AN ANALYSIS OF FREDDY GARCIA'S PITCHING MOTION & MECHANICS

1/11/2006

Last Updated 5/23/2006

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General Comments About Freddy Garcia

- 6' 4"
- 250 lbs.
- Known for his durability.
  - Probably not an accident.
    Likely due to his mechanics.
- Pitches...
  - 92-93 MPH fastball, a good two-seamer, a quality changeup and both a curveball and slider

Comments About Freddy Garcia's Pitching Motion And Mechanics

- Gets his pitching arm up to the High Cocked position sooner than most major league pitchers.
  - This may help to explain his durability.
- Gets PAS hand up before PAS elbow.
- Eyes always locked on the target.
- Late rotator.
- More upright than most at the Release Point.
  - Makes his pitches harder to hit.
- I see a significant amount of variability in the timing of Garcia's motion, which could cause consistency problems.
  - However, the photos of Garcia pitching for the White Sox seem to show a greater level of consistency, which could explain his recent success.
- I don't like that Garcia appears to extend his GS knee as he rotates his shoulders.
  - This could cause him to experience elbow problems at some point.

Year	Ag	Tm	Lg	W	L	G	GS	CG	SHO	GF	SV	IP	H	R	ER	HR	BB	SO	HBP	WP	BFP	ERA	*lgERA	*ERA+
1999	24	SEA	AL	17	8	33	33	2	1	0	0	201.3	205	96	91	18	90	170	10	12	888	4.07	5.02	123
2000	25	SEA	AL	9	5	21	20	0	0	0	0	124.3	112	62	54	16	64	79	2	4	538	3.91	4.58	117
2001	26	SEA	AL	18	6	34	34	4	3	0	0	238.7	199	88	81	16	69	163	5	3	971	3.05	4.21	138
2002	27	SEA	AL	16	10	34	34	1	0	0	0	223.7	227	110	109	30	63	181	6	7	955	4.39	4.20	96
2003	28	SEA	AL	12	14	33	33	1	0	0	0	201.3	196	109	101	31	71	144	11	11	862	4.51	4.44	98
2004	29	TOT	AL	13	11	31	31	1	0	0	0	210.0	192	92	89	22	64	184	7	8	878	3.81	4.61	121
		SEA	AL	4	7	15	15	1	0	0	0	107.0	96	39	38	8	32	82	2	5	446	3.20	4.31	135
		CHW	AL	9	4	16	16	0	0	0	0	103.0	96	53	51	14	32	102	5	3	432	4.46	4.92	110
2005	30	CHW	AL	14	8	33	33	2	0	0	0	228.0	225	102	98	26	60	146	3	20	943	3.87	4.45	115
7 Yr	WL%	.615		99	62	219	218	11	4	0	0	1427.3	1356	659	623	159	481	1067	44	65	6035	3.93	4.48	114
162 Game Avg				15	9	34	33	1	0	0	0	222.0	211	102	96	24	74	166	6	10	939	3.93	4.48	114

1. 1 
2. 1 
2 
3. 1 
2 

As you can seen in frame 3.2, Garcia has some reverse-rotation of hips, trunk, and shoulders. However, notice that he has not yet broken his hands. What he seems to do is bring his shoulders back to parallel with the driveline by the time he starts to stride. This minimizes the amount of horizontal motion that he generates and allows him to pitch from a higher arm slot.

4. 1 

Just took the ball out of his glove.

5. 1 

6. 1  2 

In frame 6.1, you can see that Garcia has eliminated his reverse-rotation and his shoulders are pretty much parallel to the driveline, which will allow him to apply the maximum force to the ball. He is starting to swing his glove-side leg out and around. He swings his glove-side leg out and around, instead of stepping directly at the plate, so as to give his arm time to get up and into the High Cocked position before he starts turning his shoulders.

7. 1 

8. 1 

9. 1  2 

10. 1 

11. 1 

Notice that in frame 11.1 Garcia is bringing his hand up before his elbow (incontrast to Mark Prior). This will help to protect his arm.

12. 1 

13. 1  2 

In frame 13.1, you can see that Garcia's weight is to the 1B side of his PAS foot and leg. As a result, he has to swing out his GS arm and leg as counterbalances.

14. 1 

15. 1 

16. 1 

17. 1 

2 

Similar to many cricket players, he lifts his glove-side arm up above his head and to the 3B side of his body. While this will help him rotate his shoulders, the problem is that it may cause him to bend forward at the waist which will lower his hand at the Release Point.

18. 1 

19. 1 

In this picture, I do like that Garcia's shoulders are parallel to the driveline but I don't like how Garcia is looking back over his GS shoulder. He has to do this because his GS arm is still pointed at 3B.

