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3D Biodynamics - Golf Fitness

GOLF BIODYNAMICS
swing excellence through 3D technology

3D Golf BioDynamics Swing Analysis

First Name:	Adam	**Last Name:**	Lumley	**Test type:**	Initial Test
Date:		**Email:**			
Mass:	297.7 lbs	**Height:**	172.9 cm	**Handicap:**	2

Summary

Setup Foundations

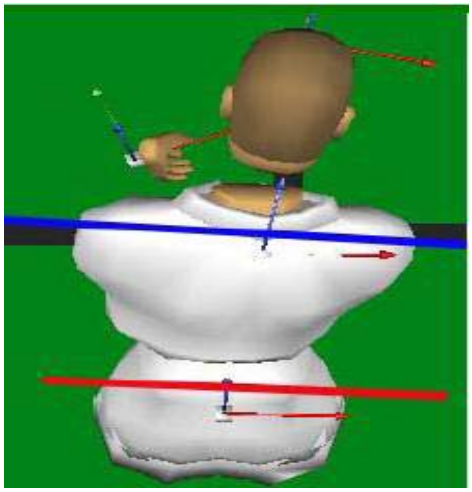
Alignment

	Corridor	You
Hips	0 to 8 ^{0}	-3 Closed
Shoulders	5 to 12 ^{0}	2 Open

Green = within corridor

Yellow = just outside corridor

Red = well outside corridor



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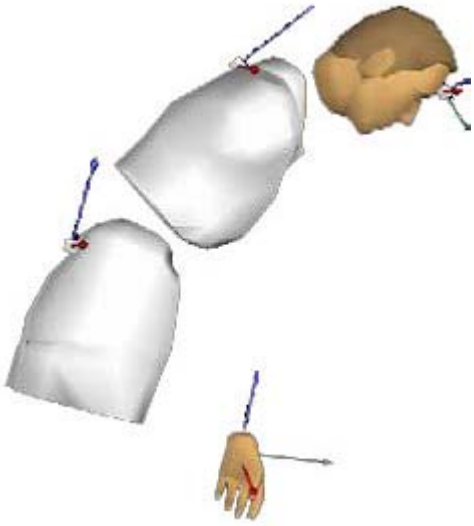
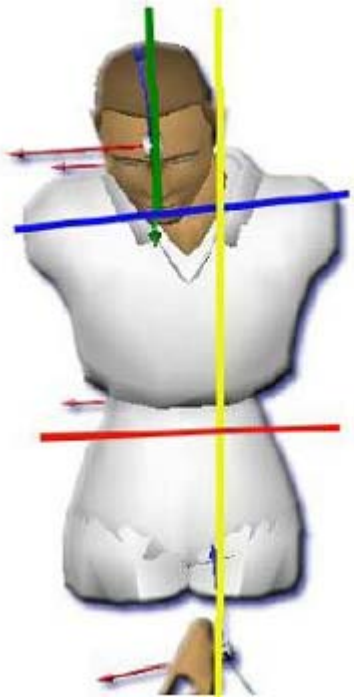
Bending		
	Corridor	You
Hips	13 to 26 ^{0}	28 Forward
Shoulders	27 to 40 ^{0}	41 Forward
Head	35 to 55 ^{0}	48 Forward



Tilting		
	Corridor	You
Hips	0 to 3 ^{0}	1 Right
Shoulders	7 to 13 ^{0}	5 Right
Head	-3 to 10 ^{0}	13 Right



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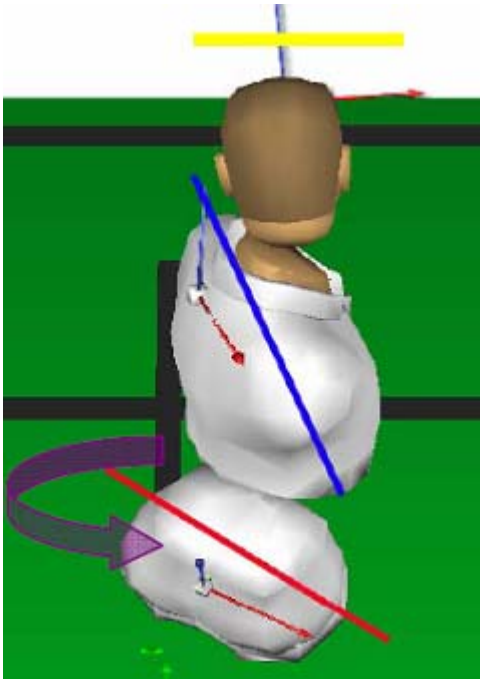
Backswing

