

Mobility & Flexibility Protocol Guide

SPORT & RECOVERY · EVIDENCE-BASED GUIDE

This guide provides an evidence-based framework for building and maintaining mobility and flexibility. Routines are organized by time commitment and training phase. All protocols reference peer-reviewed research where available.

WHY MOBILITY MATTERS

Flexibility vs. Mobility: flexibility is passive range of motion; mobility is active control through that range. Research in the *Journal of Strength and Conditioning Research* (2020) confirms that mobility training – not passive stretching alone – produces lasting functional improvements.

Fascia and connective tissue adapt more slowly than muscle (12–24 weeks vs. 4–8 weeks). Consistency over intensity is the primary driver of long-term change.

A 2019 systematic review in *Sports Medicine* (Behm et al.) found that static stretching held for ≥ 60 seconds acutely reduces force production by up to 8%. Dynamic warm-up eliminates this deficit and prepares joints for load.

DAILY MINIMUM ROUTINE (10 MIN)

- 90/90 hip stretch – 60 sec each side (targets hip flexors and external rotators)
- Cat-cow spinal mobilization – 10 slow cycles (thoracic extension focus)
- World's greatest stretch – 5 reps each side (hip, thorax, hamstring combined)
- Doorway pec stretch – 45 sec each arm (counteracts forward shoulder posture)
- Seated ankle circles + calf stretch – 30 sec each direction per ankle
- Child's pose with lat reach – 60 sec (thoracic and shoulder mobility)

Mobility & Flexibility Protocol Guide

SPORT & RECOVERY · EVIDENCE-BASED GUIDE

PRE-TRAINING DYNAMIC WARM-UP (8 MIN)

- Leg swings front-to-back – 15 reps each leg (hip flexor activation)
- Lateral leg swings – 15 reps each leg (hip abductor/adductor range)
- Hip circles – 10 reps each direction per leg (joint lubrication)
- Thoracic rotations in seated or quadruped – 10 reps each side
- Inchworm walkout with push-up – 5 reps (full posterior chain + shoulder prep)
- Lateral lunge to ankle mobilization – 8 reps each side
- Arm circles – 20 reps each direction (glenohumeral joint prep)

TARGETED MOBILITY BLOCKS (15 MIN, CHOOSE BY NEED)

HIP COMPLEX

- Pigeon pose – 90 sec each side (posterior capsule + piriformis)
- Deep squat hold (goblet or bodyweight) – 60 sec total (hip flexor lengthening)
- Couch stretch – 60 sec each side (hip flexor + rectus femoris)
- Frog stretch – 90 sec (hip adductor and groin)

THORACIC SPINE

- Foam roller thoracic extension – 10 extensions over 3 vertebral levels
- Thread-the-needle rotation – 10 reps each side
- Open books (side-lying rotation) – 10 reps each side
- Seated thoracic rotation with band – 12 reps each side

SHOULDER & UPPER BACK

- Wall slides – 10 slow reps (scapular upward rotation)
- Banded shoulder dislocations – 10 reps (glenohumeral mobility)
- Prone Y-T-W – 8 reps each position (lower trapezius + rotator cuff)

Mobility & Flexibility Protocol Guide

SPORT & RECOVERY · EVIDENCE-BASED GUIDE

POST-TRAINING STATIC STRETCHING (10 MIN)

Hold each stretch 30–60 sec. Static stretching post-training carries no acute performance penalty and accelerates connective tissue adaptation (Behm et al., Sports Medicine, 2019).

- Standing hamstring stretch (foot elevated) – 45 sec each side
- Kneeling hip flexor stretch – 45 sec each side
- Cross-body shoulder stretch – 30 sec each side
- Supine spinal twist – 45 sec each side
- Seated butterfly (hip adductors) – 45 sec
- Doorway chest stretch – 30 sec each arm angle (low, mid, high)
- Calf stretch against wall – 45 sec each side (straight and bent knee)

WEEKLY PERIODIZATION

Monday	Full dynamic warm-up + hip complex block (pre-training)
Tuesday	Daily minimum routine only
Wednesday	Thoracic spine block + post-training static stretching
Thursday	Daily minimum routine only
Friday	Full dynamic warm-up + shoulder block (pre-training)
Saturday	30-min restorative session: hip + thoracic + static stretching
Sunday	Passive rest or 10-min daily minimum only

PROGRESS BENCHMARKS

- 4 weeks: Consistent execution of daily minimum without discomfort
- 8 weeks: Measurable increase in active hip flexion range (5–10 degrees typical)
- 12 weeks: Deep squat hold achievable with heels flat for 60 sec
- 16 weeks: Thoracic rotation symmetric within 5 degrees side-to-side
- 24 weeks: Posterior shoulder stretch reaches neutral without compensations

This guide is for informational purposes only. Consult a physiotherapist before beginning if you have existing joint or connective tissue conditions.