousal; improve sleep efficiency.

Menu: 20–30' guided relaxation or Yoga Nidra; screen-off wind-down; warm shower.

Core modalities (how to do it)

- Mobility & Foam Rolling (10–20')
 - Sequence: spine → hips → knees/ankles → shoulders.
 - 30–45 s per position; 1–2 rounds.
- Low-load Aerobic (10–15')
 - Jog/cycle/swim at conversational pace ($\approx 60\text{--}75\%$ HRmax).
- Mindfulness / Yoga Nidra (15–30')
 - Quiet environment; guided audio; focus on breathing, body scan, and relaxation.
- Breath-led Down-regulation (5–10')
 - Paced breathing $\sim 4\text{--}6$ breaths $\cdot\text{min}^{-1}$; inhale:exhale $\approx 1:1\text{--}1:2$.



4. Core modalities of recovery strategies

Build your weekly recovery plan

Use one Immediate option after hard sessions; schedule Pro-Active sessions on light days; include Evening down-regulation most nights. Examples of microcycle templates can be found below.

Team-sport (match on Sunday)

- Sun (MD): Immediate ARP (easy jog + mobility) 10–15'
- Tue: PARP 20–30' Yoga Nidra or mobility circuit
- Thu: PARP easy swim 20'
- Nightly: 20–30' pre-sleep relaxation

Endurance microcycle

Alternate Immediate ARP after key sessions; 2× PARP in mid-week; nightly pre-sleep routine.

Ready-to-use sessions

Each session fits on a single page with images and cues. Select Basic / Advanced progressions as appropriate.

Immediate Acute Recovery – “Cool-down + Mobility” (15’)

- 5' easy jog or walk
- 8' mobility circuit (hips, hamstrings, calves, T-spine)
- 2' box breathing (inhale 4" – hold 4" – exhale 4" – hold 4")

MD+2 Acute Recovery: “Low-load Aerobic + Dynamic Flex” (25’)

- 12' easy aerobic
- 10' dynamic mobility (leg swings, lunges, ankle rocks)
- 3' paced breathing

Pro-Active Recovery: “Mobility Circuit” (20’)

- 8 stations × ~2'; rest 15–20" between stations.

Pro-Active Recovery: “Yoga Nidra / Guided Relaxation” (30’)

- Quiet room; audio-guided session; eyes closed; no screens post-session.

Evening: “Sleep Wind-down” (20–30’)

- Lights dim; hot shower; 10–15' guided breathing/relaxation; journal next-day plan.

Monitoring & decision rules

Daily check-in (≤30 s)

- Sleep quality; soreness; mood; readiness (1–5).

Simple decision tree

- Poor sleep + high soreness: prioritize pre-sleep routine + mobility; reduce next session load.
- Good sleep + low soreness: proceed with planned load; consider optional mobility only.

Weekly review

- Track actigraphy/wearables when available; review subjective trends; adjust PARP frequency.



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Post-Exercise Recovery: Pictures, Frequency & Time



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SELF-MYOFASCIAL RELEASE

Plantar Release



Stand tall with your feet about hip-width, both forefeet resting on the small plate/wedge and your heels on the floor, hands on your hips. From here, slowly bend your knees and let them travel forward over your toes while keeping your heels heavy, so your ankles fold and your body leans slightly forward as one piece. You should feel a strong but comfy stretch through your calves and around the Achilles, maybe a bit in the front of the ankle, but no pinching or sharp pain. Pause for 2–3 seconds in that end position, breathing out and trying to let the calves relax, then push the floor away and come back to tall. Move like this for 10–15 smooth reps, and repeat 2–3 rounds, using it as a warm-up or mobility drill before running or lifting.

Calves Release



Sit on the floor with your legs straight and the foam roller under your calves, hands on the ground behind you to lift your hips slightly off the floor. Gently roll your calves back and forth over the roller from just above the ankle to just below the knee, using your arms to control the pressure. To hit the outside of the calf, cross one leg over the other and rotate your hips so more weight drops onto a smaller area, then switch sides and do the same. You should feel a deep, slightly uncomfortable but still "good" pressure in the muscle, never on the Achilles or directly on the back of the knee and never sharp pain or tingling. Spend about 30–45 seconds per calf, moving slowly, and repeat 2–3 rounds, pausing a bit longer on any tight, crunchy spots while you breathe.

Quadriceps and tensor fascia lata release



Lie face down on your forearms with the foam roller under one thigh, just above the knee, and the other leg relaxed out to the side for support. Slowly push and pull with your arms so you roll from just above the knee up toward the hip, staying on the muscle, not the kneecap, and letting your body weight sink into the roller. You can bend and straighten the rolling leg or rotate your toes in and out to hit different parts of the quad and the inside/outside line of the thigh. It should feel like deep, intense pressure on a tight muscle – uncomfortable but still “good”, never sharp pain or numbness. Spend about 45–60 seconds on the front of the thigh, then roll a little more onto your side to get the outer quad/IT band for another 30–45 seconds. Switch legs and repeat, doing 1–3 rounds per side depending on how cooked your quads feel.

Hamstring Release



Sit on the mat with your legs extended and place a foam roller under one calf, just above the ankle. Lean back and support yourself on your hands with your elbows extended, then slightly lift your hips so your weight rests on the roller. Roll the calf slowly by moving your body forward and backward, working from the ankle up toward the back of the knee and back down again. The opposite leg can stay relaxed on the floor or crossed over the working leg to increase pressure. Switch sides and repeat for the other calf, keeping the movement slow and controlled while maintaining steady breathing.



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MOBILITY



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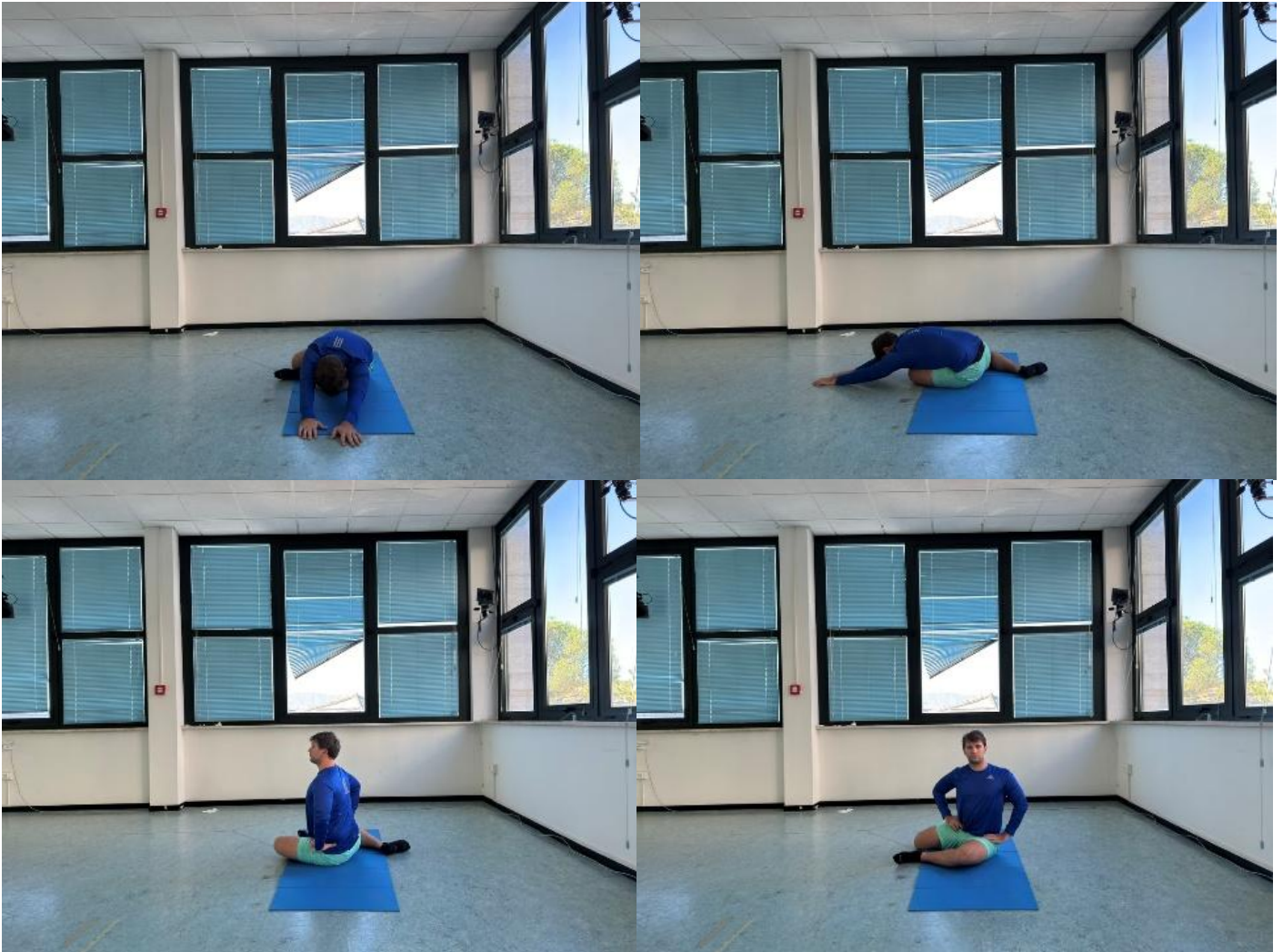
**Post-Exercise Recovery:
Pictures, Frequency & Time**

Ankle Stretching



Stand facing the wall with your hands flat at shoulder height, one foot forward and the other stepped well back, toes pointing straight ahead. Keep the back knee straight and gently drive that heel toward the floor as you lean your hips and chest into the wall. Let your front knee bend while your pelvis stays square, feeling a long stretch through the calf of the back leg and maybe a mild opening at the front ankle. Keep your ribs down, don't let your lower back arch, and breathe slowly, trying to "melt" the heel heavier into the ground with each exhale. Hold the position for about 30–45 seconds, then switch legs. Repeat 2–3 times per side, once or twice during the session.

