FLEETFORGE ATHLETICS

COMPLETE ARM HEALTH SYSTEM

ARM CARE BLUEPRINT

The 9-chapter arm health system. Pre-throw protocols, long toss programming, in-season management, recovery, warning signs, and position-specific care for pitchers, catchers, infielders, and outfielders.

FLEETFORGE SPORTS & DEVELOPMENT · YOUTH · HIGH SCHOOL · COLLEGE · EDITION 2026

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THE ARM CARE MINDSET

CHAPTER 01

Your arm is the most valuable tool you own as a baseball player. The players who last in this game — the ones who play through high school, earn college opportunities, and reach professional levels — are the ones who treat arm care as non-negotiable. The players who break down treated arm care as optional until it was too late.

The Injury Epidemic

Youth baseball is facing an arm injury crisis unlike anything the sport has seen. Over the past two decades, UCL injuries (the injury that requires Tommy John surgery) have increased by **more than 500%** among youth athletes. What was once an injury that ended professional careers is now common in 14- and 15-year-olds. The culprit isn't one single thing — it's the perfect storm of year-round play, multiple teams, no recovery protocols, and coaches who prioritize winning today over protecting the arm long-term.

THE FOUR DRIVERS OF YOUTH ARM INJURY

- **Year-round throwing** — The arm needs rest. 11 months of play with no true shutdown breaks tissue down faster than it can recover.
- **Multiple teams simultaneously** — Travel ball plus school ball doubles volume with no communication between staffs.
- **No recovery protocols** — Playing hard without systematic recovery is running a car engine without oil changes.
- **Early specialization** — Throwing exclusively before the body is developed stresses immature tissue that cannot handle elite loads.

Players Who Last vs. Players Who Break Down

After years of working with baseball players at all levels, one pattern emerges: the players who stay healthy are not always the most talented. They are the most consistent. They do their band work every single day. They follow their throwing programs. They communicate when something doesn't feel right. They treat their body like the investment it is.

PLAYERS WHO LAST	PLAYERS WHO BREAK DOWN
Band work before every throwing session	Skip warm-up because "there's no time"
Follow a structured long toss progression	Throw year-round with no rest periods
Track throwing workload	Play through pain hoping it resolves
Communicate pain immediately	Don't know how many innings they've thrown
Rest when prescribed	Jump into heavy throwing after shutdown

Everything Is Arm Care

Here is the most important mindset shift in this book: **arm care is not a 10-minute warm-up routine. Arm care is everything you do as an athlete.** Your arm health is determined by sleep quality, nutrition, weight room work, throwing mechanics, workload, and yes — your band routine. When you understand that every decision you make as an athlete either builds or erodes your arm health, you start making better decisions.

THE COMPLETE ARM CARE ECOSYSTEM

- **Weight room** — strong posterior chain, stable scapula, powerful rotator cuff
- **Mechanics** — poor arm path, inverted W, and early trunk rotation all load the elbow
- **Workload management** — pitch counts, rest days, and seasonal structure
- **Warm-up protocol** — cold throwing is the fastest path to injury
- **Recovery systems** — sleep, nutrition, active recovery
- **Data tracking** — PitchForge velocity trends and CatchForge pop time as early warning signals

THE PRE-THROW PROTOCOL

CHAPTER 02

The single most preventable arm injury in baseball is the one that happens because a player threw without warming up. Cold throwing puts maximum stress on unprepared tissue. The pre-throw protocol — adapted from the Jaeger Sports J-Band system — takes **8–12 minutes** and should happen before every single throwing session, practice, bullpen, and game.

Why Bands Before Throwing

Resistance bands activate the small stabilizing muscles of the rotator cuff, scapular stabilizers, and posterior shoulder before those muscles are asked to decelerate a 90+ mph throw. Most throwing injuries don't happen during the acceleration phase — they happen during deceleration, when the posterior shoulder muscles must stop the arm from following through. Bands prepare exactly those muscles.

