

Baseball tidbits newsletter – interesting and random stuff, fodder for bar bets.

2.12.2023

Good morning baseball fans,

The trucks have been unloaded at George M. Steinbrenner Field in Tampa, Fla., awaiting the arrival of Yankees pitchers and catchers this coming week.

In this edition the science of choosing a bat, thoughts on re-alignment as part of expansion, World Baseball Classic preview, remembering the Philadelphia A's and the 118 year-old hitless streak record.

So grab a coffee, get the day started with some baseball and then enjoy tonight's game (may all your squares hit).

THIS WEEK'S TRIVIA CHALLENGE

Barry Bonds won three out of four NL MVP Awards from 1990-93. In 1991 Bonds finished second to this 3B who won the batting title that year. This MVP played 12 of his 15 seasons with the Cards and the Braves.

In the decade of the 1960s five players hit their 500th home run. All are now in the Hall of Fame. One also hit his 600th during the decade. Three of them have last names that start with "M." Name the sluggers.

Tampa Bay Lightning made the last three straight Stanley Cup finals.

Buffalo lost 4 straight Super Bowls 1991-1992-1993-1994.

Golden State Warriors went to four straight NBA finals 2015-2016-2017-2018.

Since 1903, The Yankees have gone to 3 or more straight World Series 9 times.

Of the 8 other times that a team has gone to 3 straight World Series, 3 were after 1945.

1988-1989-1999 Managed by **Tony LaRussa**, they won 1 of 3 including the Series interrupted by an earthquake in 1989.

1972-1973-1974 Won 3 straight beating Mets, Reds and Dodgers.

1969-1970-1971 Lost to the Miracle Mets and **Roberto Clemente's** Pirates, beat the Big Red Machine.

Name the teams.

MISCELLANEOUS STUFF

Tony Gwynn won the last of his eight batting titles in 1997. Since then, the most by one player is four--**Miguel Cabrera** (AL titles in 2011-13, '15)

Where have you gone **Rickey Henderson** (130 in 1982), **Lou Brock** (118 in 1974), **Vince Coleman** (110 in 1985) and **Maury Wills** (104 in 1962)? The last MLB player to steal more than 46 bases in a season was **Dee Strange-Gordon**, MIA (60 in 2017)

The last active pro athlete drafted by the Montreal Expos has retired. You might have heard of him: Tom Brady (18th round in 1995, 507th overall). In an age when multi-sport athletes were common, Brady was one of seven future NFL players (Chad Hutchinson, Ricky Williams, Brady, Lawyer Milloy, Danny Kanell, Daunte Culpepper and Michael Bishop) and two future NBA draft selections (Ryan Minor and Mark Hendrickson) taken in the '95 MLB draft.

The 1995 MLB draft included five future NFL quarterbacks (Hutchinson, Brady, Kanell, Culpepper and Bishop), half as many as the '95 NFL draft. The '95 MLB draft also included three future managers: **A.J. Hinch** (3rd round), **David Ross** (19th round, 20 picks after Brady) and **Gabe Kapler** (57th).

Baseball expanded in 1969 with Kansas City Royals, Montreal Expos, San Diego Padres and Seattle Pilots. The Royals were the first of these to win a division title (1976), a league pennant (1980) and a World Series (1985).

I've read several pieces suggesting the free spending San Diego Padres will win the NL west. Just remember, the 2022 Los Angeles Dodgers ran away with the NL West. They won the division by 22 games, broke a franchise record of 111 wins, and secured the division by mid-September. As almost all teams do, they had turnover this offseason. But San Diego will have to earn it.

Post-season HRs in consecutive games off Cy Young winners:

1999 NLDS	John Olerud off Smoltz and Maddux
2002 NLCS	Barry Bonds off Smoltz and Maddux

2015 NLDS **Daniel Murphy** off **Kershaw and Grienke**
2022 NLWC **Trent Grisham** of the Padres off **Scherzer and DeGrom**

Led league in HRs and Hits same season:

Carl Yastrzemski	1967	44 and 189
Jim Rice	1978	46 and 213
Dante Bichette	1995	40 and 197

Not a lot of surprises on this list--Highest average with RISP since 1969:

Tony Gwynn	.348
Rod Carew	.346
Joe Mauer	.334
Miguel Cabrera	.330
Freddie Freeman	.330
Manny Ramirez	.327
Mike Sweeney	.327
Paul Molitor	.326
Joey Votto	.325

Giancarlo Stanton owns the hardest hit ball according to Statcast in 16 ball parks

Stanton had the hardest hit ball in MLB in 2013, 2016, 2017, 2018, 2019, 2020, 2021

Yogi Berra homered in 7 straight games against the KC A's 1955-56

Babe Ruth homered in 6 straight games against Philadelphia A's 1922

Giancarlo Stanton homered against the Red Sox in 6 straight games 2021-2022

Dave Winfield (1983) and **Mark Teixeira** (2011) homered in their first 3 games as a Yankee.

The Yankees' offense whiffed at historically ghastly levels in the playoffs this past season. New York played nine games — five against Cleveland, four against Houston — and the Yankees struck out a total of 103 times or 11.4 times per game. It's the most strikeouts for any team in

baseball history that has played nine or fewer postseason games in a single year. The 2019 Cardinals, No. 2 on the list no team wants to be on, struck out 95 times. And it's not just the strikeouts that were concerning with the Yankees' offense in the postseason. They also slashed a paltry .173/.255/.324 and averaged just 3.2 runs per game.

On the plus side, guess which major leaguer increased his pull hitting the most last year? Yep, time to rip up those old scouting reports on **Aaron Judge** about how he loves to take fastballs the other way. Judge became a much more dangerous hitter and the all-time AL single season home run champion by flat-out turning on pitches like never before. He increased his pull-side hitting from 35.8% to 46.3%, the biggest jump among qualified hitters. After six seasons with a high of 50 hits to the pull side, Judge smashed 73 pulled hits last season. It was the biggest change behind his huge season.

Reliability counts--since 2015 **Manny Machado** is second in games played only to **Paul Goldschmidt**.

From Sports Illustrated--The Rays smartly have locked up eight players on multi-year deals, including third baseman **Yandy Díaz**, lefthander **Jeffrey Springs** and righty reliever **Pete Fairbanks**, their three arbitration-eligible players who signed extensions this winter.

The 31-year-old Díaz, whose contract was for three years and \$24 million, was one of six MLB players with an on-base percentage above .400 last year. Springs, 30, went 9–5 with a 2.46 ERA in 2022, signed a four-year, \$31 million deal. Fairbanks, 29, was extended for three years and \$12 million after he posted a 1.13 ERA in 24 games last season. The deals for all three players include a club option for an additional year.

Four other Tampa Bay players had agreed to multi-year extensions in previous years: shortstop **Wander Franco**, starting pitcher **Tyler Glasnow**, outfielder **Manuel Margot** and second baseman **Brandon Lowe**. The eighth player, righthander **Zach Eflin**, signed as a free agent for three years and \$40 million this offseason.

These deals give the Rays fixed costs against the possibility of some of their best players driving up their future values in arbitration or free agency after strong seasons. But another side to the Tampa Bay strategy is trade value. Controllable years are a key currency in the trade market. The more years of control, the more value. The Rays know this well. They have traded **Evan Longoria**, **Ben Zobrist**, **Blake Snell**, **Chris Archer** and **Matt Moore** all while under multi-year deals.

No team has allowed a pitcher to make 28 starts in his debut season in a decade. The last one to do so was the late **José Fernández** for the Marlins in 2013.

In major league history, only four pitchers 6'6" or taller (min. 100 starts) have done better than a 3.5 strikeout-to-walk rate: **Chris Sale** (5.33), **Noah Syndergaard** (4.43), **Michael Pineda** (4.37) and **Roy Halladay** (3.58).

Wonder why the Phillies are so excited about prospect **Andrew Painter**? At 6'7", he is one of the rarest pitchers to be found: a tall power pitcher *with command*. At 19 years old with a smooth delivery, Painter in 26 minor league starts has posted a strikeout-to-walk rate of 6.68. Taller pitchers generally don't repeat their delivery and fill up the strike zone like that.

Mariners manager **Scott Servais**, a former catcher, believes there will be increased importance of arm strength and accuracy among catchers, who will face more stolen base attempts and will have to assist defense of the running game with more pickoff attempts. (There is no limit to how many times a catcher can attempt a pickoff.)

The Rays are one of several teams that must retrofit their infield to abide by the new anti-shift rules. Infielders can play no deeper than the edge of the infield dirt/cutout, which has been designated as a uniform 95 feet from the front of the pitching rubber. It had been 97 feet at Tropicana Field.

