# AN ANALYSIS OF BRUCE SUTTER'S PITCHING MOTION & MECHANICS

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#### **General Comments About Bruce Sutter**

- Large hands.
- Excellent control.
- Pitches...
  - Split-fingered fastball.
- Injuries...
  - Arm surgery (1972?).

Probably due to pinched ulnar nerve.

- "Bleeding in arm" in 1977.
- Shoulder problems led him to miss much of 1986 and all of 1987 season.
- Retired due to shoulder problems.

### **Comments About Bruce Sutter's Pitching Motion And Mechanics**

- May have had an abbreviated follow-through, which could have contributed to his shoulder problems.
  - Abbreviated follow-through was likely due to the fact that he stiffened his leg after releasing the ball.
- Looks like he started turning his shoulders before his PAS forearm was vertical, which would injure his shoulder (labrum).

Year Ag Tm Lg	W	L	G	GS	CG S	SHO	GF S	SV	IP	H	R	ER	HR	BB	SO I	HBP	WP	BFP	IBB	BK	ERA *	lgERA	*ERA+	WHIP
++		+		+		+	+	++	+	+		+	++	+	+	+	+	+	+	+	+	+	+	++
1976 23 <u>CHC</u> <u>NL</u>	6	3	52	0	0	0	28	10	83.3	63	27	25	4	26	73	0	2	332	8	0	2.70	3.86	143	1.068
1977 24 CHC NL	7	3	62	0	0	0	48	31	107.3	69	21	16	5	23	129	1	7	411	. 7	0	1.34	4.38	327	0.857
1978 25 CHC NL	8	10	64	0	0	0	47	27	99.0	82	44	35	10	34	106	1	8	414	. 7	1	3.18	4.05	127	1.172
1979 26 CHC NL	6	6	62	0	0	0	56	37	101.3	67	29	25	3	32	110	0	9	403	5	0	2.22	4.11	185	0.977
1980 27 CHC NL	5	8	60	0	0	0	43	28	102.3	90	35	30	5	34	76	1	2	423	8	4	2.64	3.93	149	1.212
1981 28 STL NL	3	5	48	0	0	0	36	25	82.3	64	24	24	5	24	57	1	0	328	8	1	2.62	3.56	136	1.069
1982 29 STL NL	9	8	70	0	0	0	58	36	102.3	88	38	33	8	34	61	3	5	424	13	0	2.90	3.64	126	1.192
1983 30 STL NL	9	10	60	0	0	0	46	21	89.3	90	45	42	8	30	64	1	2	384	14	2	4.23	3.64	86	1.343
1984 31 STL NL	5	7	71	0	0	0	63	45	122.7	109	26	21	9	23	77	1	2	477	4	0	1.54	3.49	226	1.076
1985 32 ATL NL	7	7	58	0	0	0	50	23	88.3	91	46	44	13	29	52	3	0	382	4	0	4.48	3.85	86	1.358
1986 33 ATL NL	2	0	16	0	0	0	11	3	18.7	17	9	9	3	9	16	0	0	80	2	0	4.34	3.99	92	1.393
1988 35 ATL NL	1	4	38	0	0	0	26	14	45.3	49	26	24	4	11	40	1	0	193	3	0	4.76	3.70	78	1.324
++		+		+		+	+	++	+	+		+	++		+	+	+	+	+	+	+	+	+	++
12 Years		71		0		0	3	300		879		328		309		13	37	4251	. 83	8	2.83	3.85	136	1.140
WL%= .489	68		661		0		512		1042.3		370		77		861									
160 0			+	++					+						+	+			+	+	+	+	+	++
162 Game Avg	6	7	68	0	0	0	52	30	107.0	90	38	33	7	31	88	1	3	437	8	0	2.83	3.85	136	1.140





2. 1



3.

Significant reverse-rotation of both the shoulders and the hips. This will drop his arm slot and make his balls easier to hit.



4.





Glove-Side knee is bent as he strides, which keeps his hips closed longer and lets him more powerfully rotate his hips (and thus his torso and his shoulders). My concern is that this may put an excessive, and more importantly sudden, amount of strain on his arm and could have contributed to his elbow problems.



#### 7.

Notice that in frame 7.1 it looks like Sutter's shoulders are starting to turn before his PAS forearm is vertical. This will cause him to experience a worse than average Reverse Pitching Forearm Bounce and could explain his shoulders problems (e.g. it would injure his labrum ala Chris Carpenter).





Lots of hip rotation. Shoulders have pretty much stopped rotating, which is causing his PAS forearm to fly out horizontally.





11. 1



12. 1



I don't like how stiff his GS leg is as he follows through.

This could abbreviate the deceleration of his arm and could help to explain his shoulder problems. I don't think it is the cause of his elbow problems because he doesn't extend his GS knee until after he releases the ball.