90/90 Hip stretching



Start on your knees and sink back into a child's pose, arms reaching forward, forehead toward the mat, just letting your lower back and hips gently stretch as you breathe. Then, without rushing, walk your hands to one side so you feel a long line of stretch along your side and lats while your hips stay heavy toward your heels. Come up into that 90/90 seated position with both knees bent, sit tall and feel the front of one hip and the deep muscles around your front glute opening up. From there, rotate your chest toward the front leg so you get a gentle twist through your spine and a bit more tension in the glute. Aim to hold each position for about 20–30 seconds, repeat 2–3 times per side, and keep the stretch at a "comfortable but noticeable" level, never painful.

Quadriceps Stretching



Drop into a half-kneeling lunge with one knee on the mat and the other foot in front, push your hips gently forward and reach the arm on the kneeling side straight up to the ceiling. Keep your chest tall and glutes lightly squeezed so you feel a stretch deep in the front of the hip and maybe a bit in your abs. From there, lean your torso slightly forward, reach back with the same-side hand, and grab your back foot or ankle, bringing the heel toward your glute. You should now feel a stronger stretch through the front of the thigh (quad) and hip flexor, but still no pain, just tension. Breathe slowly, hold each position for about 20–30 seconds, then switch sides, and repeat the whole sequence 2–3 times per leg.

Back Decompression



Set yourself up kneeling behind the Swiss ball, then drape your torso over it so your chest and belly rest on the ball and your hips sink toward your heels. Let your arms slide forward on the floor, palms down, and allow your head and neck to relax so you're almost hanging over the ball. You should feel a gentle opening across your chest and under your armpits, a stretch through the lats and upper back, and maybe a little release in the lower back as it decompresses. Try to breathe slowly into your ribs, especially into the sides and back, and with each exhale let your body soften a bit more over the ball. Hold this position for 30–60 seconds, come out slowly, and repeat 2–3 times if it feels good. Keep the stretch mild to medium—this one is more about relaxing and opening up than pushing range.

Whole-Body Vibration platform (Hamstrings)



The subject stands on the whole-body vibration platform with feet about hip-width apart, then hinges forward from the hips with relaxed knees, letting the upper body drape toward the feet. Hands reach to the front edge of the platform for light support while the spine lengthens and the posterior chain (hamstrings, glutes, lower back) is gently stretched under vibration.

Whole-Body Vibration platform (Adductors)



The subject stands beside the whole-body vibration platform, placing one foot on the vibrating surface with the leg extended. The opposite leg remains on the floor, flexed into a lateral lunge while the hands rest on the hips. This position loads the stance leg and produces a dynamic adductor and inner-thigh stretch in the elevated leg under vibration.

Whole-Body Vibration platform (Quadriceps)



The subject stands upright on the whole-body vibration platform, using one hand on the console for balance while flexing the same-side knee and grasping the ankle behind the body. This position places the hip in neutral and the knee in flexion to stretch the quadriceps and anterior thigh under vibration.

Whole-Body Vibration platform (Piriformis)



Single-leg squat / piriformis stretch on the vibration platform, with the stance leg slightly flexed, the opposite ankle resting across the thigh in a figure-four position, and one hand lightly holding the console for balance.

Whole-Body Vibration platform (Back)



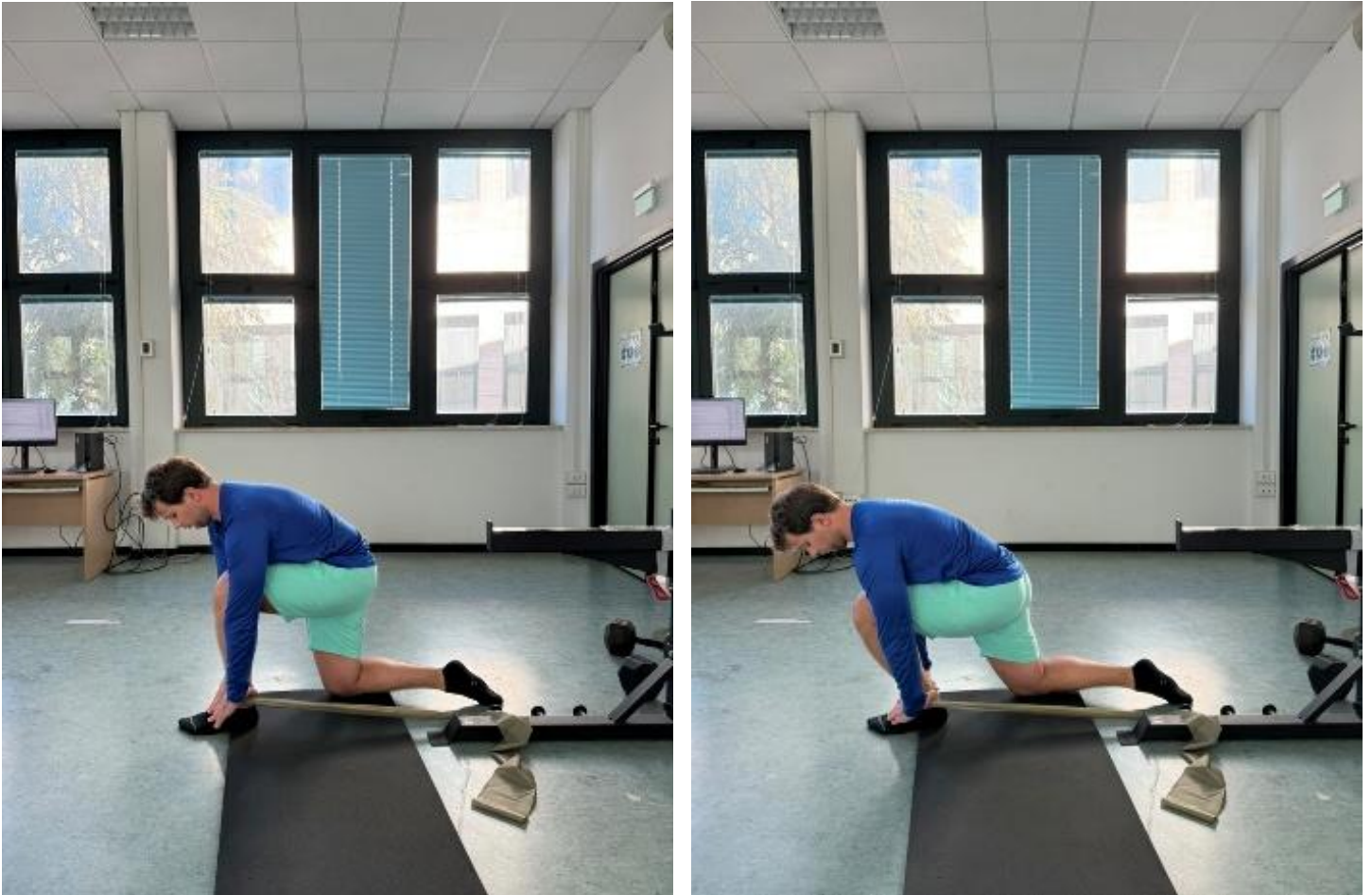
Stand in front of the vibration platform in a pike/downward-dog position, feet on the floor and hands on the plate for a global posterior chain stretch (hamstrings, calves, and back) while the plate vibrates.

Whole-Body Vibration platform (Back)



Front foot on the vibration platform and rear leg extended back in a deep runner's lunge, both hands resting on the plate to emphasize hip flexor and hamstring stretching under vibration.

Ankle Mobility



To start this exercise, secure a band low to a sturdy anchor behind you. Place one foot on a small plate or edge, with the ball of the foot on the plate and the heel on the floor. Loop the band around the ankle just below the malleoli, the ankle bones, and step forward so the band pulls your shin backward. Lower the opposite knee to the floor, adopting a half-kneeling stance with your hips facing straight ahead and your hands lightly on the front foot. Keep the front heel firmly planted and maintain an active arch. Slowly drive your front knee forward over the toes, tracking over the 2nd to 3rd toe. Transition in and out of the stretch by gliding the knee forward until you feel a firm stretch at the front of the ankle or lower calf. Pause for 1 to 2 seconds, then ease back to the starting position without losing contact with the heel. Maintain a neutral spine, with your chest slightly over the thigh and avoiding rounding in the lower back. For best results, do 2 to 3 sets of 10 to 15 slow repetitions per side, or do about 60 to 90 seconds of controlled rocking. This exercise is great as a warm-up or accessory drill to improve ankle dorsiflexion, especially before squats, lunges, and landings.

Hamstring + Piriformis Mobility



Lie on your back with one knee bent and the other leg straight up toward the ceiling, ankle over hip, keeping your lower back relaxed on the floor and feeling a gentle hamstring stretch. Then bend that lifted leg and cross the ankle over the opposite knee, grabbing behind the thigh and pulling it in toward your chest until you feel the stretch deep in the glute/hip. From there, let the crossed leg roll all the way over your body toward the floor on the opposite side, keeping your shoulder blades heavy and reaching the arm out so you get a nice twist through the lower back and side of the hip. Breathe slowly and try to “melt” into the stretch rather than forcing it. Hold each of these positions for about 20–30 seconds per side and repeat the whole sequence 2–3 times, staying at a strong-but-comfortable tension, never sharp pain.

Hip + Piriformis Mobility



Lie on your back like a relaxed starfish, arms opened out to the sides and legs extended with a slight gap between your feet. From there, brace your abs just a little and slowly raise one straight leg up toward the ceiling, keeping the other leg heavy on the floor and your lower back relaxed. Go only as high as you can without the knee bending or your pelvis twisting, so the stretch sits nicely in the back of the thigh and maybe a touch in the calf, not in the lower back. Pause for a second or two at the top, breathe out, then lower the leg under control until the heel just kisses the floor. Move smoothly for 8–12 reps per side, then switch legs, and repeat the whole sequence 2–3 times, always staying in that “strong stretch but no pain” zone.

Shoulders Mobility



Lie on your back with knees bent, feet flat, arms relaxed on the floor beside you, palms up, and let your lower back rest heavy into the mat. As you inhale, slowly sweep both arms up and over your head toward the floor, keeping your ribs down so the movement comes from your shoulders, not your lower back. You should feel a gentle opening across your chest and the front of your shoulders, maybe a light stretch along your lats, but no pinching in the shoulder joint. Exhale as you bring your arms back down to the starting position, staying smooth and controlled the whole time. Move like this for 8–12 slow reps, pausing and breathing for 2–3 seconds in the overhead position, and repeat the set 2–3 times. If your lower back starts to arch or ribs pop up, just shorten the range a bit so it stays comfortable.

