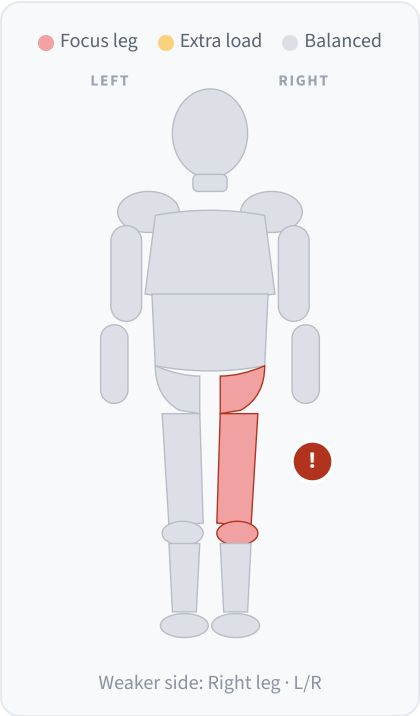
CATALYST PERFORMANCE · SAN DIEGO

MAYA ROSS

ACL Readiness Screen · SDSC Surf

Date: 2026-07-21
Age: 12 yrs
Platform: VALD ForceDecks



Weaker side: Right leg · L/R

OVERALL

FOLLOW-UP

A meaningful imbalance — worth a closer look. Based on the largest left-vs-right difference measured today (**16%**).

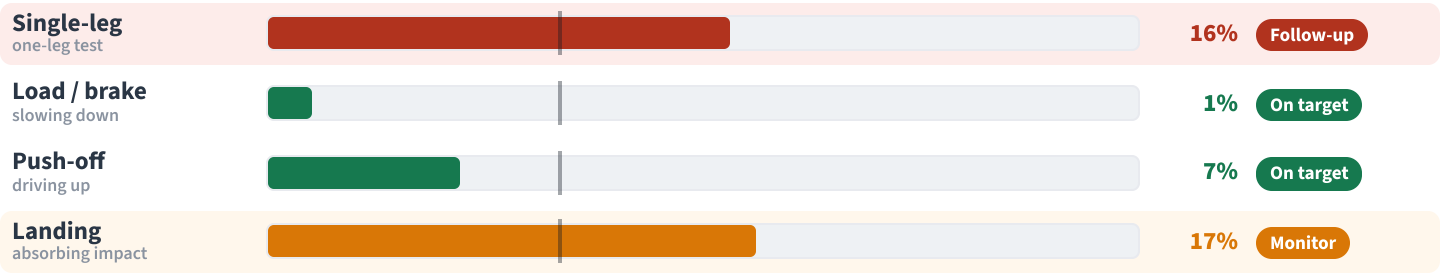
SINGLE-LEG SYMMETRY
16% gap
Target: <10% gap

JUMP HEIGHT RANK
9th of 17
By jump height · 1st = highest

JUMP POWER
23.9 cm
Above average · age 12

JUMP BALANCE — LEFT VS RIGHT

A jump has three phases — she **loads & brakes** on the way down, **pushes off**, then **lands**. We measure how evenly her legs share the work in each, plus a single-leg test. Bars show the left-vs-right gap (shorter = more balanced; target under 10%).

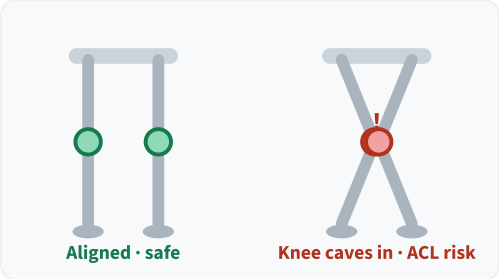


What this means. On one leg, her **right leg** produces noticeably less power and control than the other — a meaningful left-vs-right difference. On the pitch that shows up in her first-step acceleration off that leg, her balance landing from headers and 50/50 challenges, and how she holds a cut. A gap like this is one of the most established, **modifiable** risk factors for a non-contact knee injury — far better caught now, on a force plate, than after an injury. The good news: it's very trainable.

This is a movement **screen**, not a medical diagnosis. The next pages explain how an ACL injury happens, what this means for her game, her numbers, and the plan. Captured on VALD ForceDecks (dual force plates).

MAYA — UNDERSTANDING THE RESULT

HOW A NON-CONTACT ACL INJURY HAPPENS



The **ACL** is the main ligament that stabilises the knee — it stops the shin sliding forward and the knee twisting inward. About **70% of ACL tears are non-contact:** they happen in a split second when an athlete **decelerates, lands, or cuts and the knee caves inward** (the position on the right).

A leg that's **weaker or less controlled is more likely to collapse into that position** — and less able to absorb the load — so the ligament takes the strain. **That's why a left-vs-right asymmetry matters: it flags the leg least able to handle the exact forces that tear an ACL.** For Maya, that's her **right leg** — the side least able to control a one-leg landing or cut, which is when the ACL is most exposed.

