

Dr. Rob Neal, PhD

## 3D Golf BioDynamics Putting Analysis

**First Name:** Jann      **Last Name:** Schmid      **Email:** janschmid@hotmail.c  
**Date:** 01. Apr 10      **Test type:** Initial test  
**Mass:** 74 kg      **Height:** 1,79 m      **Handicap:** 0

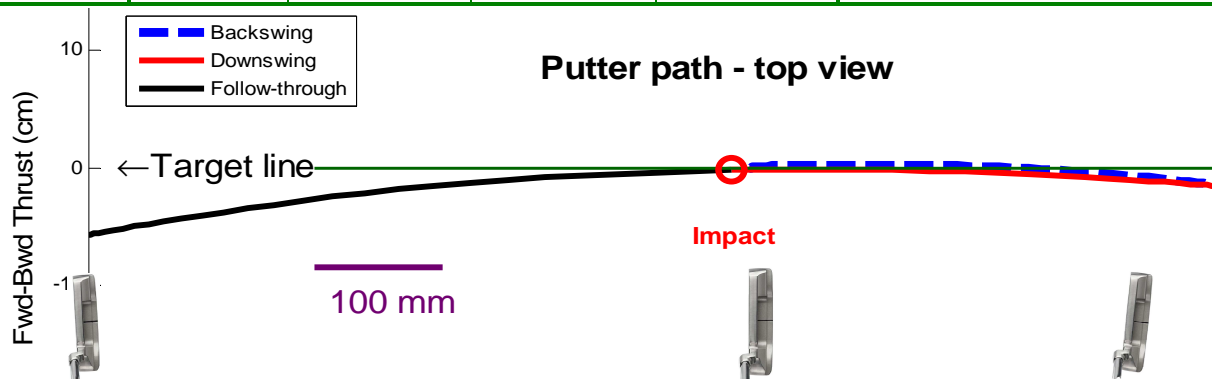
### Key Findings:

- 1.
- 2.
- 3.

### Putter Motion

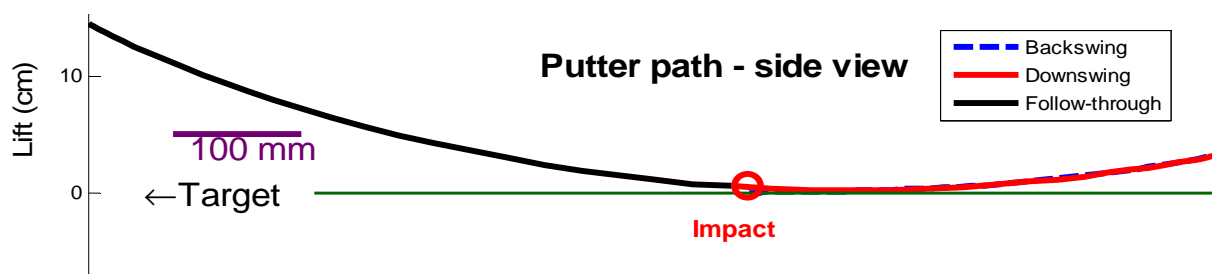
#### Face Rotation

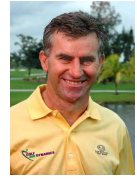
	Address	Top	Impact	Finish
You	0,0	-9,4	-0,8	12,6



#### Face Loft & Shaft Lean

	Address	Top	Impact	Finish
Face Loft	-7,1	-22,2	-7,0	13,9
Shaft Lean	0,4	-14,7	0,5	21,4