8–12	11	10–15	7
MINUTES TOTAL	EXERCISES	REPS EACH	DAYS A WEEK

The Full 11-Exercise Band Routine

Use a light-to-medium resistance J-Band or exercise band. Anchor at shoulder height. Complete all 11 exercises before picking up a baseball.

#	EXERCISE	REPS / DURATION
1	Arm Circles (forward)	30 sec — small to large
2	Arm Circles (reverse)	30 sec — reverse direction
3	Band Pull-Aparts	15 reps — retract scaps
4	External Rotations (arm at side)	12 reps each — elbow 90°
5	Elevated External Rotations	12 reps each — arm at shoulder height
6	Internal Rotations (arm at side)	12 reps each — band from opposite side
7	Band Pull-Backs / Reverse Throws	12 reps — simulate deceleration
8	Diagonal Pull-Downs	12 reps each — high-to-low throwing path
9	Horizontal Abduction	15 reps — scapular retraction focus
10	Shoulder Flexion (front raises)	12 reps each — raise to shoulder height
11	Dynamic Wrist Flexion/Extension	15 reps each direction

DRILL

External Rotation at Shoulder Height

Setup: Band anchored at shoulder height. Stand perpendicular with throwing arm away from anchor. Elbow bent 90°, tucked at side.

Execution: Rotate forearm outward away from body, keeping elbow pinned to rib cage. Control the return.

Reps: 12–15 each arm. Focus on slow, controlled motion — never rushed.

DRILL

Scap Retraction Row

Setup: Band anchored at shoulder height. Step back to create light tension. Arms extended forward at shoulder height.

Execution: Pull the band straight back, squeezing shoulder blades together. Hold the contraction for 1 full second.

Reps: 12 reps. The squeeze matters more than the range of motion.

After the Band Routine: Dynamic Throwing Prep

Once band work is complete, transition to throwing preparation before picking up a baseball. This bridges the gap between bands and your first throw. Wrist flicks at 10–15 feet, elbow-height throws at 25–30 feet, then gradually work up to your starting catch distance.

COACH'S NOTE

If your athlete complains of discomfort during band work, that is a warning sign — not a reason to skip warm-up. Tissue that protests under 5 pounds of band resistance is tissue that will fail under the demands of throwing. Address it early.

THE LONG TOSS PROGRAM

CHAPTER 03

Long toss is the most misunderstood arm care tool in baseball. Done right, it builds arm strength, throwing endurance, and velocity simultaneously. Done wrong — or skipped entirely — it leaves players underprepared for the demands of a full season. Alan Jaeger, the most influential arm care specialist in modern baseball, built his long toss philosophy around one simple principle: **let the arm tell you what it needs.**

The Three Phases of Long Toss

PHASE 1 — STRETCH OUT (60% INTENT)

Start at 40 feet. Every 5 throws, move back 10 feet. Continue until you reach your peak distance for the day. On light days this might be 120 feet. On heavy days it might be 250+ feet. The throws should have arc — you are stretching the arm, not testing velocity. Never force distance. If something feels off at 180 feet, stay there.

PHASE 2 — PEAK DISTANCE (100% INTENT ON ARC)

At your peak distance, throw **5–10 max-effort throws** with full arc. This is where arm strength is built. The throw should feel like a long fly ball — high trajectory, maximum effort. Stay at max distance until the arm feels completely open and the ball is releasing cleanly.

PHASE 3 — PULL DOWN (100% INTENT ON A LINE)

Start working back toward your partner. As distance shrinks, the trajectory flattens. These "pull-down" throws are the highest velocity throws you'll make all day. End at 60 feet with 5–10 line-drive throws. This is arm-speed training — what Jaeger calls the most important phase for velocity development.

