

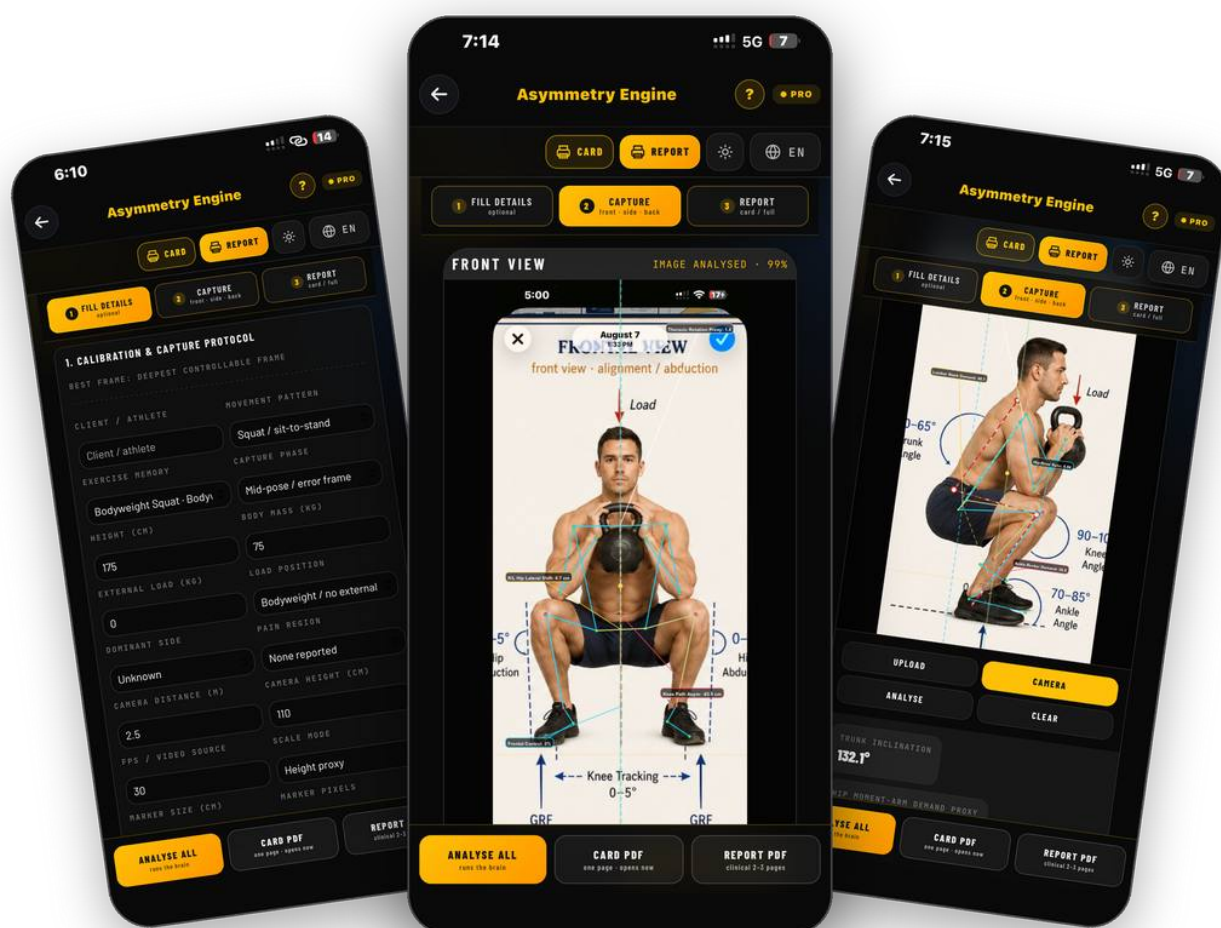


USER GUIDE

Asymmetry Engine

Tri-view asymmetry analysis – front, side and back at the same phase, run through the MMSx pose brain, gated for capture quality.

How to use the tool, step by step – in the TrainersEye app





What is Asymmetry Engine?

