OPTIMAL STRENGTH

KNEE PERFORMANCE PROFILE

SAMPLE CLIENT

STRENGTH & FUNCTION ASSESSMENT

DATE	AGE	SPORT	AFFECTED LIMB	BODYWEIGHT
—	—	Running	Left	—

REPORT BY

James Philips

CLIENT OVERVIEW

Background information gathered prior to testing

INJURY HISTORY & BACKGROUND

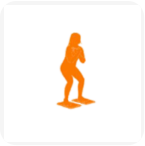
1 year post aclr hamstring graft + OCD repair

TESTING CONTEXT & OBSERVATIONS

Pain when jumping

GOALS & RETURN TO SPORT TARGET

Running



BILATERAL SQUAT

FORCEDECKS

Force plate squat assessment measuring how weight is distributed between limbs. Even small asymmetries at normal movement speeds can reflect habitual avoidance patterns.

METRIC	LEFT	RIGHT	ASYMMETRY
Peak Force	543 N	590 N	8% Right

CLINICAL INTERPRETATION

Add your clinical interpretation here — this will appear on the printed report...

SINGLE LEG SQUAT

FORCEDECKS

Each leg loaded independently on the force plate. Squat depth and eccentric power reveal how confidently and deeply each leg can be loaded — deficits here reflect both strength and neuromuscular confidence.

WEAKER LIMB — SQUAT DEPTH

11.7 cm Below Average

METRIC	LEFT	RIGHT	ASYMMETRY
Squat Depth	11.7 cm	13.9 cm	15.8% Right
Eccentric Power / kg	1.5 W/kg	1.8 W/kg	16.7% Right

CLINICAL INTERPRETATION

Add your clinical interpretation here — this will appear on the printed report...

COUNTERMOVEMENT JUMP

FORCEDECKS

Bilateral explosive jump measuring power output, loading strategy and landing control. Both the height achieved and how symmetrically each leg contributes are clinically important.

JUMP HEIGHT

13.4 cm Below Average

P25: 20.2cm P50: 24.4cm P75: 28.5cm

PEAK POWER / KG

28.2 W/kg Below Average

P25: 30W/kg P50: 40W/kg P75: 50W/kg

RSI-MOD

0.17 Below Average

P25: 0.3 P50: 0.4 P75: 0.5

METRIC	LEFT	RIGHT	ASYMMETRY
Concentric Impulse Asymmetry	–	–	18.5% Right
Eccentric Impulse Asymmetry	–	–	19.2% Right
Eccentric Duration	0.54 s		bilateral
Concentric Duration	0.3 s		bilateral

CLINICAL INTERPRETATION

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QUADRICEP STRENGTH

DYNAMO · ISOMETRIC SEATED

Isometric quadricep strength measured in a seated position. This is one of the most important tests for ACL and knee rehabilitation — deficit here directly impacts both function and re-injury risk.

PEAK FORCE / KG

Left — 3.92 N/kg Below Average

Right — 5.31 N/kg Average

METRIC	LEFT	RIGHT	ASYMMETRY
Peak Force	341 N	461 N	26% Right
Peak Force / kg	3.92 N/kg	5.31 N/kg	26.2% Right

CLINICAL INTERPRETATION

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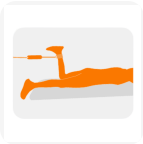

INNER RANGE HAMSTRING

DYNAMO · ISOMETRIC PRONE

Isometric hamstring strength in inner range (prone, knee at 90°). Particularly relevant following a hamstring graft ACL reconstruction — the donor muscle commonly shows a significant deficit in this position. Deficits here have direct implications for knee stability, return to running & change of direction.

METRIC		LEFT	RIGHT	ASYMMETRY
Peak Force		73 N	115 N	36.5% Right
Peak Force / kg		0.84 N/kg	1.33 N/kg	36.8% Right
Force Asymmetry	–	–	36.5% Right	Target: ≤25%

** Asymmetry target: ≤25% at 1 year post-op, ≤12.5% at 2 years post-op*

CLINICAL INTERPRETATION

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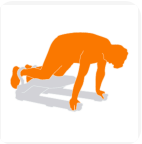

HAMSTRING ISO PRONE

NORDBORD

Isometric prone hamstring test measures peak force and torque in a stronger range. This measures the whole of the hamstring musculature in a more specific position to running & change of direction.

