

AN ANALYSIS OF ROGER CLEMENS' PITCHING MOTION & MECHANICS

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General Comments About Roger Clemens

- 6' 4"
- 220 lbs.
- 7 Cy Young awards.
- Injuries...
 - Strained hamstring (2005).
 - Sore back (2005).
 - Groin injury (2002).
 - Groin injury (1993).
 - Inflamed elbow (1993).
 - Torn rotator cuff (_____).
 - Missed most of 1985 season with _____ injury (only second year in major leagues).
- Pitches...
 - Currently throws...
 - Fastball (still 94-96 MPH).
 - Split finger fastball (88-89 MPH).
 - No longer throws...
 - Curveball
 - Slider

Comments About Roger Clemens' Pitching Motion And Mechanics

- Motion and timing has changed significantly over time.
 - Timing is very different if you compare his years in Boston versus his years in Houston.
- Shoulders have levelled out over time.
- Currently almost no reverse-rotation.
- Looking at his motion while he was in Boston, he appears to start rotating his shoulders before his arm is up and in the high cocked position, which may explain his shoulder problems.
 - This will worsen his Reverse Pitching Forearm Bounce and may have lead to his rotator cuff problems.

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+
1984	21	BOS	AL	9	4	21	20	5	1	0	0	133.3	146	67	64	13	29	126	2	4	575	4.32	4.16	96
1985	22	BOS	AL	7	5	15	15	3	1	0	0	98.3	83	38	36	5	37	74	3	1	407	3.29	4.27	130
1986	23	BOS	AL	24	4	33	33	10	1	0	0	254.0	179	77	70	21	67	238	4	11	997	2.48	4.19	169
1987	24	BOS	AL	20	9	36	36	18	7	0	0	281.7	248	100	93	19	83	256	9	4	1157	2.97	4.56	154
1988	25	BOS	AL	18	12	35	35	14	8	0	0	264.0	217	93	86	17	62	291	6	4	1063	2.93	4.13	141
1989	26	BOS	AL	17	11	35	35	8	3	0	0	253.3	215	101	88	20	93	230	8	7	1044	3.13	4.13	132
1990	27	BOS	AL	21	6	31	31	7	4	0	0	228.3	193	59	49	7	54	209	7	8	920	1.93	4.07	211
1991	28	BOS	AL	18	10	35	35	13	4	0	0	271.3	219	93	79	15	65	241	5	6	1077	2.62	4.31	164
1992	29	BOS	AL	18	11	32	32	11	5	0	0	246.7	203	80	66	11	62	208	9	3	989	2.41	4.23	175
1993	30	BOS	AL	11	14	29	29	2	1	0	0	191.7	175	99	95	17	67	160	11	3	808	4.46	4.68	105
1994	31	BOS	AL	9	7	24	24	3	1	0	0	170.7	124	62	54	15	71	168	4	4	692	2.85	5.05	177
1995	32	BOS	AL	10	5	23	23	0	0	0	0	140.0	141	70	65	15	60	132	14	9	623	4.18	4.82	115
1996	33	BOS	AL	10	13	34	34	6	2	0	0	242.7	216	106	98	19	106	257	4	8	1032	3.63	5.15	142
1997	34	TOR	AL	21	7	34	34	9	3	0	0	264.0	204	65	60	9	68	292	12	4	1044	2.05	4.62	226
1998	35	TOR	AL	20	6	33	33	5	3	0	0	234.7	169	78	69	11	88	271	7	6	961	2.65	4.66	176
1999	36	NYY	AL	14	10	30	30	1	1	0	0	187.7	185	101	96	20	90	163	9	8	822	4.60	4.48	97
2000	37	NYY	AL	13	8	32	32	1	0	0	0	204.3	184	96	84	26	84	188	10	2	878	3.70	5.07	137
2001	38	NYY	AL	20	3	33	33	0	0	0	0	220.3	205	94	86	19	72	213	5	14	918	3.51	4.48	128
2002	39	NYY	AL	13	6	29	29	0	0	0	0	180.0	172	94	87	18	63	192	7	14	768	4.35	4.38	101
2003	40	NYY	AL	17	9	33	33	1	1	0	0	211.7	199	99	92	24	58	190	5	5	878	3.91	4.39	112
2004	41	HOU	NL	18	4	33	33	0	0	0	0	214.3	169	76	71	15	79	218	6	5	878	2.98	4.31	145
2005	42	HOU	NL	13	8	32	32	1	0	0	0	211.3	151	51	44	11	62	185	3	3	838	1.87	4.14	221
+-----+																								
22 Yr	WL%	.665	341	172	672	671	118	46	0	0	4704.3	3997	1799	1632	347	1520	4502	150	133	19369	3.12	4.46	143	