Long Toss Weekly Schedule

DAY	IN-SEASON	OFF-SEASON	NOTES
Mon	Full session (game +1 or +2)	Full session	Best post-rest day for max distance
Tue	Light bands only or rest	Full or short session	Recovery from Monday
Wed	Full or short session	Full session	Mid-week conditioning
Thu	Light or bands only	Full or short session	Pre-weekend management
Fri	Pre-game prep only	Full session	In-season: warm-up only
Sat	Game day protocol	Off or light bands	Competition day
Sun	Rest or light bands	Rest	Mandatory recovery

LONG TOSS SAFETY RULES

- Never long toss with a sore arm
- Never long toss without a full band warm-up first
- Never throw for distance if the arm is not truly loose
- Maximum 2 long toss days per week during season
- Full pull-down day requires 3 full recovery days after
- Long toss is conditioning — it is NOT your warm-up

How Long Toss Builds Velocity and Arm Health

Maximum-distance throws require the arm to generate more rotational force, activate more muscle fiber, and achieve higher arm speeds than pitching off a mound. Over time, this progressive overload — just like weight training — builds the connective tissue, muscle strength, and neuromuscular patterns that translate directly to velocity at game distances. Players who long toss consistently over months and years don't just throw harder — their arms become more resilient.

THE JAEGER PHILOSOPHY

Alan Jaeger never imposes artificial distance limits or time caps. The arm stretches out as far as it naturally wants to go on a given day, then pulls back down. This creates a conditioning load the arm is prepared for — rather than forcing it beyond its readiness. Trust the arm. Don't chase numbers.

IN-SEASON ARM CARE

CHAPTER 04

In-season arm care is the highest-stakes piece of this entire system. During a season, your arm is being asked to perform at high intensity, frequently, with limited recovery time. The protocols in this chapter are your roadmap for managing that load and arriving at the end of the season with your arm in the same or better condition than when it started.

Game-Day Routine

What you do on game day — before and after — determines how your arm feels the next day and through the rest of the week. Don't leave it to chance.

TIME	ACTIVITY	PURPOSE
90+ min pre-pitch	Light movement, activation	No throwing yet
60–70 min pre-pitch	Full band routine (all 11 exercises)	8–12 minutes
45–50 min pre-pitch	Long toss — stretch out + pull down	Arm conditioning warm-up
25–30 min pre-pitch	Flat ground at mound distance	Game-intensity prep
15–20 min pre-pitch	Bullpen warm-up — full pitch mix	Final calibration
Post-game (within 30 min)	Band flush routine	Acute recovery

Between-Start Recovery: The 4-Day Cycle

For pitchers on a 4-day rotation, the between-start period should be structured — not random. Many arm injuries happen on Day 2 and Day 3 when pitchers don't know what to do and either throw too much or not enough.

DAY	ACTIVITY	PURPOSE
Day 0 (Game Day)	Start + post-game band flush	Competition + immediate recovery
Day 1	Rest or light walk — bands only, NO throwing	Tissue repair window — protect it
Day 2	Light long toss 50–120 ft, easy effort	Restore blood flow, maintain looseness
Day 3	Full bullpen: 30–45 pitches, game intensity	Maintain timing and pitch command
Day 4	Long toss + flat ground, starter protocol	Ready to compete again

BULLPEN DAY MANAGEMENT

Bullpen days are often treated casually — as if bullpen work doesn't count as arm stress. It absolutely does. Full warm-up required — bands and long toss before every bullpen session, no exceptions. Maximum 45–50 pitches for a full between-start session. Post-bullpen flush is the same as post-game: band exercises within 30 minutes.

Catcher-Specific In-Season Management

Catchers are the forgotten arm care case. They throw more times per game than any position player — every pitch returned to the pitcher, steal attempts, pick-offs, and end-of-inning throws add up. A catcher who catches 3 games per week may throw 200+ times in that span.

- Pre-game band work — catchers need extra external rotation sets (add 5 reps per set)
- Receiving warm-ups count — treat warm-up tosses to the pitcher as part of throwing volume
- Track steal and pick-off attempts per game — high-effort pop throws are the most stressful throw in baseball
- Day after behind the plate — bands only or complete rest
- **Two catching days per week maximum** for youth players 14 and under

When to Say "My Arm Needs a Day"

Taking a day off is not weakness. It is not letting your team down. An athlete who communicates proactively about arm soreness and takes a planned rest day is far more valuable than one who plays through pain, breaks down, and misses three weeks. Coaches who understand player development will respect this. If they don't — that's important information about the program you're in.