The shortstops who play the deepest (pull side without a shift) who will be impacted the most by the rule change are **Miguel Rojas** (Dodgers), who plays at 152 feet, **Xander Bogaerts** (Padres), **Dansby Swanson** (Cubs), **Oneil Cruz** (Pirates), **Tommy Edman** (Cardinals) and **Carlos Correa** (Twins), who all line up an average of 151 feet. Among returning second basemen, **Jeff McNeil** of the Mets (159), **Gleyber Torres** of the Yankees (157) and all second basemen for the Blue Jays and Rays, who love to play deep on turf, face the biggest adjustment.

Ron Labinski, a visionary architect who a half-century ago foresaw a market for modern single-sport stadiums and then helped design them, replacing look-alike concrete bowls that had often inelegantly housed both baseball and football teams, died on Jan. 1 in Prairie Village, Kan. He was 85.

Labinski, who was believed to be the first architect in the United States to specialize in sports facilities, helped transform stadium design over 30 years, creating cozy, fan-friendly venues like Oriole Park at Camden Yards in Baltimore and Oracle Park in San Francisco.

At the same time, his designs brought a critical source of new revenue to team owners with club seats, built as exclusive sections with access to climate-controlled private lounges and restaurants. The hallmarks of his designs include sightlines that provide the best possible views of games as well as vistas of what's beyond a stadium — the skyline outside Oracle Park in San Francisco, for example, or the B&O Warehouse outside Camden Yards, or a panorama of downtown Denver and the Front Range mountains from rooftop cabanas at Coors Field. The designs are also distinguished by open concourses that let fans follow the action while buying food from a wide array of concession options.

Tigres del Licey returned to the peak of winter baseball with a 3-0 victory over Leones del Caracas in the “Gran Final” championship of the Caribbean Series. Tigres won a record 11th title in the historic tournament that played its 65th edition this year, returning the trophy to the Dominican Republic after Caimanes de Barranquilla of Colombia wrested away the title last year.

The Caribbean Series is a kind of club championship similar to soccer's Champions League in Europe. Licey moved further in front of their Dominican rivals, Águilas Cibaeñas, whose six Caribbean titles are second-most.

Since the Caribbean Series was first contested in 1949 in Havana, Cuba, teams from the Dominican Republic have won 22 titles, followed by Puerto Rico with 16. Criollos de Caguas was Puerto Rico's most recent champ, after winning back-to-back in 2017-18. A year ago, Caimanes de Barranquilla became a surprise champ, winning Colombia's first title, and they did it in the Dominican.

Licey and Caracas each finished the tournament with 6-3 records and Leones had defeated Tigres earlier in the tournament, in a wild 3-2 victory in 12 innings Sunday.

In the third-place game, Cañeros de Los Mochis, champs of the Mexican league, topped Colombia's Vaqueros de Montería, 1-0.

In 1966 **Jim Kaat** of the Twins went 25-13 but did not win the Cy Young. Back then there was just one Cy Young Award across both leagues. Kaat lost out to **Sandy Koufax** who went 27-9 for the Dodgers.

Juan Marichal went 25-8 in 1963; 25-6 in 1966; and 26-9 in 1968 without a Cy Young.

Robin Roberts averaged 301 innings pitched per year for the decade of the 1950s, completing 237 of 370 games started in that ten-year span.

In 1968 **Frank Howard** of the Senators hit 10 HRs over 6 games/20 AB in a week. (Howard hit 44 HRs in 1968, 48 in 1969 and 44 in 1970).

Phil Humber pitched 8 seasons, started 51 games, retired with a 16-23 record. He threw just one complete game. That was in 2012 for the White Sox. He threw one of MLB's 23 perfect games. He beat the Mariners 4-0.

Humber's was one of three perfect games thrown in 2012. **Matt Cain** of the Giants over the Astros and **King Felix Hernandez** of the Mariners over the Rays.

The largest attendance for a perfect game was 65,519 for **Don Larsen's** 1956 World Series perfect game. The smallest – 6,298, when **Catfish Hunter** shut down the Twins in Oakland on May 8, 1968.

Ralph Kiner was the NL HR leader 7 straight seasons starting with his rookie season in 1946.

What do the following Hall of Famers have in common? **Sparky Anderson. Tom Seaver. Babe Ruth. Rube Waddell. Ken Griffey, Jr.** They are all named George. George Lee Anderson, George Herman Ruth, George Thomas Seaver, George Edward Waddell, George Kenneth Griffey, Jr.

Most home runs hit while teammates:

Hank Aaron / Ed Mathews--863

Babe Ruth / Lou Gehrig--859

Willie Mays / Willie McCovey--814

Nomar Garciaparra, hit two grand slams for the Red Sox at Fenway in a May 10, 1999 win over the Mariners. Garciaparra hit three homers and drove in ten runs in the 12-4 victory. Of the 13 times in MLB history a player has hit two Grand Slams, it was the only time in front of a home crowd.

Since 1901 only two players have won HR titles in both leagues:

Fred McGriff Blue Jays (AL) 1989 / Padres (NL) 1992

Mark McGwire A's (AL) 1987 & 96 / Cardinals (NL) 1998 & 99

From the be careful how you word the question file--Who was the first black pitcher to play in a World Series?

The original answer – **Satchel Paige**, who – at age 42 – came in with one out in the 7th in Game Five (October 10, 1948) and retired the only two men he faced – as his Cleveland Indians lost to the Boston Braves 11-5. Satch was the first black pitcher to take the mound in the World Series.

But there is also **Dan Bankhead**, who pitched in four games for the Dodgers during the 1947 regular season and then appeared in Game Six of the World Series as a pinch runner (in the sixth inning, running for **Bobby Bragan**, who had doubled while pinch-hitting for pitcher **Ralph Branca**). Bankhead later scored on a single by **Pee Wee Reese**). So, while Paige was the first Black player to pitch in the World Series, Bankhead was the first Black pitcher to appear in the World Series – albeit as a pinch runner.

The Red Sox have installed LED lights at Fenway Park, which use less energy and last longer. It also will allow for special effects during a game.

The Red Sox are one of only six teams who have sold advertising patches on their uniforms. The others are the Angels, Astros, Diamondbacks, Padres, and Reds.

More deals are likely throughout spring training.

MassMutual agreed to a reported 10-year, \$170 million deal with the Sox for the patch and signage at Fenway Park. The Reds, on the other hand, are getting \$5 million a year from a grocery store chain.

As part of their deal with MassMutual, the patch on Sox uniforms will be placed where it gets the most television exposure. That means the throwing arm of a pitcher or the front shoulder of a hitter.

MLB gave teams a choice of having all the patches on one sleeve or to vary them depending on the player.

Smart comment from Peter Abraham of the Boston Globe-- Nearly 80 percent of the Hall of Fame voters (307 of 389) made their votes public. That's great, but it should be closer to 100 percent. Members of the BBWAA ask players, managers, and executives to go on the record with their opinions. The least we can do is hold ourselves to that standard and take whatever criticism results.

ON SUPERBOWL SUNDAY, A FEW MLB PLAYERS WHO DID OK AT FOOTBALL TOO

Jeff Samardzija

Samardzija is one of the rare players on this list who may have had a better collegiate career on the gridiron than the diamond. Playing at one of the premier football programs in the country, Samardzija capped his football career with back-to-back 1,000-yard receiving seasons for the Notre Dame Fighting Irish. He wasn't too bad on the mound either, going 16-3 with a 4.13 ERA over his last two years.

Darin Erstad

Prior to winning the 2002 World Series as a member of the Angels, Erstad was part of an undefeated Nebraska Cornhuskers football team that won the 1994 national title. Erstad was one of the top punters in the country, averaging 42.6 yards per punt, while also going 10-for-10 on extra points and kicking three field goals for the '94 club. He rounded out that academic year by hitting .410 with 19 homers and 76 RBIs for the school's baseball team the following spring. Erstad was named a first-team All-American and Big Eight Co-Player of the Year, as well as a Golden Spikes Award finalist. He was selected with the No. 1 overall pick by the Angels following that impressive '95 campaign, finishing his Husker career as the school-record holder for most hits (six), runs (six), and RBIs (six) in a game; most hits (103) and total bases (194) in a single season (1995); and most career hits (261).