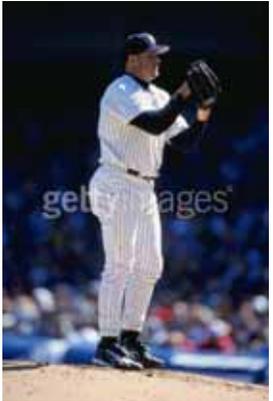
1. 1



2



3



2. 1



3. 1



4. 1

2

5. 1

2

3

As you can see in frame 5.1, Clemens does very little in the way of reverse-rotation. He does reverse-rotate his hips, which will help help generate power, but he doesn't really reverse-rotate his shoulders. Also, similar to Bob Gibson, Clemens by the time Clemens breaks his hands, his shoulders are again parallel to the driveline. This may help to explain his longevity.



6. 1



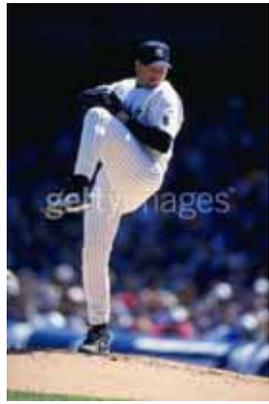
7. 1



2



8. 1



9. 1

2

3



10. 1

2

3



11. 1

2

3

4



1



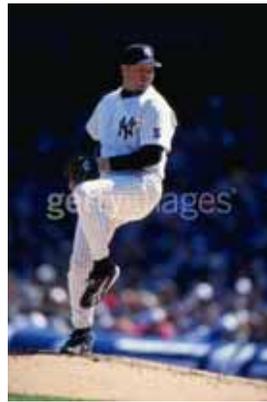
2

12.

Notice the difference in body lean between frames 12.1 and 12.2. In frame 12.1, which was taken while he was pitching for Houston, Clemens is pretty much erect. In contrast in frame 12.2, which was taken while he was pitching for Boston, Clemens is leaning toward the plate.



1



2



3

13.



14. 1

2

3



15. 1

2

3

4



16. 1

2

3

4



17. 1 2 3 4

Notice very different mechanics in frame 17.4, which was taken while he was pitching in Boston. Leaning back with glove-side knee and foot much higher.



18. 1 2 3



19. 1

2

3



20. 1

2

3



21. 1

2

3

4

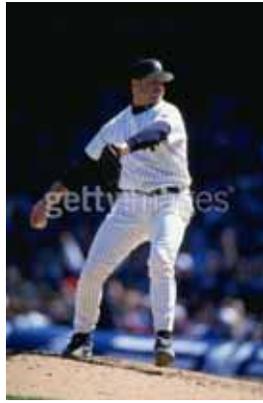
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22. 1



2



3



4



23. 1



2



3



4



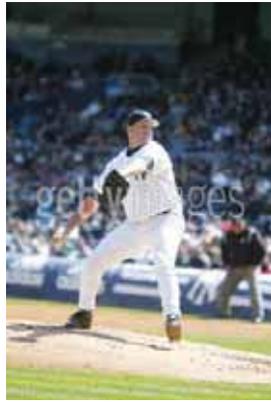
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24. 1



2



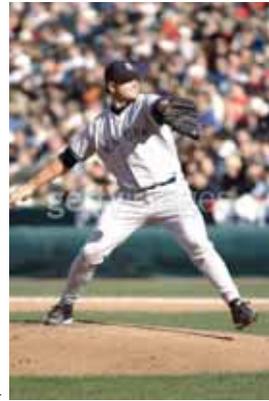
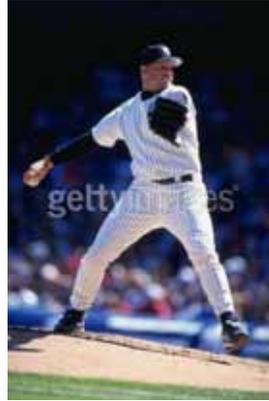
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4