Asymmetry Engine is TrainersEye MMSx Body Mechanic — a tri-view asymmetry decision engine. Fill in the calibration and capture protocol, capture or upload the front, side and back view of the same rep at the same phase and load, and the MMSx pose brain analyses all three: hip and pelvic shift, knee path, frontal control and thoracic rotation from the front; trunk inclination, lumbar stack demand, hip-knee sync and ankle rocker from the side; pelvic shift, Achilles and rear-foot stack from the back. The report gates its own accuracy — capture, true view, phase lock — and issues a decision: GREEN, RED, or RECAPTURE when the evidence is not good enough, with a corrective plan drawn from the flaw library and a retest protocol. Educational clinical decision-support only; not a medical diagnosis.

Three views, one phase

Front, side and back of the same rep, same depth, same load — captured with the camera or uploaded.

The MMSx pose brain

Pose landmarks detected in the app, calibration gates and MMSx rule-based force-path reasoning.

Gated, not guessed

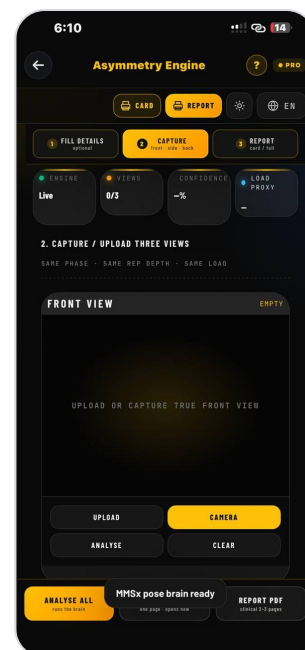
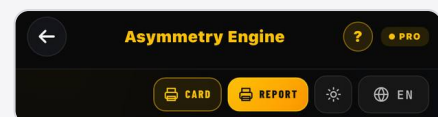
Every report carries a clinical accuracy gate — final, capture, true view, phase lock — and asks for a recapture before it will issue a final RED or GREEN.

Card or clinical report

A one-page card that opens at once, or the two-to-three-page clinical report with executive decision, tri-view evidence, corrective plan and retest protocol.

Where to find it

Open the TrainersEye app, go to the Dashboard and tap Asymmetry Engine. It is part of the Pro plan. The question mark at the top opens help on every screen.



This guide in thirteen steps

1 Open the tool

3 The three steps

5 Calibrate the camera

7 Upload or camera, analyse, clear

9 Read the front view

11 Read the back view

13 Corrective plan and retest protocol

2 Card, Report, look and language

4 Fill details — the capture protocol

6 Capture three views — same phase, same depth, same load

8 Analyse All

10 Read the side view

12 Executive decision and the accuracy gate



PART 1 · GETTING STARTED

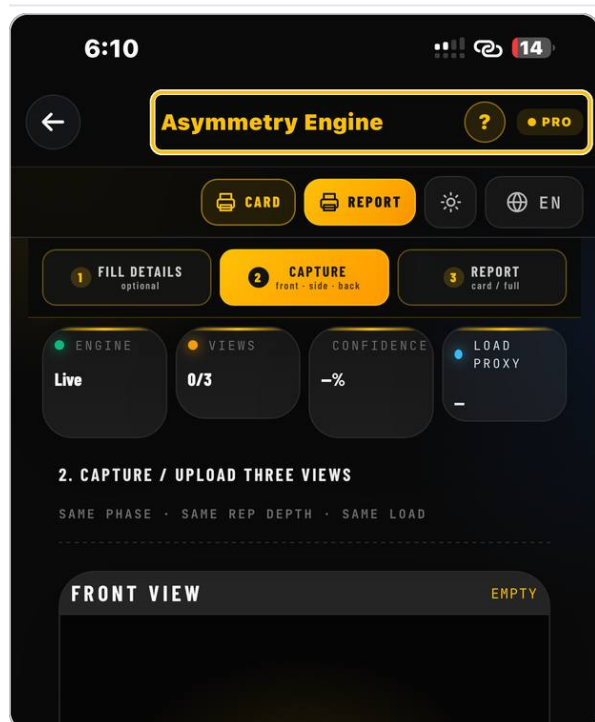
STEP 1

Open the tool

From the Dashboard, tap Asymmetry Engine – TrainersEye MMSx Body Mechanic, powered by MMSx Authority Institute. It is a Pro-plan tool.