OFF-SEASON ARM DEVELOPMENT

CHAPTER 05

The off-season is where arm development happens. Not in-season maintenance, not game-day warm-ups — the off-season is when you have the time and the structure to make real, lasting improvements to your arm strength, velocity, and durability. Use it intentionally.

Phase 1: The Shutdown Period (Weeks 1–3)

Every arm needs **2–4 weeks of complete rest from throwing** after a season ends. This isn't optional. The connective tissue in your arm has been under stress for months. Complete rest allows the microscopic damage from throwing to fully heal. Players who skip the shutdown and go straight into fall ball or winter training never allow this healing to happen — and they start the next cycle already behind.

During the Shutdown — what you can do: light band work (maintenance only), weight room work (legs, core, upper body strength), sprint work and conditioning, mobility and flexibility work, film review and mental preparation. No throwing of any kind during the first 2 weeks. No plyo balls, weighted balls, or long toss.

Phase 2: The Ramp-Up Period (Weeks 4–8)

Coming out of shutdown, the arm needs a gradual progression back to full throwing. The ramp-up is not just about getting loose — it's about reloading the tendon, ligament, and muscle tissue progressively so that by Week 8, you can handle high-intensity throwing with confidence.

WEEK	DISTANCE	EFFORT	VOLUME
Week 4	30–45 feet	50–60%	3x/week, 20 throws
Week 5	45–75 feet	60–65%	3–4x/week, 25–30 throws
Week 6	75–120 feet	65–70%	4x/week, 35–40 throws
Week 7	100–180 feet	70–80%	4x/week, 40–50 throws + begin pull-down
Week 8	Full long toss distance	75–85%	4–5x/week, full sessions

Phase 3: Weighted Ball Introduction (Weeks 9–12)

Weighted ball training, when done correctly, is one of the most effective velocity development and arm strengthening tools available. The Driveline Baseball system — widely used at professional and elite amateur levels — uses both overload (heavier balls) and underload (lighter balls) to develop arm speed and strength simultaneously.

WEIGHTED BALL SAFETY

Weighted ball programs carry higher injury risk than conventional throwing. They are NOT appropriate for players with any current arm pain, recent injury, or players under age 14. Always complete the full ramp-up period before introducing weighted balls. If you feel any elbow or shoulder pain during weighted ball work, STOP immediately.

Driveline-Style PlyoCare Ball Protocol (Intro): - Balls used: 100g, 150g, 250g, 325g PlyoCare balls (or equivalent plyometric balls) - Wall work (Weeks 9–10): Standing 6–8 feet from a wall. Reverse throws, pivot pickoffs, rocker switches. 10 reps each per ball weight. - Roll-in throws (Weeks 10–11): Chest-height wall targets, aggressive rocker throws into wall. Focus on arm speed. - Plyo partner throws (Week 12): 20–30 feet, progressive effort. Lead with hips, aggressive arm action. - After each session: 10–15 minutes of standard long toss to normalize the arm.

Strength Training for Arm Support

The arm doesn't throw in isolation. A powerful, stable kinetic chain reduces the stress placed on the arm by transferring force more efficiently.

KEY STRENGTH TRAINING FOCUS AREAS

- **Posterior chain** (hamstrings, glutes, lower back) — drives hip rotation, reduces arm-dominant throwing
- **Scapular stabilizers** (mid/lower trap, serratus anterior) — control the shoulder blade during throwing
- **Rotator cuff** (external rotators, supraspinatus) — decelerate the arm after release
- **Forearm and grip** (wrist flexors/extensors, pronators) — control the ball through release
- **Core** (anti-rotation, rotational power) — the bridge between lower body drive and arm delivery
- **Hip flexors and hip mobility** — stride length and hip load determine how much the arm needs to do

RECOVERY SYSTEMS

CHAPTER 06

Recovery is not passive. Recovery is what happens when you make intentional choices after throwing — choices about nutrition, sleep, tissue work, and active movement. The player who recovers faster between outings can handle more throwing volume with less breakdown. That player gets more reps, more development, and better results.