T-Spine Mobility



Lie on your back with your knees bent and stacked together, arms out in a big T so your palms face the ceiling. Let your knees slowly fall to one side while you turn your head gently the opposite way, keeping your shoulders heavy on the floor. You should feel a smooth twist through your lower back and side of the ribs, maybe a light stretch in the hip and glute on the top leg, but nothing sharp or grabbing. Breathe slowly and try to relax your stomach on each exhale so you "sink" a little deeper into the twist. Hold there for about 20–30 seconds, then bring the knees back to centre and roll them over to the other side. Do 2–3 rounds per side, staying loose and controlled the whole time.

Adductors + Spine Mobility



Start on all fours on the mat and slide your knees a bit wider than hip-width, then let both feet fall out to one side, so your hips rotate inward. From there, slowly sink your hips toward the floor and lower your chest down, supporting yourself on your hands or forearms while you breathe into the stretch. You should feel a deep pull around the front and inside of the hips and a bit in the glutes, but nothing sharp or pinching. Keeping your legs in the same position, press through your hands and lift your chest into a gentle back extension, like a low cobra, feeling the front of the hips and your abs open up. Move smoothly between the low position and the lifted position, pausing 5–10 seconds in each, for about 6–8 reps per side. If it feels good and not too intense, you can also hold the end positions for 20–30 seconds on the last rep.

One-leg Adductor Mobility



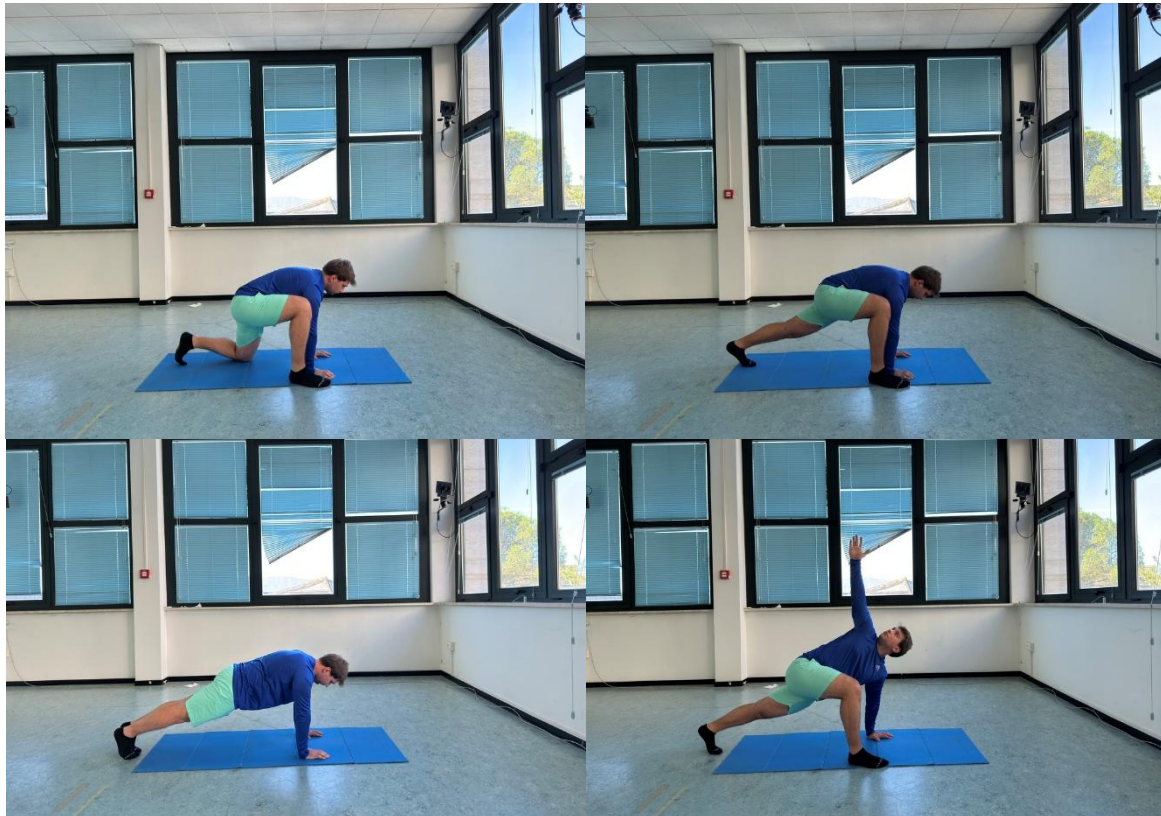
Start on all fours, then slide one leg straight out to the side with the foot flat and toes pointing forward, keeping the other knee under your hip. From here, slowly push your hips back toward your heel, letting your chest drop slightly toward the floor while your hands stay under your shoulders. You want to feel a strong but comfortable stretch along the inner thigh of the straight leg and maybe a bit in the groin, never pain in the knee. Rock in and out of that stretch, moving back on the exhale and forward on the inhale, staying smooth and controlled. Aim for 8–12 slow reps per side, pausing 2–3 seconds at the back position, or hold the deepest stretch for 20–30 seconds. Switch legs and repeat for 2–3 rounds.

Posterior Chain Mobility



Start on all fours with your hands under shoulders and knees under hips, spine long and neck relaxed. Slowly round your back up toward the ceiling, tucking your tail and letting your head drop so you feel your whole spine flex and gently stretch. Then glide back to a neutral, flat back and from there tuck your toes, push through your hands, and lift your knees to send your hips up and back into a sort of "A" shape. In that final position you should feel a stretch through your calves and hamstrings plus a long line from your hands to your hips, without sharp pressure in the wrists or shoulders. Take 2–3 slow breaths there, then lower back down to all fours and repeat the whole flow. Aim for 6–10 reps, moving smoothly and letting your breathing guide the rhythm.

Hip + T-Spine Mobility



Start in a low lunge with your front foot just outside your hand and your back knee hovering, hands on the floor or block so your chest is over the leg. Slide the front foot back into a strong plank, feel your core switch on, then step it back up to the outside of your hand again, keeping the back leg long. From there, rotate your chest toward the front knee and reach that same-side arm up to the ceiling, letting your hips sink so you feel a big stretch in the front hip, groin, and through your upper back. Breathe slowly in that opened position, eyes following your hand, then bring the hand down and cycle back through plank into the next rep. Aim for 5–8 smooth reps per side, holding the rotated position 2–3 seconds each time, or up to 15–20 seconds on the last rep if it feels good.

One-leg Adductor Mobility



Sit on the floor supported on your hands, knees bent and opened out wider than hip-width, feet flat in front of you. From there, let one leg slide out straight on the floor while the other stays bent and relaxed, then bring your torso more upright and open your arms like in the last picture. As you settle, think about gently pushing the straight leg's heel away from you and sitting tall on both sit-bones. You should feel a stretch through the inner thigh and hamstring of the straight leg and a light opening in the groin of the bent side, but the knees themselves should feel comfortable. Flow in and out of the position, switching which leg is straight each time, for about 8–12 slow reps, pausing 3–5 seconds at the end. On the last rep per side, you can hold the stretch for 20–30 seconds, breathing calmly and trying to relax the hips.

Half-Kneeling Hip Mobility



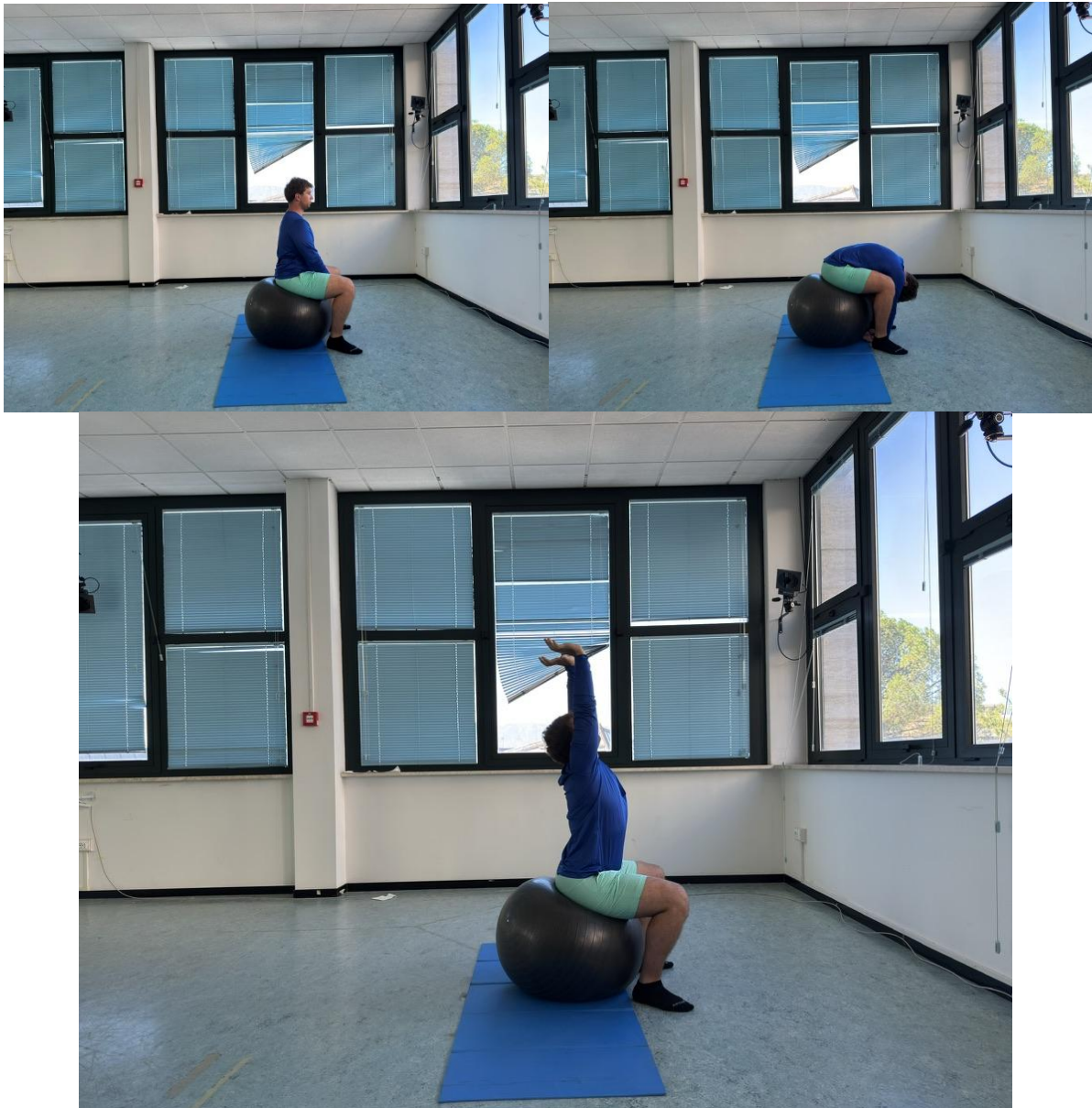
Set up in a tall half-kneeling position with one knee on the mat and the other leg straight out to the side, foot flat, toes pointing forward, arms relaxed and open for balance. Keep your chest proud and lightly squeeze your glutes, then slowly sink your hips toward the side of the straight leg without letting the knee cave in. You should feel a clear stretch along the inner thigh of the straight leg and a bit of tension around the front of the hip on the kneeling side, never sharp pain. Breathe slowly through the nose, easing a little deeper on each exhale while keeping your spine long. Rock gently in and out of the stretch for 8–12 reps, pausing 2–3 seconds at the bottom each time, or hold the deepest position for 20–30 seconds. Switch legs and repeat the same thing on the other side for 2–3 rounds.