TIP

The plan badge beside the title shows Pro; the question mark beside it opens help on every screen.



PART 1 · GETTING STARTED

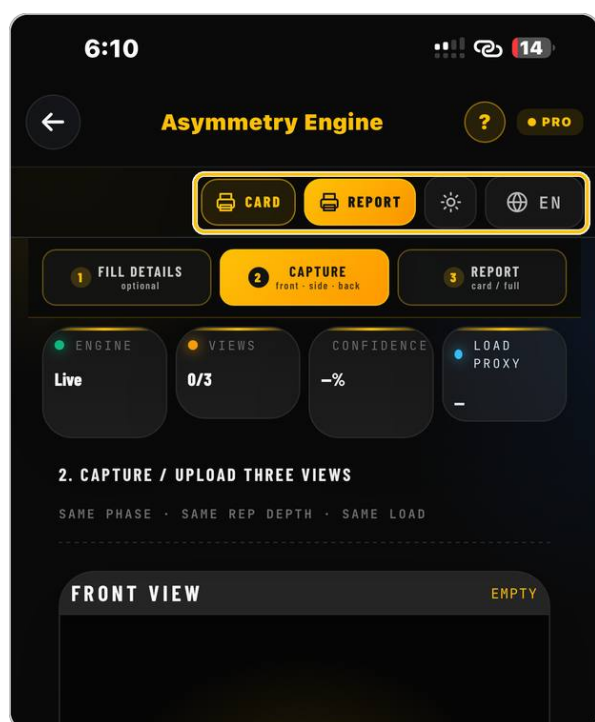
STEP 2

Card, Report, look and language

The header prints the one-page Card or the full Report, switches the light and dark look, and sets the language – English, Hindi, Spanish or Arabic.

TIP

Card and Report here are the print buttons; the PDF buttons at the bottom open the documents.





PART 1 • GETTING STARTED

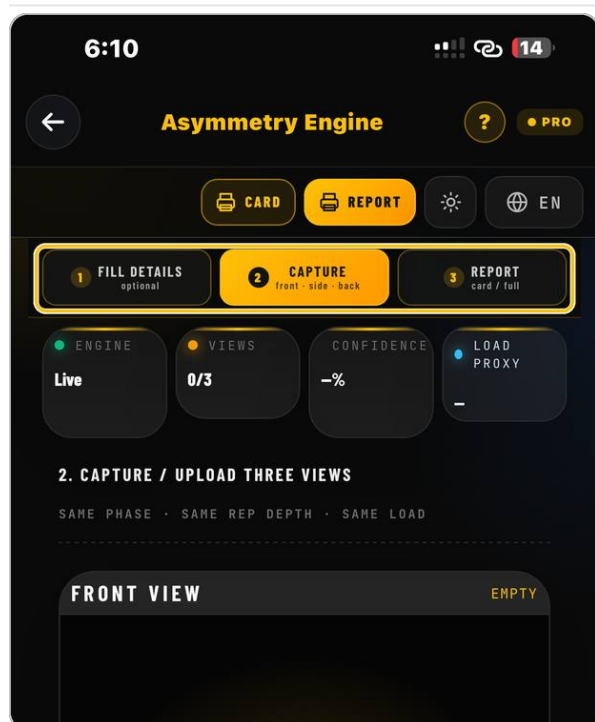
STEP 3

The three steps

Fill Details, Capture and Report – the stepper across the top. Fill Details is optional but sharpens every number; Capture takes the three views; Report gives the card or the full document.

TIP

Tap a step to jump to it; the amber step is where you are.



