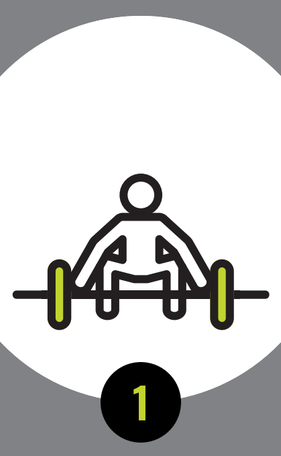
THE ISOKINETICS DIFFERENCE

HUMAC

STRENGTH THROUGH KNOWLEDGE

WHY ISOKINETICS?

Isokinetics is the only way to **measure maximum strength** at every point in the range-of-motion



Isokinetic resistance maintains a consistent load
even as strength increases throughout the cycle of effort

HOW WE TEST

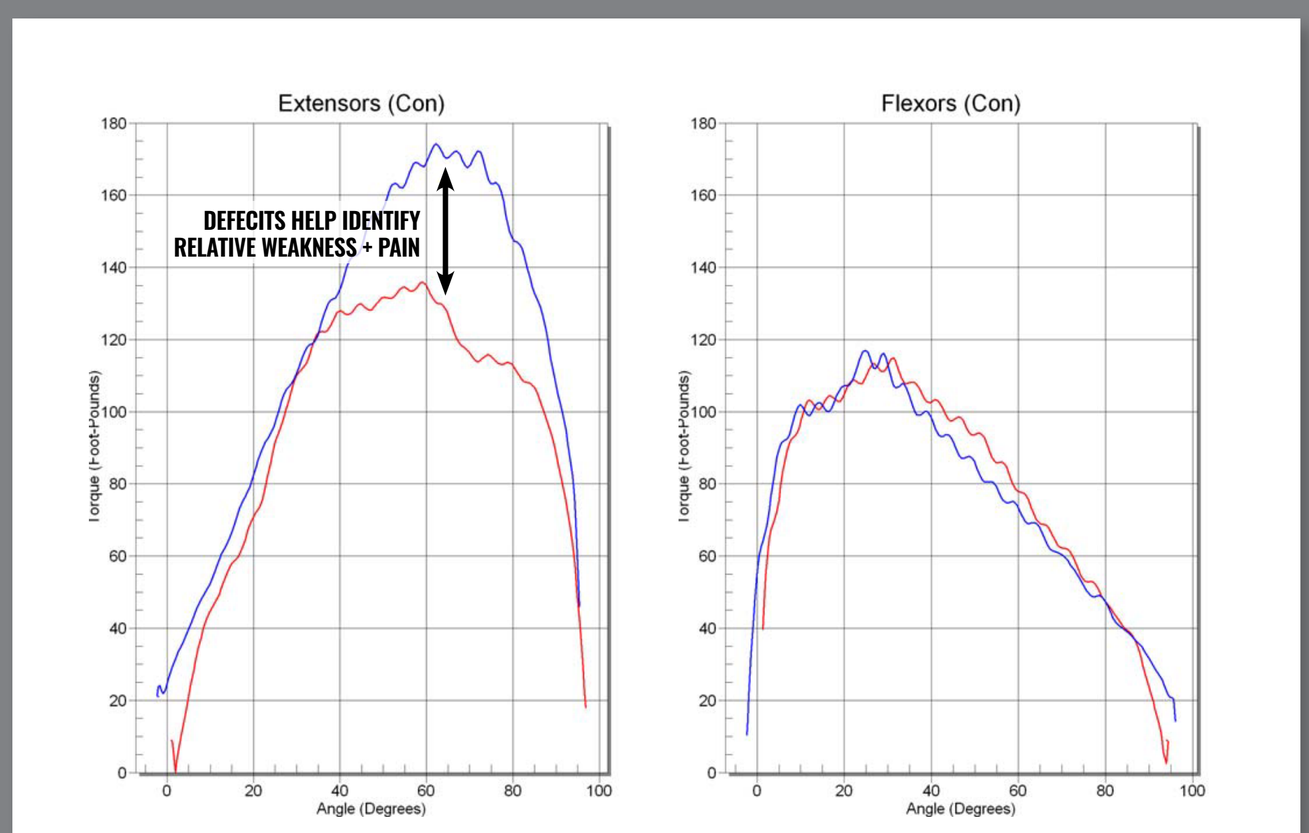
Strength test
Low speed @ 60°/second
3 warm-up reps + 3 test reps

Endurance test
High speed @ 300°/second
3 warm-up reps + 15 test reps

8 MINUTES
START TO FINISH

WHAT WE SEE

Maximum strength a every point in the range-of-motion



GUIDELINES

<10%
Right/left symmetry deficit

>85%
Peak torque/ bodyweight ratio

65-70%
Quad/ham ratio

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ISOKINETIC PERFORMANCE OF ELITE COLLEGE FOOTBALL PLAYERS

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PROTOCOL
60°/sec, 3 test repetitions, best rep ft/lbs.

			EXTENSOR: QUAD		FLEXOR: HAM		
			PEAK TORQUE FT/LBS	% BODY WEIGHT	PEAK TORQUE FT/LBS	% BODY WEIGHT	RATIO HAM/QUAD
DB	DEFENSIVE BACKS (n=222)	DOMINANT	210	103%	136	67%	65%
		NON-DOMINANT	205	100%	134	66%	65%
		DEFICIT	2%	-	2%	-	-
DL	DEFENSIVE LINE (n=218)	DOMINANT	254	92%	170	61%	67%
		NON-DOMINANT	250	91%	171	62%	68%
		DEFICIT	2%	-	-1%	-	-
PK	PLACE KICKERS (n=37)	DOMINANT	204	100%	131	65%	64%
		NON-DOMINANT	198	98%	132	65%	67%
		DEFICIT	3%	-	-1%	-	-
LB	LINE-BACKERS (n=123)	DOMINANT	241	101%	162	68%	67%
		NON-DOMINANT	233	98%	156	65%	67%
		DEFICIT	3%	-	4%	-	-
OL	OFFENSIVE LINE (n=204)	DOMINANT	257	84%	173	57%	67%
		NON-DOMINANT	252	83%	173	57%	69%
		DEFICIT	2%	-	0%	-	-
QB	QUARTER-BACKS (n=73)	DOMINANT	224	101%	153	68%	68%
		NON-DOMINANT	218	99%	152	68%	70%
		DEFICIT	3%	-	0%	-	-
RB	RUNNING BACKS (n=118)	DOMINANT	223	103%	147	68%	66%
		NON-DOMINANT	218	100%	145	67%	67%
		DEFICIT	2%	-	1%	-	-
TE	TIGHT ENDS (n=59)	DOMINANT	251	99%	170	68%	68%
		NON-DOMINANT	248	98%	170	67%	68%
		DEFICIT	1%	-	0%	-	-
WR	WIDE-OUTS (n=198)	DOMINANT	205	102%	142	70%	69%
		NON-DOMINANT	204	102%	141	70%	69%
		DEFICIT	1%	-	1%	-	-

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Zvijac, JE, Toriscelli, TA, Merrick, WS, Papp, DF, and Kiebzak, GM. Isokinetic concentric quadriceps and hamstring normative data for elite Collegiate American football players participating in the NFL Scouting Combine. *J Strength Cond Res* 28: 875–883, 2014.