

Strength and range of motion report

Carlos Ruiz, assessed 20 Oct 2026

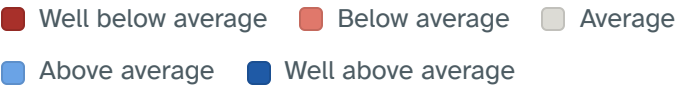
Person

Sex	Male
Age	35.4 years
Body weight	84.0 kg
Height	182 cm
BMI	25.4 kg/m²
Dominant side	Right

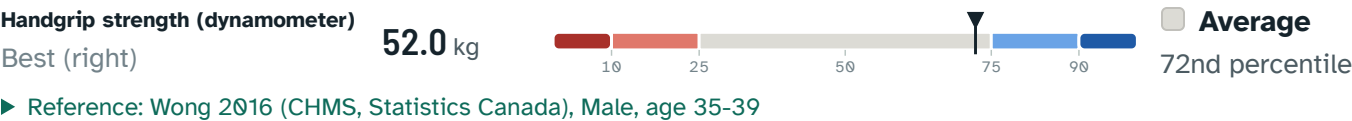
Full push-pull and HHD profile.

Summary

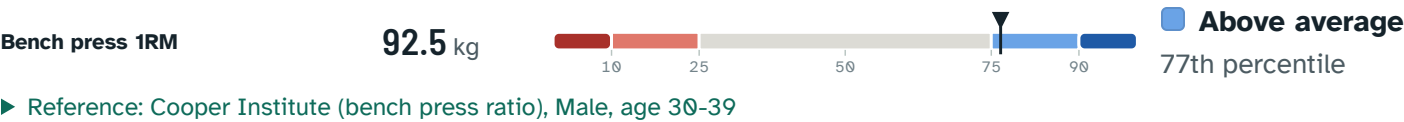
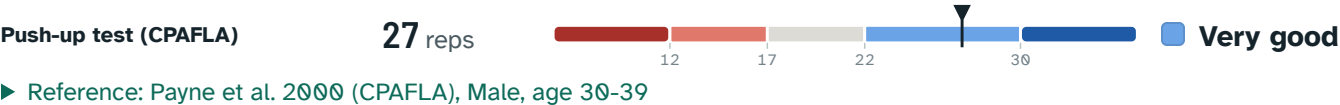
Tests recorded	32
Results rated against norms	13 (22 without norms)
Mean percentile	50th (12 results)
Motions below 90% of normal	6 of 12
Ratios outside target	4
Side differences flagged	6



Grip



Push



Pull

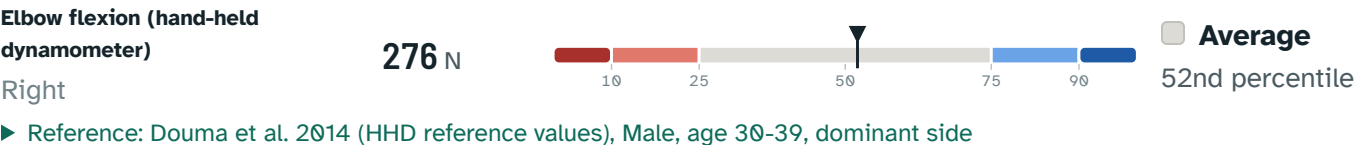
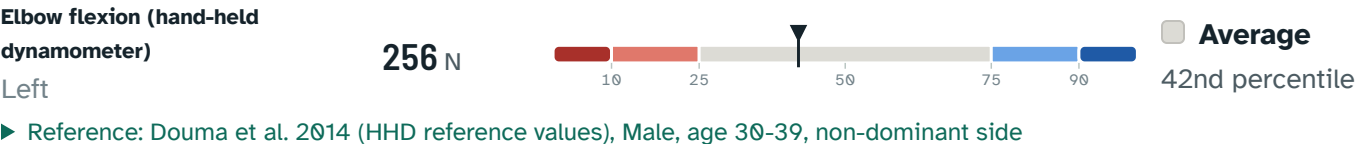
Row 1RM (seated cable or bent-over) 70.0 kg

No norm table is loaded for this test.

Pull-ups (maximum repetitions) 6 reps

No norm table is loaded for this test.

Muscle tests (dynamometry)

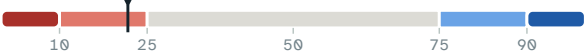


Elbow extension (hand-held dynamometer)

Left **170 N**  **Average** 42nd percentile

► Reference: Douma et al. 2014 (HHD reference values), Male, age 30-39, non-dominant side

Elbow extension (hand-held dynamometer)

Right **152 N**  **Below average** 22nd percentile

► Reference: Douma et al. 2014 (HHD reference values), Male, age 30-39, dominant side

Knee extension (hand-held dynamometer)

Left **359 N**  **Average** 57th percentile

► Reference: Douma et al. 2014 (HHD reference values), Male, age 30-39, non-dominant side

Knee extension (hand-held dynamometer)

Right **385 N**  **Average** 63rd percentile

► Reference: Douma et al. 2014 (HHD reference values), Male, age 30-39, dominant side

Knee flexion (hand-held dynamometer)

Left **241 N**  **Average** 43rd percentile

► Reference: Douma et al. 2014 (HHD reference values), Male, age 30-39, non-dominant side

Knee flexion (hand-held dynamometer)

Right **255 N**  **Average** 45th percentile

► Reference: Douma et al. 2014 (HHD reference values), Male, age 30-39, dominant side

Shoulder abduction (hand-held dynamometer)

Left **178 N**  **Average** 52nd percentile

► Reference: Douma et al. 2014 (HHD reference values), Male, age 30-39, non-dominant side

Shoulder abduction (hand-held dynamometer)

Right **163 N**  **Average** 32nd percentile

► Reference: Douma et al. 2014 (HHD reference values), Male, age 30-39, dominant side

Shoulder external rotation

Left **51.0 Nm** No norm table is loaded for this test.