PART 2 • SET UP AND CAPTURE

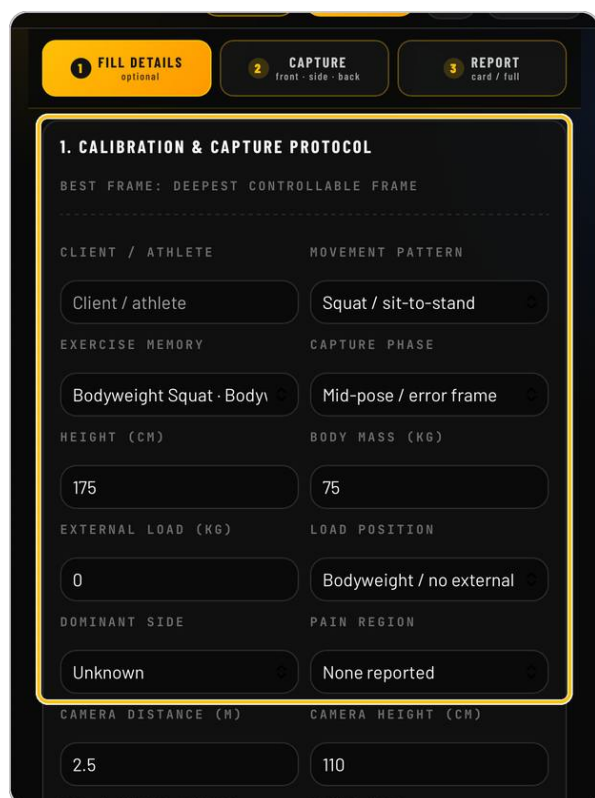
STEP 4

Fill details – the capture protocol

Enter the client, the movement pattern and exercise, the capture phase – the deepest controllable frame – height, body mass, external load and load position, dominant side and pain region.

TIP

The best frame is the deepest controllable frame: mid-pose, where the error shows.





PART 2 • SET UP AND CAPTURE

STEP 5

Calibrate the camera

Record camera distance and height, frames per second and the scale mode — height proxy, or a visible marker with its size in centimetres and pixels for centimetre-level reporting.

TIP

Phone fixed at hip-to-chest height, no tilt, no wide-angle: the report's own retest rule.

Bodyweight Squat · Bodyn Mid-pose / error frame

HEIGHT (CM) BODY MASS (KG)

175 75

EXTERNAL LOAD (KG) LOAD POSITION

0 Bodyweight / no external

DOMINANT SIDE PAIN REGION

Unknown None reported

CAMERA DISTANCE (M) CAMERA HEIGHT (CM)

2.5 110

FPS / VIDEO SOURCE SCALE MODE

30 Height proxy

MARKER SIZE (CM) MARKER PIXELS

ANALYSE ALL runs the brain

CARD PDF one page · opens now

REPORT PDF clinical 2-3 pages

PART 2 • SET UP AND CAPTURE

STEP 6

Capture three views — same phase, same depth, same load

Front is the true front view, Side the 90° lateral view, Back the true back view — all of the same rep at the same phase, depth and load.

TIP

Capture the three within the same movement frame; a different rep is a different measurement.

