

MotoLab

Mobility and Flexibility

PHYSICAL FITNESS MODULE



24 exercises with two-sided cards

Illustrated manual for high school

Joints and muscles involved

6 guided sequences, workload and variations

Choose Your Exercise

01-12: dynamic mobility · 13-24: held stretches

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Six guided sequences on pages 53-64.

Before You Start



Get the Body Moving

Prepare with 5-8 minutes of walking, easy jogging and simple movements of increasing intensity. Set out equipment before starting and try each new position with a reduced range of movement.

Movement and Holds

Cards 01-12 guide joints through slow, repeated movements. Cards 13-24 use a held position with gentle tension. Choose the task to suit the lesson phase and the students' characteristics.

Tension and Breathing

Find mild, comfortable tension while breathing steadily. Enter and leave each position gradually. Stop the movement and tell the teacher if pain, tingling or dizziness occurs. Use a minimal range for the neck.

Your Own Limit

Use the range each student can control. Compare quality, breathing and continuity. Partners observe from a distance with their hands free; every student adjusts their own position independently.

Using the Module

Front and Back

The front shows a specific illustration, objectives and three execution steps. The back gives workload and recovery, the joints and muscles involved, organization and observations. Side panels help adapt and correct the task.

Workload and Sequences

The workloads are initial teaching suggestions for one exercise. Choose duration and range to suit the class. The six final sequences use every card once and give a reduced workload when combining exercises.

Within the Lesson

Use dynamic mobility after general activation, linked to the movement that follows. Include held stretches in a dedicated session or at the end. Gradually reactivate movement before returning to sprints and jumps.

Sources and Credits

NSCA, Introduction to Dynamic Warm-Up (2017): dynamic movements and movement preparation. [nscapublications.com](https://www.nscapublications.com/) · Dynamic Warm-Up
NSCA, Static Stretching and Performance (2018): integrating stretching into a program. [nscapublications.com](https://www.nscapublications.com/) · Static Stretching
Accessed 2 October 2026. Text and teaching structure by MotoLab. Anatomical plate: Termininja, Muscular system, Wikimedia Commons, CC BY-SA 3.0. MotoLab adaptations: grayscale and highlighted joint regions. Adapted plates retain the same license. Marks show joint locations on a surface figure; the spine is indicated by region. Cover and activity illustrations generated with AI; images illustrate movement and text specifies supports and range.

01

Ankle: Knee to Wall

DYNAMIC MOBILITY · ANKLE · INDIVIDUAL

Equipment: Clear wall; optional removable tape.

**Slow, controlled movement**

Aims and objectives

Explore dorsiflexion with a stable foot and recognize your personal movement limit. Keeps heel down · Aligns knee and foot · Returns slowly

Execution

1. Place hands on the wall and one foot close to it with the whole sole on the floor.
2. Slowly move the knee toward the second toe, keeping the heel down.
3. Return, repeat and change feet. Adjust the distance from the wall to stay in control.

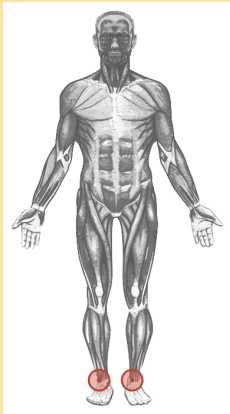
01

Ankle: Knee to Wall

DYNAMIC MOBILITY · ANKLE · INDIVIDUAL

EXERCISE AND OBSERVATIONS

Joints and muscles involved



Highlighted joint area

Ankle · dorsiflexion

Moving forward increases ankle dorsiflexion and lengthens the calf complex. On the return, lower-leg muscles guide the leg back into position.

Workload

Workload: 2 sets of 6 repetitions per side.

Recovery: 20-30 seconds between sets with relaxed supports.

Estimated time: 4-6 minutes, including explanation, attempts and brief observation.

Organize the class

Provide personal spaces with about 1.5 m clear and check room for arms and equipment. Take turns at the wall. The observer reads one instruction, then swaps roles.