Shoulder external rotation

Right **50.5 Nm** No norm table is loaded for this test.

Shoulder internal rotation

Left **74.0 Nm** No norm table is loaded for this test.

Shoulder internal rotation

Right **82.0 Nm** No norm table is loaded for this test.

Isometric strength (force gauge)

Peak force, best of the trials. Each measurement is paired with the opposite direction (push and pull, the two rotations, the two sides of the legs, the two ankle directions), with their ratio. $\times BW$ = force $\div$ body weight. No population norms are loaded for these tests: compare the pairs and follow the change over time. Knee extension and flexion are in the muscle tests above, rated against norms.

Push-pull (each push with the pull in the opposite direction)	Measurement	Opposite	Ratio
Horizontal	380 N $0.46 \times BW$ push forward	420 N $0.51 \times BW$ pull backward	1.11 pull $\div$ push
Vertical	296 N $0.36 \times BW$ push upward	512 N $0.62 \times BW$ pull downward	1.73 pull $\div$ push
45° high line	335 N $0.41 \times BW$ push forward-upward	476 N $0.58 \times BW$ pull from above, backward-downward	1.42 pull $\div$ push
45° low line	361 N $0.44 \times BW$ push forward-downward	444 N $0.54 \times BW$ pull from the floor, backward-upward	1.23 pull $\div$ push
Horizontal adduction / abduction, both arms	262 N $0.32 \times BW$ squeeze inward (adduction)	170 N $0.21 \times BW$ spread apart (abduction)	0.65 abduction $\div$ adduction
Rotation	Measurement	Opposite	Ratio
Trunk rotation	222 N $0.27 \times BW$ to the left	246 N $0.30 \times BW$ to the right	1.11 right $\div$ left
Shoulder rotation, right	152 N $0.18 \times BW$ internal rotation	96 N $0.12 \times BW$ external rotation	0.63 ER $\div$ IR
Shoulder rotation, left	161 N $0.20 \times BW$ internal rotation	118 N $0.14 \times BW$ external rotation	0.73 ER $\div$ IR

Range of motion

Degrees, greatest of the consistent trials. % of normal = result $\div$ the normal value of the reference; within the normal range from 90%, markedly limited below 70% (app settings). Side comparison = smaller $\div$ larger side.

Motion	Normal	Right	Left	Side comparison
Cervical flexion ROM	60°	Midline (no side)		
Dual inclinometry		50° 83%		
Oregon WCD spinal ROM forms		Limited		

Motion	Normal	Right	Left	Side comparison
Cervical extension ROM Dual inclinometry Oregon WCD spinal ROM forms	75°	Midline (no side) 60° 80%  ■ Limited		
Cervical rotation ROM Oregon WCD spinal ROM forms	80°	74° 93%  ■ Within normal range	78° 98%  ■ Within normal range	95% Right 4° less
Shoulder flexion ROM NY WCB 2018 Impairment Guidelines	180°	152° 84%  ■ Limited	179° 99%  ■ Within normal range	85% Right 27° less ⬇ Below 90%
Shoulder abduction ROM NY WCB 2018 Impairment Guidelines	180°	140° 78%  ■ Limited	178° 99%  ■ Within normal range	79% Right 38° less ⬇ Below 90%
Painful arc 90-130° on the right.				
Shoulder external rotation ROM NY WCB 2018 Impairment Guidelines	90°	72° 80%  ■ Limited	90° 100%  ■ Within normal range	80% Right 18° less ⬇ Below 90%
Shoulder internal rotation ROM NY WCB 2018 Impairment Guidelines	70°	55° 79%  ■ Limited	70° 100%  ■ Within normal range	79% Right 15° less ⬇ Below 90%

Push-pull balance

Opposing muscle groups compared directly (ratios) and through their percentiles.

Upper body: percentiles

Push: Bench 1RM, Elbow extension. Pull: Elbow flexion.



7 points apart

✓ **Balanced**

Flag above 25 points (app setting)

Lower body: percentiles

Push: Knee extension. Pull: Knee flexion.



