PITCHER ANALYSIS – KERRY WOOD

AN ANALYSIS OF KERRY WOOD'S PITCHING MOTION & MECHANICS

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General Comments About Kerry Wood

- 6' 5"
- 225 lbs.
- Pitched during Little League.
  - Learned to throw curveball while young.
- Pitches...
  - Fastball (mid-90s).
  - Slider.
  - Curveball
- Injuries...
  - Out all of 2005 season due to shoulder problems (supraspinatus tear and bursitis).
  - Strained elbow in August 1998.
  - Out all of 1999 season due to torn tendon in elbow and Tommy John surgery.
  - Right shoulder tendinitis (June 2000).
  - Triceps strain (May 2004).

http://www.jockbio.com/Bios/Wood/Wood_bio.html

Comments About Kerry Wood's Pitching Motion And Mechanics

- 1/11/2006
  - I have read quotes from the Cubs pitching staff saying that they have looked at Kerry Wood and have found him to be mechanically just fine and find those quotes to be absolutely laughable.

    Kerry Wood has major mechanical problems that should be obvious to anyone who knows what they are talking about.
  - He was hard to sequence because there seems to be a lot of variability in his motion, which could lead to control problems.

    Where and when he breaks his hands.

    The angle of his glove-side foot at a certain moment.
  - May be talking to Mark Prior and/or Tom House about mechanics.

    In some places his mechanics resemble those of Mark Prior.
  - Sometimes throws across his body.
  - Significant reverse-rotation of both hips and shoulders.
  - May pronate earlier than most.

    But spends a lot of time in the zone of maximum load on the UCL.
    - Elbow bent 90 degrees during much of the acceleration phase.
  - Likely contributors to shoulder injuries...

    Moves elbows both behind acromial plane and above shoulders.

    Appears to start turning shoulders before pitching forearm is up and in the high cocked position.

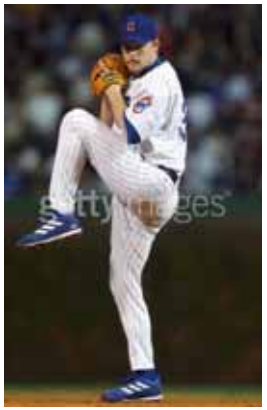
    Stiff glove-side knee near Release Point.

1. 1 
2. 1 
3. 1 

4. 1  2  3 

5. 1  2 

6. 1  2  3  4 

7. 1  2  3  4 

8. 1 

9. 1  2 

10. 1  2  3 

11. 1 

12. 1  2  3  4 

13. 1 

14. 1 

15. 1 
2 

16. 1 

17. 1  2  3  4 

18. 1 

19. 1  2 

20. 1  2  3 

21. 1  2 

22. 1  2  3  4 

23. 1  2  3 

24. 1  2  3  4 

25. 1  2 

26. 1 

27. 1 

28. 1 
2 
3 


29. 1 
2 
3 

30. 1  2  3 

31. 1  2 

32. 1  2 

33. 1  2 

34. 1  2  3  4 

Frames 34.2 and 35.3 show signs of significant reverse-rotation of both the hips and the shoulders.

35. 1  2  3  4 

36. 1 

37. 1 

38. 1  2  3 

39. 1 

40. 1  2  3  4 

41. 1  2  3 

42. 1  2  3 

43. 1  2  3 

44. 1  2 

45. 1  2  3 

46. 1  2  3  4  5 

Notice how in frames 45.1, 46.1, 46.3 and others (and ala Mark Prior), Wood's elbows are both behind his acromial line and above his shoulders. This likely contributes to his shoulder problems.

47. 1

48. 1

49. 1  2 

50. 1  2  3 

51. 1  2 

52. 1  2 

53. 1  2  3 

54. 1  2  3  4 

Based on what I see in frame 54.3 (and elsewhere), it looks like Wood has a very common flaw that I have seen in other pitchers with shoulder problems (e.g. Chris Carpenter); he starts turning his shoulders before his PAS forearm is vertical.

55. 1  2  3 

56. 1 

57. 1 

58. 1  2  3 

59. 1  2  3  4 

60.


1


2


3


4


5


6


7


8

61. 1  2  3  4  5 

62. 1  2  3 

63. 1  2  3  4  5 

64. 1  2  3 

65. 1  2  3 

66. 1  2  3  4 

67. 1  2  3 

68. 1  2  3 

Point of maximum load on the UCL.

At this moment, Wood's elbow is simultaneously rapidly extending and being pulled toward 2B. As a result, his UCL is being subjected to a torquing load in which it is being both extended and twisted at the same moment.

Also, frame 68.1 shows probably the worst Reverse Pitching Forearm Bounce I've ever seen. This may explain his elbow problems even given signs of early pronation.

Finally, Wood has a very stiff GS knee in frames 68.1 and 69.1 (slightly flexed in 68.3). Stiffening the GS is a trick that pitchers like Sandy Koufax have employed to gain a few MPH (but increasing the amount and rate at which the hips rotate) but which quite possibly comes at the cost of increasing the load that is placed on the elbow. In this vein, I wonder if the stiff leg that is visible in frame 68.1 (and in frame 68.3 as well) contributes to the severe Reverse Pitching Forearm Bounce that you can see in the same frame. Similarly, I wonder if the more flexed knee that is visible in frame 68.2 has something to do with the relatively less Reverse Pitching Forearm Bounce that is evident in that frame.

69. 1  2 

70. 1  2 

Frame 70.1 (blown up in frame 70.2) may show signs of early pronation that may help to protect his elbow. However, if he is just starting to pronate here then it's too late because he is moving out of the zone of maximum load on the UCL.

71. 1  2 

72. 1 

73. 1 

74. 1 

75. 1  2 

76. 1 

77. 1  2  3  4 

78. 1  2  3 

79. 1  2  3  4 

5

80. 1

2

3

81. 1

2

82. 1  2  3  4 

83. 1  2  3  4 

5  6  7 


8


9


10


11


12


13


14


15


84. 1


2


3


4


5

85. 1

2

3

4

5

6

7

6

7

8

9

8

9

10

11

12

13

1

2

3

87. 1 

2 

3 

4 

4 

5 

5 

6 

88. 1 

89. 1 

90. 1 

91. 1