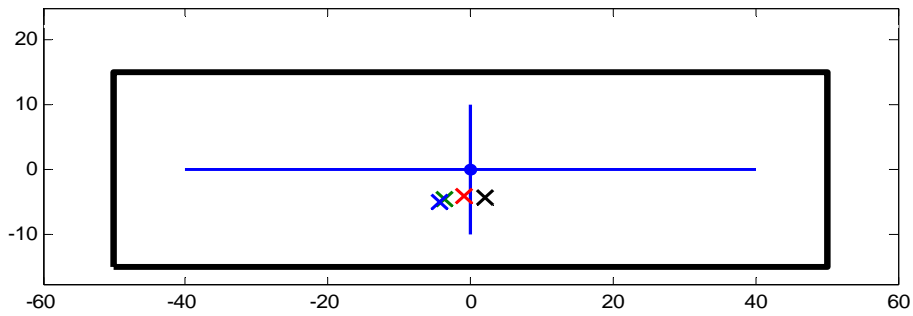




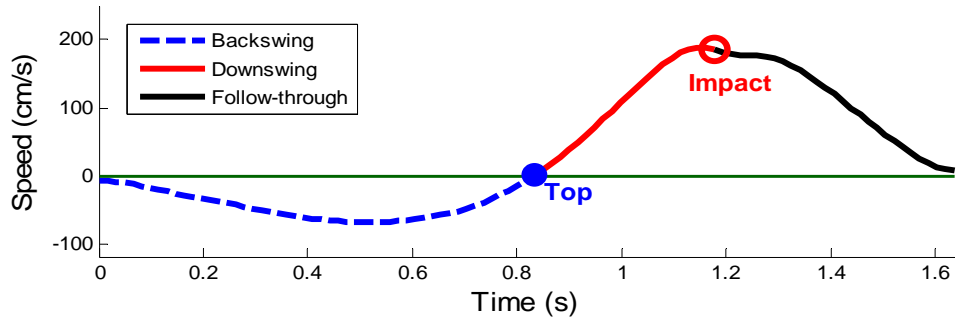
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### Impact Location

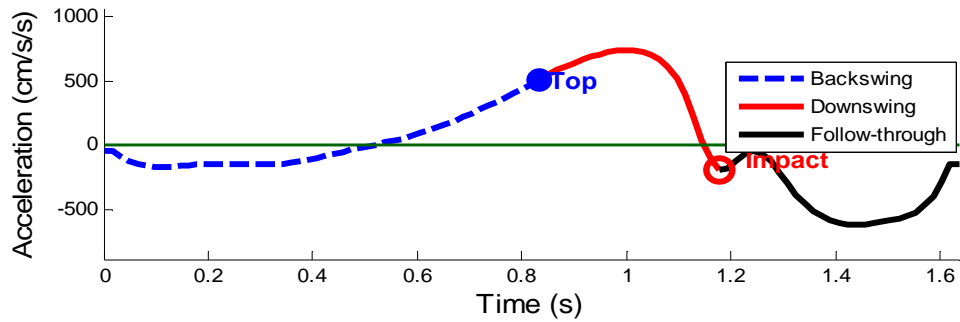
	Average Impact Point		Direction
Heel/Toe	-1,8	mm	Toe
Up/Down	4,5	mm	Down

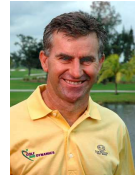


### Putter velocity



### Putter acceleration



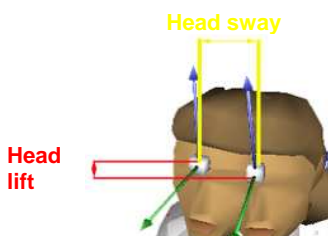


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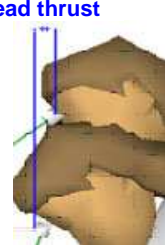
## Body Motion & Dynamics

### Backswing

Stability		
		You
Head sway (Address to top)		0,8
Head lift (Address to top)		-0,5
Head thrust (Address to top)		-0,4