Adam Dunn

When the Reds selected Dunn in the second round of the 1998 MLB Draft, both parties knew of his plans to play football at the University of Texas. A star quarterback at New Caney High School in Texas, Dunn worked out a deal with the Reds to play Minor League baseball in the summer before returning to Austin to prepare for football season. He ultimately redshirted his freshman season behind starter Major Applewhite, but Texas then asked Dunn to switch to tight end after receiving a commitment from star QB recruit Chris Simms the following year.

Dunn instead opted to switch his focus entirely to baseball, making his MLB debut in 2001 and his first All-Star appearance in '02 on his way to hitting 462 career home runs.

Joe Mauer

Mauer is one of the few players on this list who did not play football collegiately -- but he certainly could have. The Twins legend threw for 5,528 yards and 73 touchdowns in two seasons as the starting quarterback at Cretin-Derham Hall High School in St. Paul, Minn. Considered by most recruiting experts to be the top quarterback in his class, Mauer looked poised to follow in the footsteps of 2000 Heisman Trophy winner Chris Weinke -- who also starred in both baseball and football at Cretin-Derham Hall -- by committing to Florida State in May 2001. Less than a month later, however, the Twins selected Mauer with the No. 1 overall pick in the MLB Draft -- and he never made it to Tallahassee.

Frank Thomas

Many believe the Big Hurt could have just easily inflicted his pain on NFL defenders instead of MLB pitchers. Thomas, one of the top tight ends in the country coming out of high school, attended Auburn University on a football scholarship, though it came with the agreement that he would also play baseball. After sustaining an ankle injury during his freshman football season, however, Thomas made the decision to focus full-time on baseball.

Todd Helton

Prior to becoming a five-time All-Star and the Rockies' all-time leader in just about every offensive category, Helton played quarterback alongside -- and, for a brief time, ahead of -- Peyton Manning at the University of Tennessee. Helton received a scholarship to play both baseball and football for the Volunteers, and he spent his first two seasons backing up Heath Shuler, who went on to become the No. 3 overall pick in the 1994 NFL Draft. Jerry Colquitt began the next season as the starter, but when he went down with an early-season injury, it was Helton -- not Manning, a true freshman at the time -- who got the call. Ultimately, Helton was taken with the No. 8 pick in the '95 MLB Draft, and he went on to become the Rockies' all-time leader in hits, home runs, RBIs, doubles, total bases, runs scored and games played.

Kirk Gibson

Long before hitting one of the most iconic home runs in MLB history, Gibson was garnering attention at Michigan State as one of the top receivers in collegiate football. He led MSU in receiving for three straight seasons from 1976-78, and he departed as the school's all-time leader in receptions (112), receiving yards (2,347) and touchdown receptions (24). Gibson was named to the All-America Team as a senior in '78 -- the same year he received All-America honors on the baseball diamond. Gibson was selected by the Tigers with the No. 12 pick in the 1978 Draft, and he went on to hit 255 home runs over a 17-year career with the Tigers,

Dodgers, Royals and Pirates. He won the 1988 NL MVP Award and was a two-time World Series champion.

Jackie Robinson

Prior to becoming a trailblazer in Major League Baseball, Robinson was a four-sport star at UCLA, where he lettered in baseball, football, basketball and track. Surprisingly, he struggled a bit on the diamond, hitting .097 in 1940 -- but he was sensational on the football field.

Robinson was the nation's leading punt returner in both 1939 and '40, while also leading UCLA in passing, rushing and scoring as a senior. His name remains prominently featured in the UCLA football record book, including for the most yards per carry by any player in a single season (12.2).

ROOKIES IN BLUE

A flood of new umpires will patrol games this season with 10 rookies replacing retiring veterans across Major League Baseball, MLB vice president Michael Hill said last month. It will be the big leagues' largest first-year class of umps in more than 20 years.

The newbies, ranging in age from 31 to 40, are joining a league that is rapidly evolving its rules amid a particularly anxious future for umpires.

This season, MLB will for the first time introduce a pitch clock, shift limits and larger bases, the league's most seismic set of rule changes in nearly 50 years. And, for the first time this season, every Triple-A ballpark will employ an automated strike zone, so-called robo umps, after debuting the system last year.

MLB typically rotates a cast of 19 umpire crews in a season, each including four umpires who work the entirety of a series before moving along to another city. Those crews will see a thorough shakeup.

Tom Hallion was the longest-tenured among those umps who are retiring, with 30 years of experience. And **Ted Barrett**, who worked 26 seasons in the majors, is the only ump in baseball's history to have worked two perfect games. Barrett was on the field when the Yankees' **David Cone** pitched a perfecto against the Expos in New York in 1999 and when the Giants' **Matt Cain** threw one against the Astros in 2012.

The other umps who are retiring: **Jerry Meals** (26 years of experience), **Marty Foster** (24 years), **Greg Gibson** (24 years), **Jim Reynolds** (23 years), **Tim Timmons** (23 years), **Bill Welke** (23 years), **Sam Holbrook** (22 years) and **Paul Nauert** (22 years).

Those umps are leaving behind a total of 243 years of collective experience. Together, they worked 16 World Series.

The last time baseball saw an exodus of umps to this degree came in 1999. That summer, the umpires' union grew upset in their contract negotiations with the league and, unable to legally strike, instead resigned en masse, with 57 of them signing letters of resignation. By the next season, 22 of those umps had to be replaced. Eventually, 11 of those 22 were brought back.

Reynolds, as one example among those retiring, was one of those umpires hired to replace the lost 22 in 1999.

The new wave of umps includes 40-year-old **Nick Mahrley**, who worked the minor leagues since 2007 and has been a regular call-up ump, and 31-year-old **Brennan Miller**, who is now the youngest umpire on MLB's roster. He is also the youngest rookie ump since **Lance Barrett**, who was 29 when he was promoted in 2014.

EXPANSION AND RE-ALIGNMENT

Former GM Bob Bowden writing in *The Athletic* on expansion and re-alignment. Always interesting to kick around options.

When I spoke to commissioner Rob Manfred at the World Series last October, I asked if expansion was still on the table, and he assured me it was. Manfred said, as he has for many years, that the Tampa Bay Rays and Oakland A's respective stadium issues must be resolved first, and he acknowledged that has taken much longer than expected.

But it's clear the commissioner and the club owners he represents want to expand to 32 teams soon. What's less clear is "where to?" and "what's next?"

Manfred hasn't indicated what cities could be the front-runners, though he has previously named potential expansion locations such as Nashville (Tenn.), Charlotte (N.C.), Portland (Ore.) and Las Vegas, as well as Montreal and Vancouver in Canada. (*The Athletic* recently examined four of those options in stories that we've linked to here.)

So, once the stars align for expansion, what's next for baseball?

It's way too early to say, of course. But when MLB finally expands to 32 teams, it should seize the opportunity to implement a dramatic geographic realignment of the sport. The league could do so while maintaining the American League and National League framework, but a complete overhaul would arguably maximize revenue and certainly improve the travel burden on teams.

MLB has carefully considered geographic realignment for years, and Manfred cited “a more geography-based alignment” as a benefit of expansion in an interview with *The Athletic*’s Ken Rosenthal in 2018.

It’s impossible to predict what will happen because there are so many expansion variables and scenarios. Yes, the AL and NL could survive. But I think the move to 32 teams is the perfect time to do away with those leagues and form Eastern and Western conferences consisting of four geographically-aligned divisions apiece. Four teams per division, 16 teams per conference. With significantly more interleague play (46 games per team per season, starting this year) and the universal designated hitter, there’s no reason — beyond tradition and losing some rivalries — to keep the present infrastructure.

MLB could maintain the 12-team postseason field, with six clubs from each conference — the four division winners and two wild-card berths — and the playoffs could be structured in a similar manner to last year if desired. Or not!

So what could the new conferences and divisions look like? Just for fun, here’s the Bowden Realignment Plan. (For this exercise, I included Charlotte and Nashville as the expansion cities, both in the Eastern Conference, and left open the possibility of the A’s remaining in Oakland or moving to Las Vegas.)

Eastern Conference

East Division

Boston Red Sox
New York Mets
New York Yankees
Philadelphia Phillies

North Division

Cincinnati Reds
Cleveland Guardians
Detroit Tigers
Toronto Blue Jays

Mid-Atlantic Division

Baltimore Orioles
Charlotte expansion team
Pittsburgh Pirates
Washington Nationals

Southeast Division

Atlanta Braves

Miami Marlins

Nashville expansion team

Tampa Bay Rays

Western Conference

Midwest Division

Chicago Cubs

Chicago White Sox

Milwaukee Brewers

Minnesota Twins

Southwest Division

Houston Astros

Kansas City Royals

St. Louis Cardinals

Texas Rangers

Pacific Coast Division

Colorado Rockies

Oakland/Las Vegas A's

Seattle Mariners

San Francisco Giants

West Division

Arizona Diamondbacks

Los Angeles Angels

Los Angeles Dodgers

San Diego Padres

Bottom line: Geographic realignment would enhance the schedule and save teams considerable time and expense that's currently consumed by unnecessary travel. I hope to see it happen when MLB expands, and the sooner the better. How about you?