CARD REPORT EN

1 FILL DETAILS optional

2 CAPTURE front · side · back

3 REPORT card / full

ENGINE VIEWS CONFIDENCE LOAD PROXY

Live 0/3 —% —

2. CAPTURE / UPLOAD THREE VIEWS

SAME PHASE · SAME REP DEPTH · SAME LOAD

FRONT VIEW EMPTY

UPLOAD OR CAPTURE TRUE FRONT VIEW



PART 2 · SET UP AND CAPTURE

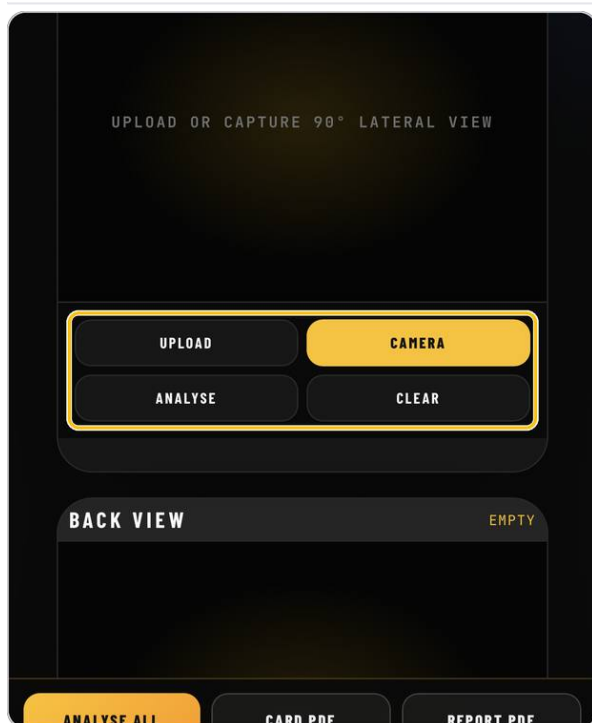
STEP 7

Upload or camera, analyse, clear

Each view panel has Upload and Camera to bring the image in, Analyse to run that view alone, and Clear to start it again.

TIP

Analyse one view to check the pose lands before you shoot the next.



PART 3 · ANALYSE

STEP 8

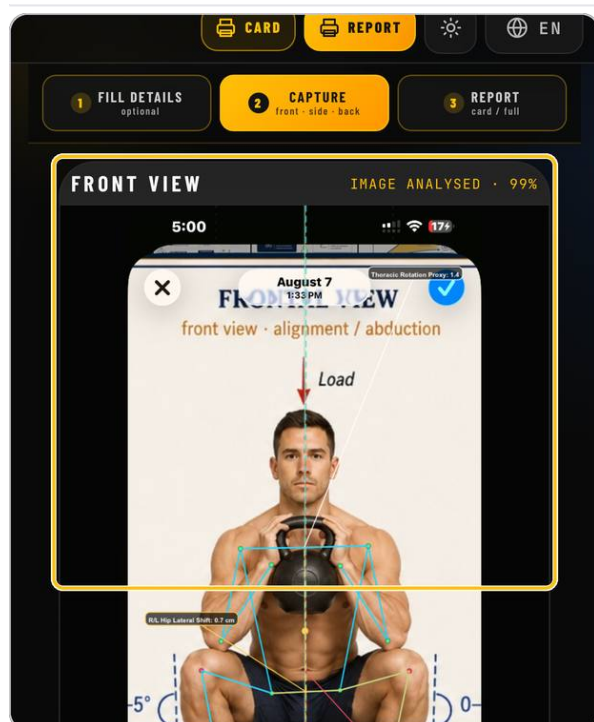
Analyse All

Tap Analyse All to run the brain on all three views. The status tiles show the engine, views analysed, confidence and the load proxy.

TIP

The toast MMSx pose brain ready means the engine is loaded; wait for it before you analyse.