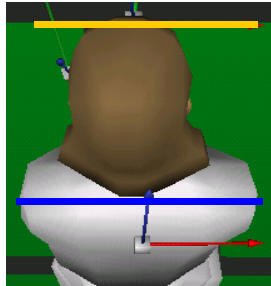


Head sway  
Head lift

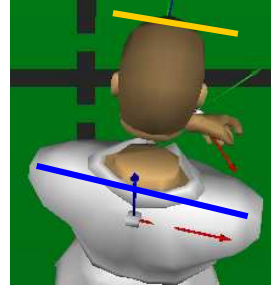


Head thrust

Rotations		
	Address	End of backstroke
Shoulder Turn	1	-30
Head Turn	4	5
Wrist flex	-33,9	-32,3



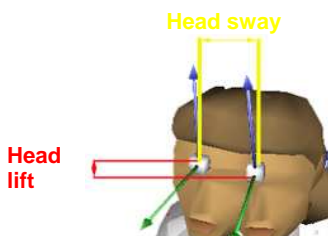
Address



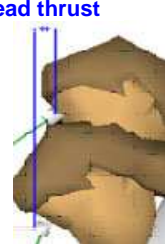
End back stroke

### Downswing

Stability		
		You
Head sway (Top to impact)		-0,7
Head lift (Top to impact)		0,9
Head thrust (Top to impact)		-0,6

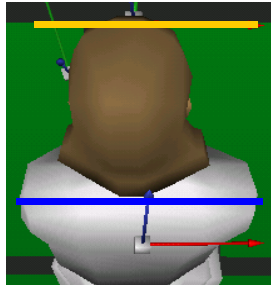


Head sway  
Head lift

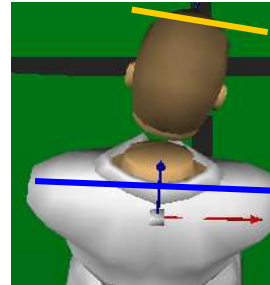


Head thrust

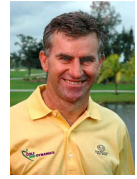
Rotations		
	Address	Impact
Shoulder Turn	1	3
Head Turn	4	18
Wrist flex (at impact)	-33,9	-33,7



Address



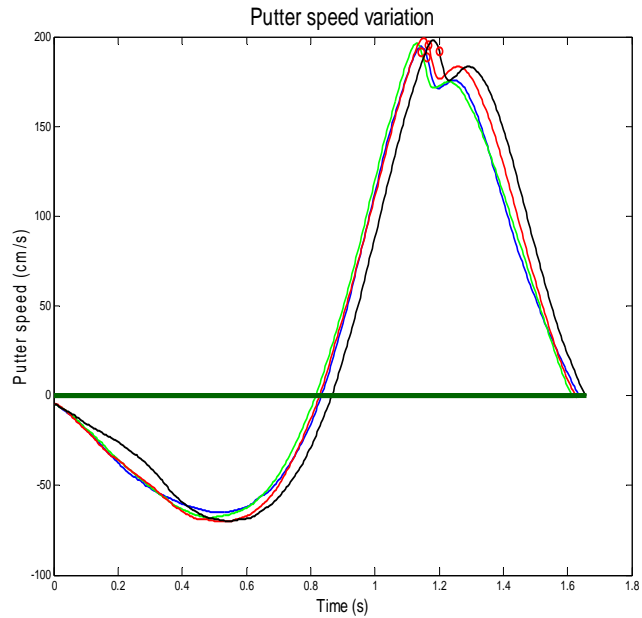
Impact



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Speeds		
	Speed (deg/s)	Consistency (%)
Shoulders	76	97,6
Forearm	90	98,1
Putter face rotation	91	99,0

Tempo		
	Time (ms)	Consistency (%)
Backswing time	836	97,4
Downswing time	336	98,8



Stroke Lengths			
	Backswing (cm)	Follow-through (cm)	Ratio
Forearm	11,2	15,2	1,3
Putter	36,2	51,6	1,4

Putter Arc Radius		
	Downswing (cm)	Follow-through (cm)
Radius (cm)		