THIS RECORD IS NOW 118 YEARS OLD

Matt Kelly, Mlb.com

What if one could bottle up the feeling of a no-hitter and just keep it going and going?

Every pitcher's dream became an extraordinary reality for one pitcher more than a century ago. The pitcher's name? **Cy Young** -- yeah, that guy. 118 years ago, Young gave up his first base hit in over two weeks, snapping a streak of 24 consecutive hitless innings that, according to the Elias Sports Bureau, remains unchallenged as the Major League record.

You read that correctly: Young went *24 straight innings* -- or nearly the span of three complete games -- without permitting a single base knock. Here's how Elias breaks it down:

- On April 25, 1904, Young allowed his last hit to the leadoff batter in the sixth inning, and then did not allow a hit in the seventh and eighth frames of a 2-0 loss to Philadelphia, starting him off with two complete hitless innings.
- Five days later, Young came on for seven hitless innings of relief, earning a modern-day save (though it wasn't called that at the time) in a 4-1 win over Washington.
- Five days after that, Young tormented Philadelphia again, this time twirling the first perfect game in American League history.
- And finally, on May 11, Young had no-hit stuff again until Detroit's **Sam Crawford** finally reached on a seventh-inning double, snapping Young's record streak at 24. How did Young react? Merely by shrugging that off and going *15 innings* for a hard-fought 1-0 win. There's a reason baseball's highest pitching honor is named after him.

Across the administrations of 21 U.S. Presidents, two World Wars and countless changes in both baseball and our daily lives, Young's streak of 24 still tops the list. Reds pitcher **Johnny Vander Meer** famously became the only man to pitch back-to-back no-hitters in June 1938, but even he fell shy of Young, ultimately settling at 21 hitless innings for the NL record.

While Young's achievement fell in the Dead Ball Era, few pitchers have even sniffed his record in recent history. Below, courtesy of Elias, are the closest attempts since the start of MLB's Expansion Era beginning in 1961.

1) Dennis Eckersley, Cleveland: 21 consecutive hitless innings

Dates: May 25 - June 3, 1977

Eckersley's most dominant years were still down the road in Oakland, but to the hitters who faced him in late May 1977, Eck was stifling enough as it was.

Cleveland's third-year righty channeled Young and the pitchers of yesteryear in a 12-inning complete-game win over the Mariners on May 25, holding Seattle hitless for the last seven frames of the ballgame. Eckersley returned to the Cleveland Stadium mound on May 30 and spun a no-hitter against the Angels, allowing only two baserunners via a walk and a dropped third strike. In his follow-up four days later at the Kingdome, Eckersley was channeling Vander Meer and on pace for back-to-back no-nos until Seattle's **Ruppert Jones** finally homered with two outs in the sixth inning. Eck's stretch got the nation's attention, and helped earn him his first All-Star Game invitation.

2-T) Max Scherzer, Nationals: 16 innings

Dates: June 14-26, 2015

Scherzer began staking his claim as baseball's best pitcher in the summer of 2015 -- his first after signing a massive free-agent deal with the Washington Nationals. The right-hander authored a 16-strikeout one-hitter on the road at Miller Park on June 14, allowing the lone single to **Carlos Gomez** in the bottom of the seventh. Then he hurled his first career no-hitter in his next start against the Pirates, coming one hit batsman with two outs in the ninth away from a perfect game. Mad Max took another no-no bid into the sixth inning of his next start against the Phillies before **Freddy Galvis** doubled to finally end Scherzer's run. At one point across those three games, Scherzer had retired 70 of 73 batters faced, carrying a no-hitter into the sixth inning of each contest.

"I wouldn't imagine that that's going to be the last opportunity that he's going to have to do something special," said Nationals manager Matt Williams. That turned out to be extremely prescient, as Scherzer finished the season with a 17-strikeout no-hitter against the Mets.

2-T) Dwight Gooden, Yankees: 16 innings

Dates: May 8-14, 1996

Similar to Eckersley, Gooden's streak came with the team that you might not expect. Twelve years after he enraptured the baseball world as a fire-balling phenom with the Mets, Gooden resurfaced after a full-season suspension with the crosstown Yankees. Doc's comeback got off to a rough start with five or more earned runs allowed in each of his first three starts in pinstripes, but by mid-May, "Dr. K" was rolling. On May 8, Gooden earned his first win with eight innings of two-run ball against Detroit, holding the Tigers hitless across his last seven frames. Then came May 14, the day Gooden became the headline story again when he no-hit the Mariners on a memorable night at Yankee Stadium.

Gooden's chase of Vander Meer and Young came to a quick end in his next start against Oakland, when A's slugger **Jason Giambi** doubled with two outs in the first. But 1996 would be memorable for Gooden in more ways than one, as he and the Yankees climbed back atop the heap for the franchise's first World Series title in 16 years.

2-T) Mike Scott, Astros: 16 innings

Dates: Sept. 20-Oct. 2, 1986

Scott finished his 13-year career with a precisely average era-adjusted 100 ERA+, but in the latter half of 1986, he might have been the most unhittable pitcher on the planet. Wielding a splitter so filthy that opponents began openly questioning its legality, Scott went on an absolute tear to close the regular season. He began by retiring the Padres in order to finish out a seven-inning win on Sept. 20, and then unleashed a 13-strikeout no-hitter against the Giants at the Astrodome to clinch the NL West division title for Houston.

"I can't ever remember a game with such importance that was so dominated by one person," said Scott's teammate, **Nolan Ryan**.

Scott then looked like he might no-hit those same Giants again on Oct. 2, carrying a perfect-game bid into the sixth and then finally surrendering a leadoff double to **Will Clark** in the seventh to break the streak. But Scott was far from finished, as he surrendered just one earned run across two stifling complete-game victories over the Mets in the 1986 NLCS.

2-T) Steve Busby, Royals: 16 innings

Dates: June 14-24, 1974

The list of pitchers who have thrown no-hitters in back-to-back seasons includes many stars with whom we're all familiar -- Ryan, **Sandy Koufax**, **Jake Arrieta**, **Tim Lincecum** and **Warren Spahn**, for example -- along with a few lesser-known names. Busby belongs to the latter category, though he was certainly making himself known to Kansas City fans in 1974.

Busby had struck out 174 batters and twirled a no-hitter as a rookie with the Royals the year prior, finishing third in AL Rookie of the Year voting. He was off to a less spectacular start entering June of his second campaign, but seemed to flip the switch right around the start of this streak. Busby went the distance in a win on June 14 in Detroit, retiring his last eight batters. Then he put himself into the record books in Milwaukee by authoring his second no-no in a span of 14 months while surrendering just one walk to the Brewers.

Busby then retired the first nine White Sox batters he faced and carried another no-hit bid into the sixth on June 24, and went on to finish 1974 with a career-best 22-14 mark. He would pitch just one more complete season, and though he became the first pitcher to successfully return to the diamond following rotator cuff surgery, his career was never the same.

2-T) Nolan Ryan, Angels: 16 innings

Dates: July 15-19, 1973

Few pitchers have ever dominated a summer the way Nolan Ryan did in 1973, when he put up a pair of no-hitters and set the modern single-season strikeout record with 383. Ryan's second no-no came on July 15 in Detroit, when he struck out 17 Tigers and was so terrifying that

cleanup hitter **Norm Cash** came up to the plate with two outs in the bottom of the ninth with a table leg instead of a bat.

Ryan returned to the mound four days later and evidently wasn't that tired, taking a no-hitter into the eighth against the Orioles and ultimately going 10 1/3 innings before handing the ball to Angels reliever **Dave Sells** -- who promptly allowed the game-winning runs. Across those two starts, Ryan allowed three hits and faced 70 batters, while punching out 30 of them.

WORLD BASEBALL CLASSIC

The most star-studded United States roster in the history of the World Baseball Classic is now official.

Team USA's 30-man roster, which will be managed by **Mark DeRosa** and captained by **Mike Trout**, features 21 All-Stars, including four MVPs in Trout, **Mookie Betts**, **Paul Goldschmidt** and **Clayton Kershaw**.