5

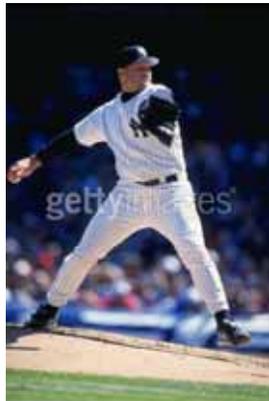


25. 1

2

3

4



26. 1

2

3

4

Sitting back when compare 25.3 and 26.3.



27. 1

2

3

4



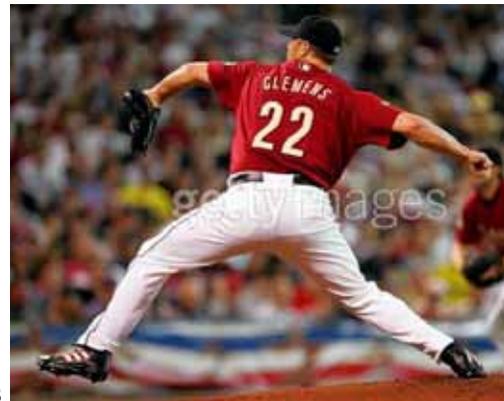
28. 1

2

3

4

5



29. 1

2

3

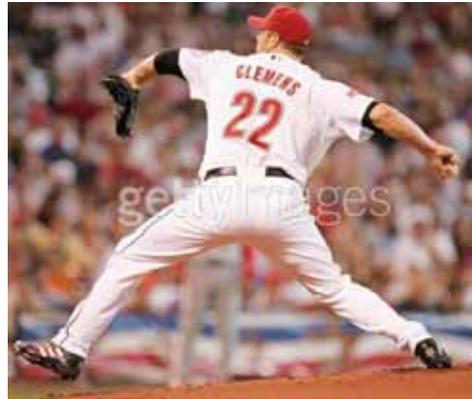
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30. 1

2

3



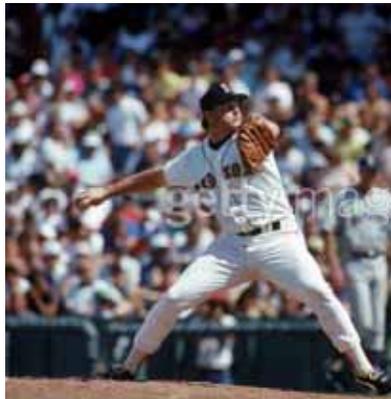
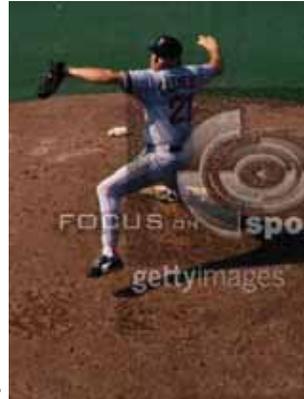
31. 1

2

3

4

5



32. 1

2

3

4



33. 1

2

3

4



34. 1

2

3

4



35. 1

2

3

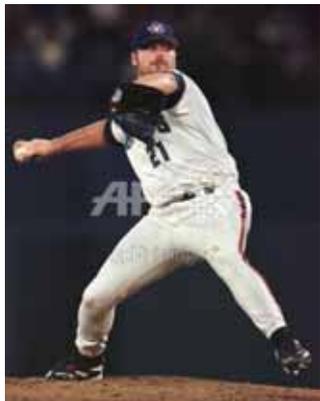


36. 1

2

3

4



37. 1

2 3

4



38. 1

2

3



39. 1

2

3

4



39. 1

2

3

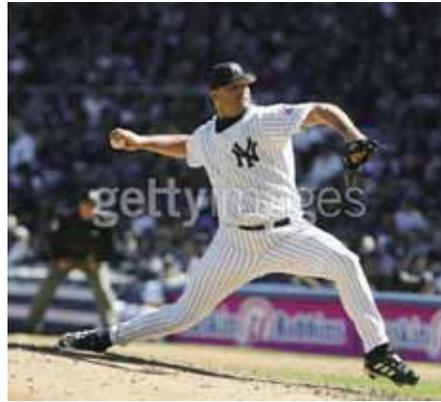
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40. 1



