

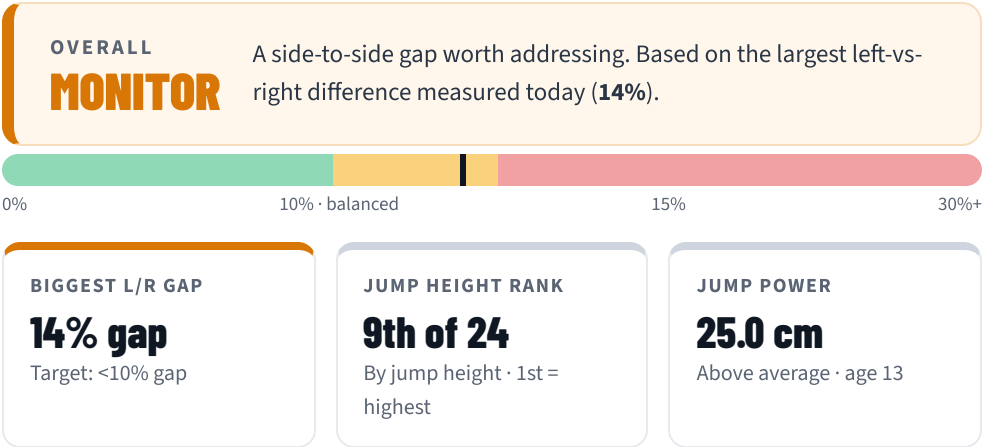
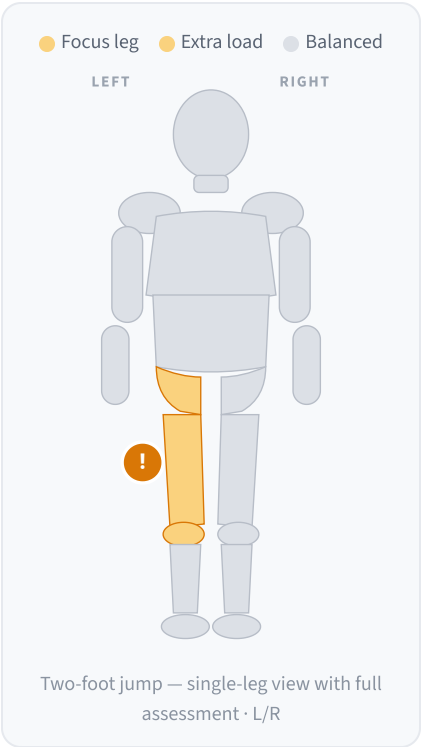
LILLIAN ENDEMANN

ACL Readiness Screen · SDSC

Date: 2026-06-11

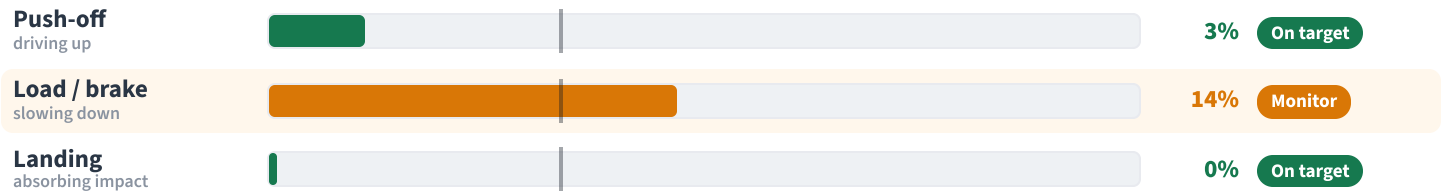
Age: 13 yrs

Platform: VALD ForceDecks



JUMP BALANCE — LEFT VS RIGHT

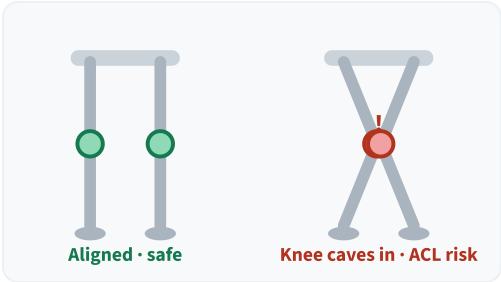
A jump has three phases — she **pushes off**, **loads & brakes** on the way down, then **lands**. We measure how evenly her legs share the work in each (shorter bar = more balanced; target under 10%). **Braking and landing are where most non-contact knee/ACL injuries happen**, so a big left-vs-right gap there is worth attention. The vertical line marks the **10% concern threshold** — bars reaching past it are flagged. (Landing can vary jump-to-jump; the single-leg assessment confirms.)



What this means. Her biggest gap is in how she **decelerates and plants** — one leg takes more of the braking load — a modest left-vs-right difference. That's the exact movement behind stopping to defend, cutting and changing direction — and where the large majority of non-contact ACL tears happen. 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). © Catalyst Performance.

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 Lillian, it's her **braking** — one leg less able to absorb the deceleration safely, the exact moment most ACLs tear.

WHAT THIS MEANS FOR LILLIAN'S GAME

ON THE PITCH

- **Decelerating to defend or stop** — One leg absorbs more of the braking — the highest-risk moment for the knee.
- **Planting to cut & change direction** — Uneven loading exactly where most non-contact ACL tears occur.
- **Over a full season** — Thousands of cuts and stops compound that uneven load.

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 **25.0 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.

LILLIAN — HER NUMBERS & PLAN

HOW LILLIAN'S NUMBERS COMPARE

MEASURE	LILLIAN	TARGET / REFERENCE	STATUS
Push-off balance (take-off)	3% gap	<10% gap	On target
Load / brake balance (decelerating)	14% gap	<10% gap	Monitor
Landing balance (impact)	0% gap	<10% gap varies; single-leg confirms	On target
Counter-movement jump height	25.0 cm	Above average vs girls age 13	Baseline

Jump Height vs Girls Her Age (13) — Lillian 25.0cm · Above average



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 — LILLIAN'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 Lillian'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 LILLIAN'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 **1,000x/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. © Catalyst Performance · catalystperformancesd.com