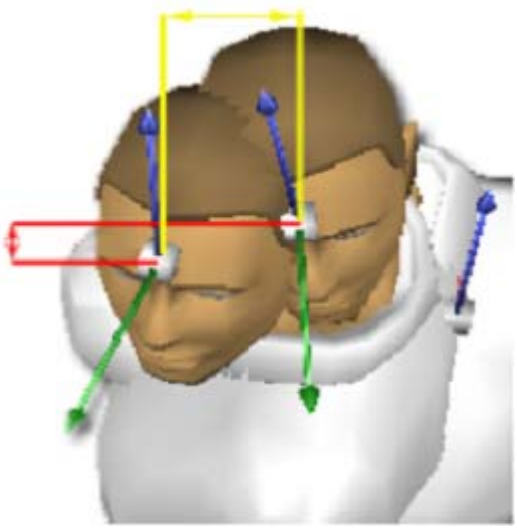
Rotations

	Corridor	You
Shoulder Turn	-85 to -98 ^{0}	-97 Closed
Hip Turn	-37 to -48 ^{0}	-42 Closed
X-Factor	-40 to -50 ^{0}	-55 Closed
X-Factor Stretch	-15 to -25 ^{0}	-11 Closed
Head Turn	-20 to -40 ^{0}	-19 Closed

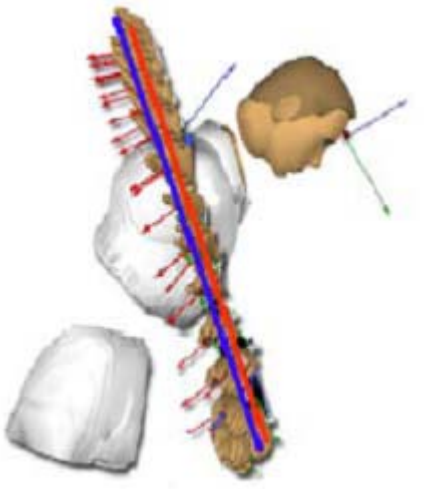


Stability

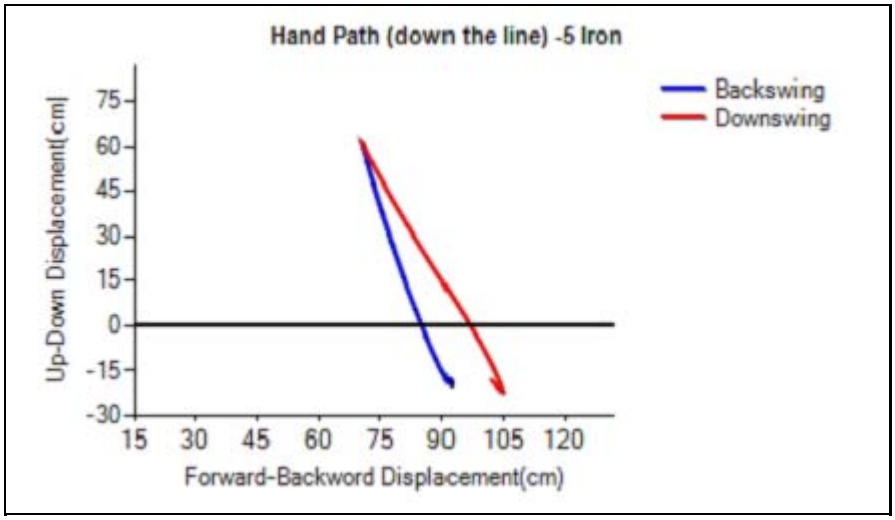
	Corridor	You
Head sway (Address to top)	2 to 7 cm	3.9 Away
Head lift (Address to top)	-2.5 to 1 cm	-3.9 Down
Head thrust (Address to top)	-2 to 2 cm	2.5 Forward
Hip drop (Address to top)	-3 to 0 cm	-4.6 Down
Hip sway (Address to top)	-1.5 to 1.5 cm	-5.4 Toward



