

The Rising Fastball

The Newsletter of SABR's Science and Baseball Research Committee



Volume 1, Number 1

March 2003

GREETINGS FROM THE CHAIR

This is the premiere issue of *The Rising Fastball*, the official newsletter of SABR's Science and Baseball Committee. The title was suggested by John Pastier because the illusory phenomenon can best be examined and understood through different sciences in collaboration, as we hope to do in this new venture. The committee was proposed in the fall of 2002, and was approved by the Executive Board in January 2003, with Kenneth Heard serving as Chair and Alan Nathan as Vice Chair.

As of this writing, we have 58 individuals subscribed to the e-group and 30 SABR members officially listed in the Directory on-line. We will continue to reconcile the two lists, to make sure all members are officially recognized. Depending on which number you use, we have grown either 50% or 200% over the initial 20 who committed to participate when we were first proposed. Alan has invited a large number of prominent scientists involved in baseball-related research to join, and during this next quarter I will begin targeted recruiting of the SABR membership through the sortable directory feature on-line. As I find or am sent articles on baseball research, I will continue to reach out to others members and non-members to try and capture additional interest and expertise. I plan also to send this newsletter

to the Chairs of the Regional Chapters and am hopeful that we can make substantial membership gains going into SABR 33. Judging by our rapid growth and involvement of a very diverse pool of individuals from different fields, training and backgrounds, I think we are off to a very good start and the prospects for sustainability look excellent.

CONVENTION UPDATE

SABR 33 promises to be a good meeting for members of our committee, and I will produce a convention preview column for the June issue. I'd like to take advantage of our time in Denver to discuss the direction of the committee and perhaps develop some specific concrete projects that we can get started on. The Committee meeting is scheduled for Friday at 9 AM, and don't miss the Baseball at Altitude Panel with Dr. Robert K. Adair, author of *The Physics of Baseball*, Rany Jazayerli of *Baseball Prospectus*, and Colorado Rockies General Manager Dan O'Dowd. I am looking forward to some actual "face time" and can't wait to meet as many of you in person as I can.

-Ken



http://groups.yahoo.com/group/SABR_Baseball_Science/

Committee on Science and Baseball

Mission Statement: The mission of the Science Committee is to explore, disseminate, and foster research in the science of baseball, broadly construed to include behavioral, physical, and natural sciences. The Committee will provide a forum for all members with an interest in scientific matters, regardless of background or training.

Specific Goals of the Committee

1. Compile and annotate the scientific literature on baseball for distribution to interested members and inclusion in the Baseball Index where not already indexed.
2. Develop and maintain a website that would include links to resources and organizations of interest to SABR members and non-members who may desire to conduct research in these areas.
3. Develop and maintain a discussion list for the exchange of ideas and information.
4. Foster authorship of publications that would review and integrate the scientific literature at large with the purposes of:
 - a. Making the academic and scientific literature more accessible to non-scientists with an interest in the topic.
 - b. Encouraging more and better applied and experimental research in academic disciplines.
 - c. Promoting the increased use of experimentally validated knowledge by professionals within, or connected to, our national pastime.
 - d. Documenting the history of applied scientific research in baseball.
5. Support original experimental research, through consultation, pooling of resources and information, identifying sources of potential grant support for researchers, and the establishment of an award for contributions to applied experimental research (for life-time contribution or for best original research contribution).
6. Publish a newsletter summarizing and coordinating Committee activities and providing a publication outlet for articles on subjects within the scope of the committee's charter.

For additional information, please contact Ken Heard at ekenheard@yahoo.com or 401-874-5740.

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RESEARCH BRIEFS
(Culled from Pub Med)

Evidence of a reduced home advantage when a team moves to a new stadium. J Sports Sci 2002 Dec;20(12):969-73

Pollard R.

The author analyses 37 teams moving to new stadiums in the same city from 1987 to 2001. Home advantage during the first season in a new stadium drops an estimated 24%.

Head-first versus feet-first sliding: a comparison of speed from base to base. Am J Sports Med 2002 Nov-Dec;30(6):834-6

Kane SM, House HO, Overgaard KA.

The authors compared sliding technique in athletes from Little League to college level. They report no significant difference in speed between head-first and feet-first sliding at all levels of play.

Relationship between throwing mechanics and elbow valgus in professional baseball pitchers. J Shoulder Elbow Surg 2002 Mar-Apr;11(2):151-5

Werner SL, Murray TA, Hawkins RJ, Gill TJ.