Half-Kneeling Hamstring Mobility



Drop into a half-kneeling lunge with your front foot on the pad, back knee on the floor, chest tall and one hand on your hip. Gently drive your hips forward so you feel the front of the hip on the back leg and the quad wake up, but keep your ribs stacked over your pelvis. Then slide your hips back, straighten the front knee, pull the toes up on the pad and hinge your chest forward over that leg. Now the stretch should move into the hamstring and calf of the front leg, with your back staying long, not rounded. Just flow slowly between these two positions, using your breath: exhale as you sink into each stretch, never forcing it. Go for about 8–12 smooth reps per side, pausing 2–3 seconds in each end range, and run through 2–3 rounds.

Swiss Ball Spine Mobility



Sit tall on the Swiss ball with your feet flat and hip-width apart, feeling your weight cantered over the ball. Slowly round your spine forward, letting your head and shoulders drop and your hands slide toward the floor, like you're curling over a big beach ball. You should feel a gentle stretch along your upper and mid-back, maybe down into the lower back, but no sharp pulling. Then, vertebra by vertebra, roll back up and reach one arm up toward the ceiling, opening your chest and letting your ribs lift just a little so you feel a nice stretch through the front of the body and side of the ribs. Lower the arm, reset tall, and repeat the forward curl into the reach, alternating arms every rep. Go for 8–10 slow reps total, holding the bottom and top positions for 2–3 relaxed breaths each time.

Swiss Ball Shoulders + Spine Mobility



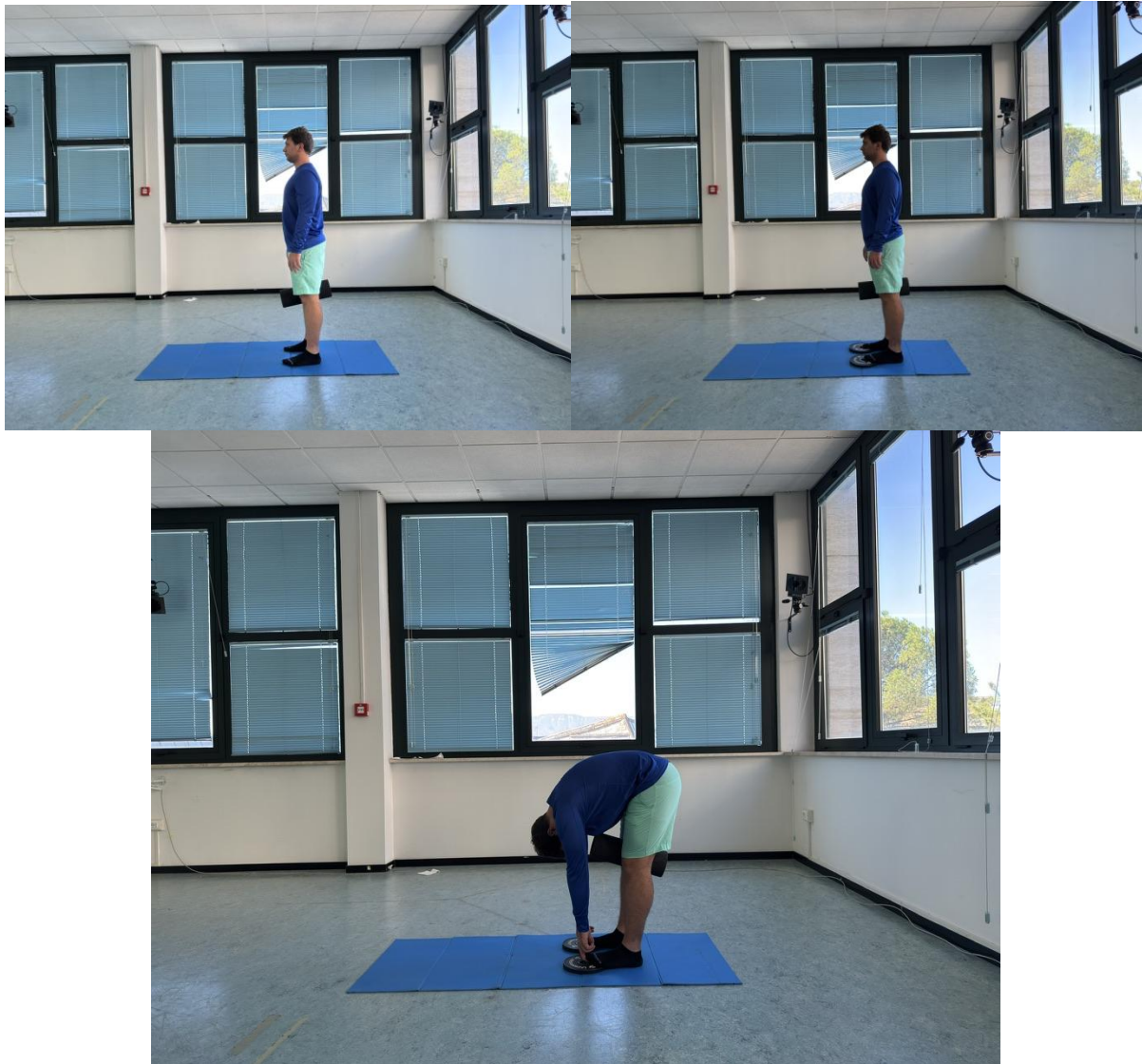
Kneel on the mat with the Swiss ball in front of you, arms straight and hands resting on top, chest tall and ribs stacked over your hips. From there, let the ball roll forward as you sit your hips back and drop your chest toward the floor, like a child's pose but with your hands riding the ball. Keep your arms long and elbows soft, feeling a stretch along your lats, under the armpits, and across the shoulders, not a pinch in the lower back. Breathe slowly and try to let your chest sink a bit closer to the floor on each exhale while your hips stay heavy toward your heels. You can flow in and out of the stretch for 8–10 slow reps, pausing 3–5 seconds at the end, or simply hold the deepest position for 20–30 seconds. Repeat 2–3 rounds, keeping the tension at a comfortable medium the whole time.

Swiss Ball Shoulders Mobility



Kneel on the mat with the Swiss ball just in front of you and rest your elbows and forearms on top, keeping your chest tall and ribs stacked over your hips. From there, slowly let the ball roll forward as you sit your hips back and drop your chest toward the floor, keeping your elbows on the ball and your neck relaxed. You should feel a stretch along the back of your upper arms, under the armpits, and through the lats and upper back, maybe a little opening in the chest too, but no pinching in the shoulders or lower back. Breathe slowly and let your ribs expand on the inhale, then on each exhale try to soften and sink a bit deeper without forcing it. Roll in and out of the stretch for 8–10 smooth reps, pausing 3–5 seconds at the end position, or hold the deepest spot for 20–30 seconds. Do 2–3 rounds, staying in that comfy medium-stretch zone the whole time.

Standing Roll Spine Mobility



Stand tall with your feet about hip-width apart on the little wedge/plate, knees soft and arms relaxed by your sides. Take a breath in, then slowly let your chin tuck toward your chest and start to roll your spine down one vertebra at a time, arms just hanging as you fold forward toward your toes. Go only as far as you can while keeping the knees slightly bent and the weight balanced over your mid-foot. You should feel a stretch in your calves (because of the wedge), hamstrings, and lower back, but nothing sharp or electric. Pause at the bottom for 3–5 slow breaths, then roll back up just as slowly, stacking the spine until you're tall again. Perform 6–10 controlled reps or hold the bottom position for 20–30 seconds for 2–3 rounds if you prefer a longer stretch.

Squat + T-Spine Mobility



Start standing with your feet a bit wider than hip-width, toes slightly turned out and let your arms hang relaxed by your sides. Drop into a deep squat by sitting your hips down and back, keeping your heels on the floor and your elbows inside or just above your knees. Place one hand on the floor between your feet, keep your chest as tall as you can, then rotate your chest toward the opposite side and reach the free arm straight up to the ceiling. You should feel your hips and ankles working to keep you stable, a stretch through the groin, and a nice opening across your chest and upper back as you twist. Breathe out at the top of the rotation, hold for 2–3 seconds, then come back to the squat and switch sides. Go for 6–8 reps per side, moving smoothly, and repeat the sequence 2–3 times as part of your warm-up or cooldown.

Standing adductors + Spine Mobility



Stand with your feet well wider than hip-width, toes slightly turned out and let your hands slide down your legs until they reach the floor between your feet, relaxing your head and spine. In this forward position you should feel a stretch along the hamstrings and inner thighs, but your knees stay soft and comfortable. From there, bend one knee and shift your hips toward that side, keeping the other leg straighter so you move into a gentle side lunge and feel the groin of the straight leg open up. Glide back through the centre fold and over to the other side, moving smoothly and not bouncing. Do 8–12 slow side-to-side shifts, pausing 2–3 seconds where the stretch feels strongest, then roll up to standing. Repeat the whole sequence 2–3 times, staying in that strong-but-comfortable stretch zone.

