

THE BILATERAL DEFICIT

Add up an athlete's left-leg jump and right-leg jump, and the total beats their two-leg jump, reliably, in almost every athlete. That gap is the bilateral deficit, and its size says something useful about how the athlete expresses force. Three tests reveal it: Standing Vertical, plus a Single-Leg Vertical on each side.

$$\text{Bilateral Index} = \text{Two-Leg Jump} \div (\text{Left} + \text{Right}) \times 100$$

Higher index = the two-leg jump captures more of what the legs can each do alone

WHAT THE DATA SHOWS · 72 ATHLETES WITH ALL THREE TESTS

68%

10TH PERCENTILE

72%

25TH PERCENTILE

78%

MEDIAN INDEX

84%

75TH PERCENTILE

90%

90TH PERCENTILE

For the median trained athlete, the sum of the single-leg jumps beats the bilateral jump by roughly 28%. Nearly nobody reaches 100%. The deficit itself is normal neurophysiology, not a defect.

READING THE INDEX

UNDER ~72% BIG DEFICIT

Strong legs, weak sum. The athlete owns single-leg output but leaves force on the table jumping off two. Train bilateral expression: synchronized jumps, loaded CMJs, intent work.

72 - 84% TYPICAL

The middle half of trained athletes. Keep developing both capacities and let the index follow, it is a description here, not a prescription.

NEAR 90%+ CHECK THE SINGLES

A very high index usually means the single-leg jumps are underdeveloped, not that the two-leg jump is special. Audit SL strength and control, sport will, eventually.

WHY IT MATTERS

IT SORTS THE NEXT BLOCK

Two athletes with identical verticals can sit at opposite ends of this index, one needs bilateral intent, the other single-leg capacity. Same outcome, opposite programs.

THREE TESTS, ONE SCREEN

Run Standing Vertical and SL Vertical (both legs) in one session. The app holds all three bests; the arithmetic takes ten seconds and writes the program.

Index distribution: aggregate Plyomat testing data, 2026, athletes holding a Standing Vertical and both single-leg bests. Flight-time heights throughout. Bands are Plyomat field guidance anchored to the observed quartiles, not clinical cutoffs.



LIVE VERSION

qr.plyomat.com/bilateral-deficit