Team USA's won the championship in the 2017 WBC -- after the first four installments of the event were won twice each by Japan and the Dominican Republic.

After a two year break due to the pandemic, following two qualifying events last September, the Classic is set to take place across the globe in March.

Think of it as baseball's answer to the World Cup, showcasing the top baseball talent in the world.

It is an international baseball tournament sanctioned by the International Baseball Federation (IBAF) and the World Baseball Softball Confederation (WBSC) in partnership with MLB. It is the only baseball tournament sanctioned by the WBSC that grants the winner the title of "World Champion."

How are the 20 teams ranked?

For the first round, teams are assigned and ranked in each pool based on the following criteria:

1. First, the team representing each pool's host country/territory.
2. Second, the team(s) that participated in the final four of the 2017 Classic will next be assigned as the top teams for each pool.
3. Finally, the remaining teams will be assigned based on Dec. 31, 2021, WBSC rankings in order to guarantee competitive balance.

With that in mind, the pool list and rankings are as follows:

Pool A – Taichung, Taiwan

- Chinese Taipei
- Netherlands
- Cuba
- Italy
- Panama

Pool B – Tokyo, Japan

- Japan
- Korea
- Australia
- China
- Czech Republic

Pool C – Phoenix, AZ, USA

- United States of America
- Mexico
- Colombia
- Canada
- Great Britain

Pool D – Miami, Fla., USA

- Puerto Rico
- Venezuela
- Dominican Republic
- Israel
- Nicaragua

Pool play is a round-robin, double-elimination tournament. From there, the top two teams in each pool advance to, essentially, an eight-team, single-elimination bracket. Pool play starts March 8. The championship will be played March 21 in Miami.

Each team's final, 30-man roster has to include at least 14 pitchers and at least two catchers.

Here is USA's roster:

Catchers: Kyle Higashioka (Yankees), J.T. Realmuto (Phillies), Will Smith (Dodgers)

Realmuto, a three-time All-Star and two-time Gold Glove winner, fronts this backstop group. All three are first-time participants in the WBC.

Infielders: Pete Alonso (Mets), Tim Anderson (White Sox), Nolan Arenado (Cardinals), Paul Goldschmidt (Cardinals), Trea Turner (Phillies), Bobby Witt Jr. (Royals)

Arenado and Goldschmidt are back for more after anchoring the infield for the 2017 championship team, and they are joined by a dynamic group that features a two-time Home Run Derby champ in Alonso, batting champs in Anderson and Turner and one of the most exciting young talents in the sport in Witt.

Outfielders: Mookie Betts (Dodgers), Jeff McNeil (Mets), Cedric Mullins (Orioles), Kyle Schwarber (Phillies), Mike Trout (Angels), Kyle Tucker (Astros)

Though **Bryce Harper**'s elbow surgery prevents him from honoring his commitment to Team USA, the outfield group nevertheless features two of the absolute biggest stars in the sport in Trout and Betts, along with reigning NL home run champ Schwarber and three other All-Stars (McNeil is listed as a left fielder on the roster but is also capable of helping in the infield).

Pitchers: Jason Adam (Rays), Daniel Bard (Rockies), David Bednar (Pirates), Nestor Cortes^ (Yankees), Kendall Graveman (White Sox), Merrill Kelly (D-backs), Clayton Kershaw^ (Dodgers), Lance Lynn (White Sox), Miles Mikolas (Cardinals), Adam Ottavino (Mets), Ryan Pressly (Astros), Brooks Riley^ (Mets), Brady Singer (Royals), Adam Wainwright (Cardinals), Devin Williams (Brewers)

^ denotes left-handed pitcher

Kershaw -- a nine-time All-Star, three-time Cy Young winner, MVP and likely future Hall of Famer -- is a first-time WBC participant. He's joined by a cast of arms with a wide assortment of experience, from more recent big league breakout types like Singer, Williams and Bednar to the established likes of Lynn and Wainwright. None of these pitchers were on the 2017 roster.

Watch out for the Dominican Republic. A few names from their stacked roster--**Willy Adames (Brewers), Rafael Devers (Red Sox), Wander Franco (Rays), Vladimir Guerrero Jr. (Blue Jays), Manny Machado (Padres), Ketel Marte (D-backs), Jeremy Peña (Astros), Jean Segura (Marlins), Nelson Cruz (Padres), Julio Rodríguez (Mariners), Juan Soto (Padres), Sandy Alcantara (Marlins)** plus the bullpen is stacked with three key members of the Astros World Series team in **Rafael Montero, Hector Neris and Bryan Abreu**.

Two players have played in the previous for tournaments--**Miguel Cabrera** (Venezuela) and **Oliver Pérez** (Mexico).

Shohei Ohtani will play for Japan.

Ronald Acuña Jr., OF, **Miguel Cabrera**, INF, **Jose Altuve**, INF, **Salvador Perez**, C, **Gleyber Torres**, INF will all play for Venezuela.

Freddie Freeman-Canada

Edwin Díaz-Puerto Rico

Xander Bogaerts-Netherlands

Joc Peterson-Israel

Randy Arozarena-Mexico

INSIDE THE HIGH-TECH HITTING LAB WHERE AUSTIN RILEY AND OTHER MLB STARS TEST THEIR BATS

Ken Rosenthal

Twelve sensors are attached to **Austin Riley**'s body, from his knuckles to his heels, his head to his toes. The Braves third baseman looks more like a cyborg, something out of a Terminator movie. And actually, there are two of him, including the motion-capture image appearing on a screen over his left shoulder, in sync with his every movement.

Riley, 25, is inside a warehouse that houses the Baseball Performance Lab at Marucci Sports headquarters in Baton Rouge, La. One baseball star after another has flocked to the lab the past two off-seasons, seeking to be fitted for bats the way golfers are fitted for clubs. The players go through about three hours of testing, culminating with the exercise Riley is about to begin: A high-tech determination of which bat suits him best.

Not that Riley needs much help. He ranked fifth in the majors last season with a career-high 38 home runs. His average and maximum exit velocities were in the top 4 percent of the league. And yet, even as he barreled his way a sixth-place finish in the National League MVP voting, he could not help but notice the respective first- and third-place finishers performing at even higher levels. **Paul Goldschmidt** and **Nolan Arenado** excelled with relatively new styles of bats, featuring oversized knobs that resembled hockey pucks.

Curious about the changes, Riley spoke to the two when the Braves played the Cardinals, chatting up Goldschmidt at first base and Arenado at third. Other hitters, noting Goldschmidt was enjoying a career-best season at 34, engaged him in similar conversations, wanting to know more about the hockey-puck knob. Goldschmidt would tell them about the lab in Baton Rouge, explain the process was more about just adding a funky new knob to your standard game model. Arenado would concur, saying, "It's not just for the bat. It's to see your body, the way it moves, how it can be more efficient."

Only four years ago, the concept of bat-fitting was foreign to Major League Baseball. Players chose their preferred lengths and weights, but there was no science behind it, nothing like what was going on in golf, which embraced technological advances in club-fitting. The idea of balancing bats differently, enabling players to swing even heavier models faster, had not been extensively explored. Even now, there is no statistical evidence demonstrating the fitting process actually works, in either baseball or golf. But an increasing number of star players cite the benefits of bat-fitting.

The transformative moment for baseball occurred during a conversation between Dr. Greg Rose, a co-founder of the Titleist Performance Institute (TPI) , and Kent Matthes, a player agent, at the 2019 PGA Show in Orlando. Matthes told Rose there was no such thing as bat-fitting in baseball. Rose summoned Liam Mucklow, a former professional golfer who had evolved into an equipment expert and TPI instructor, from the other side of the convention center.

“Can you figure it out?” Rose asked Mucklow.

Matthes connected Mucklow with Kyle Ourso, Marucci’s vice-president of sports marketing. The two went to spring training in Arizona and conducted a trial in which they paid five independent-ball players \$50 each to test eight different bats. Asked to pick their favorites, the players routinely chose models that felt the most comfortable but did not, according to Rapsodo data, provide the best performance. It was an *a-ha* moment: Players weren’t always using the bats that could help them most.

Of course, even the perfect bat can take a hitter only so far. But Marucci, as an equipment company, naturally wants to provide the best possible bat for its clients.

On Jan. 18, 2020, Marucci announced a partnership with Baseball Performance Lab, a newly formed division of Mucklow’s original company, The Golf Lab. BPL operates out of Marucci headquarters, a complex of 12 warehouses, all painted black, on McCann Drive in Baton Rouge. Marucci once recruited potential clients by hosting them at LSU football games. With the lab, players are coming to them. Teams, too.

