

AN ANALYSIS OF STEVE CARLTON'S PITCHING MOTION & MECHANICS

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General Comments About Steve Carlton

- Didn't start playing organized baseball until age 12.
- Big believer in arm conditioning.
- Devoted to the martial arts.
- Incredible concentration and focus on the mound.
- Adjusting stance on rubber helped improve his control.
- Pitches...
 - Fastball
 - Slider.
- Injuries...
 - Occasional soreness in left elbow (1973-1975).

Comments About Steve Carlton's Pitching Motion And Mechanics

- Signs of early pronation, which would help to protect his UCL.
- Stiffens GS knee at the release point.
 - Could explain his elbow soreness.

Year	Ag	Tm	Lg	W	L	G	GS	CG	SHO	GF	SV	IP	H	R	ER	HR	BB	SO	HBP	WP	BFP	IBB	BK	ERA	*lgERA	*ERA+	WHIP
1965	20	STL	NL	0	0	15	2	0	0	5	0	25.0	27	7	7	3	8	21	1	5	104	1	0	2.52	3.86	153	1.400
1966	21	STL	NL	3	3	9	9	2	1	0	0	52.0	56	22	18	2	18	25	0	2	223	1	1	3.12	3.61	116	1.423
1967	22	STL	NL	14	9	30	28	11	2	1	1	193.0	173	71	64	10	62	168	2	6	802	1	0	2.98	3.27	110	1.218
1968	23	STL	NL	13	11	34	33	10	5	1	0	231.7	214	87	77	11	61	162	3	6	954	4	0	2.99	2.90	97	1.187
1969	24	STL	NL	17	11	31	31	12	2	0	0	236.3	185	66	57	15	93	210	4	7	968	6	0	2.17	3.56	164	1.176
1970	25	STL	NL	10	19	34	33	13	2	0	0	253.7	239	123	105	25	109	193	2	14	1086	16	1	3.73	4.14	111	1.372
1971	26	STL	NL	20	9	37	36	18	4	0	0	273.3	275	120	108	23	98	172	5	12	1171	11	0	3.56	3.61	101	1.365
1972	27	PHI	NL	27	10	41	41	30	8	0	0	346.3	257	84	76	17	87	310	1	8	1351	8	2	1.97	3.59	182	0.993
1973	28	PHI	NL	13	20	40	40	18	3	0	0	293.3	293	146	127	29	113	223	3	7	1262	12	0	3.90	3.82	98	1.384
1974	29	PHI	NL	16	13	39	39	17	1	0	0	291.0	249	118	104	21	136	240	5	11	1227	8	4	3.22	3.77	117	1.323
1975	30	PHI	NL	15	14	37	37	14	3	0	0	255.3	217	116	101	24	104	192	2	5	1063	5	7	3.56	3.74	105	1.257
1976	31	PHI	NL	20	7	35	35	13	2	0	0	252.7	224	94	88	19	72	195	1	8	1031	4	3	3.13	3.54	113	1.172
1977	32	PHI	NL	23	10	36	36	17	2	0	0	283.0	229	99	83	25	89	198	4	3	1135	5	7	2.64	3.99	151	1.124
1978	33	PHI	NL	16	13	34	34	12	3	0	0	247.3	228	91	78	30	63	161	3	3	1006	7	7	2.84	3.58	126	1.177
1979	34	PHI	NL	18	11	35	35	13	4	0	0	251.0	202	112	101	25	89	213	5	10	1029	11	11	3.62	3.85	106	1.159
1980	35	PHI	NL	24	9	38	38	13	3	0	0	304.0	243	87	79	15	90	286	2	17	1228	12	7	2.34	3.79	162	1.095
1981	36	PHI	NL	13	4	24	24	10	1	0	0	190.0	152	59	51	9	62	179	1	9	763	3	4	2.42	3.63	150	1.126
1982	37	PHI	NL	23	11	38	38	19	6	0	0	295.7	253	114	102	17	86	286	1	9	1193	5	9	3.10	3.68	119	1.147
1983	38	PHI	NL	15	16	37	37	8	3	0	0	283.7	277	117	98	20	84	275	3	13	1183	10	9	3.11	3.56	115	1.273
1984	39	PHI	NL	13	7	33	33	1	0	0	0	229.0	214	104	91	14	79	163	0	11	964	7	7	3.58	3.63	101	1.279
1985	40	PHI	NL	1	8	16	16	0	0	0	0	92.0	84	43	34	6	53	48	0	3	401	4	2	3.33	3.71	111	1.489
1986	41	TOT		9	14	32	32	0	0	0	0	176.3	196	120	100	25	86	120	1	7	792	4	2	5.10	3.97	78	1.599
		TOT	NL	5	11	22	22	0	0	0	0	113.0	138	90	74	19	61	80	1	5	533	4	1	5.89	3.79	64	1.761
		PHI	NL	4	8	16	16	0	0	0	0	83.0	102	70	57	15	45	62	0	3	393	4	0	6.18	3.88	63	1.771
		SFG	NL	1	3	6	6	0	0	0	0	30.0	36	20	17	4	16	18	1	2	140	0	1	5.10	3.54	69	1.733
		CHW	AL	4	3	10	10	0	0	0	0	63.3	58	30	26	6	25	40	0	2	259	0	1	3.69	4.31	117	1.311
1987	42	TOT	AL	6	14	32	21	3	0	5	1	152.0	165	111	97	24	86	91	4	7	693	4	5	5.74	4.59	80	1.651
		CLE	AL	5	9	23	14	3	0	3	1	109.0	111	76	65	17	63	71	2	5	493	3	4	5.37	4.56	85	1.596
		MIN	AL	1	5	9	7	0	0	2	0	43.0	54	35	32	7	23	20	2	2	200	1	1	6.70	4.65	69	1.791
1988	43	MIN	AL	0	1	4	1	0	0	1	0	9.7	20	19	18	5	5	5	0	0	54	1	2	16.76	4.09	24	2.586
24 Yr	WL%			.574	329	244	741	709	254	55	13	2 5217.3	4672	2130	1864	414	1833	4136	53	183	21683	150	90	3.22	3.70	115	1.247
162 Game Avg				15	11	34	33	11	2	0	0	244.7	219	99	87	19	85	193	2	8	1016	7	4	3.22	3.70	115	1.247