WHAT THIS MEANS FOR MAYA'S GAME

ON THE PITCH

- **First-step acceleration** — Off her right leg she drives with less power — that costs her a step.
- **Landing from headers & 50/50s** — Less single-leg control means less stability on impact.
- **Holding a cut** — Planting and changing direction on the weaker side is harder to control.

WHY IT MATTERS — THE EVIDENCE

- Female soccer players are **4–6× more likely** to tear an ACL than boys.
- About **70% are non-contact** — on cuts, decelerations and landings, the exact movements measured here.
- A left-vs-right gap over **10–15%** is a recognised, **modifiable** risk factor and a return-to-play standard.
- Soccer-specific neuromuscular training (FIFA 11+) cuts ACL injuries **30–50%** — and works best in youth.

Refs: Arendt & Dick 1995; Grindem 2016; Bishop 2018; Sadoghi 2012 (meta-analysis).

MORE THAN INJURY — PERFORMANCE

Symmetry isn't only protective — it's faster. The same balance that guards the knee also drives her game:

- **Acceleration & cutting** — Even drive off both legs means a quicker first step and sharper change of direction.
- **Power transfer** — Her jump of **23.9 cm** (Above average for her age) is her explosive base — balanced legs put it into sprints, jumps and shots.
- **Durability** — When one leg isn't overworking, she fatigues less and stays available all season.

POWER & SPRING — HER FULL BATTERY

Beyond balance, we also measured how much power Maya produces and how well she re-uses it as **"spring"** — captured on the same plates, the same day. These are her performance engines.

JUMP POWER	REACTIVE STRENGTH	ARM-ASSISTED JUMP
23.9 cm	**1.61**	**36.1 cm**
Above average · age 12	Strong spring · "spring"	+12.2 cm from arm swing

Reactive Strength (RSI) is how fast she rebounds off the ground — springy, elastic power that adds speed and protects the joints on landing. The **arm-assisted jump** shows her true explosive ceiling with a natural arm swing.

MAYA — HER NUMBERS & PLAN

HOW MAYA'S NUMBERS COMPARE

MEASURE	MAYA	TARGET / REFERENCE	STATUS
Single-leg jump symmetry (L vs R)	16% gap	<10% gap (≥90% symmetry)	Follow-up
Push-off balance (take-off)	7% gap	<10% gap	On target
Load / brake balance (decelerating)	1% gap	<10% gap	On target
Landing balance (impact)	17% gap	<10% gap	Monitor
Counter-movement jump height	23.9 cm	Above average vs girls age 12	Baseline
Reactive strength — "spring" (RSI)	1.61	Higher = springier rebound jump	On target
Arm-assisted jump height	36.1 cm	Explosive power with arm swing	Baseline

Jump Height vs Girls Her Age (12) — **Maya 23.9cm · Above average**

12 · below avg | avg 20 | above avg · 28 cm

Symmetry targets follow return-to-sport standards (≥90% limb symmetry). The jump-height benchmark is an approximate developmental reference for female youth, not a clinical percentile.

WHAT TO WORK ON — MAYA'S TAKE-HOME

1. **Eccentric single-leg strength** — 3-second-lowering split squats and single-leg RDLs — both sides, extra reps on the weaker leg. The braking phase is when the knee is under the most load.
2. **Decelerate-and-stick** — Jog, plant on one leg and freeze for 2 seconds — it trains each leg to absorb force evenly.

Coach-led general guidance from today's screen — a starting point, not a prescription. The complimentary follow-up adds the single-leg test and turns this into a personalized, supervised plan with a re-test to show progress.

HOW WE CAN HELP — NEXT STEPS

FREE RESULTS CALL
Complimentary · 15 min

Walk through Maya's results with our staff and map out what to do next.

IN-DEPTH EVALUATION
$169 · 1 hour

A fuller VALD force-plate battery — more movements tested to pinpoint the cause and build her plan.

COMPLETE ASSESSMENT
$349 · 2 hours

The full VALD evaluation **plus** hands-on flexibility & mobility screening with our ATC on the table.

BOOK MAYA'S SESSION

Recommended given today's result — reply to this email, text us, or talk to your coach — we'll get her started.

How this was measured. Captured on **VALD ForceDecks** — dual force plates sampling **1,000×/second**, the same system used by professional and national teams. Every value is the **average of 3 maximal jumps** for reliability, and compared against published youth-athlete reference ranges. Prepared by the Catalyst Performance team.

Important. Wellness **screen**, not a medical diagnosis or injury prediction — asymmetry is one risk indicator, not a guarantee either way. Results vary day to day; any pain or prior injury should be seen by a physician/PT.