16 points apart

✓ **Balanced**

Flag above 25 points (app setting)

Elbow push:pull (extension / flexion, HHD) Left

Elbow extension 170.0 N ÷
Elbow flexion 255.7 N



0.67

✓ **Within target**

Target 0.59–0.80; expected
0.70

Expected ratio = predicted extension / predicted flexion for this person (Douma 2014 equations). The +/-15 % tolerance is an app default. Source: Douma et al. 2014 (HHD reference values). [Peer-reviewed](#)

Elbow push:pull (extension / flexion, HHD) Right

Elbow extension 151.7 N ÷
Elbow flexion 275.7 N



0.55

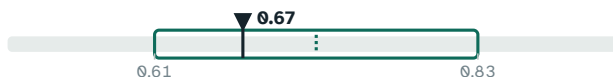
⬇ **Below target**

Target 0.58–0.79; expected
0.69

Elbow extensors (push) weak relative to flexors. Expected ratio = predicted extension / predicted flexion for this person (Douma 2014 equations). The +/-15 % tolerance is an app default. Source: Douma et al. 2014 (HHD reference values). [Peer-reviewed](#)

Knee flexor:extensor, H:Q (isometric HHD) Left

Knee flexion 240.7 N ÷ Knee
extension 359.0 N



0.67

✓ **Within target**

Target 0.61–0.83; expected
0.72

Expected ratio = predicted knee flexion / predicted knee extension (Douma 2014 equations, seated at 90 degrees). The +/-15 % tolerance is an app default. Source: Douma et al. 2014 (HHD reference values). [Peer-reviewed](#)

Knee flexor:extensor, H:Q (isometric HHD) Right

Knee flexion 255.0 N ÷ Knee
extension 385.0 N



0.66

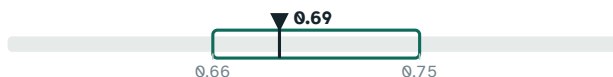
✓ **Within target**

Target 0.62–0.84; expected
0.73

Expected ratio = predicted knee flexion / predicted knee extension (Douma 2014 equations, seated at 90 degrees). The +/-15 % tolerance is an app default. Source: Douma et al. 2014 (HHD reference values). [Peer-reviewed](#)

Shoulder external:internal rotation (ER:IR) Left

Shoulder ER 51.0 Nm ÷
Shoulder IR 74.0 Nm



0.69

✓ **Within target**

Target 0.66–0.75

Concentric isokinetic reference. Isometric ratios may differ. Source: Ellenbecker & Davies 2000. [Peer-reviewed](#)

Shoulder external:internal rotation (ER:IR) Right

Shoulder ER 50.5 Nm ÷
Shoulder IR 82.0 Nm



0.62

⬇ **Below target**

Target 0.66–0.75

External rotators weak relative to internal rotators. Concentric isokinetic reference. Isometric ratios may differ. Source: Ellenbecker & Davies 2000. [Peer-reviewed](#)

Horizontal pull:push (row 1RM / bench 1RM)
Row 1RM 70.0 kg ÷ Bench 1RM 92.5 kg



0.76
⬇️ Below target
Target ≥ 0.90

Horizontal pulling weak relative to pressing. Coaching rule of thumb (row roughly equal to bench press). Not a population norm: edit the target to your own standard. Source: App default (practice convention). Practice convention

Isometric shoulder external:internal rotation (force gauge) Left
Iso shoulder ER 118.0 N ÷ Iso shoulder IR 161.0 N



0.73
✅ Within target
Target 0.66–0.75

Concentric isokinetic reference; isometric ratios may differ. Use the same lever arm for both directions. Source: Ellenbecker & Davies 2000. Peer-reviewed

Isometric shoulder external:internal rotation (force gauge) Right
Iso shoulder ER 96.0 N ÷ Iso shoulder IR 152.0 N



0.63
⬇️ Below target
Target 0.66–0.75

External rotators weak relative to internal rotators. Concentric isokinetic reference; isometric ratios may differ. Use the same lever arm for both directions. Source: Ellenbecker & Davies 2000. Peer-reviewed

Left-right symmetry

Limb symmetry index (LSI) = weaker side ÷ stronger side; deficit = 100 – LSI. Flagged below 90% (common clinical criterion; app setting; dashed line).

Handgrip strength (dynamometer) Weaker: left		94.2% LSI · deficit 5.8%
Elbow flexion (hand-held dynamometer) Weaker: left		92.7% LSI · deficit 7.3%
Elbow extension (hand-held dynamometer) Weaker: right		89.2% LSI · deficit 10.8% ⬇️ Below 90%
Knee extension (hand-held dynamometer) Weaker: left		93.2% LSI · deficit 6.8%
Knee flexion (hand-held dynamometer) Weaker: left		94.4% LSI · deficit 5.6%
Shoulder abduction (hand-held dynamometer) Weaker: right		91.6% LSI · deficit 8.4%



Test	Left	Right	Symmetry	Weaker side	Status
Handgrip strength (dynamometer)	49.0 kg	52.0 kg	94%	Left	✔ Symmetric
Elbow flexion (hand-held dynamometer)	255.7 N	275.7 N	93%	Left	✔ Symmetric
Elbow extension (hand-held dynamometer)	170.0 N	151.7 N	89%	Right (dominant)	⬇ Below 90%
Knee extension (hand-held dynamometer)	359.0 N	385.0 N	93%	Left	✔ Symmetric
Knee flexion (hand-held dynamometer)	240.7 N	255.0 N	94%	Left	✔ Symmetric
Shoulder abduction (hand-held dynamometer)	178.0 N	163.0 N	92%	Right (dominant)	✔ Symmetric
Shoulder external rotation	51.0 Nm	50.5 Nm	99%	Right (dominant)	✔ Symmetric
Shoulder internal rotation	74.0 Nm	82.0 Nm	90%	Left	✔ Symmetric
Isometric trunk rotation (force gauge)	222.0 N	246.0 N	90%	Left	✔ Symmetric