2



3



41. 1



2



42. 1



2



3



4



43. 1



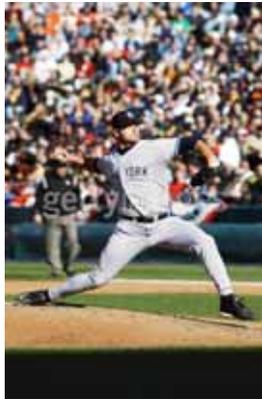
2



3



43. 4



5



44. 1



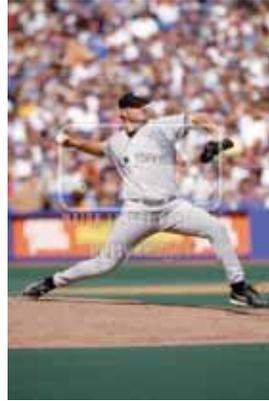
2



44. 3

4

5



45. 1

2

3

4

5



46. 1

2

3

4



47. 1

2

3



47. 4

5

6



48. 1

2

3

4

5



49. 1

2

3



50. 1

2

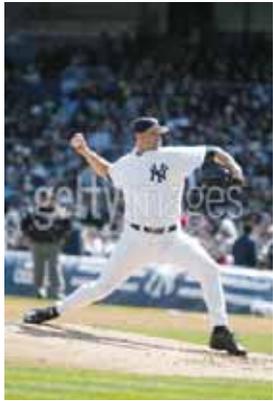
3



50. 4

5

6



51. 1

2

3

4



52. 1

2

3

4

5



53. 1

2

3

4

5

GLOVE-SIDE FOOT PLANTED: The



Notice different timing when in Boston. In these pictures, Clemens' forearm is at the same angle as in the pictures that were taken while he was pitching in Houston, but his glove-side foot is still well off ground in Boston. Showing ball to CF in Boston.





56. 1

2



57. 1

2

3



58. 1

2

3



59. 1 2

Clemens arches his backs to allow his hips to keep turning. His shoulders haven't started to turn yet.



60. 1 2 3



61. 1

2

3

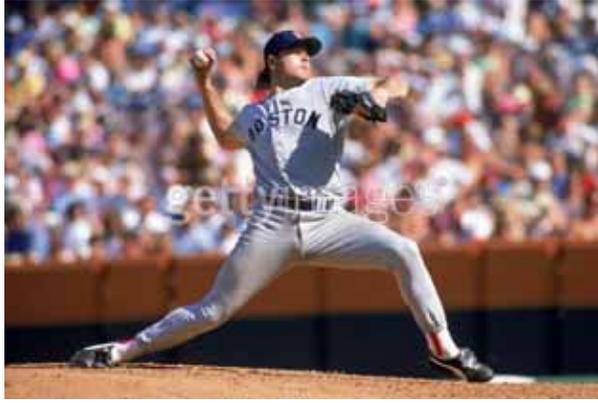
4



61. 5

6

7



62. 1



63. 1



63. 1



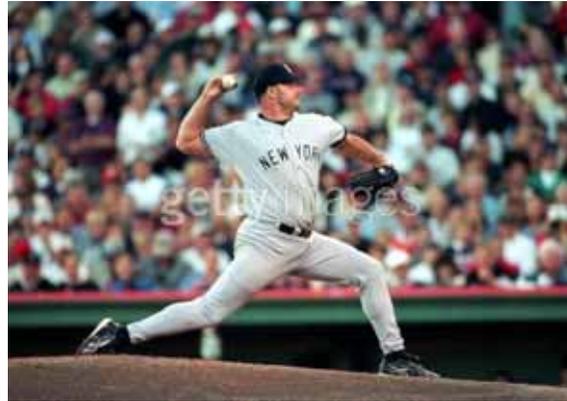
2



64. 1



2



3



65. 1

SHOULDERS STARTING TO TURN: Wrist starting to bounce backwards toward 1B as shoulders start to turn. As you would expect, Clemens does a great job of staying back; of not starting to turn his shoulders until his glove-side foot is planted.