Half-Kneeling + Hip Rotation Mobility



Drop into a half-kneeling lunge with one knee on the mat and the other foot in front, torso tall and hands on your hips. Gently push your hips forward so you feel a stretch in the front of the hip and thigh of the back leg, keeping your ribs stacked over your pelvis. From there, drive through the front foot and back toes to stand up into a wide stance, feet turned slightly out, still tall through the chest. You should feel your glutes and quads working to bring you up, and a light opening through the hips when you arrive in the wide stand. Lower back down under control to the half-kneeling position and repeat, almost like a slow lunge to stand. Do 8–10 reps per side, holding the bottom stretch 2–3 seconds each time, and run through 2–3 rounds.

Hurdle Mobility



You start tall in front of the bar, driving one knee up to hip height as if doing a running march. From there you drop into a wide lateral lunge to that same side, sitting your hips back while the opposite leg stays long and your chest comes forward next to the bar. You then shift across under the bar into a lateral lunge on the other side, keeping one leg bent and one straight. Finally, you drive up out of the lunge into an upright position on the far side, lifting the opposite knee to hip height, then repeat the pattern back and forth.



iRecover

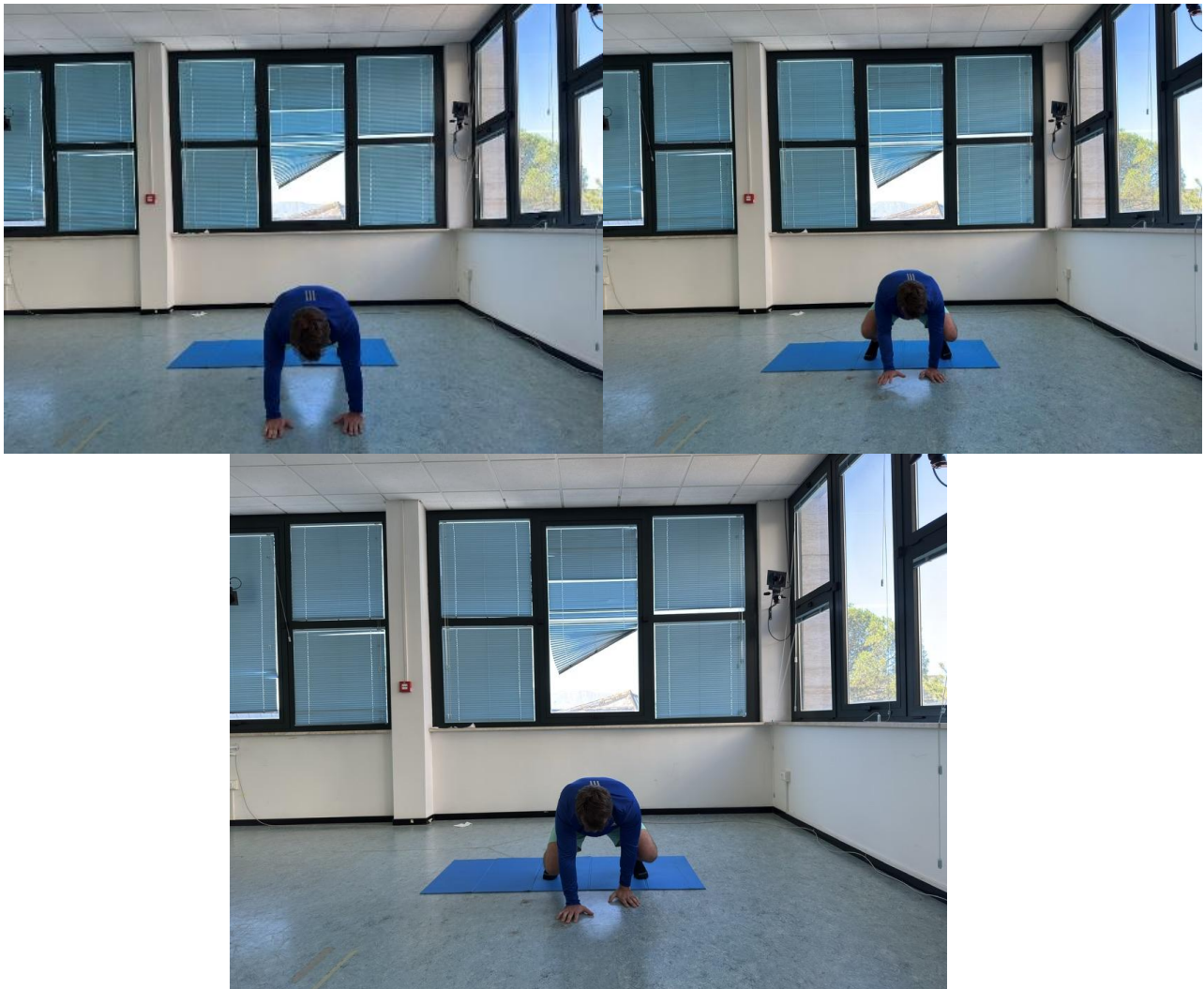
STABILITY & STRENGTH

**Post-Exercise Recovery:
Pictures, Frequency & Time**



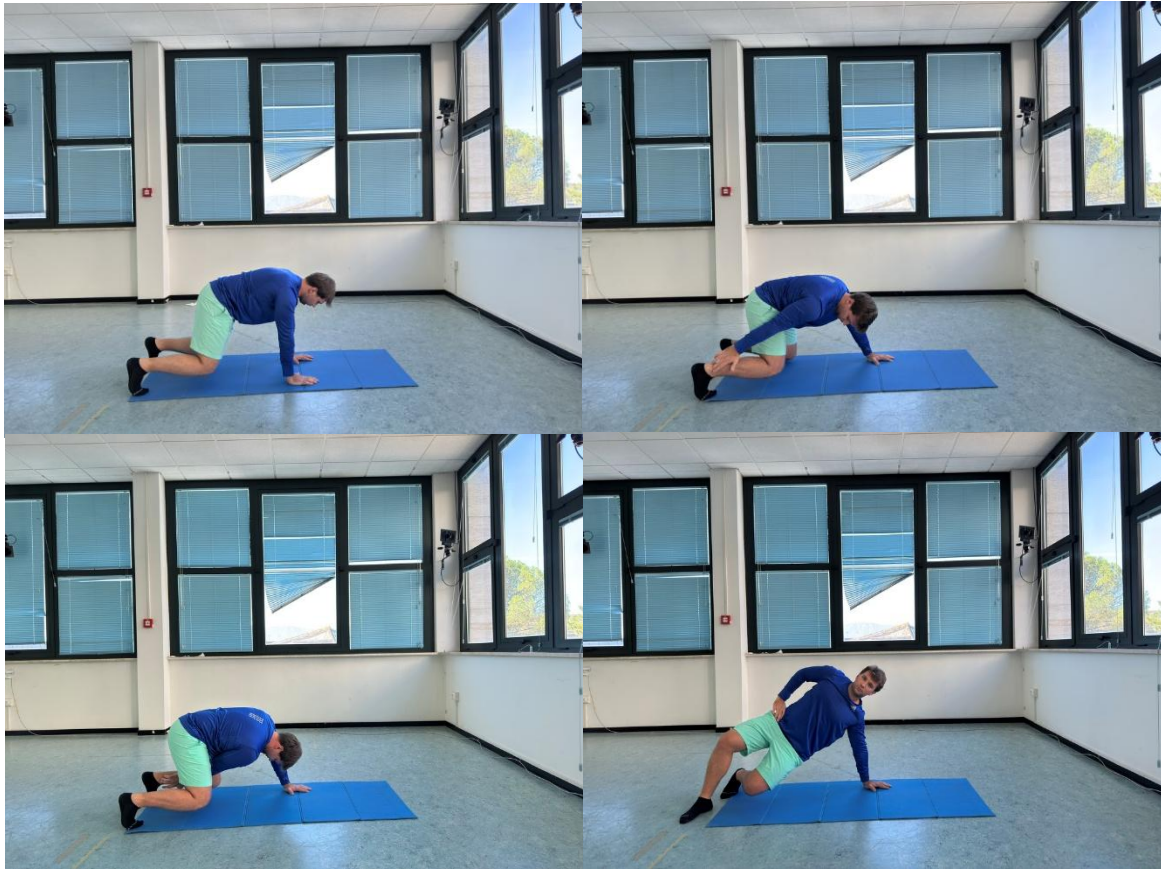
Co-funded by
the European Union

Horizontal Squat



Start in a deep squat with your feet a bit wider than hip-width and your hands on the floor between your knees, chest dropped but heels heavy. From there, slowly walk your hands forward and let your knees melt down to the mat one at a time until you arrive in an all-fours position with hands under shoulders and knees under hips. You should feel your hips and ankles opening as you leave the squat, then a gentle load through your shoulders and core when you land in quadruped. Hold that all-fours position for a breath or two, keeping your spine long, then walk your hands back and lift your knees to slide yourself back into the deep squat. Move smoothly between squat and quadruped for about 6–10 reps, pausing 2–3 seconds in each end position, and repeat the whole flow 2–3 times.