PART 3 · ANALYSE

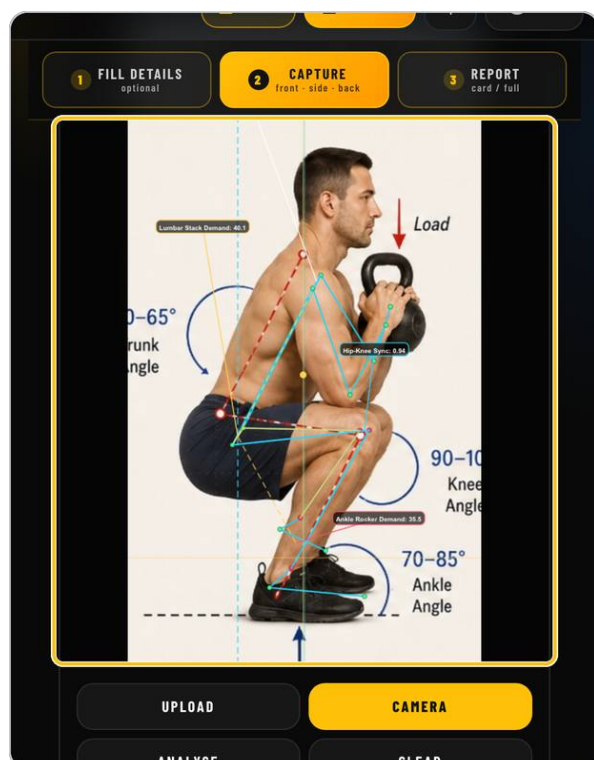
STEP 9

Read the front view

The overlay draws the skeleton and the front metrics – R/L hip lateral shift, knee path asymmetry, frontal control and the thoracic rotation proxy – with the confidence of the analysis.

TIP

Knee path asymmetry in centimetres is the front view's headline finding.



PART 3 · ANALYSE

STEP 10

Read the side view

Trunk inclination, lumbar stack demand, hip-knee sync, ankle rocker demand and the hip moment-arm demand proxy.

TIP

Trunk inclination and lumbar stack demand read together: the deeper the lean, the higher the stack demand.



PART 3 · ANALYSE

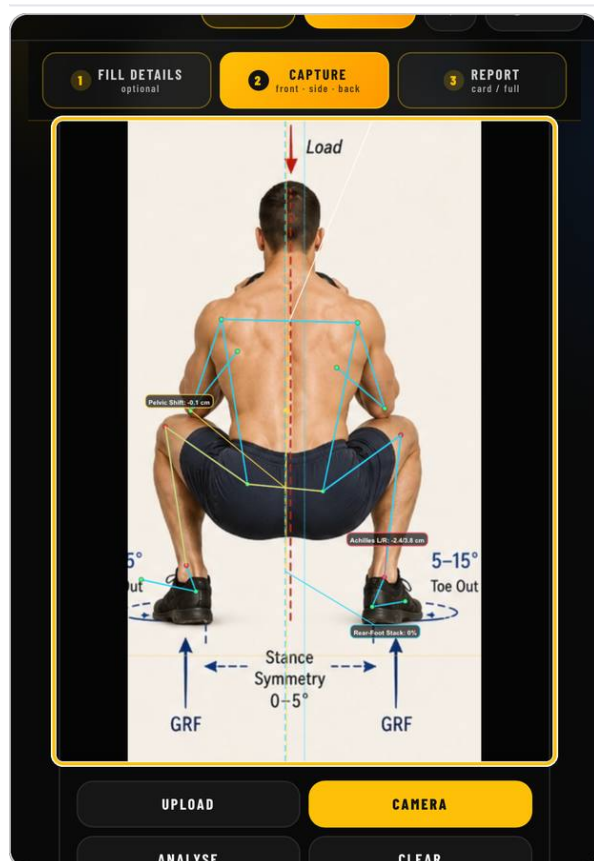
STEP 11

Read the back view

Pelvic shift, Achilles left and right, rear-foot stack and posterior pelvic shift.

TIP

Rear-foot stack at 0 % means both heels are square — an asymmetry here shows first as an Achilles left-right difference.