Eight clubs, more than one-fourth the major-league total, work with BPL. Five Silver Slugger winners in 2022 — Goldschmidt, Arenado, **Nathaniel Lowe**, **Julio Rodríguez** and **Mookie Betts** — worked with the lab prior to and during the season. Two other winners, Josh Bell and Luis Arráez, visited this offseason. **Francisco Lindor**, **Joey Votto** and **Bryan Reynolds** are among the past guests. The individual sessions cost \$7,500, but for Marucci clients like Riley, the price is covered as part of his contract.

At least one former winner of a major award made the trek to Baton Rouge, but asked to remain anonymous because he endorses another equipment company. Goldschmidt and Arenado made the same request last offseason when they went to BPL with **Matt Carpenter**, who cited the lab as a factor in his revival with the Yankees. The two Cardinals sluggers since have signed with Marucci.

Riley, upon getting wired up, fears he will snap one of the cords. At the behest of lab officials, he moves away from a dual force plate used for other measurements, lest the metal from the plate interfere with the electro-magnetic motion capture equipment. Each swing provides 26,000 data points, Mucklow says. The data, revealing launch angle, exit velocity and other information, processes within five seconds.

Hitting off a pitching machine can be uncomfortable with wires springing from seemingly every joint of a player's body. Riley though, is undaunted. If Goldschmidt and Arenado did it, he can do it, too.

"Why wouldn't you get all hooked up to see what fits best for you?" Riley asks. "I feel like the best hitters are always trying to find that little bit of an edge."

Riley lives in Hernando, Ms., about a 5 1/2-hour drive from Baton Rouge. On the way to the Marucci lab he notices a light flashing on his dashboard, indicating he needs an oil change. Upon getting to Baton Rouge, he drops off his car at a place where it can be serviced, takes an Uber over to Marucci and walks to a nearby shop for a cup of coffee.

Not typical behavior for a player who is about to begin a 10-year, \$212 million contract.

"Usually," Ourso says, "you're lining up black cars for guys."

Riley arrives at the lab wanting to improve against two-seam (sinking) fastballs and four-seamers with high spin. He relays those desires to Mucklow and BPL director of player development Micah Gibbs, a former LSU catcher who played six seasons in the minors with the Chicago Cubs and Kansas City Royals before becoming an LSU coach.

Riley, mind you, wasn't bad against either pitch last season — his .429 slugging percentage off sinkers was his lowest against any one offering, but even that was well above the .395 overall major-league slugging mark. Still, if the lab can help him identify a bat he can use, say, against a nasty sinkerballer, he's all ears.

For Marucci, which also manufactures its bats at the warehouse complex on McCann Drive, it's the busiest time of year. The company makes approximately 4,000 bats for 250 to 300 players prior to spring training. A major leaguer generally uses between 40 and 60 at-bats per season, though there are exceptions. "Ozzie orders bats every day, I think," Riley says with a chuckle, referring to Braves teammate Ozzie Albies.

The fittings are based on a metric the lab developed — Balance Point Index, or BPI. The metric, according to the lab's website, describes the amount of energy needed to move the bat to the strike zone. It incorporates the bat's length, weight and weight distribution into a number between 1 and 100. A 1 would be the smallest tee-ball bat on the market, Mucklow says. A 100 is based off a 35-inch, 35-ounce bat — the **Nelson Cruz** model.

The goal is to determine which bat a hitter moves best. There is no right or wrong answer; each player's BPI reflects his individual characteristics, serving almost as a hitting fingerprint. **Corbin Carroll**, the Arizona Diamondbacks' 5-foot-10, 165-pound outfield prospect, swings a bat with an 89 BPI. **Joey Gallo**, the Minnesota Twins' 6-foot-5, 250-pound specimen, is at 77. Hitters often tell lab officials they want the Goldschmidt-Arenado hockey-puck bat. But those two bats are not the same. Goldschmidt's has an 88 BPI, Arenado a 79.

To adjust BPI, Marucci can change the taper of a bat's neck, the width and depth of the cup, adjust the center mass or add the hockey-puck knob as a counter-weight. The knob brings the center of mass closer to the player's hands, making it easier to swing than a bat of the same weight that is end-loaded.

Sometimes when the lab alters a bat's BPI, it can see a change in a hitter's movement patterns, an adjustment in his body as he swings through the zone. Other times the movement pattern doesn't change but the player swings at a different angle. Ourso cites **Anthony Rizzo**, a left-handed hitting slugger, as an example of how the process can work. The two are friends; Ourso was in Rizzo's wedding.

Early in the lab's development, Ourso and Mucklow recall asking Rizzo during a meeting at Wrigley Field, "What would it take to change your bat?" Rizzo replied, "Nope, not changing. Why are you even asking? That's not happening." Rizzo was so wedded to his model, he told Ourso, "When I put it on the scale and it weighs 31.7, it fires me up mentally."

And now?

"Rizzo's got a 33-inch bat that swings like his 34 1/2-inch game bat. It's basically relocating that barrel closer to his hands for a right-handed reliever that is going to run a cutter up under him," Ourso says.

"It's not like, 'Here comes a cutter. Let me grab this bat.' But if you see a guy running out of the bullpen, you look at the iPad and think, 'This guy is going to try to beat me with this pitch in this spot, let me try this bat in this situation.' From a mechanics standpoint, it's basically choking up for him."

As the Rizzo example shows, hitters are particular, even finicky, about their bats. At certain times in his career, Albert Pujols would request bats of both 31.8 and 32 ounces, then pick one in games based upon the kind of pitcher he was facing and whether he wanted to hit for contact or power. The difference between the two bats was so miniscule, however, some Marucci officials believed it had minimal effect.

Two years ago, Francisco Lindor, a switch hitter, asked for a .1 millimeter difference between his left-handed and right-handed bats in the thickness of the handle. Ourso thought the request extreme and told Lindor as much, but Marucci went ahead and made the bats. Ourso then challenged Lindor, asking him to close his eyes and trying to confuse him by handing him the

bats in different sequences. Lindor guessed correctly every time, then signed a bat for Ourso: “I was right. .1mm. Frankie.”

Riley’s game model is 34 inches, 31 ounces. He does not want to deviate from his gamer much, if at all. But he is open to any adjustment Marucci might make within the league’s bat-density regulations, and Mucklow is eager to dive in with his latest subject.

“There’s more we could do with a baseball bat than I ever imagined,” Mucklow says.

As the lab testing begins, Riley reacts in frustration whenever any measurement of one of his body movements turn up “limited.” Gibbs, who oversees the screening, says the examination is not a pass-fail exercise. He’s simply trying to determine what Riley can and cannot do physically, detect any restrictions that might impede his swing.

Working methodically, Gibbs measures Riley for every physical quality associated with swinging a bat. Hand size. Arm length. Wing span. Gibbs also checks mobility. Riley’s hip rotation. Shoulder rotation. Thoracic spine mobility. Pelvic control. And more.

After the measurements, Riley moves on to the “horsepower test”: a vertical jump to measure lower-body strength; an overhead toss of a medicine at the end of a sit-up to measure core strength; and a chest pass of the ball to measure upper-body strength.

As Riley finishes his chest pass, Mucklow starts tapping on his calculator and inputting the third baseman’s results, all of which were above average for a professional player. The calculator displays a number: 119.95. Mucklow, working off a formula the lab created, declares it Riley’s potential maximum exit velocity.

Only one major leaguer had a higher exit velocity than 119.95 last season: Oneil Cruz, who registered 122.4. Riley’s maximum of 115.9 ranked 16th in the majors. So how does Mucklow come up with 119.95? He explains that because Riley seeks contact during games, he is not swinging at maximum speed. But if Riley tried to max out against a pitching machine delivering balls down the middle, he could squeeze out the few extra mph necessary to reach 119.95.

Mucklow and Gibbs, however, are not simply trying to measure Riley’s physical capabilities. They also want to get a sense of Riley’s “feel” for a bat’s properties, and conduct two experiments to gain that understanding.

In the first experiment, Riley closes his eyes and is given two bats to hold, one at a time. Mucklow asks which bat is longer. Riley picks the shorter bat, then opens his eyes, saying, “damn,” upon learning he picked the wrong one. Eighty percent of major leaguers make the same choice, selecting a 33-inch bat with an 85 BPI over a 34-inch model with a 78. The shorter bat is end-loaded, making it seem longer.