Horizontal Squat + Rotation



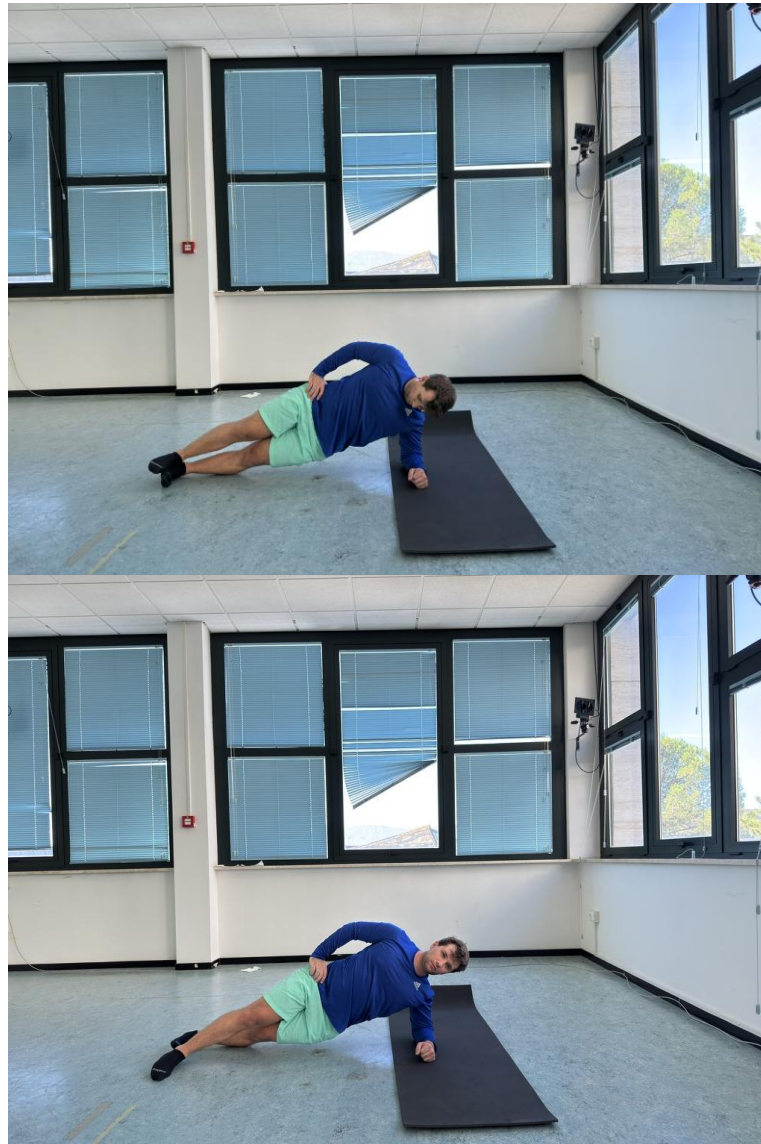
Start on all fours with hands under shoulders and knees under hips, spine long and eyes looking just ahead of your hands. Shift your weight onto one hand and the opposite knee, then rotate your legs so your knees drop slightly to the side as you start to open your chest. From there, slide your top leg out straight and lift your hips into a supported side plank, resting on your lower knee and hand while the top hand goes to your hip. You should feel your obliques and glute on the bottom side working to hold you up, with a gentle stretch across the front of the hips and chest as you open. Breathe slowly and hold that side-plank position for about 15–20 seconds, then come back to all fours and reset. Do 3–5 reps per side, alternating, and keep everything smooth and controlled rather than rushed.

Side Plank + Pulling



Lie on your side with knees bent about 90°, feet stacked, and your elbow directly under your shoulder, then lift your hips so your body forms a straight line from shoulders to knees. Keep your top hand on your hip, ribs gently pulled in and neck long, so you feel the side of your waist and glute working to hold you up, not your lower back. From that high position, slowly lower your hips a few centimetres toward the floor, then drive them back up, like small, controlled “hip dips” without losing the straight line. You should feel a strong burn along your obliques and outer hip on the bottom side, but no pinching in the shoulder or strain in the neck. Breathe steadily, exhaling as you lift, and aim for 8–15 smooth reps per side, holding the top position for 2–3 seconds each time. Do 2–3 sets per side, resting briefly between sets so you can keep the form clean.

Walking Side Plank



Lie on your side with legs straight and stacked, elbow directly under your shoulder and forearm on the floor, top hand resting on your hip. Brace your abs a little, squeeze your glutes, and then lift your hips up so your body forms a straight line from ankles to shoulders, not letting your ribs sag or your butt drift back. You should feel the side of your waist and outer hip on the bottom side working hard, plus some tension in your glute and shoulder, but no strain in your neck or lower back. Breathe slowly and keep looking straight ahead or slightly down so your neck stays relaxed. Hold the side plank for 15–30 seconds, lower with control, and repeat 2–3 times per side; if that feels easy, build up to 30–45 seconds.

High Plank + Rotation



Start in a strong high plank, hands under shoulders, feet a bit wider than hip-width, body in a straight line from heels to head and core braced. From here, press one hand firmly into the floor and slowly rotate your chest to the same side, letting your feet roll onto their edges as you stack one foot on top of the other. As you turn, reach the free arm straight up to the ceiling and think about lifting your hips slightly so you feel your obliques and glute on the bottom side working. You should feel your shoulders stabilizing, your core lit up all around, and a gentle stretch across the chest, but no pinching in the lower back. Hold the side-plank position for about 10–20 seconds, then rotate back to the regular plank and switch sides. Do 3–5 turns each way, resting briefly between sets if your form starts to wobble.

Side Squat



Start standing with your feet well wider than hip-width, toes slightly turned out and hands on your hips, so your chest stays tall. Shift your weight to one side by bending that knee and pushing your hips back, while the other leg stays straight with the heel heavy on the floor. Keep your torso facing forward and think “sit into the hip” rather than dropping your chest, so you feel a strong stretch along the inner thigh of the straight leg and some work in the glute and quad of the bent leg. Push the floor away to come back to the middle, then slide over into the same position on the other side, moving smoothly side to side. Go for about 8–12 controlled reps per side, pausing 2–3 seconds where the stretch is strongest. Do 2–3 rounds, staying in a strong-but-comfy stretch zone, never in sharp knee or groin pain.

Lateral-lean split squat



Step forward into a lunge with your front knee roughly over the ankle and your back heel lifted, torso tall and relaxed. Slowly let your back knee drop toward the floor (it can touch lightly or hover) and place the hand opposite the front leg on the ground beside your foot for support. From there, rotate your chest toward the front leg and reach the same-side arm up and slightly overhead, eyes following the hand. You should feel a stretch in the front of the hip on the back leg, some load in the front glute and quad, and a nice opening through your chest and upper back. Breathe out in the rotated position, hold for about 2–3 slow breaths, then bring the hand down and step back to standing. Hit 6–8 reps per side and run through the sequence 2–3 times as a warm-up before running or field work.

Lateral-lean side to side split squat



Stand tall on one leg with the other knee lifted in front of you and your arms opened out like an airplane, eyes fixed on a point ahead to help balance. Slowly hinge your hips back and let your chest come forward over the standing leg while the free leg drifts slightly behind you, then rotate and reach one hand down toward the floor and the other up to the ceiling. Keep the knee of the stance leg soft, not locked, and let the work sit in the glute and quad of that leg, with a bit of stretch through the hip and maybe the hamstring. You should feel your ankle working hard to stabilise and your core firing to control the twist, but no sharp pain in the knee or lower back. After holding the rotated position for 2–3 seconds, smoothly return to the tall balance and reset. Aim for 6–8 controlled reps per side, repeat 2–3 rounds, and move slowly enough that you're fighting for balance the whole time rather than bouncing through it.

Rotational split squat



Step forward into a lunge with your front knee roughly over your ankle, back heel lifted, and both arms reaching straight out in front of your chest like an arrow. Keep your torso tall and your core slightly braced so you feel your front glute and quad doing most of the work, not your lower back. From there, open your arms wide and rotate your chest toward the front leg, letting your head follow your hands so you get a big twist through your upper back and a light stretch across your chest and hip flexor. Hold that rotated position for 2–3 slow breaths, then bring your arms back together in front and either step back to standing or switch legs. Aim for 6–8 reps per side, moving smooth and controlled, and repeat the sequence 2–3 times as part of your warm-up or cooldown.

Squat + Pivot + Cross-Lunge



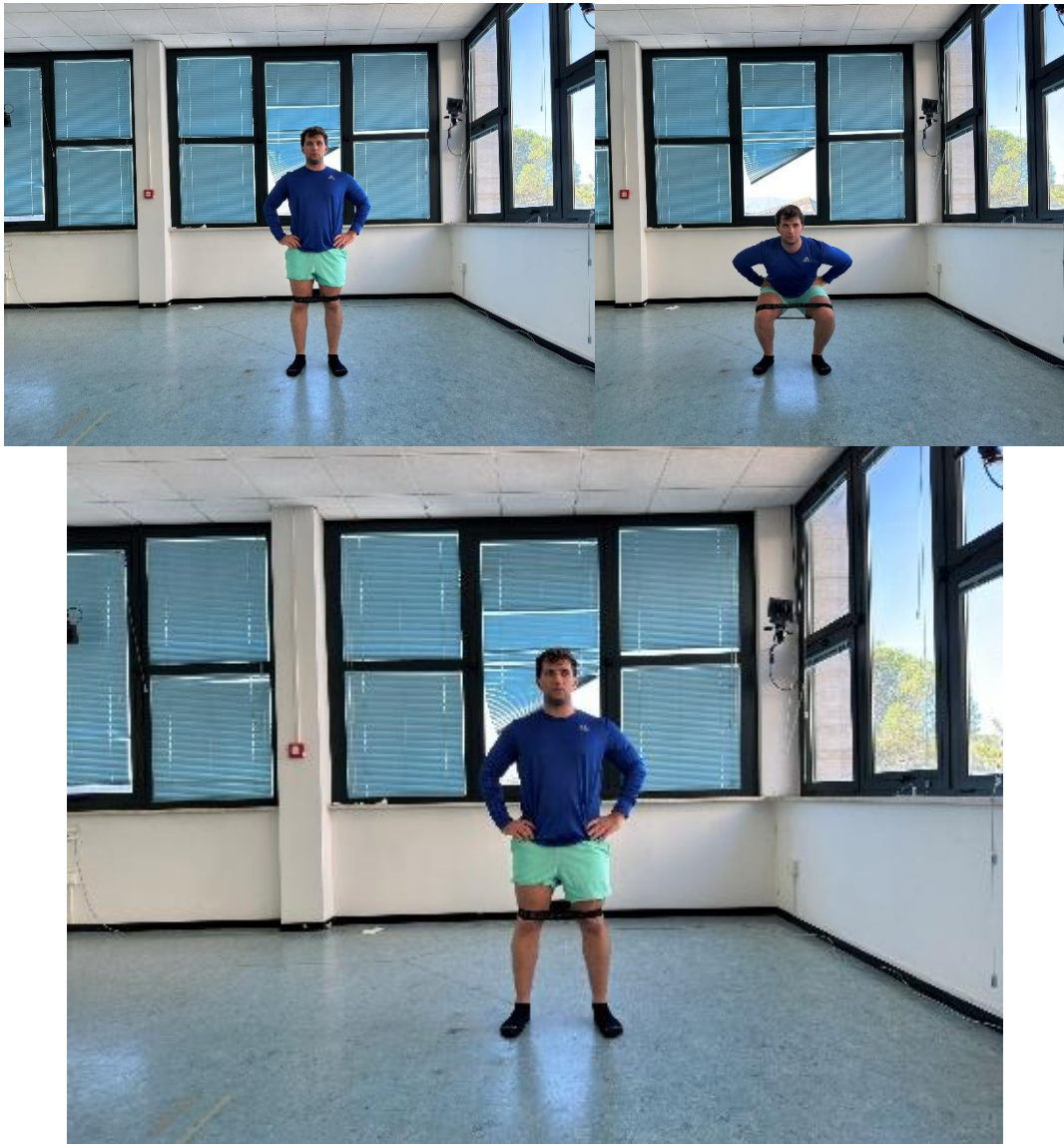
Start in an athletic stance, feet about hip-width, knees softly bent and chest up, like you're ready to move in any direction. Staying low, take small, quick steps or bounces on the spot for a couple of seconds to load the legs, then step one foot back and across into a curtsy lunge, keeping the front knee tracking over the middle of the foot. Let your arms open slightly for balance and keep your torso tall so the work sits in the glute and quad of the front leg, not in the knee. You should feel a strong but controlled burn through the front leg and side of the hip, with only light tension in the back leg. Push back up to the athletic stance, reset with a few quick steps, then drop into a curtsy lunge on the other side. Go for 6–8 curtsy lunges per leg (or about 30–40 seconds of continuous work), repeat 2–3 rounds, and keep the whole movement smooth rather than rushed.