Test	Left	Right	Symmetry	Weaker side	Status
Isometric shoulder external rotation (force gauge)	118.0 N	96.0 N	81%	Right (dominant)	⬇️ Below 90%
Isometric shoulder internal rotation (force gauge)	161.0 N	152.0 N	94%	Right (dominant)	✅ Symmetric

Force-time test: Shoulder abduction

20 Oct 2026, ActivForce 2. Mean of 3 trials per side.

Metric	Right	Left	Bilateral	Unit
Peak force	35.4	42.6	71.4	lb
Time to peak force	1,495	1,087	1,266	ms
Mean force	29.6	36.4	60.4	lb
RFD 0-100 ms	363	553	792	N/s
RFD 0-200 ms	362	527	797	N/s
RFD to peak	102	169	248	N/s
Impulse 0-100 ms	2.2	3.1	4.2	N·s
Impulse 0-200 ms	8.3	11.9	16.9	N·s
Impulse 0-300 ms	17.3	24.6	36.2	N·s

Limb symmetry

Right (involved) ÷ left; for time to peak the faster side is the reference.

Peak force Weaker: right		83.2% LSI · deficit 16.8% ⬇️ Below 90%
Mean force Weaker: right		81.3% LSI · deficit 18.7% ⬇️ Below 90%
Force at 200 ms Weaker: right		70.3% LSI · deficit 29.7% ⬇️ Below 90%
RFD 0-100 ms Weaker: right		65.6% LSI · deficit 34.4% ⬇️ Below 90%
RFD 0-200 ms Weaker: right		68.7% LSI · deficit 31.3% ⬇️ Below 90%
Impulse 0-200 ms Weaker: right		69.7% LSI · deficit 30.3% ⬇️ Below 90%

Time to peak force

Weaker: right

72.8% LSI · deficit

27.2% ⬇ Below 90%

Bilateral index, peak force: -8.4% (bilateral ÷ (right + left) – 1; negative = bilateral deficit).

Reference sources

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5. Cruz-Jentoft AJ, Bahat G, Bauer J, et al. Sarcopenia: revised European consensus on definition and diagnosis. *Age Ageing*. 2019;48(1):16-31. Link [Peer-reviewed](#)
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7. Relative grip strength (max grip kg / body weight kg) percentiles derived from the US National Health and Nutrition Examination Survey 2011-2012 and 2013-2014 (n = 9,923 adults), as published by fitnessnorms.com. Link [Secondary source](#)
8. New York State Workers' Compensation Board. *Workers' Compensation Guidelines for Determining Impairment (2018 Impairment Guidelines)*. Albany, NY: WCB; 2018 (PDF dated Feb 2, 2018; 64 pp). Link [Practice convention](#)
9. Oregon Workers' Compensation Division. *Spinal (Cervical) Range of Motion, Form 440-2278C (3/23); Spinal (Thoracic) Range of Motion, Form 440-2278T (3/23); Spinal (Lumbar) Range of Motion, Form 440-2278L (4/24)*. Link [Practice convention](#)
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11. Soucie JM, Wang C, Forsyth A, Funk S, Denny M, Roach KE, Boone D; Hemophilia Treatment Center Network. Range of motion measurements: reference values and a database for comparison studies. *Haemophilia*. 2011;17(3):500-507. doi:10.1111/j.1365-2516.2010.02399.x. PMID 21070485 (not in PMC). Link [Peer-reviewed](#)
12. Wong SL. Grip strength reference values for Canadians aged 6 to 79: Canadian Health Measures Survey, 2007 to 2013. *Health Reports*. 2016;27(10):3-10. Statistics Canada 82-003-X. Table 3. Link [National survey](#)

Norms describe the populations they were measured in and depend on the test protocol. Use them with clinical judgement.

Shoulder abduction

Carlos Ruiz, 20 Oct 2026, ActivForce 2. Part of the assessment of 20 Oct 2026

Results

Metric	Right			Left			Bilateral		
	T1	T2	T3	T1	T2	T3	T1	T2	T3
Peak force lb	34.86	36.18	35.15	42.12	43.18	42.4	70.36	72.42	71.51
Relative peak force × BW	0.19	0.2	0.19	0.23	0.23	0.23	0.38	0.39	0.39
Time to peak force ms	1353.38	1563.78	1567.09	1075.32	1083.01	1104.1	1316.1	1145.56	1337.57
Mean force lb	29.12	30.1	29.52	36.02	36.89	36.26	59.62	60.81	60.72
Force at peak lb	34.86	36.18	35.15	42.12	43.18	42.4	70.36	72.42	71.51
Force at 100 ms lb	8.87	9.52	9.83	13.99	13.58	13.5	19.46	17.55	20.18
Force at 200 ms lb	17.34	17.26	18.02	24.76	25.1	25	37.28	35.3	38.69
Force at 300 ms lb	22.46	22.76	23.34	31.57	31.87	31.45	49.15	47.46	50.53
RFD to peak N/s	110.49	99.34	96.23	169.05	172.24	165.76	233.57	276.38	233.65
RFD 0-100 ms N/s	338.99	367.79	381.85	566.6	548.65	544.86	809.97	725.3	842.02
RFD 0-200 ms N/s	357.93	356.06	373.07	522.76	530.65	528.07	801.23	757.45	832.72
RFD 0-300 ms N/s	314.55	318.79	327.59	449.46	454.06	447.69	710.21	685.34	730.68
Impulse to peak N·s	167.56	205.81	203.72	161	165.74	167.26	335.8	283.65	349.72
Impulse 0-100 ms N·s	2.11	2.24	2.3	3.22	3.09	3.07	4.31	3.86	4.41
Impulse 0-200 ms N·s	8.05	8.3	8.61	12.06	11.91	11.84	17.17	15.75	17.72
Impulse 0-300 ms N·s	16.98	17.22	17.82	24.62	24.66	24.51	36.52	34.35	37.76
Mean force to peak lb	27.83	29.59	29.22	33.66	34.4	34.06	57.36	55.67	58.78
Mean force 0-100 ms lb	4.75	5.04	5.17	7.24	6.95	6.9	9.68	8.68	9.92
Mean force 0-200 ms lb	9.05	9.33	9.68	13.55	13.39	13.31	19.3	17.7	19.92
Mean force 0-300 ms lb	12.72	12.91	13.36	18.45	18.48	18.37	27.37	25.74	28.29