20. 1 

21. 1 
2 

22. 1 
2 

Notice that in frame 22.2 he has the grip to throw a circle change-up.

23. 1  2  3 

24. 1  2  3  4 

25. 1  2 

26. 1  2  3 

27. 1  2 

When I first saw Freddy Garcia pitch in the 2005 World Series, I noticed that he does a better job than most pitchers of getting his arm up and in the High Cocked position before his glove-side foot has landed and he starts rotating his shoulders. Notice that in frames 27.1 and 28.1 his pitching arm is up and in the High Cocked position while his heel is still well off the ground. As a result, he should never have a problem with rushing.

Unfortunately, these pictures also show that Garcia's arm is bent at 90 degrees when he is in the High Cocked position and his shoulders start to turn. This will lead him to experience significant Reverse Pitching Forearm Bounce.

28. 1 

29. 1 
2 
3 
4 

30. 1 

31. 1 

2 

32. 1 
2 

33. 1  2  3  4 

34. 1 

35. 1  2  3  4 

36. 1  2  3 

37. 1 

38. 1  2  3 

In frame 38.2, it looks like Garcia does do some scapular loading. However, he does it in such a way that is unlikely to put too much strain on his rotator cuff. He doesn't bring his elbows too far behind the acromial plane and, most importantly (and unlike pitchers like Don Drysdale and Bobby Madritsch who had shoulder problems), he doesn't bring his elbows above his shoulders.

39. 1

40. 1

2

3

SHOULDERS STARTING TO ROTATE: In frames 40.1, 40.2, and 40.3 you can tell that Garcia's shoulders are just starting to turn because the inertia of the ball in his hand is causing his PAS forearm to bounce or lay back toward 1B. I am a little concerned that, as you can see in frame 40.2, it looks like that in these frames Garcia's shoulders start to rotate before his glove-side foot is completely planted. However, this timing is probably close enough that it won't cause a major problem. It also appears that in other frames (e.g. 41.1) that his timing is better.

41. 1  2 

42. 1  3  4 

GLOVE FOOT PLANTED: Glove-side knee is almost entirely extended.

43. 1  2  3  4 

44. 1  2 

45. 1  2  3  4  5 

46. 1  2  3 

47. 1  2 

48. 1  2 

From frame 48.2, you can tell that Garcia's eyes and shoulders are both parallel to the driveline and pointing at the target.

49. 1 

50. 1 

2 
3 

51. 1  2 

52. 1  2 

53. 1  2 

54. 1  2  3 

55. 1  2 

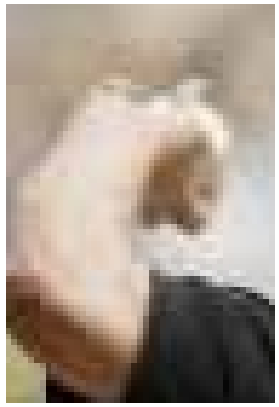
56. 1 

57. 1  2 

58. 1  2  3 

Elbow moving through the zone of maximim load on the UCL.

I am not sure, but it looks like Garcia is shows some signs of Early Pronation in frames 58.3 and 59.4, which could explain his lack of elbow problems. I say this because it looks like Garcia keeps his palming generally facing up as his elbow extends. The only way to do this is to pronate the wrist as the elbow extends.

59. 1  2  3  4  5 

I find frames 59.2, 59.3, and 59.4 potentially troubling because it looks like Garcia is extending his GS knee as he rotates the shoulders. This is a trick (also used by Sandy Koufax and others) that can help a pitcher pick up a few extra MPH but may increase the strain on the arm. The amount of strain will depend on whether he locks his GS knee or not.

Regardless, I would not be surprised if Garcia experiences elbow problems at some point in his career.

One good thing that the above frames show is the benefit of Garcia's getting his arm up so early. Because he does this, he does not have to lunge with his GS leg in order to give his arm time to get up into the High Cocked position. Instead, he can release the ball much higher, which makes his pitches much harder to hit.

60. 1  2  3 

61. 1  2 

62. 1 

63. 1 

64. 1  2 

65. 1  2  3 

66. 1  2  3 

67. 1 

68. 1  2  3 

69. 1  2  3  4  5  6 

RELEASE POINT: Doesn't bend forward at the waist as much as some pitchers, which also helps to maximize the height of his PAS hand at the Release Point and makes his pitches harder to hit.

70. 1  2 

71. 1 

72. 1 

73. 1 

74. 1 

75. 1  2  3 

76. 1  2 

77. 1 

78. 1 

79. 1 
2 
3 

80. 1 

81. 1 

82. 1 

Finishes in a fairly strong fielding position with his glove near his head.