High-speed video data were collected on 40 professional pitchers in game situations during the 1998 and 1999 Cactus League season in Arizona, as part of Major League Baseball Spring Training. The relationship between parameters of pitching mechanics related to elbow stress was examined.

After-effects of using a weighted bat on subsequent swing velocity and batters' perceptions of swing velocity and heaviness. Percept Mot Skills 2002 Feb;94(1):119-26

Otsuji T, Abe M, Kinoshita H.

The authors completed an experiment which suggests that the advantage of the warm-up with a weighted bat is psychological and not biomechanical.

A comparison of standard vs. breakaway bases: an analysis of a preventative intervention for softball and baseball foot and ankle injuries. Foot Ankle Int 2001 Oct;22(10):810-6

Janda DH, Bir C, Kedroske B.

Examined the impact and forces of standard and different types of breakaway bases on the foot, ankle, and tibia/fibula and recommends the use of breakaways on all fields.

Experimental determination of baseball spin and lift. J Sports Sci 2001 May;19(5):349-58

Alaways LW, Hubbard M.

The aim of this study was to develop a new method for the determination of lift on spinning baseballs

Toxicological deaths of major league baseball players. J Toxicol Clin Toxicol 1998;36(7):737-42

Boren S, Erickson TB.

Twenty-eight poisoning deaths major league baseball players were identified between 1889-1995. The most common agent was carbon monoxide (8), followed by methane gas asphyxiation (4), opiate overdose (4), ethanol (3), and phenol (3). Fourteen (50%) were unintentional deaths, 13 (46%) were suicidal in nature, and 1 (4%) homicidal. The majority of deaths (75%) occurred after the players had retired from the game.

The effect of ocular dominance on the performance of professional baseball players. Ophthalmology 1998 May;105(5):864-6

Laby DM, Kirschen DG, Rosenbaum AL, Mellman MF.

Examined the effect of "same" (right-right or left-left) and "crossed" (right-left) hand-ocular dominance on BA and ERA in four hundred and ten major and minor league members of the Los Angeles Dodgers professional baseball team. Hand-ocular dominance patterns did not have an effect on batting average or ERA.

Baseball and beer: an analysis of alcohol consumption patterns among male spectators at major-league sporting events. Ann Emerg Med 1998 May;31(5):629-32

Wolfe J, Martinez R, Scott WA.

Examination of alcohol consumption patterns of male spectators at two major-league baseball stadiums. Some number of men are apparently legally intoxicated at games, even if they indicate that they intend to drive home.

Violence in television commercials during nonviolent programming. The 1996 Major League Baseball playoffs. JAMA 1997 Oct 1;278(13):1045-6

Anderson C.

Overt violent content in commercials during the 1996 major league playoffs was common and consisted mainly of promotions for television programs and big-screen movies, making it difficult for parents to avoid exposing their children to this form of violence.

Hitting a baseball: a biomechanical description. J Orthop Sports Phys Ther 1995 Nov;22(5):193-201

Welch CM, Banks SA, Cook FF, Draovitch P.

A detailed quantification of the hitting motion, aimed at developing rehabilitation, strength, and conditioning programs for the hitting athlete.

Kinetics of baseball pitching with implications about injury mechanisms. Am J Sports Med 1995 Mar-Apr;23(2):233-9

Fleisig GS, Andrews JR, Dillman CJ, Escamilla RF.

Elbow and shoulder kinetics for 26 highly skilled, healthy adult pitchers were calculated using high-speed motion analysis. Two critical instants were 1) shortly before the arm reached maximum external rotation, when 67 N-m of shoulder internal rotation torque and 64 N-m of elbow varus torque were generated, and 2) shortly after ball release, when 1090 N of shoulder compressive force was produced

Impact of Yankee Stadium Bat Day on blunt trauma in northern New York City. Ann Emerg Med 1994 Mar;23(3):555-9

Bernstein SL, Rennie WP, Alagappan K.

CONCLUSION: The distribution of 25,000 wooden baseball bats to attendees at Yankee Stadium did not increase the incidence of bat-related trauma in the Bronx and northern Manhattan. There was a positive correlation between daily temperature and the incidence of bat injury. The informal but common impressions of emergency clinicians about the cause-and-effect relationship between Bat Day and bat trauma were unfounded.

SUGGESTED WEBSITES

Alan Nathan's Physics of Baseball Page

<http://www.npl.uiuc.edu/~a-nathan/pob>

The Society for Judgment and Decision Making: an interdisciplinary academic organization dedicated to the study of normative, descriptive, and prescriptive theories of decision. Its members include psychologists, economists, organizational researchers, decision analysts, and other decision researchers.

<http://www.sjdm.org>

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