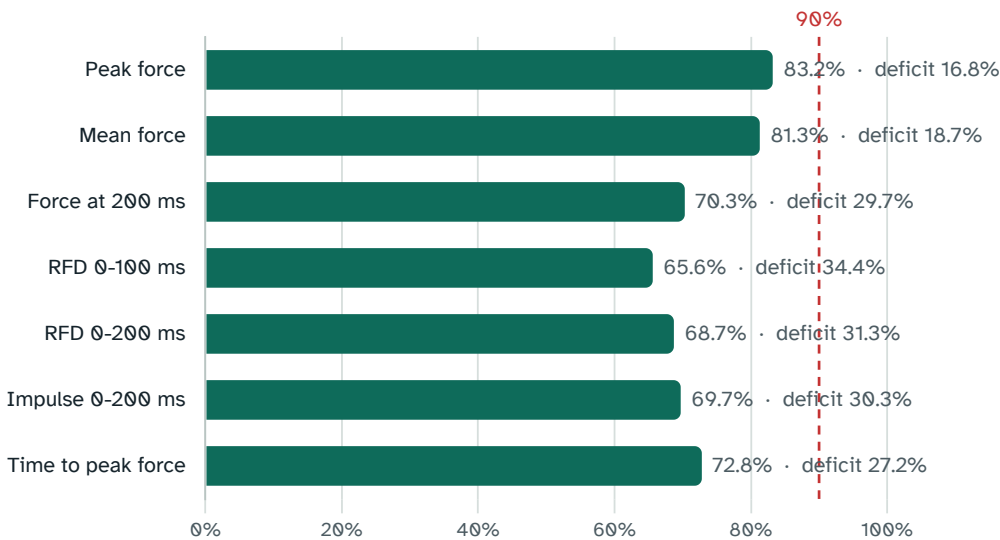
Summary

Mean of the trials for each side. CV = trial-to-trial variation of peak force (above 10–15% suggests an inconsistent effort or set-up).

Metric	Right	Left	Bilateral	Unit
Peak force	35.40	42.57	71.43	lb
Relative peak force	0.19	0.23	0.39	× BW
Time to peak force	1,495	1,087	1,266	ms
Mean force	29.58	36.39	60.38	lb
Force at peak	35.40	42.57	71.43	lb
Force at 100 ms	9.41	13.69	19.06	lb
Force at 200 ms	17.54	24.95	37.09	lb
Force at 300 ms	22.85	31.63	49.05	lb
RFD to peak	102	169	248	N/s
RFD 0-100 ms	363	553	792	N/s
RFD 0-200 ms	362	527	797	N/s
RFD 0-300 ms	320	450	709	N/s
Impulse to peak	192.36	164.67	323.06	N·s
Impulse 0-100 ms	2.22	3.13	4.19	N·s
Impulse 0-200 ms	8.32	11.94	16.88	N·s
Impulse 0-300 ms	17.34	24.60	36.21	N·s
Mean force to peak	28.88	34.04	57.27	lb
Mean force 0-100 ms	4.99	7.03	9.43	lb
Mean force 0-200 ms	9.35	13.42	18.97	lb
Mean force 0-300 ms	13.00	18.43	27.13	lb
Peak force CV between trials	2.0	1.3	1.4	%

Limb asymmetry

Limb symmetry index (LSI) = right (involved) ÷ left × 100; for time to peak the faster side is the reference. Deficit = 100 – LSI. Flagged below 90% (app setting).