66. 1

2

3

4



67. 1

2

3

4

5

Forearm starting to bounce backwards toward 1B as shoulders continue to turn. Standing taller in 67.1 than in 66.1.



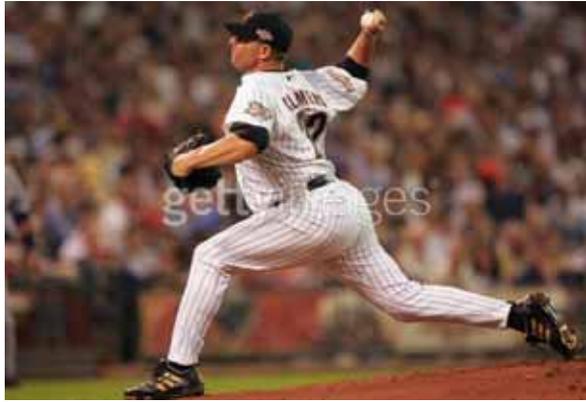
68. 1

2

3

4

In frame 68.1, Clemens is continuing to arch his back to allow his hips to keep turning.



69. 1

2

3



70. 1

2

3



70. 4

5

6



73. 1

2

3

4



74. 1

2



75. 1

2



76. 1

2

3

4



77. 1

2

3

4



78. 1



79. 1 2 3 4

Notice difference in shoulder tilt from Yankees to Astros.



80. 1 2 3 4 5



81. 1

2

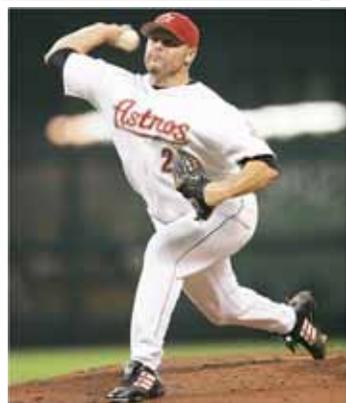
3



82. 1

2

3



83. 1

2

3

4



84. 1

2

3



85. 1

2

3

4



86. 1

2

3

4

5



87. 1

2

3



88. 1

2

3



89. 1

2

3



89. 1

2

3

4



90. 1

2

3

4



91. 1

2

3

4



92. 1

2

3

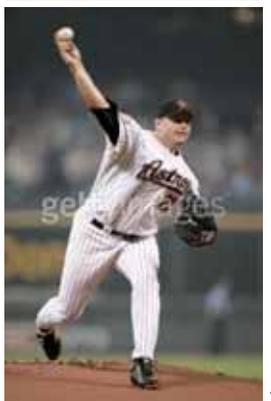


93. 1

2

3

4



94. 1

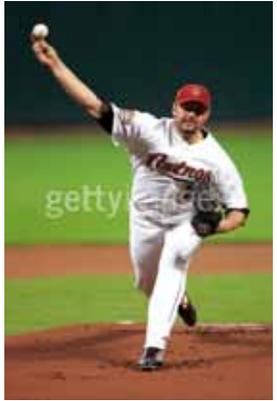
2

3



95. 1

2



96. 1

2

3



97. 1

2

3



98. 1

2

3



99. 1

2



100. 1

2

3



101. 1

2

3



102. 1

2

3



103. 1

2

3



104. 1

2

3

4



105. 1

2

3

4



106. 1

2

3



107. 1

2

3



108. 1

2

3

4



109. 1

2



110. 1



111. 1



2



112. 1



2



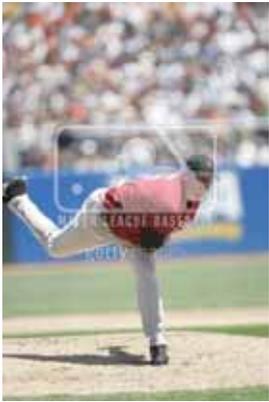
3



4



113. 1



114. 1



2



115. 1



2



116. 1



2



117. 1



2



118. 1



119. 1

Mediocre fielding position. Eyes locked on the target but glove back by hip.