PEAK FORCE / KG

Left — **1.42 N/kg** Below Average

P25: 3N/kg | P50: 4N/kg | P75: 5N/kg

Right — **1.83 N/kg** Below Average

P25: 3N/kg | P50: 4N/kg | P75: 5N/kg

METRIC	LEFT	RIGHT	ASYMMETRY
Peak Force	123 N	159 N	22.6% Right
Peak Force / kg	1.42 N/kg	1.83 N/kg	22.4% Right

CLINICAL INTERPRETATION

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CALF / ANKLE STRENGTH

FORCEFRAME · SEATED

Seated plantar flexion strength (soleus dominant). Target: 1.5× bodyweight (≈1278.9 N) for return to running. Asymmetry between sides can affect loading patterns throughout the kinetic chain.

PEAK FORCE / KG

Left — 12.88 N/kg Below Average

Right — 12.99 N/kg Below Average

METRIC	LEFT	RIGHT	ASYMMETRY
Peak Force	1119 N	1129 N	0.9% Right
Peak Force / kg	12.88 N/kg	12.99 N/kg	0.8% Right

CLINICAL INTERPRETATION

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HIP ADDUCTION & ABDUCTION

FORCEFRAME · SUPINE

Isometric hip strength at knee 90°, hip 45°. Hip strength forms the proximal foundation for knee stability — deficits impact pelvic stability & control during running & change of direction tasks.

HIP ADDUCTION / KG

Left — **3.51 N/kg** Below Average

P25: 4N/kg | P50: 4.5N/kg | P75: 5N/kg

Right — **3.58 N/kg** Below Average

P25: 4N/kg | P50: 4.5N/kg | P75: 5N/kg

HIP ABDUCTION / KG

Left — **3.71 N/kg** Below Average

P25: 4N/kg | P50: 4.5N/kg | P75: 5N/kg

Right — **3.87 N/kg** Below Average

P25: 4N/kg | P50: 4.5N/kg | P75: 5N/kg

METRIC	LEFT	RIGHT	ASYMMETRY
Hip Adduction	305 N	311 N	1.9% Right
Hip Adduction / kg	3.51 N/kg	3.58 N/kg	2% Right
Hip Abduction	323 N	336 N	3.9% Right
Hip Abduction / kg	3.71 N/kg	3.87 N/kg	4.1% Right

CLINICAL INTERPRETATION

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HIP FLEXION STRENGTH

FORCEFRAME · SEATED

Isometric hip flexor strength. Contributes to anterior knee stability and is important during running and change of direction tasks.

PEAK FORCE / KG

Left — **3.04 N/kg** Above Average

P25: 2N/kg | P50: 3N/kg | P75: 4N/kg

Right — **3.13 N/kg** Above Average

P25: 2N/kg | P50: 3N/kg | P75: 4N/kg

METRIC	LEFT	RIGHT	ASYMMETRY
Peak Force	264 N	272 N	2.9% Right
Peak Force / kg	3.04 N/kg	3.13 N/kg	2.9% Right

CLINICAL INTERPRETATION

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OVERALL SUMMARY

A concise summary of the key clinical findings from this assessment.

CLINICAL INTERPRETATION

Add your clinical interpretation here — this will appear on the printed report...

TRAINING RECOMMENDATIONS

Priority areas and recommended training focus based on assessment findings.

CLINICAL INTERPRETATION

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WHAT THE METRICS MEAN

LIMB SYMMETRY INDEX (LSI)

The % similarity between your two legs. Sport return typically requires >90%. Values below 85% represent a significant functional deficit.

REACTIVE STRENGTH INDEX (RSI)

Jump height divided by contact time. Higher = better. Measures elastic energy use — critical for sprinting and change of direction.

ECCENTRIC PHASE

The loading/braking phase — muscles lengthening under force, such as lowering into a squat or absorbing landing impact.

CONCENTRIC PHASE

The propulsion phase — muscles shortening to generate force, such as pushing upward in a jump.

ASYMMETRY %

% difference between left and right. For most tests: <10% acceptable, 10–20% moderate concern, >20% significant deficit. Hip and squat tests use tighter thresholds.

PEAK FORCE / KG

Force normalised to bodyweight — allows fair comparison between people of different body sizes.