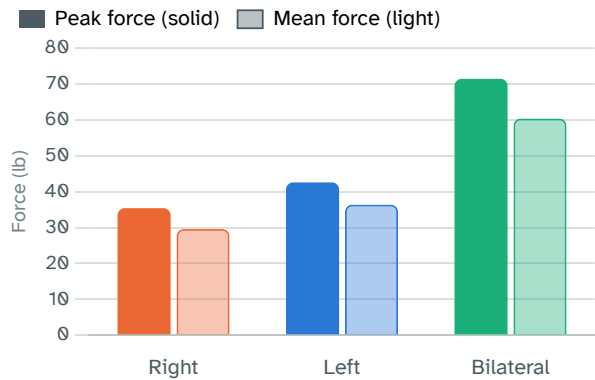
Metric	Right	Left	LSI	Deficit	Weaker side	Status
Peak force	35.40 lb	42.57 lb	83.2%	16.8%	Right	⬇ Below 90%
Relative peak force	0.19 × BW	0.23 × BW	84.1%	15.9%	Right	⬇ Below 90%
Time to peak force	1,495 ms	1,087 ms	72.8%	27.2%	Right	⬇ Below 90%
Mean force	29.58 lb	36.39 lb	81.3%	18.7%	Right	⬇ Below 90%
Force at peak	35.40 lb	42.57 lb	83.2%	16.8%	Right	⬇ Below 90%
Force at 100 ms	9.41 lb	13.69 lb	68.7%	31.3%	Right	⬇ Below 90%
Force at 200 ms	17.54 lb	24.95 lb	70.3%	29.7%	Right	⬇ Below 90%
Force at 300 ms	22.85 lb	31.63 lb	72.3%	27.7%	Right	⬇ Below 90%
RFD to peak	102 N/s	169 N/s	60.4%	39.6%	Right	⬇ Below 90%
RFD 0-100 ms	363 N/s	553 N/s	65.6%	34.4%	Right	⬇ Below 90%
RFD 0-200 ms	362 N/s	527 N/s	68.7%	31.3%	Right	⬇ Below 90%
RFD 0-300 ms	320 N/s	450 N/s	71.1%	28.9%	Right	⬇ Below 90%
Impulse to peak	192.36 N-s	164.67 N-s	116.8%	-16.8%	Left	✅ Symmetric
Impulse 0-100 ms	2.22 N-s	3.13 N-s	70.9%	29.1%	Right	⬇ Below 90%
Impulse 0-200 ms	8.32 N-s	11.94 N-s	69.7%	30.3%	Right	⬇ Below 90%
Impulse 0-300 ms	17.34 N-s	24.60 N-s	70.5%	29.5%	Right	⬇ Below 90%
Mean force to peak	28.88 lb	34.04 lb	84.8%	15.2%	Right	⬇ Below 90%
Mean force 0-100 ms	4.99 lb	7.03 lb	70.9%	29.1%	Right	⬇ Below 90%

Metric	Right	Left	LSI	Deficit	Weaker side	Status
Mean force 0-200 ms	9.35 lb	13.42 lb	69.7%	30.3%	Right	⬇ Below 90%
Mean force 0-300 ms	13.00 lb	18.43 lb	70.5%	29.5%	Right	⬇ Below 90%

Bilateral index = bilateral ÷ (right + left) – 1: peak force -8.4%, mean force -8.5%. A negative value (bilateral deficit) means both limbs together produce less than the sum of each limb alone.

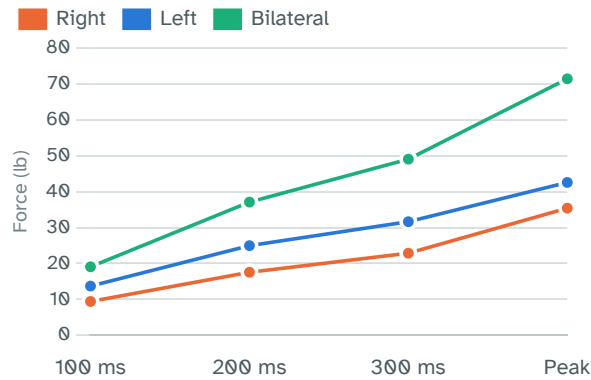
Peak force and mean force

Highest force and the average force over the whole effort, by side (mean of trials).



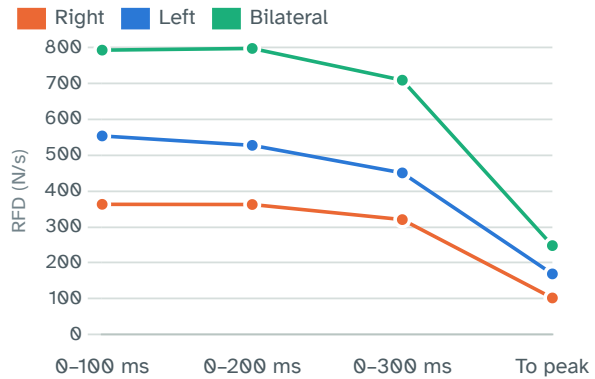
Force development profile

Force at 100, 200 and 300 ms after the start of the effort and at peak.



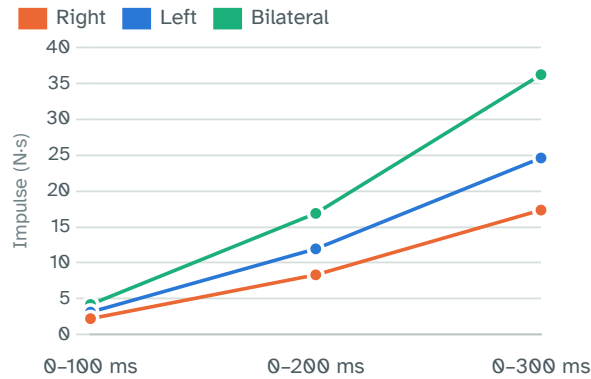
Rate of force development (RFD)

How fast force rises (N/s) from the start to 100, 200 and 300 ms and to peak.