Ideal Hand Path



Your Hand Path

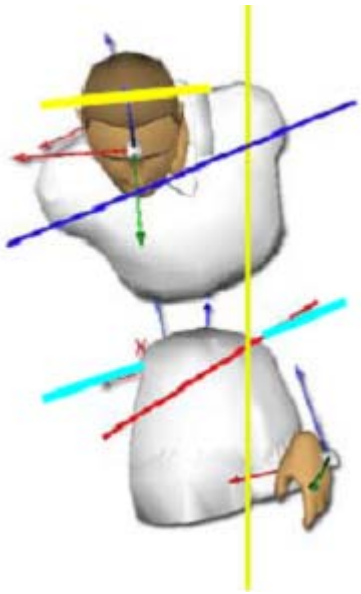


Blue = backswing **Red = downswing**

Downswing

Impact Zone

	Corridor	You
Hip Turn	35 to 55 ^{0}	43 Open
Shoulder Turn	35 to 55 ^{0}	28 Open
Head Turn	10 to 40 ^{0}	-4 Closed
Hip Tilt	10 to 15 ^{0}	11 Right
Hip Bend	0 to 10 ^{0}	9 Forward



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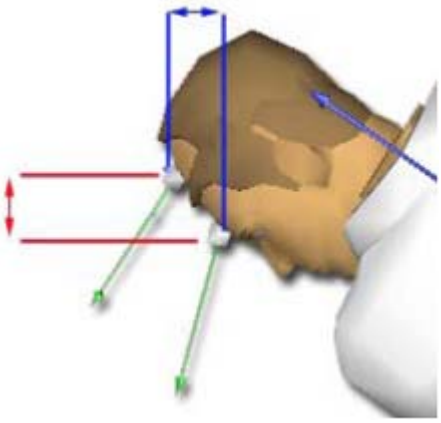
Stability (Spine Angle Control)

	Corridor	You
Head drop (Address to impact)	-6 to 1 cm	-7.1 Down
Head thrust (Address to impact)	-2 to 2 cm	1.4 Forward
Head sway (Address to impact)	-3 to 2 cm	3.9 Away
Hip sway (Address to impact)	-11 to -14 cm	-11.8 Toward



Body Speed

	Corridor	You
Hips	>= 430 deg/s	536
UT	>= 640 deg/s	824
Arm	>= 880 deg/s	936
Hand	>= 1400 deg/s	1,471

Timing Sequence
order that peak speeds occur in downswing

	Hips	UT	Arm	Hand
Ideal	1	2	3	4
7-Iron	1	3	2	4
-	0	0	0	0

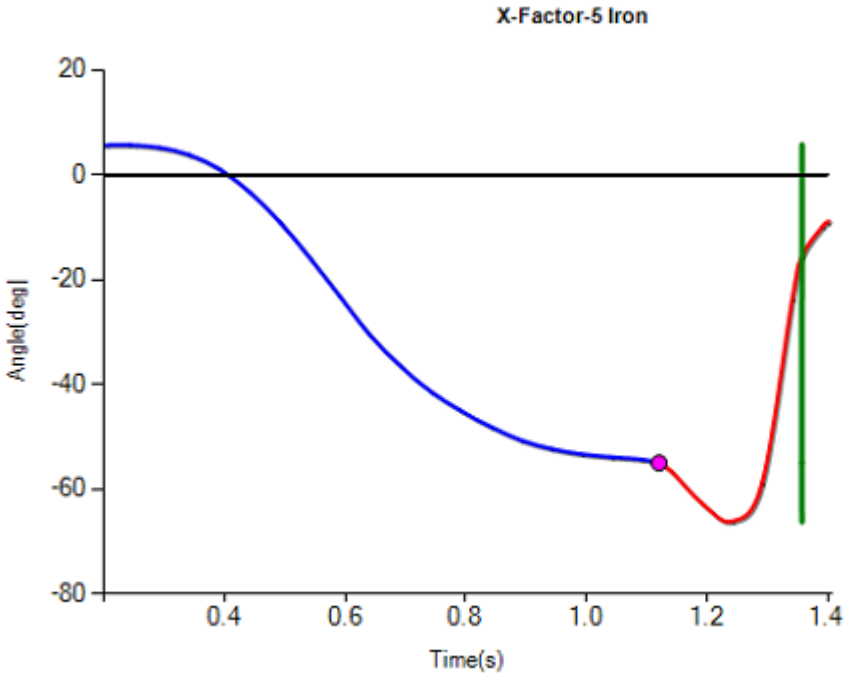
Timing Lags

	Corridor	You
Hips to UT	25 to 40 ms	29.2
UT to Arm	15 to 30 ms	-25.0
Arm to Hand	5 to 20 ms	41.7
Hand to Impact	15 to 45 ms	16.7

