

TEMPO, TIMING AND THE HITTER'S CLOCK

Fast *or* Slow

A hitter has to start swinging before the ball is released, using your body as the clock. Tempo is the one variable that changes what he is reading rather than what he is reading it about, and it costs almost nothing to work on.

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Everything else in this library changes the pitch. Tempo changes **when the hitter starts solving it.**

He cannot wait for release. The ball arrives too fast for that, so he begins his swing off cues in your delivery: the front foot leaving the ground, the hands separating, the leg reaching its height. Those cues are a clock, and the pitcher owns it. Changing the rhythm changes what that clock says without changing anything about the ball, which makes it the cheapest deception available and the one most often left untouched.

What tempo actually is

Two different measurements that get used interchangeably and should not be.

DELIVERY TEMPO

Leg lift to release

The internal rhythm of the delivery itself, and the one that interacts with sequencing. The whole thing takes under a second from leg lift to release, and how that second is distributed changes how the segments hand off.

This is the one that affects the pitch. A rushed delivery and a slow one can both sequence correctly, but they load and unload differently.

TIME TO PLATE

First movement to the catcher's glove

The number that matters for the running game and for the hitter's clock. Typical values: a slide step around **1.25 to 1.30 seconds**, a modified slide step **1.35 to 1.45**, and a full leg lift **1.50 and above**.

This is the one that affects the hitter and the base runner, and it can be changed without touching the delivery's internal rhythm much at all.

Why the hitter is vulnerable to it

He is reading your body, not the ball

A swing has to be initiated well before release. There is not enough time otherwise. So the hitter uses **kinematic cues from the pitcher** as a trigger: the front foot leaving the ground, the glove coming up, the leg reaching the top. He learns what those cues predict over the course of a few pitches and then runs on that prediction.

Which means the timing relationship between your cues and your release is a variable you control. Keep it identical every pitch and he calibrates to it within an at bat. Change it and the calibration is wrong, and being wrong on timing is the most expensive kind of wrong a hitter can be.

This is why quick pitching works even when the pitch itself is ordinary, and it is why a pitcher with two distinct tempos is harder to face than his stuff suggests.

What each end costs

Neither one is free, and the trade is different depending on which direction you move.

QUICK

Less time to load

Cutting the tempo shortens the phase where the back hip is supposed to be loaded and where momentum toward the plate is built. A pitcher who genuinely needs that time will lose velocity when he speeds up.

- Watch **stride length**, which is the first thing to shorten
- Watch whether the **back hip actually loads** or the athlete starts hiking to get moving faster
- Slide step velocity loss is real for some pitchers and near zero for others. Measure his rather than assuming

SLOW

Predictable, and it invites running

A long deliberate leg lift gives the hitter a longer, clearer clock to read, and gives the runner the time to leave.

- Above about 1.50 seconds to the plate, the running game becomes a separate problem
- A single fixed rhythm is easier to time regardless of how long it is
- Slow is not a fault by itself. Slow **and identical every pitch** is

Tempo is partly built in

Some athletes do not have a slow gear, and some do not have a fast one

Motor preference frameworks describe two organisations that bear directly on this. One type carries weight toward the heels, lifts the leg slowly and low, bends the back knee immediately and **can pause in the load without losing anything**. The other carries weight toward the forefoot, lifts fast and high with no pause, barely bends the back leg, and rebounds off the ground rather than pushing.

Asking the second type to slow down and sit into the load removes the mechanism he throws with. Asking the first type to eliminate the pause does the same in reverse. Both look like reasonable coaching and both cost velocity.

Treat that framework as a reason for caution rather than a diagnosis. It is a coaching model, not settled science. But the caution is warranted here, because tempo is one of the easiest things to change and one of the harder ones to change back.

Using it deliberately

USE 01 Two tempos, same delivery The highest value application. A pitcher who can deliver the same pitch from two different rhythms has a variable the hitter cannot solve from the scouting report, and it costs nothing in stuff.	USE 02 Vary the hold, not the delivery Changing how long you hold before starting is the cheapest version. It disrupts the clock without touching the sequencing at all, which makes it the safest place to begin.	USE 03 Quick pitch as a genuine weapon Skipping the leg lift catches hitters who have calibrated to the normal rhythm. Worth knowing the pace of play rules where you are, since a pitch delivered too late in the clock can be penalised.
USE 04 Match tempo to the athlete A quick tempo suits a springy athlete who rebounds. A deliberate one suits an athlete who loads and drives. Fighting that is where velocity gets lost for nothing.	USE 05 Tempo as a fix, not a goal Tread's check is that if a pitcher can reach the low 80s in warmups feeling like the lower half is throwing the ball, the sequencing is timed. Tempo work is often how that gets found.	AVOID Changing tempo to fix mechanics Speeding a delivery up to stop someone drifting, or slowing it down to make them load, usually relocates the problem rather than removing it. Fix the fault, then set the tempo.

Measuring and working on it

STEP 1 Get his numbers, both of them Delivery tempo and time to plate are different measurements and both are worth having. • Time to plate from first movement to the catcher's glove, from the stretch and from the windup • Delivery tempo from leg lift to release, which you can pull off video frame counts • The spread across pitches, since a pitcher who is identical every time is the easiest to time • Velocity alongside each, so the cost of any change is visible rather than assumed

STEP 2

Find out whether a second gear exists

Before building anything, establish what he already has access to.

- Throw a set at his normal rhythm, then a set noticeably quicker, and compare velocity and command
- Watch **stride length and back hip loading** in the quick set. That is where the cost shows up first
- Some pitchers lose almost nothing. Some lose four mph. You cannot predict which from watching

STEP 3

Build the cheap version first

Varying the hold before starting disrupts the hitter's clock without touching the delivery. Start there and only move to genuine tempo changes if it is not enough.

- Varied hold times from the stretch as a normal part of bullpen work
- Then varied leg lift heights, which changes the cue the hitter is reading
- Then a full second tempo, if the athlete has one available without a velocity cost

STEP 4

Check what it did to the delivery

Tempo changes are sequencing changes, so the usual frames need rechecking.

- **Foot contact**, since that is where command is decided and a new rhythm moves it
- **Stride length** as a share of height
- Whether the back hip is still loading or the athlete has started hiking to keep up
- Command, which is the thing most likely to have been spent

Sources

Time to plate values are coaching reference figures rather than laboratory measurements, and vary by level and by delivery.

- [The Psychology of Quick Pitching and Altering Deliveries, Perception and Action](#)
- [Batting is Timing, Pitching is Disruptive Timing](#)
- [Pitch Tempo leaderboard, Baseball Savant](#)
- [Pitching Regulations and Timing Rules, Baseball Rules Academy](#)
- [Tread Athletics — Problem Solving Your Lower Half Pitching Mechanics](#)
- [Driveline — The Interaction of Biomechanics and Command](#)
- [ActionTypes — Aerial and terrestrial pitchers](#)
- [ASMI — The Clinician's Guide to Baseball Pitching Biomechanics](#)

He starts his swing off your body. The clock is yours, and most pitchers never touch it.