In the second experiment, Riley grabs his game bat, holds it upright and closes his eyes again. Mucklow directs him to take his top hand off the bat and grab the sweet spot with two fingers before it drops to the ground. **Kiké Hernández** missed the bat entirely when he went through the exercise. Riley does not, but when told of Hernández's result, he says, "I was honestly worried I was going to do that."

Not that Riley should have been embarrassed: The experiment is simply designed to demonstrate how a player's sweet-spot awareness might change as he tries bats with higher and lower BPIs. Mucklow says some of the lab's best results have come after relocating the sweet spot so it's more in line with what the player feels.

His preliminary testing complete, Riley moves to the batting cage. Lab officials advise visiting hitters to follow their normal routines, so Riley begins by taking flips from Gibbs, standing on a dual force plate. Outside the cage, lab technician Jameson Fisher, a former White Sox farmhand, sits at a desk and stares into a computer monitor, viewing data. On one screen above them, a six-camera system shows Riley from various angles. A second, larger screen displays a series of graphs, measurements of how various parts of Riley's body — as well as his bat — are moving. The measurements, in essence, form the DNA of Riley's swing, providing future reference points if he experiences an injury or slump.

During a break, Riley mentions that he wraps the knob of his game bat with a thin piece of athletic tape, just to provide extra support. Ourso tells him Marucci can cut a bat to achieve the same effect, and departs for another warehouse on the site where bats are manufactured. Within the hour, Ourso returns, new model in hand. Riley grips it and immediately gives his approval, saying, "Now I won't have to put tape on it."

For the final phase of testing, Riley gets wired for motion-capture analysis, with Gibbs, Mucklow and Fisher placing and adjusting sensors on his body. The process takes several minutes. From a distance, Riley catches a glimpse of his motion-capture image. "Seeing your body up there, the robotic movements, it's pretty cool," he says.

Riley warms up with his game bat, which has an 81 BPI. He then tests six bats — three puck and three non-puck — with BPIs between 80 and 88. Fisher feeds balls into a pitching machine. Gibbs monitors the data. One of the screens displays Riley's motion-capture image. The other shows his exit velocity, launch angle, spray direction and "player rating." To establish that rating, Riley shouts out a number, between 1 and 10, after each swing. The subjective evaluation acknowledges the importance of his own feel, and comprises about 15 percent of the overall assessment.

As Riley switches bats, lab officials check for changes in his movement patterns, the tiniest of details that might provide the difference between a barrel and a swing-and-miss. Mucklow notices cleaner movements when Riley uses puck bats with the center of mass closer to his hands. One such bat is two ounces heavier than his gamer, but easier for him to swing. His wrists stabilize, get into a more neutral, powerful position.

At the end of the session, Riley pulls up a stool in front of the screens to review his data. Mucklow explains a hitter creates force in three ways — horizontally, by moving toward and away from the pitcher; vertically, by pushing his heel down into the ground; and torque, by spinning his torso. He is particularly complimentary of Riley's heel strike, noting the player does not drift the way hitters sometimes do when overwhelmed by velocity. Riley responds that he struggled with that issue throughout his time in the minor leagues, and finally corrected about two years ago.

"Honestly, I can go through a whole bunch of cool detailed stuff on biomechanics that I love looking at. But a lot of the stuff you do, whatever your hitting guy has you working on, stay the course," Mucklow says.

"That's the plan," Riley says.

Riley, though, did not depart without a new toy. The company will add a fresh model to his bat shipment for spring training. The bat will be a 1/2 inch longer and 1.1 ounces heavier than his gamer. It also will feature a hockey-puck knob and a slightly higher BPI — 82, as opposed to 81.

The new recipe, Mucklow says, is designed to help Riley better handle sinkers and better cover the inside part of the zone. While using the bat during his motion-capture session, Riley impressed Gibbs by pulling an inside pitch fair. Riley said he normally would have hit the ball foul, into the third-base dugout. Counter-intuitive as it might sound, the longer bat gave him better inside coverage. And while the bat was heavier, it was also more balanced. Thus, Riley could move it with more control.

Hitters seem to relish the lab's process, which provides new insight into their craft. Yet for all the lab's work on bat-fitting, all the transfer of information from the golf to the baseball worlds, Mucklow says, "There is still no study that has ever proven that golf-club fitting lowers handicaps." Which leads to an obvious question: Where is the proof bat-fitting actually works?

The offensive WARs of the lab's clients provide one indication, though Mucklow acknowledges a variety of factors sway that metric. Assessing every at-bat of the players who get fitted and every bat they use would be too massive an assignment for the lab's analytics department.

But two of the teams under contract to the lab do precisely that work, and Muckley says both have proposed contract extensions.

A player's mindset also factors into the equation.

"We believe if someone goes through our process, even if we recommend they stay with the same bat, they're going to take that bat into the game with a higher level of confidence — and higher confidence breeds better performance," Mucklow says.

Bat-fitting also is only part of the lab's mission. From a top-down camera, lab officials recently noticed an accomplished major-league hitter not getting enough internal hip rotation. The lack of rotation caused his front foot to spin out, which in turn caused him to lose force prior to contact. The player, who did not want his identity revealed because his issue stemmed from an old injury, can now take measures to address the problem.

A diagnosis of a different sort occurred last August, when the Mets' **Brandon Nimmo** was debating whether to use a leg kick or toe tap. With the leg kick, the lab's testing showed he lost stability in his pelvis, and his heel strike suffered. As Nimmo puts it, "I had a better kinetic sequence when I did the toe tap, and therefore could be more consistent and put more into the ball on a more consistent basis."

Before the season started, the lab also helped Nimmo identify the bats that work best for his swing. "You are no longer guessing at what you are feeling," Nimmo says. "There are actual numbers to support what you are feeling now."

Goldschmidt, when he visited the lab with Arenado and Carpenter last offseason, was not looking to make a change, particularly after his game model tested well. The lab, however, suggested a few slight modifications, including the hockey-puck knob. The adjustments, in Goldschmidt's view, made a difference. "I felt it when I was hitting," he says.

Players can't be fooled. Players always know. Which is why Riley was willing to drive 5 1/2 hours to Baton Rouge on the first day of February, then allow the lab to transform him into a cyborg. The Contreras brothers, **Willson and William**, visited the lab two days later, along with the Cardinals' **Juan Ypez**. Arráez was in on Monday, **David Peralta** on Tuesday. **Alex Bregman** is up Friday.

"I have my main model, my go-to, it hasn't treated me wrong yet," Riley says. "But if you face a guy who may have your number because he's got a certain pitch that is tough to get to, if I can move the center weight a little closer to me with a different bat, get a little bit more launch angle, the next thing you know you hit a single, a double ..."

And there it is. The difference Riley is seeking. That extra edge.

PHILADELPHIA A'S HISTORY LESSON

With One More Title, the Eagles Would Finally Match the A's

Despite having left town in 1954, the Athletics, with five championships, are still Philadelphia's most decorated team. The Eagles could tie things up on Sunday.

Tyler Kepner, The New York Times

Bobby Shantz moved into his home in Ambler, Pa., in 1954, the same year the Philadelphia Athletics moved away. Shantz is still there now, at 97 years old, a little left-hander in winter, eager to watch his hometown Eagles in the Super Bowl this Sunday.

“Oh, yeah, I root for the Eagles,” Shantz said by phone this week. “They’re getting so cocky, I’m almost ready to root for Kansas City, though. I always liked their coach. I don’t care who wins, to tell you the truth, but I can’t wait till the game starts because I love to watch football.”

If the Eagles beat their former coach, Andy Reid, and the Chiefs on Sunday, Shantz’s old franchise will have company — at long, long last — atop the Philadelphia sports empire. It would be the Eagles’ fifth title, after N.F.L. crowns in 1948, 1949 and 1960, and a Super Bowl victory in 2018, matching the A’s for most championships in the history of a sports-mad city.

The A’s packed up for Kansas City, Mo. — on their way to Oakland, Calif., as it turned out — with five World Series titles. Given nearly seven decades to equal the feats of Connie Mack’s teams, the city’s other franchises in M.L.B., the N.F.L., N.B.A. and N.H.L. have still not quite done it.

The Phillies, 76ers and Flyers have won two championships apiece. (The Philadelphia Warriors also won two before moving to San Francisco in 1962.) Seventeen cities or regions have at least one current pro franchise with five titles; New England alone has four such teams. But in Philadelphia, the A’s still reign.

“That’s amazing, because when I followed the A’s, they were just kind of a middle-of-the-road team,” said **Jim Kaat**, the Hall of Fame pitcher, whose father, John, raised him in Michigan to love the A’s. “But I remember my dad talking about them, and looking them up in the history books — I had every baseball guide from 1900, because my dad collected them, and I could look up those old championship teams they had.”