Transition Sequence
order that body segments change direction

	Hips	UT	Arm	Hand
Ideal	1	2	3	4
You	2	3	3	1

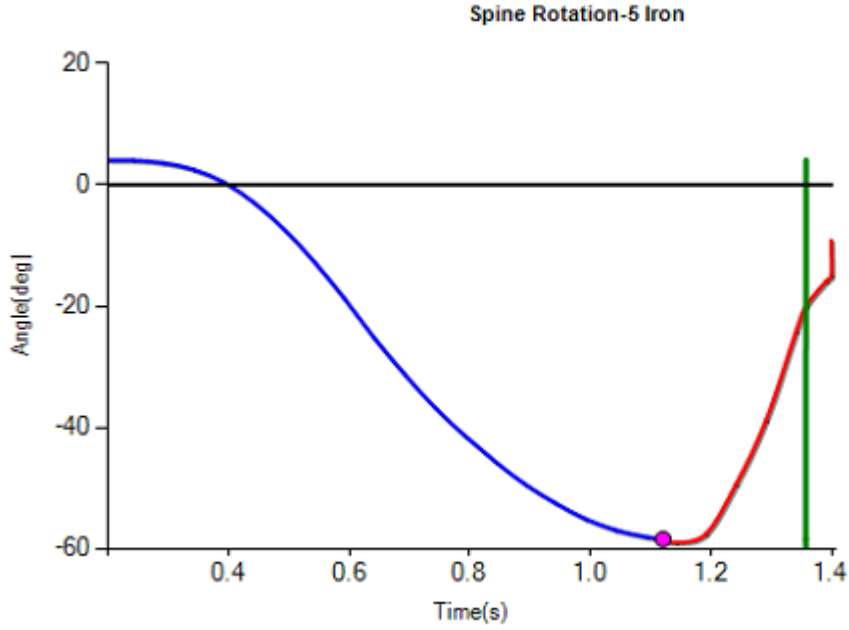
Dynamics



XF @ Top =-55.0 deg

Max XF = -66.3 deg

XF Stretch = -11.30 deg

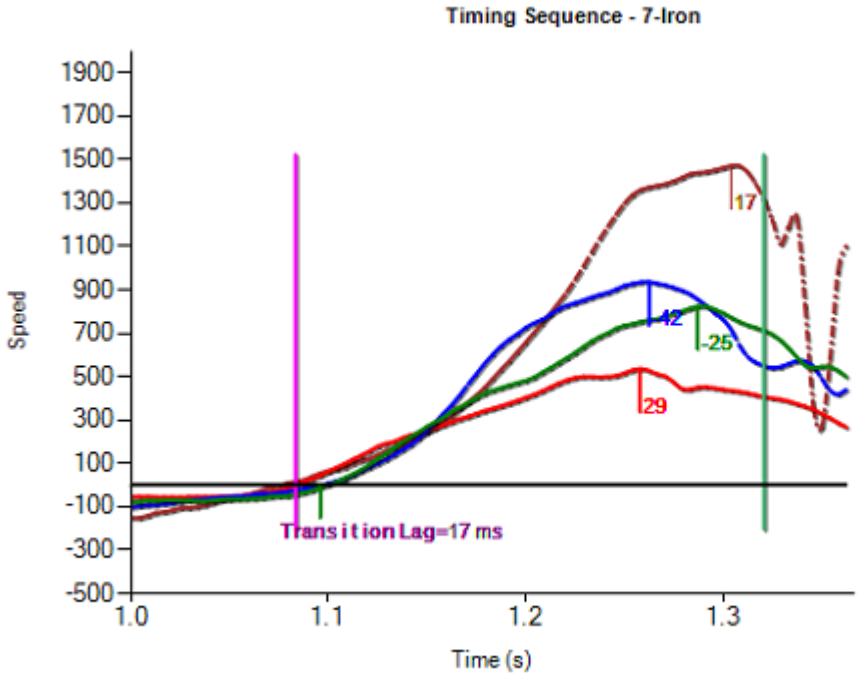


SR @ Top =-58.4 deg

Max SR = -59.3 deg

SR Stretch = -0.90 deg

Dynamics

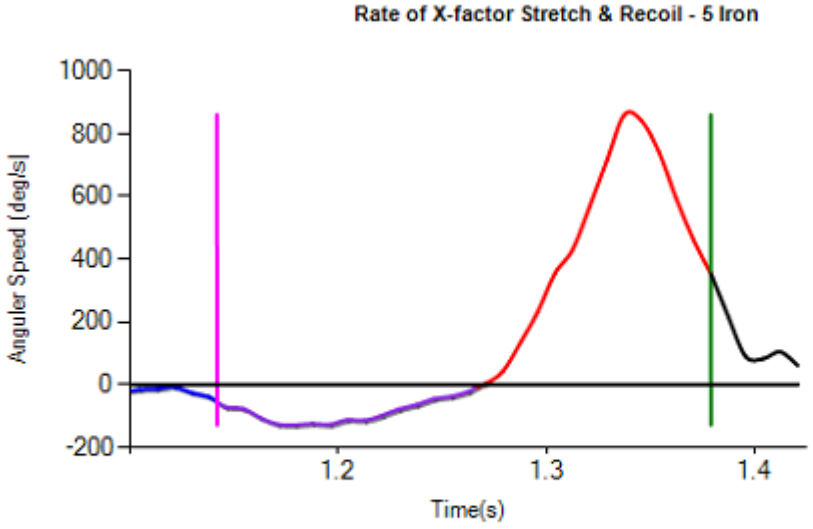


Max Hip Speed=536.4 deg/s

Max UT Speed=824.5 deg/s

Max Arm Speed=936.4 deg/s

Max Hand Speed=1471.3 deg/s



Max_Recoil=860.7 deg/s

Max Rate of Stretch = 86.6 deg/s

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Adam Lumley

Swing parameter	16-Feb-2011		7-Iron	
	A	T	I	F
Pelvic Rotation (deg)	-3.2	-42.4	43.5	97.1
X-Factor (deg)	5.6	-55.0	-15.5	37.6
Upper Torso Rotation (deg)	2.4	-97.5	28.0	134.7
Pelvic Bend (deg)	28.4	19.1	8.8	12.0
Spine Bend (deg)	12.1	-12.4	32.3	-35.6
Upper Torso Bend (deg)	40.6	6.7	41.1	-23.6
Pelvic Tilt (deg)	0.8	-7.5	11.2	6.4
Spine Tilt (deg)	4.1	-44.5	9.6	7.2
Upper Torso Tilt (deg)	4.9	-52.0	20.8	13.6