Single Leg RDL



Start standing tall on one leg with the other knee lifted in front of you, arms slightly forward like you're ready to run, eyes fixed on a point ahead for balance. From here, hinge at the hip of the standing leg, sending that hip back as your chest tips forward and the free leg reaches straight behind you. Aim to make a straight line from your heel through your hips to your head, arms reaching forward, with the knee of the stance leg softly bent, not locked. You should feel the back of that standing leg (glute and hamstring) working hard, plus your foot and ankle fighting to keep you stable, but your lower back should feel neutral, not strained. Pause for 2–3 seconds in the long "T" position, then drive the foot into the floor and come back up to the high-knee balance. Hit 6–8 slow reps per side, repeat for 2–3 rounds, and keep the movement smooth rather than rushed.

Squat + Miniband



Step into the mini-band and park it just above your knees, then stand tall with feet about shoulder-width apart and hands on your hips. Keeping a little outward tension on the band so your knees track over your mid-foot, sit your hips back and down into a squat, chest proud and heels flat on the floor. At the bottom you should feel your glutes and quads working, plus a clear burn on the outside of the hips from pushing the knees out against the band, but no collapse of the knees inward. Breathe out as you drive the floor away and stand back up, keeping that band tension the whole time. Move in a smooth tempo for 10–15 reps, rest briefly, and repeat for 2–3 sets, staying in a solid “working hard but controlled” zone.

Leaning Tower Miniband



Slip the mini-band around your ankles and stand tall with feet about hip-width, ribs stacked over hips and arms relaxed. From there, take a strong step back into a long-split stance, hinging slightly forward at the hips and dropping into a shallow lunge while your arms move into a running position. Keep tension on the band the whole time so the back leg doesn't collapse inward; you should feel your glutes and hamstrings of the front leg working, plus the hip of the back leg fighting the band. Hold that "sprinter" position for 2–3 seconds, then drive through the front foot and bring the back leg up to standing again, staying balanced. Move smoothly for 8–12 reps on one side, then switch legs, and repeat 2–3 rounds, keeping the effort strong but controlled, never painful on the knees or ankles.

High-Knee Miniband



Stand tall with the mini-band around your ankles, feet hip-width, ribs stacked over your hips and arms relaxed by your sides. From there, drive one knee up to about hip height like a running march while the opposite arm comes up, keeping the standing leg strong and the band under constant tension. You should feel the hip flexor of the lifted leg working hard, the glute of the stance leg firing to keep you tall, and the band trying to pull your feet together. Pause for a brief second at the top, control the leg back down without letting it snap, then switch sides. Keep marching like this for 20–30 seconds or 8–12 reps per leg, rest, and repeat 2–3 rounds, staying snappy and controlled rather than rushed.

Sidestep Mini-Band: High-Low Position



Slip the mini-band around your ankles and start standing tall with your feet about hip-width, hands on your hips. Soften your knees, push your hips slightly back and drop into a quarter-squat, keeping your chest proud and toes pointing straight ahead. From there, step one foot out to the side against the band, then bring the other foot in only halfway so there's always tension on the band, and your knees never cave inward. You should feel the outside of your hips and glutes burning, with your quads and core quietly working to keep you stable. Take 8–10 controlled steps in one direction, then 8–10 back the other way, staying low the whole time. Rest briefly and repeat for 2–3 rounds, keeping the band tension strong but never painful around the ankles.

Half Kneeling Lift



Drop into a half-kneeling position with one knee on the mat, front knee at 90°, and grab the stick with both hands in front of your chest. Start by gently rotating your torso toward the front leg, keeping the hips square, so you feel a light twist through your mid-back without losing balance. Come back to centre, then drive the stick up and away on a diagonal, like you're drawing a big sword out of its sheath, letting your ribs lift slightly but keeping your glutes and core tight. You should feel the front of the hip on the down knee opening, your obliques and upper back doing the rotation, and a stretch across the chest and shoulders as the stick goes overhead. Control the stick back down to the starting position and repeat the flow—rotate, then reach. Aim for 6–8 slow reps per side, holding the end-range overhead for 2–3 breaths, and run through 2–3 rounds.

Half Kneeling Chop



Set up in a half-kneeling stance facing the rack, front knee at 90° and back knee on the mat, both glutes lightly squeezed. Grab the stick with both hands and let the band pull it up and away on a diagonal, so your arms are stretched overhead but your ribs stay stacked over your pelvis. From there, “pull the sword to the sheath”: bring the stick down toward your collarbone, elbows driving back and shoulder blades sliding down and together, then continue the path toward the opposite hip. You should feel the front of the hip on the down knee opening, the lat and mid-back of the band side working hard, and a bit of rotation through your upper back, but no strain in the lower back or neck. Move slowly and with control, resisting the band on the way up as much as you pull it down. Perform 8–12 reps per side, holding 1–2 seconds in the bottom position, and complete 2–3 sets each way.

Half Kneeling Twist



Set up in a half-kneeling stance with the knee closest to the rack down on the mat and the other foot in front, both hips square and glutes lightly squeezed. Grab the stick with both hands and hold it straight out in front of your chest, arms almost locked, letting the band pull you toward the rack. From there, resist that pull by keeping your ribs stacked over your pelvis and your shoulders level while you slowly rotate the stick away from the rack, then back to centre, without letting your hips twist. You should feel your front-leg glute working to keep you stable and a deep burn through the obliques and muscles around your spine on the side facing away from the band. Move in a smooth, controlled rhythm for 8–12 reps per side, holding 1–2 seconds at the furthest point of rotation each time. Do 2–3 sets on each side, resting just enough between sets to keep the quality of the movement high.

Split Rotational



Stand in a staggered stance facing slightly away from the rack, feet about hip-width, and grab the stick with both hands close together near your front thigh. With your arms long and core braced, sit a little into the front leg and let the band pull the stick toward the low anchor without losing your balance. From there, drive through the front foot and rotate your hips and chest as you “throw” the stick up and across your body on a diagonal, finishing with your hands above and slightly behind your head. You should feel the front-leg glute and quad pushing the floor away, your core and obliques powering the rotation, and the band resisting you all the way up—but no sharp pull in the lower back or shoulder. Control the stick back down along the same path, keeping tension the whole time. Do 8–12 smooth reps per side, rest 45–60 seconds and repeat for 2–3 sets.

Split Cross-Snatch



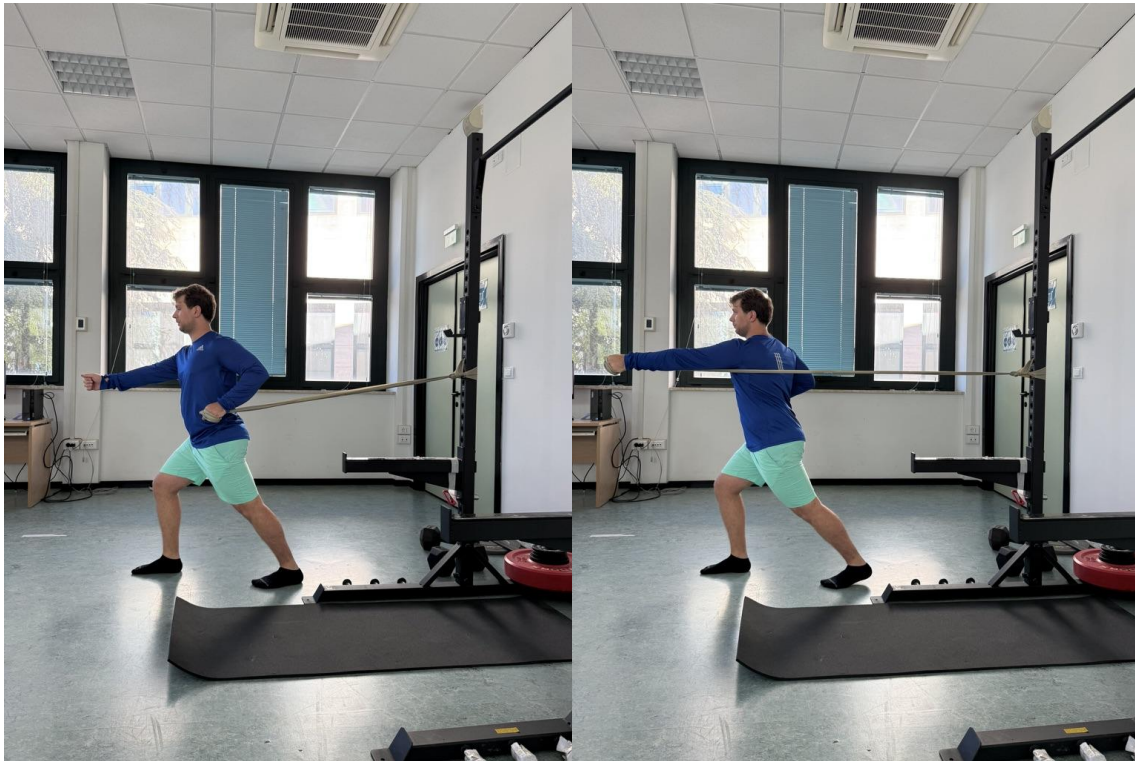
Stand tall facing the anchor with the stick held in both hands just in front of your hip, band already under tension. From here, drive one knee up to hip height like a marching step while at the same time pulling the stick up and across your body on a diagonal, finishing with your arms long and slightly overhead. Keep your ribs stacked, your butt lightly squeezed and your eyes forward, so you feel your standing-leg glute, core and hip flexor of the lifted leg working, not your lower back. Slowly lower the foot back to the floor while controlling the band on the way down, then reset your posture before the next rep. Aim for 6–10 smooth reps per side, or about 20–30 seconds of continuous work each leg and repeat for 2–3 sets with good balance and clean control.