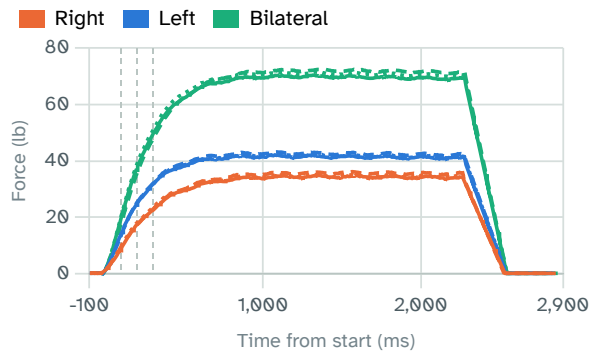
Impulse, first 300 ms

Force accumulated over time (N·s) from the start to 100, 200 and 300 ms.



Force-time curves

Imported raw curves aligned at the start of the effort. Line style = trial; dotted lines at 100, 200 and 300 ms.



Peak force against norms

Shoulder abduction (hand-held dynamometer). Mean peak force converted to N (from lb); uses the saved results. Use the same position and method as the norm study (see the test protocol).

Shoulder abduction (hand-held dynamometer)

Left

189 N

Reference: Douma et al. 2014 (HHD reference values), Male, age 30-39, non-dominant side

Shoulder abduction (hand-held dynamometer)

Right

157 N

Reference: Douma et al. 2014 (HHD reference values), Male, age 30-39, dominant side

Notes

Seated, arm abducted to 90° in the scapular plane, dynamometer just proximal to the elbow. Three 3-second maximal efforts per side, 60 s rest. Mild pain (2/10) on the right at the end of the effort.

Superbill / statement of services

Date of service 20 Oct 2026 · Superbill no. 1

Example Physical Therapy
100 Sample Street, Albany, NY 12207
518-555-0100

Rendering provider

Name **Alex Morgan, PT, DPT**
NPI **1234567893**
Tax ID **12-3456789**
License **PT-000000**
Place of service **11 – Office**

Patient

Name **Ruiz, Carlos**
Birth date, sex **2 Jun 1991, Male**
Address **25 Example Avenue, Albany, NY 12208**
Phone **518-555-0142**

Payer and claim

Payer **Commercial health insurance:
Example Health Plan**
Member / policy no. **XEH123456789**
Group no. **GRP-0042**
Authorization no. **AUTH-2026-0815**
Referring provider **Dr Taylor Reed**
Referring NPI **1234567893**
Condition related to **Not stated**

Diagnoses (ICD-10-CM)

A	M75.101	Unspecified rotator cuff tear or rupture of right shoulder, not specified as traumatic
B	M62.81	Muscle weakness (generalized)

Services

Date	POS	Code	Modifiers	Description	Dx	Minutes	Units	Charge
10/20/2026	11	97750	GP	Physical performance test or measurement with written report, each 15 minutes	A,B	45	3	126.00
Total						45	3	126.00

Timed services: 45 minutes of direct one-on-one time. Units counted by code (at least 8 minutes per unit for each code).

Objective test results (documentation)

Test	Result	Rating against norms	Reference
Handgrip strength (dynamometer), best (right)	52.0 kg	Average, 72nd percentile	Wong 2016 (CHMS, Statistics Canada)

Test	Result	Rating against norms	Reference
Push-up test (CPAFLA)	27 reps	Very good	Payne et al. 2000 (CPAFLA)
Bench press 1RM	92.5 kg	Above average, 77th percentile	Cooper Institute (bench press ratio)
Row 1RM (seated cable or bent-over)	70.0 kg	Recorded (no norm table for this test)	
Pull-ups (maximum repetitions)	6 reps	Recorded (no norm table for this test)	
Isometric push, horizontal (force gauge)	380 N	Recorded (no norm table for this test)	
Isometric pull, horizontal (force gauge)	420 N	Recorded (no norm table for this test)	
Elbow flexion (hand-held dynamometer), left	256 N	Average, 42nd percentile	Douma et al. 2014 (HHD reference values)
Elbow flexion (hand-held dynamometer), right	276 N	Average, 52nd percentile	Douma et al. 2014 (HHD reference values)
Elbow extension (hand-held dynamometer), left	170 N	Average, 42nd percentile	Douma et al. 2014 (HHD reference values)
Elbow extension (hand-held dynamometer), right	152 N	Below average, 22nd percentile	Douma et al. 2014 (HHD reference values)
Knee extension (hand-held dynamometer), left	359 N	Average, 57th percentile	Douma et al. 2014 (HHD reference values)
Knee extension (hand-held dynamometer), right	385 N	Average, 63rd percentile	Douma et al. 2014 (HHD reference values)
Knee flexion (hand-held dynamometer), left	241 N	Average, 43rd percentile	Douma et al. 2014 (HHD reference values)
Knee flexion (hand-held dynamometer), right	255 N	Average, 45th percentile	Douma et al. 2014 (HHD reference values)
Shoulder abduction (hand-held dynamometer), left	178 N	Average, 52nd percentile	Douma et al. 2014 (HHD reference values)
Shoulder abduction (hand-held dynamometer), right	163 N	Average, 32nd percentile	Douma et al. 2014 (HHD reference values)
Shoulder external rotation, left	51.0 Nm	Recorded (no norm table for this test)	