Head Rotation (deg)	2.3	-19.0	-3.6	83.2
Head Bend (deg)	48.0	36.4	55.1	-16.5
Head Tilt (deg)	12.8	-4.2	10.2	22.0
Pelvic Sway (cm)	0.0	-5.4	-11.8	-18.4
Upper Torso Sway (cm)	0.0	0.1	-1.0	-14.4
Head Sway (cm)	0.0	3.9	3.9	-16.1
Hand Sway (cm)	0.0	36.4	-12.3	5.4
Pelvic Thrust (cm)	0.0	3.3	3.7	11.1
Upper Torso Thrust (cm)	0.0	4.7	-0.5	1.2
Head Thrust (cm)	0.0	2.5	1.4	-12.4
Hand Thrust (cm)	0.0	-21.4	10.1	-33.4
Pelvic Lift (cm)	0.0	-4.6	0.4	2.0
Upper Torso Lift (cm)	0.0	-4.8	-0.9	9.3
Head Lift (cm)	0.0	-3.9	-7.1	20.2
Hand Lift (cm)	0.0	79.0	-0.4	95.0
X-Factor Stretch (deg)	-11			
Max. Pelvic Speed (deg/s)	536			
Max. Upper Torso Speed (deg/s)	824			
Max. Arm Speed (deg/s)	936			
Max. Hand Speed (deg/s)	1,471			
Max. Hand Speed cm/s	813			
Hip - Upper Torso lag(ms)	29			
Upper Torso - Arm lag(ms)	-25			
Arm - Hand lag(ms)	42			
Hand Impact lag(ms)	17			
Backswing Time (ms)	917			
Downswing Time (ms)	233			
Total Swing Time (ms)	1,150			
Hip posn(Downswing hip rot=0) (Sway,Thrust,Lift)	-9.00 , 3.00 , -4.00			
Max hip sway on downswing (cm)	-22.7			