PART 4 · THE REPORT

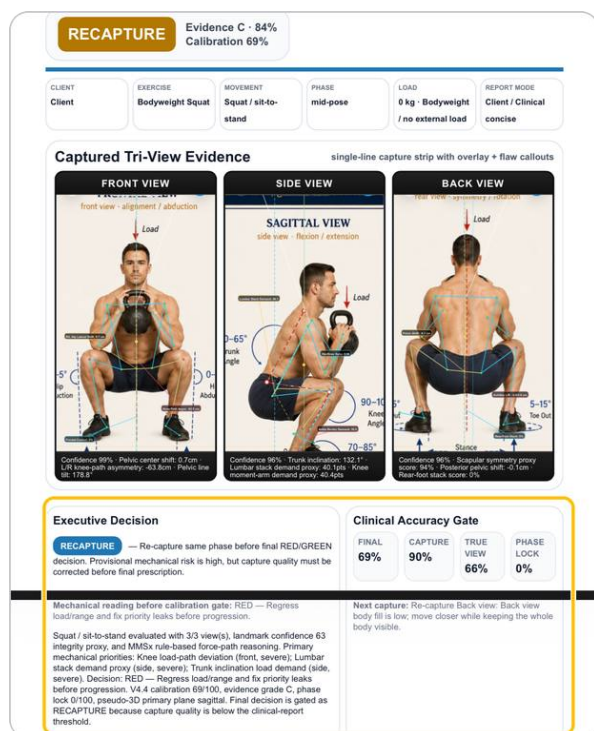
STEP 12

Executive decision and the accuracy gate

The report opens with the decision — GREEN, RED, or RECAPTURE — the evidence grade and calibration, the tri-view evidence with confidence, and the clinical accuracy gate: final, capture, true view, phase lock — with the next capture to make.

TIP

RECAPTURE is not a failure: it is the engine refusing to prescribe on poor evidence. Follow the next-capture note and run again.





PART 4 · THE REPORT

STEP **13**

Corrective plan and retest protocol

The report prints only the corrections this capture needs – each with dose, setup, execution and why – the retest protocol, capture notes and the pseudo-3D vector. Card PDF is one page; Report PDF is the clinical two to three pages.

TIP

Repeat the same phase, not a different rep: same athlete, shoes, stance, load and depth.

Corrective Plan — Only What This Capture Needs

The full 600-faw library is kept in the system database, but this report prints only the highest-value corrections for this capture.

Wall Dowel Squat/Hinge Stack EXCESSIVE TRUNK FLEXION / FORWARD TORSO COLLAPSE Dose: 2 sets × 6 slow reps Setup: Hold dowel touching head, thorax, sacrum or face wall. Execution: Move while maintaining rib-pelvis stack and COM over base. Why: Creates a visual/tactile reference for trunk angle control.	Goblet Counterbalance Tempo EXCESSIVE TRUNK FLEXION / FORWARD TORSO COLLAPSE Dose: 3 sets × 5 reps Setup: Hold light load in front of chest. Execution: Use 3-second descent and pause while torso stays in target angle. Why: Improves COM management and prevents forward collapse.
Hip Hinge Dowel Drill LUMBAR FLEXION / SPINAL ROUNDOFF LEAK Dose: 3 sets × 6 reps Setup: Dowel contacts head, mid back, sacrum. Execution: Push hips back while all three contact points remain stable. Why: Teaches hip motion without lumbar borrowing.	Hamstring Eccentric Bridge Walkout LUMBAR FLEXION / SPINAL ROUNDOFF LEAK Dose: 2 sets × 5 walkouts Setup: Bridge position, ribs down. Execution: Walk heels out slowly without lumbar rounding.
Tripod Foot + Mini-Band Knee Track KNEE VALGUS / MEDIAL COLLAPSE Dose: 2–3 sets × 8 slow reps each side Setup: Stand with heel, big toe, and little toe grounded; light band above knees. Execution: Descend or pulse slowly while keeping knee centered over second toe. Why: Builds foot-to-hip line so femur does not collapse medially.	Wall-Facing Split Squat Track KNEE VALGUS / MEDIAL COLLAPSE Dose: 2 sets × 6 reps each side Setup: Front foot 10–20 cm from wall, hands lightly supported. Execution: Lower without touching knee to wall, keep pelvis square and foot tripod loaded. Why: Teaches knee path with vertical COM control.

Retest Protocol

Repeat the same phase, not a different rep.

- Same athlete, same shoes, same stance width, same load, same depth.
- Phone fixed at hip-to-chest height; no tilted lens or wide-angle distortion.
- Front, side and back captured within the same movement frame.
- Use visible floor grid or marker for centimeter-level reports.
- Accept improvement only when pain does not increase and top finding improves in the same view.

