

ERA

ERA stands for Earned Run Average. It is a key pitching statistic in baseball that measures the average number of earned runs a pitcher allows per nine innings pitched. Essentially, it shows how effective a pitcher is at preventing runs that are not due to fielding errors. A lower ERA indicates better pitching performance.

WHIP

WHIP in baseball stands for Walks plus Hits per Inning Pitched. It is a key pitching metric that measures how many base runners a pitcher allows on average per inning. Essentially, it sums the walks and hits allowed by the pitcher and divides that by the innings pitched. WHIP is widely used to evaluate a pitcher's effectiveness at preventing batters from reaching base, making it a crucial stat for both fantasy baseball and real-world analysis.

ERA+

Also known as Adjusted ERA, it measures a pitcher's ERA to account for external factors like ballpark dimensions and league averages. A score of 100 is league average, while anything above 100 indicates better-than-average performance. ERA+ allows for fair comparisons between pitchers in different environments, such as hitter-friendly or pitcher-friendly parks.

FIP

Fielding Independent Pitching, or FIP, focuses solely on outcomes a pitcher can control: strikeouts, walks, hit-by-pitch, and home runs. It removes the impact of fielding and luck from a pitcher's ERA. FIP provides a clearer picture of a pitcher's skill by isolating their performance from defensive factors.

xFIP

xFIP, or Expected Fielding Independent Pitching, is an advanced pitching metric that estimates a pitcher's performance by focusing on outcomes they can control, such as strikeouts, walks, and home runs, while normalizing the home run rate to a league average. It removes the effects of defense and luck, providing a better predictor of future performance than traditional ERA. xFIP is especially useful for evaluating how sustainable a pitcher's results are over time.

BABIP

BABIP stands for Batting Average on Balls In Play. It measures how often a batted ball in play (excluding home runs and strikeouts) results in a hit. BABIP is used to evaluate both hitters and pitchers by showing how frequently balls put into play fall for hits, which can indicate luck, defensive support, or skill. A typical BABIP for pitchers tends to hover around .300, and deviations can suggest whether a pitcher is overperforming or underperforming relative to their true skill level.

Stuff+

Stuff+ evaluates the physical characteristics of a pitch, such as velocity, spin rate, vertical and horizontal movement, and release point. It quantifies how "nasty" a pitch is. This metric identifies pitchers with elite pitch quality and potential for high strikeout rates. It stabilizes quickly, making it reliable for in-season analysis.

Location+

Location+ assesses a pitcher's ability to place pitches in the optimal location based on the count and pitch type. It uses a standardized "correct location" rather than relying on catcher framing. This metric highlights pitchers with strong command, who are less likely to issue walks and more likely to induce weak contact.

Pitching+

Pitching+ is a combination of Stuff+ and Location+. Pitching+ provides an overall evaluation of a pitcher's effectiveness. It also accounts for batter-handedness to analyze platoon splits. Pitching+ offers a comprehensive view of a pitcher's skill set, balancing raw pitch quality with command.

Spin Rate

Spin rate measures the revolutions per minute (RPM) of a pitch. Higher spin rates often correlate with more movement, making pitches harder to hit. Spin rate helps evaluate the effectiveness of fastballs and breaking pitches, such as curveballs and sliders.

SIERA

Skill-Interactive ERA, or SIERA, accounts for a pitcher's ability to generate strikeouts, limit walks, and induce weak contact. It's more predictive than ERA or FIP. SIERA provides a forward-looking evaluation of a pitcher's performance, making it valuable for projections.

Hard Hit Rate

Hard-hit rate in baseball measures the percentage of batted balls that a pitcher gives up with an exit velocity of 95 mph or higher. It indicates how often batters make strong contact with the ball, which is a key factor in predicting power and extra-base hits. A higher hard-hit rate for a pitcher generally correlates with better offensive performance and more home runs. The MLB average hard-hit rate for a starting pitcher is around 40 percent.

Barrel Rate

Barrel percentage for a pitcher refers to the percentage of batted balls they allow that are classified as "barrels." A barrel is a batted ball with the ideal combination of exit velocity (at least 95 mph) and launch angle (typically between 8 and 32 degrees). These batted balls are highly likely to result in extra-base hits or home runs due to their optimal trajectory and speed. For pitchers, a lower barrel percentage is a key indicator of success, as it reflects their ability to limit hard, well-placed contact by opposing hitters.

Strikeout Rate

Pitcher strikeout rate, often referred to as K rate or K%, is a statistic that measures the percentage of strikeouts a pitcher records compared to the total number of plate appearances they face. A high strikeout rate is a strong indicator of a pitcher's effectiveness. K rate is considered a crucial metric because strikeouts are the one outcome a pitcher can fully control. High strikeout rates correlate with WHIP and ERA. High strikeout pitchers typically don't give as many baserunners and, as a result, don't allow as many runs either. Generally, a pitcher with a strikeout percentage of at least 20 percent is considered "good." Elite pitchers usually have K rates of 25 percent or higher.

Walk Rate

A pitcher's walk rate refers to the percentage of batters that a pitcher walks in relation to the amount of plate appearances. It's a key metric that measures a pitcher's effectiveness at limiting baserunners by avoiding free passes. A lower walk rate generally indicates better control and command from a pitcher. A low walk rate also correlates with a low WHIP. Pitchers with walk rates below 8 percent are considered "good" and those with walk rates below 5 percent are considered elite. Low walk rates lead to a low WHIP which then results in fewer run-scoring opportunities for an opponent.

Using Advanced Pitching Metrics

Teams use these metrics to scout talent, identify undervalued players, and make roster decisions. Managers rely on advanced metrics to determine pitch selection, defensive alignments, and bullpen usage. Coaches analyze metrics like spin rate and release point to refine a pitcher's mechanics and improve performance. The team at YLose uses advanced pitching metrics to win more bets.