1. 1



2. 1



3. 1



2



3



4



4. 1



5. 1



6. 1



2



7. 1

2

3

4

Considerable reverse-rotation of both the hips and the shoulders.



8. 1



9. 1

2



10. 1



11. 1



2



3



12. 1

Hips still considerably reverse-rotated but hand is moving almost directly back toward 2B.



13. 1



14. 1



2



3



15. 1



2

Look at how late he opens up his hips, which will allow him to generate significant power. They are still mostly closed in the frames above.



16. 1



2



17. 1



18. 1

Finally opening up his hips but his shoulders are still closed (and still slightly reverse-rotated). This is a very efficient process that will serve to stretch the muscles of his torso and enable him to powerfully rotate toward Home Plate at the last second.



19. 1



20. 1



21. 1



22. 1



2

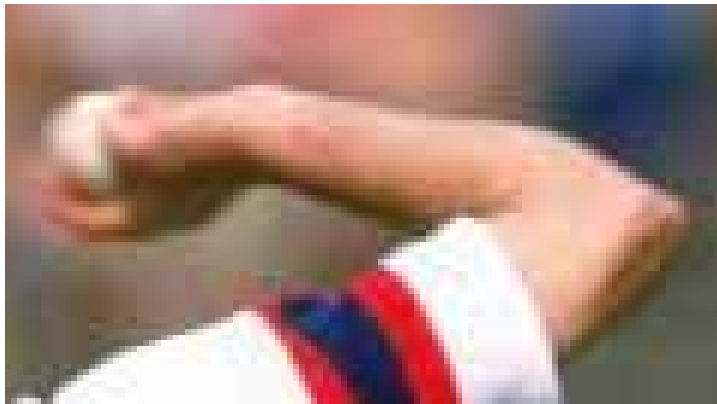
Arching back as shoulders just starting to turn. Seems to be doing this before his GS foot is planted, which could explain some of the problems he had during this part of his career (Chicago and Cleveland). During his days in Philadelphia, his GS foot was planted well before this point.



23. 1



24. 1



2

Elbow just about to enter the zone of maximum load on the UCL. Frame 23.1 (enlarged in frame 23.2) suggests early pronation — his palm is facing up — which would serve to protect his UCL by shifting some of the load over to his Pronator Teres muscle.



25. 1



2



26. 1

RELEASE POINT: GS knee is locked, which could have contributed to his elbow soreness.



27. 1



28. 1



2

I don't like how stiff his GS leg is after he releases the ball (because it could cause problems with how he decelerated his arm). It's interesting to note that in frame 28.2, which looks like it was taken while he was in Cleveland, his GS knee is bent.



29. 1



30. 1



31. 1



2

Notice the very different form in the two pictures taken when he was in Cleveland (frame 31.1) versus Philadelphia (frame 31.2). He finished much more upright in Philadelphia, which would have raised his release point and made his balls harder to hit. He may have had to make these changes to his motion to deal with his advancing age. I don't like how he finishes with his glove behind his body. This would have hurt him as a fielder.



32. 1