Post-Outing Band Flush Routine

Within 30 minutes of finishing your last throw, complete the post-throw band flush. This is not a conditioning workout — it is a recovery protocol. Use a light band and focus on blood flow through the posterior shoulder — the muscles that did the most deceleration work.

EXERCISE	SETS × REPS	CUE
Band Pull-Backs (Reverse Throws)	2 × 20	Target posterior shoulder deceleration muscles
Horizontal Abduction	2 × 20	Flush blood through posterior shoulder
Shoulder Flexion (Band)	2 × 15 each	Restore range of motion

Ice vs. No Ice: The Modern View

For decades, icing the arm after pitching was standard practice. Modern sports science has significantly complicated this picture. Ice does reduce inflammation — but inflammation is part of the tissue repair process. Systematically shutting down inflammation after every outing may actually slow the adaptation process that makes the arm stronger.

ICE WHEN	SKIP ICE WHEN
High-volume outing (100+ pitches, 7+ innings)	Routine between-inning or bullpen work
Acute pain or swelling present	Normal soreness with no acute pain
First high-intensity outing after a rest period	Low-volume outings (under 40 pitches)
Directed by a medical professional	Arm feels fine post-outing

Heat vs. Ice Timing Protocol: - Ice (within 0–2 hours post-throwing): Only for acute pain, significant swelling, or high-volume outings. 15–20 min max. - Heat (24–48 hours after): Promotes circulation and loosens tight tissue. Use before Day 2/3 light throwing sessions. - Contrast therapy (advanced): Alternating heat/ice (3 min heat, 1 min ice, 4 rounds) shown to improve recovery in high-frequency throwers.

Sleep and Nutrition as Arm Care

This section gets skipped in most arm care resources. Don't skip it. **Your arm heals while you sleep.** Growth hormone peaks during deep sleep and drives tissue repair. A player getting 6 hours per night recovers more slowly than one getting 8–9. This is not opinion — it's physiology.

> **RECOVERY TARGETS**
>
> - **Sleep:** 8–9 hours minimum for growing athletes. Arm repair happens predominantly during deep sleep.
> - **Protein:** 0.7–1.0g per pound of bodyweight. Post-outing priority: protein within 30–60 minutes.
> - **Hydration:** 3–4 liters of water daily minimum. Dehydrated tendons are less elastic and more prone to injury.
> - **Anti-inflammatory foods:** Omega-3s (salmon, walnuts, flaxseed), tart cherry juice, turmeric. Reduce processed foods.

Soft Tissue Work: Foam Rolling for the Throwing Arm

The lat, pec, and posterior capsule all tighten significantly from throwing. Tight lats restrict hip hinge and trunk rotation. Tight pecs alter shoulder position. Foam rolling and targeted self-myofascial release helps restore the mobility your mechanics depend on.

Key areas for foam rolling / myofascial release: - Lat: Side-lying, roller under armpit and along the lateral ribcage. 30–45 sec per side. - Pec minor: Lacrosse ball in pec minor (just inside the front shoulder). 30 sec. - Posterior capsule: Sleeper stretch or cross-body stretch held 45–60 sec each arm. - Thoracic spine: T-spine roller work for 60 sec — improves trunk rotation. - Forearm: Lacrosse ball on forearm extensors and flexors. Reduces grip and wrist tightness.

WARNING SIGNS — WHEN TO SHUT DOWN

CHAPTER 07

The most important skill in arm care is knowing when to stop. Players who recognize warning signs early and respond appropriately avoid surgery. Players who play through warning signs end up on the operating table. This chapter is not about fear — it is about intelligence.