Kaat, 84, would listen to A’s games on the radio when the team traveled to Chicago, close enough to get a signal across Lake Michigan. He especially admired Shantz, a 5-foot-6 wonder who went 24-7 to win the American League Most Valuable Player Award in 1952. That was the last winning season for a team that won championships in 1910, 1911, 1913, 1929 and 1930.

The first winning era featured stars like **Eddie Collins, Eddie Plank, Chief Bender and Home Run Baker** (career high in homers: 12). The second was the prime of **Jimmie Foxx, Mickey Cochrane, Al Simmons and Lefty Grove**, who so inspired John Kaat that he drove to Cooperstown, N.Y., for Grove’s Hall of Fame induction ceremony in 1947. Kaat even made a pilgrimage to Grove’s bowling alley in Lonaconing, Md.

“When I went through the Hall and saw where my plaque was going to be,” said Kaat, who was inducted last summer, “I had my picture taken touching Lefty Grove’s plaque.”

Shantz could not make it to the ceremony, but his health is still good and his memory is sharp — though he is a bit too young to remember the last Philadelphia A's title, in 1930, when he was five years old. Shantz, who grew up in Pottstown, Pa., joined the A's in 1949 and knew Bender, Simmons and **Bing Miller** — who doubled home Simmons to win the 1929 World Series over the Chicago Cubs — as coaches on Mack's staff. Bender was Shantz's first major league pitching coach — a very nice man, he said, though he did not share the secrets of his slider, a pitch he pioneered.

"No, he didn't try to teach me — he didn't figure I was worth teaching, I guess," Shantz said, laughing. "He always kept telling me, 'Keep the ball down, keep the ball down, try to keep it around the knees.' So I tried to keep the ball as low as I could and try to get a strike."

Shantz, who later played for three Yankees' pennant winners in a 16-year career, is the last surviving player to have played for Mack — officially, that is. Mack, who also owned the team, was 87 years old when he managed his final season in 1950.

"Connie had a son Earle, and he ended up doing most of the managing, because Connie was very quiet; he never said a heck of a lot," Shantz said. "I still get letters in the mail from people, and they ask me what the difference was between **Connie Mack and Casey Stengel**. I say, 'One never said anything and the other never shut up!'"

Mack managed a record 53 seasons (18 more than **Tony La Russa**, who is second), with bursts of glory and epochs of misery. In that way, his Philadelphia A's mirror their descendants in Oakland, who succeed for a while, then sell off their stars, always flirting with relocation.

The Oakland Athletics (1972-74) are the only team besides the Yankees to win three consecutive World Series. The Philadelphia version came within one victory in 1931 of doing the same, with a group that John Thorn, the official historian of Major League Baseball, believes was even better than the fabled Yankees of **Babe Ruth and Lou Gehrig**.

"They were better until they weren't — and then they had a long drought," Thorn said. "And the drought may have been self-induced because Mack didn't have the money to develop his farm system or to acquire talent at the highest level as he had in the '20s."

The Phillies provided little comfort for local fans. In nine of Mack's 17 last-place seasons with the A's, the Phillies also had the worst record in the National League. In 1980, they became the last of the original 16 franchises to win a World Series, and added a second championship in 2008.

"The A's and the Phillies were both last-place teams for so long, in tandem, that there's hardly a soul alive who recalls the last great A's team," Thorn said. "But the A's were competitive in the early 1950s, after Mack was gone."

That limited success (fourth place in 1952) was due mostly to Shantz, whose miracle season ended in late September when a pitch from Washington's **Walt Masterson** shattered his left wrist. He slumped to 5-9 in 1953.

"The following year I was lucky to get anybody out," Shantz said. "I don't think I won too many ballgames, and none of our pitchers seemed to be able to get anybody out. That's when everybody thought we were going to leave town. They had to do something, and in 1954, we didn't draw anything and we moved out of there."

Only 1,715 fans attended the final A's game in Philadelphia, a 4-2 loss to the Yankees on Sept. 19, 1954, at Connie Mack Stadium. A week later, the Eagles opened their season there to much greater fanfare; a crowd of 26,546 saw them beat the Cleveland Browns.

Six years later, the Eagles would win their third championship, 17-13, over the Green Bay Packers in Vince Lombardi's only career postseason loss. Lombardi's name adorns the trophy the Eagles hope to grasp on Sunday, when they can finally join their long-ago neighbors in Philadelphia sporting supremacy.



Al Simmons and Jimmie Foxx



Bobby Shantz and Connie Mack in 1952.

OTHER INTERESTING STUFF FROM THE SPORTS PAGES

Editor's note—a new occasional feature of things that hopefully make you say 'wow'.

NFL MVPs and the Super Bowl. the MVP curse -- the last nine MVPs to play in the Super Bowl that season are 0-9. Kurt Warner was the last to win both the MVP award and Super Bowl following the 1999 season.

Wayne Gretzky scoring 378 goals as an 11-year-old peewee with the Nadrofsky Steelers in Brantford, Ontario.

Gretzky is the all-time points leader with 2,857 NHL points — with enough assists that if he'd never scored a goal, he would still be the league's all-time points leader with 1,963.

10 times he led the NHL in scoring, 9 times MVP, 3 straight seasons with more than 100 points, he remains the only player to ever surpass 200 points in a season, which he did four times.

When Jim Brown retired in 1965, there had been eight NFL seasons when a running back averaged 100-plus yards per game. Here are those eight seasons:

1. Jim Brown, 1963, 133.1
2. Jim Brown, 1958, 127.3
3. Jim Brown, 1959, 110.8
4. Jim Brown, 1965, 110.3
5. Jim Taylor, 1962, 105.3
6. Jim Brown, 1960, 104.8
7. Jim Brown, 1964, 103.3
8. Jim Brown, 1961, 100.6

To this day, he is often listed as the greatest men's lacrosse player ever. At Syracuse, he averaged 15 points a game for the basketball team, finished fifth in the U.S. Championship in the decathlon, and was obviously an All-American in lacrosse. 4x NFL MVP. Brown carried the ball 2,359 times for 12,312 rushing yards and 106 touchdowns, which were all records when he retired. He averaged 104.3 rushing yards per game, and is the only player in NFL history to average over 100 rushing yards per game for his career.

Oh, and my mother was his tutor at Syracuse for a year.

THIS WEEK'S TRIVIA CHALLENGE ANSWERS

Barry Bonds won three out of four NL MVP Awards from 1990-93. In 1991 Bonds finished second to this 3B who won the batting title that year. This MVP played 12 of his 15 seasons with the Cards and the Braves.

Atlanta's **Terry Pendleton** in 1991

In the decade of the 1960s five players hit their 500th home run. All are now in the Hall of Fame. One also hit his 600th during the decade. Three of them have last names that start with "M."

Ted Williams

Mickey Mantle

Ed Mathews

Hank Aaron

Willie Mays (500 & 600)

Tampa Bay Lightning made the last three straight Stanley Cup finals.

Buffalo lost 4 straight Super Bowls 1991-1992-1993-1994.

Golden State Warriors went to four straight NBA finals 2015-2016-2017-2018.

Since 1903, The Yankees have gone to 3 or more straight World Series 9 times.

Of the 8 other times that a team has gone to 3 straight World Series, 3 were after 1945.

1988-1989-1999 Managed by **Tony LaRussa**, they won 1 of 3 including the Series interrupted by an earthquake in 1989.

1972-1973-1974 Won 3 straight beating Mets, Reds and Dodgers.

1969-1970-1971 Lost to the Miracle Mets and **Roberto Clemente's** Pirates, beat the Big Red Machine.

Name the teams.

Oakland A's	1988-1989-1990
Oakland A's	1972-1973-1974
Baltimore Orioles	1969-1970-1971

The others were:

St. Louis Cardinals	1942-1943-1944
New York Giants	1921-1922-1923
New York Giants	1911-1912-1913
Detroit Tigers	1907-1908-1909
Chicago Cubs	1906-1907-1908

The 9 Yankee teams to go to 3 or more straight World Series:

Yankees	1998-1999-2000
Yankees	1976-1977-1978
Yankees	1960-1961-1962-1963-1964
Yankees	1955-1956-1957-1958
Yankees	1949-1950-1951-1952-1953
Yankees	1941-1942-1943
Yankees	1936-1937-1938-1939
Yankees	1926-1927-1928
Yankees	1921-1922-1923

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