Capture Notes

- Front view uses height-proxy scaling. For centimeter-level reports, use a visible calibration marker.
- Side view uses height-proxy scaling. For centimeter-level reports, use a visible calibration marker.
- Side view shows left-right depth spread; capture a cleaner 90° lateral image.
- Back view body fill is low; move closer while keeping the whole body visible.

Pseudo-3D vector: frontal 0.1 cm · sagittal -3.6 cm · rotation proxy 35.7. transverse rotation is influencing the interpretation

Educational / clinical decision-support only. This report uses browser pose landmarks, calibration gages, and MMS rule-based force-path reasoning. It is not a medical diagnosis and is not equivalent to force-plate inverse dynamics, EMG, pressure mapping, BMU, radiology, or laboratory



You're ready

That's it. Open Asymmetry Engine, capture the three views and run the brain.



Reading the clinical report

Page one of every report is the decision page. Here is what each part means.

1 MMSx BODY MECHANIC™ V5 · CLINICAL REPORT
Client / athlete · 2026-09-27 19:17

2 TrainerEye MMSx Body Mechanic™
Tri-View Asymmetry Analysis · Clinical-Clean Report · V4.4
Engine: MMSx Body Mechanic Brain 4.4.0-clinical-clean-report · V4.4 Clinical-Clean Tri-View · Generated 9/27/2026, 7:17:21 PM

3 RECAPTURE Evidence C · 84% Calibration 69%

CLIENT	EXERCISE	MOVEMENT	PHASE	LOAD	REPORT MODE
Client	Bodyweight Squat	Squat / sit-to-stand	mid-pose	0 kg · Bodyweight / no external load	Client / Clinical concise

4

5 Captured Tri-View Evidence single-line capture strip with overlay + flaw callouts

FRONT VIEW
front view - alignment / abduction

SIDE VIEW
SAGITTAL VIEW
side view - flexion / extension

BACK VIEW
rear view - symmetry / rotation

6

7 Executive Decision
RECAPTURE — Re-capture same phase before final RED/GREEN decision. Provisional mechanical risk is high, but capture quality must be corrected before final prescription.

8 Clinical Accuracy Gate

FINAL	CAPTURE	TRUE VIEW	PHASE LOCK
69%	90%	66%	0%

Mechanical reading before calibration gate: RED — Regress load/range and fix priority leaks before progression.

Squat / sit-to-stand evaluated with 3/3 view(s), landmark confidence 63 integrity proxy, and MMSx rule-based force-path reasoning. Primary mechanical priorities: Knee load-path deviation (front, severe); Lumbar stack demand proxy (side, severe); Trunk inclination load demand (side, severe). Decision: RED — Regress load/range and fix priority leaks before progression. V4.4 calibration 69/100, evidence grade C, phase lock 0/100, pseudo-3D primary plane sagittal. Final decision is gated as RECAPTURE because capture quality is below the clinical-report threshold.

Next capture: Re-capture Back view. Back view body fill is low; move closer while keeping the whole body visible.

- 1 Masthead**
MMSx Body Mechanic clinical report, client and date.
- 2 Title and engine**
Tri-view asymmetry analysis, the report version and the engine that generated it.
- 3 Decision, evidence, calibration**
GREEN, RED or RECAPTURE; the evidence grade and calibration percentage.
- 4 Capture parameters**
Client, exercise, movement, phase, load and report mode as entered.
- 5 Captured tri-view evidence**
The three views with their overlays and flaw callouts.
- 6 Confidence lines**
Per view: confidence and the headline metrics.
- 7 Executive decision**
The decision in words, the mechanical reading before the gate and the priorities.
- 8 Clinical accuracy gate**
Final, capture, true view and phase lock, with the next capture to make.



Move with **Precision.** Live with **Confidence.**

ASYMMETRY ENGINE IS PART OF TRAINERSEYE

Support: support@trainerseye.com · trainerseye.com

TrainersEye MMSx Body Mechanic · Powered by MMSx Authority Institute

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