Test	Result	Rating against norms	Reference
Shoulder external rotation, right	50.5 Nm	Recorded (no norm table for this test)	
Shoulder internal rotation, left	74.0 Nm	Recorded (no norm table for this test)	
Shoulder internal rotation, right	82.0 Nm	Recorded (no norm table for this test)	
Cervical flexion ROM	50°	Limited, 83% of normal	Oregon WCD spinal ROM forms
Cervical extension ROM	60°	Limited, 80% of normal	Oregon WCD spinal ROM forms
Cervical rotation ROM, left	78°	Within normal range, 98% of normal	Oregon WCD spinal ROM forms
Cervical rotation ROM, right	74°	Within normal range, 93% of normal	Oregon WCD spinal ROM forms
Shoulder flexion ROM, left	179°	Within normal range, 99% of normal	NY WCB 2018 Impairment Guidelines
Shoulder flexion ROM, right	152°	Limited, 84% of normal	NY WCB 2018 Impairment Guidelines
Shoulder abduction ROM, left	178°	Within normal range, 99% of normal	NY WCB 2018 Impairment Guidelines
Shoulder abduction ROM, right	140°	Limited, 78% of normal	NY WCB 2018 Impairment Guidelines
Shoulder external rotation ROM, left	90°	Within normal range, 100% of normal	NY WCB 2018 Impairment Guidelines
Shoulder external rotation ROM, right	72°	Limited, 80% of normal	NY WCB 2018 Impairment Guidelines
Shoulder internal rotation ROM, left	70°	Within normal range, 100% of normal	NY WCB 2018 Impairment Guidelines
Shoulder internal rotation ROM, right	55°	Limited, 79% of normal	NY WCB 2018 Impairment Guidelines
Isometric push, vertical upward (force gauge)	296 N	Recorded (no norm table for this test)	
Isometric pull, vertical downward (force gauge)	512 N	Recorded (no norm table for this test)	

Test	Result	Rating against norms	Reference
Isometric push, 45° forward-upward (force gauge)	335 N	Recorded (no norm table for this test)	
Isometric pull, 45° from above, backward-downward (force gauge)	476 N	Recorded (no norm table for this test)	
Isometric push, 45° forward-downward (force gauge)	361 N	Recorded (no norm table for this test)	
Isometric pull, 45° from the floor, backward-upward (force gauge)	444 N	Recorded (no norm table for this test)	
Isometric horizontal adduction, both arms (force gauge)	262 N	Recorded (no norm table for this test)	
Isometric horizontal abduction, both arms (force gauge)	170 N	Recorded (no norm table for this test)	
Isometric trunk rotation (force gauge), left	222 N	Recorded (no norm table for this test)	
Isometric trunk rotation (force gauge), right	246 N	Recorded (no norm table for this test)	
Isometric shoulder external rotation (force gauge), left	118 N	Recorded (no norm table for this test)	
Isometric shoulder external rotation (force gauge), right	96 N	Recorded (no norm table for this test)	
Isometric shoulder internal rotation (force gauge), left	161 N	Recorded (no norm table for this test)	
Isometric shoulder internal rotation (force gauge), right	152 N	Recorded (no norm table for this test)	

Limb symmetry: Handgrip strength (dynamometer) 94% (deficit 6%); Elbow flexion (hand-held dynamometer) 93% (deficit 7%); Elbow extension (hand-held dynamometer) 89% (deficit 11%); Knee extension (hand-held dynamometer) 93% (deficit 7%); Knee flexion (hand-held dynamometer) 94% (deficit 6%); Shoulder abduction (hand-held dynamometer) 92% (deficit 8%); Shoulder external rotation 99% (deficit 1%); Shoulder internal rotation 90% (deficit 10%); Cervical rotation ROM 95% (deficit 5%); Shoulder flexion ROM 85% (deficit 15%); Shoulder abduction ROM 79% (deficit 21%); Shoulder external rotation ROM 80% (deficit 20%); Shoulder internal rotation ROM 79% (deficit 21%); Isometric trunk rotation (force gauge) 90% (deficit 10%); Isometric shoulder external rotation (force gauge) 81% (deficit 19%); Isometric shoulder internal rotation (force gauge) 94% (deficit 6%).

Range of motion regions measured: cervical spine, left upper extremity, right upper extremity (95851: one unit per extremity or spine section).

Force-time test, Shoulder abduction (ActivForce 2): peak force Right 35.4 lb, Left 42.6 lb, Bilateral 71.4 lb (mean of 3 trials); LSI 83.2%, deficit 16.8%; RFD 0-100 ms LSI 65.6%.

Provider signature

Date

CMS-1500 boxes (general): 1 insurance type: Group health plan or Other; 1a insured ID; 10a-c condition related to employment / auto accident; 11 group or claim reference; 14 date of injury (qualifier 431); 17/17b referring provider; 21 diagnoses (ICD indicator 0); 23 prior authorization; 24 services; 25 tax ID; 31-33 provider and billing NPI. CPT codes and descriptions © American Medical Association. Check codes, modifiers and unit rules with each payer.