CRITICAL RULE: When in doubt, sit out. If you are unsure whether what you are feeling is normal soreness or a warning sign, take the day off. If it resolves in 24–48 hours, you are fine. If it persists or worsens, see a medical professional. There is no game, no showcase, and no tryout worth a UCL.

Dead Arm: What It Is and What to Do

Dead arm is a well-documented phenomenon where the arm feels heavy, powerless, and sluggish — often after a period of high throwing volume. The ball comes out with no life. This is your arm telling you it needs rest, not more throwing.

DEAD ARM PROTOCOL

- STOP throwing immediately. No playing through dead arm.
- Complete rest for 3–5 days. Bands only, no baseball.
- If dead arm persists beyond 5 days with rest, see a sports medicine physician.
- Do NOT attempt to "throw through" dead arm. This is how small problems become surgery.

Sharp Pain vs. Dull Pain: Knowing the Difference

DULL SORENESS (NORMAL)	SHARP PAIN (WARNING)
General fatigue feeling in shoulder or arm	Sharp, stabbing, or shooting pain at any point
Soreness that goes away in 24–48 hours	Pain that increases with throwing
Stiffness the morning after high-volume outing	Pain that doesn't resolve in 48–72 hours
Responds positively to bands and light throwing	Pain that wakes you up at night

Elbow Pain on the Inside (Medial): UCL Stress

> **STOP AND SEE A DOCTOR: MEDIAL ELBOW PAIN**
>
> Pain on the inside of the elbow (the medial side) is the primary symptom of UCL stress. The UCL is the ligament that holds the elbow together under the valgus stress of throwing. Do not continue throwing with medial elbow pain — period. See a sports medicine physician or orthopedic surgeon. Request an MRI with contrast if necessary. Catching a partial UCL tear early — with rest and PT — may avoid surgery entirely. Catching it late means Tommy John surgery and 12–18 months of rehabilitation.

Sudden Velocity Loss as an Early Warning

This is one of the most overlooked warning signs in baseball: a sudden, unexplained drop in velocity. If your PitchForge or CatchForge data shows a 3–5+ mph drop in velocity that persists across multiple sessions, this is not a mechanical issue — it is an arm health issue. The body protects a stressed or injured arm by inhibiting the muscles that create maximum velocity. **Velocity is your arm health barometer.**

- 3–4 mph drop in a single session: Rest that day. Monitor next session.
- 3+ mph drop that persists 2+ sessions: Full rest for 5–7 days. Bands only.
- 5+ mph unexplained drop: Stop throwing. See a medical professional.
- Gradual decline over a season: Classic cumulative fatigue. Structure a rest week.

Having the Conversation with Your Coach

Telling a coach that your arm doesn't feel right can feel like the hardest thing in the world. Players fear losing their spot, being seen as soft, or letting the team down. Here is the reality: a coach who pressures you to throw through genuine pain is putting their short-term competitive interests ahead of your long-term health and career.

Scripts that work: "Coach, my arm has been sore for three days and it's not going away. I want to take a day and see if it responds." / "I've been tracking my velocity and had a significant drop I can't explain. I think I need a few days off." / "I have some elbow discomfort on the inside that I want to get checked out before it becomes a bigger issue." A good coach will respond to this with appreciation.

POSITION-SPECIFIC ARM CARE

CHAPTER 08

Every position on the field places unique demands on the throwing arm. A pitcher's workload is measured in pitches and innings. A catcher's in receptions and steal attempts. An infielder's in quick-release throws and double plays. Each position requires adjustments to the core arm care system to address its specific demands.

Pitchers

Pitchers face the highest arm stress of any position — repeated maximum-effort throws at extreme arm speeds, often with breaking ball grip stress and deceptive arm paths. Pitchers need the most structured arm care protocols and the most conservative workload management.