A record to keep

One successful detail: _____

To revisit: _____

TEACHER RESOURCES

**Adapt the task**

Easier: Foot closer to the wall and a short movement.

Harder: Slightly increase the distance while keeping heel and sole stable.

Accessible: Choose a supported stance and your own range.

**Teacher feedback**

Watch heel, foot arch and knee direction. Move the foot closer to the wall if the heel starts to rise.

**Observe and revisit**

- Keeps heel down
- Aligns knee and foot
- Returns slowly

Choose one detail to revisit next lesson.

02

Supported Hip Circles

DYNAMIC MOBILITY · HIP · INDIVIDUAL

Equipment: A section of wall bars or a stable support per student.



Slow, controlled movement

Aims and objectives

Control a small hip circle and distinguish leg movement from trunk rotation. Keeps pelvis stable · Draws a controlled circle · Alternates both directions

Execution

- 1. Hold the wall bars with one hand and steady the supporting foot. Lift the other knee to a comfortable height.**
2. Draw a small circle with the knee, moving forward and slightly sideways.
3. Return, reverse direction and change legs. Keep the circle slow and continuous.

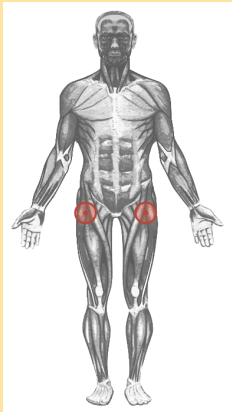
02

Supported Hip Circles

DYNAMIC MOBILITY · HIP · INDIVIDUAL

EXERCISE AND OBSERVATIONS

Joints and muscles involved



Highlighted joint area

Hip · circular movement

The circle combines hip flexion, opening and rotation. Flexors, gluteals and rotators control the path; stabilizers of the supporting hip hold the pelvis.

Workload

Workload: 1 set of 4 small circles per direction on each leg; add a second set if control remains good.

Recovery: 20-30 seconds between sets with relaxed supports.
Estimated time: 4-6 minutes, including explanation, attempts and brief observation.

Organize the class

Provide personal spaces with about 1.5 m clear and check room for arms and equipment. Take turns at the wall. The observer reads one instruction, then swaps roles.

A record to keep

One successful detail: _____
To revisit: _____

TEACHER RESOURCES



Adapt the task

Easier: Low knee and small circle.

Harder: Keep the same range with lighter hand support.

Accessible: Choose a supported stance and your own range.



Teacher feedback

Keep pelvis facing forward and trunk tall. Reduce the circle if movement transfers to the back.



Observe and revisit

- Keeps pelvis stable
- Draws a controlled circle
- Alternates both directions

Choose one detail to revisit next lesson.

01 · Before Running and Jumping

Dynamic mobility · About 8-10 minutes.

1 · CARD 01

Ankle: Knee to Wall

Keeps heel down · Aligns knee and foot



2 · CARD 02

Supported Hip Circles

Keeps pelvis stable · Draws a controlled circle



3 · CARD 04

Half-Kneeling Hip Rock

Keeps trunk tall · Controls pelvis



4 · CARD 06

Supine Knee Extension

Supports thigh · Moves knee with control

Lead the Sequence



When to Use It

After 5-8 minutes of general activation and before sports activities. Aim: Prepare ankles and hips with controlled support.

Workload and Timing

One set per exercise: 6 repetitions per side; for card 02 use 4 circles in each direction. Complete each side before the next task. Estimated duration: About 8-10 minutes, including explanation and position changes.

Organization

Prepare supports before starting. Everyone performs the same card in their own space; organize two waves at the wall. Observers read one instruction and change roles on the next round. Allow time to return and put equipment away.

Observe and Adapt

Stable heel, controlled pelvis and knee following foot. Reduce range or duration as needed. A second round revisits the chosen details; the four exercises' workloads remain part of the same session.

A Useful Finish

Ask which support or instruction helped each student stay in control.
One successful choice: _____
To revisit next lesson: _____