Split Horizontal pull



Set yourself in a high split stance facing the rack, back heel off the floor, and hold the stick with both hands so the band is pulling your arms straight out in front of you. Brace your core, then pull one hand back toward your ribs as if you're drawing a bow, letting your chest rotate slightly while the other arm reaches forward and stays long. Keep your shoulders down away from your ears and think of squeezing the shoulder blade of the rowing arm toward your spine, feeling your upper back, lats, and front-leg glute doing most of the work. There should be tension from the band the whole time, but no yank on your lower back or shrugging through the neck. Return the stick to the start under control and reset your stance if you wobble. Go for 8–12 smooth reps per side, resting briefly, and repeat for 2–3 sets each leg/arm.

Split Horizontal Push



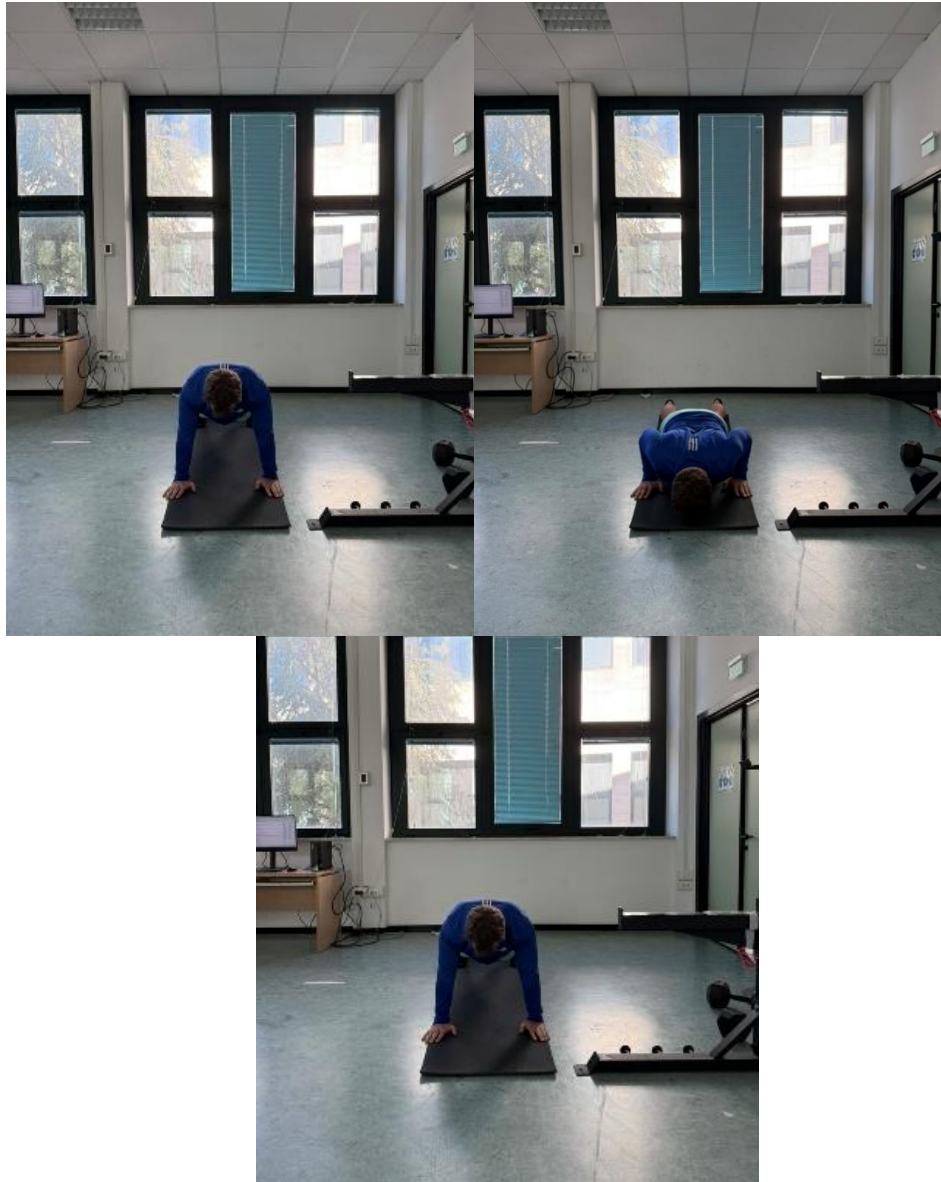
Set yourself in a high split stance facing the rack, back heel off the floor, and hold the stick with both hands so the band is pulling your arms straight out in front of you. Brace your core, then pull one hand back toward your ribs as if you're drawing a bow, letting your chest rotate slightly while the other arm reaches forward and stays long. Keep your shoulders down away from your ears and think of squeezing the shoulder blade of the rowing arm toward your spine, feeling your upper back, lats, and front-leg glute doing most of the work. There should be tension from the band the whole time, but no yank on your lower back or shrugging through the neck. Return the stick to the start under control and reset your stance if you wobble. Go for 8–12 smooth reps per side, resting briefly, and repeat for 2–3 sets each leg/arm.

Pull Up



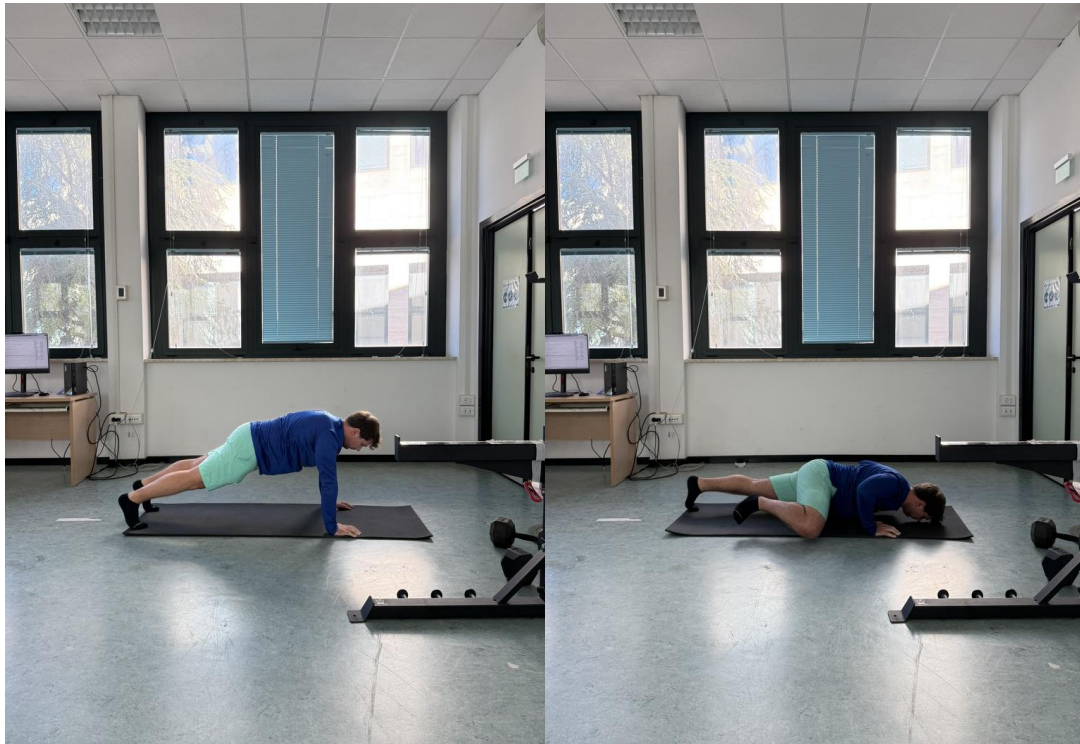
Start from a dead hang with your hands a bit wider than shoulder-width, thumbs wrapped, ribs gently down and legs together so the body hangs like a straight plank. From here, think about pulling the bar to your chest rather than your chest to the bar: drive your elbows down toward your ribs, squeeze your shoulder blades into your back pockets and keep your chin tucked as you rise. At the top, aim to get your chin clearly over the bar without shrugging, feeling lats, upper back and biceps doing most of the work while your core stays tight to avoid swinging. Lower yourself slowly all the way back to the dead hang, owning the descent for two to three seconds and keeping tension rather than dropping. Breathe out gently as you pull, inhale on the way down, then reset your brace before the next rep. Perform 4–8 reps per set, resting 90–120 seconds, for 3–5 sets depending on your current strength level.

Push Up



Start in a strong high plank with your hands under your shoulders and your body in a straight line from head to heels. Lower yourself toward the floor in one solid piece until your chest, hips and thighs lightly touch down. At the bottom, briefly lift your hands a few centimetres off the ground to “reset” the tension, keeping your shoulders away from your ears and your neck long. Place the hands back where they were and push the floor away, bringing chest and hips up together so there’s no “worm” motion. Inhale on the way down, exhale as you press back up. The most common errors are letting the hips sag or pike, so the plank shape is lost, pushing up with the chest while the hips stay on the floor, and letting the elbows flare straight out to the side instead of roughly 45° from the torso. Keeping the body rigid, the core tight and the elbow angle controlled will make the movement cleaner and safer.

Star Push Up



From a regular high plank, you bend one knee and draw it out and forward toward the elbow as you lower into the push-up, letting the hip flex and rotate so the knee comes close to or lightly touches the floor beside you. Keep the chest, hips and lifted leg moving down together like a normal push-up, then press back up and return the leg to the start position before repeating on the other side.

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