PITCHER ARM CARE NON-NEGOTIABLES

- Full band routine before every outing — no exceptions, including bullpen sessions
- Pitch counts enforced strictly — follow USA Baseball age-appropriate guidelines
- Mandatory rest days — follow the 4-day cycle. Never pitch on consecutive days.
- Post-start flush within 30 minutes — exercises 7, 9, 10 from band sequence
- Full shutdown after final game — minimum 3 weeks of no throwing
- Track cumulative season pitch count — it is more predictive of injury than single-game counts

Catchers

The catcher position demands elite arm strength combined with elite arm care discipline. Catchers throw in an awkward, explosive motion from behind the plate and must maintain pop-time consistency across an entire game and across an entire week. Volume management for catchers often falls through the cracks because their throwing isn't tracked the way pitchers' is.

- Extra external rotation work — add 5 reps to every external rotation set in the band routine
- **Pop-time tracking as health data** — CatchForge pop time trending downward equals arm fatigue
- Max 2 full catching games per week for players 14 and under

- Steal-attempt volume management — high-effort throws to second or third are the most stressful throws in baseball
- Between-inning warm-up throws count — don't add extra warm-up throws casually

Infielders

Infielders make an enormous number of short, explosive throws — often from awkward fielding positions. The key stresses are quick-release mechanics (less warm-up time than other positions), lateral throws, and the occasional all-out throw from deep in the hole.

INFIELDER ARM CARE FOCUS

- Band routine timed to ground ball and fielding practice warm-up — 6–8 minutes minimum
- Pull-back exercises (Band Pull-Backs #7) — prepare specifically for deceleration after quick-release throws
- Footwork first — most arm injuries on infield throws come from compensating for poor footwork, not from bad arm mechanics
- Double-play arm: shortstops and second basemen take extra stress from jump throws — track volume and rest accordingly

Outfielders

Outfield throws are the longest, highest-effort throws on the field — full-extension crow-hop throws from warning track depth that demand complete shoulder elevation and maximum arm speed. Outfielders often underestimate their throwing workload because they make fewer throws than infielders, but the intensity per throw is significantly higher.

- Extra shoulder flexion work in band routine — outfield throws require full shoulder elevation
- Long toss is essential — outfielders must maintain throwing distance across the full season
- Track all-out throws: relay throws, extra-base cut-offs, and home-plate attempts count as high-intensity events requiring 2–3 recovery days
- Warning track throw technique: lead with the glove side, crow-hop footwork, full follow-through — never short-arm an outfield throw

A Note on Year-Round Athletes

If you're a multi-sport athlete — playing basketball, football, or wrestling in addition to baseball — your arm gets rest built into the calendar. That's an advantage. When you return to throwing, use the ramp-up progression from Chapter 5 regardless of how long you've been away. If you took 6+ weeks off from throwing, start at Week 4 of the ramp-up and progress forward.

500%
UCL INJURY INCREASE IN YOUTH PLAYERS

8–12
PRE-THROW ROUTINE MINUTES

4
DAYS BETWEEN STARTS

3
WEEKS MINIMUM OFF-SEASON SHUTDOWN

USING YOUR FORGE DATA AS AN ARM HEALTH SIGNAL

CHAPTER 09

Your FleetForge data — PitchForge velocity readings and CatchForge pop-time data — is not just a performance metric. It is an arm health barometer. Velocity is one of the first things the body protects when the arm is under stress. Before pain becomes obvious, before mechanics break down visibly, velocity drops. If you are tracking your data consistently, you will see the warning before it becomes a crisis.

PitchForge Velocity as an Arm Health Indicator

A pitcher's velocity fluctuates normally — by 1–2 mph depending on warm-up quality, temperature, fatigue, and game adrenaline. What you are looking for is **the pattern, not the individual reading.**

VELOCITY CHANGE	INTERPRETATION	ACTION
±1–2 mph game to game	Normal variation	Monitor only
3–4 mph single-session drop	Fatigue signal	Rest that day. Recheck next session.
3+ mph that persists 2+ sessions	Arm stress indicator	Full rest 5–7 days. Bands only.
5+ mph unexplained drop	Potential injury	Stop throwing. See a sports medicine physician.
Gradual season-long decline	Cumulative fatigue	Build a scheduled rest week into your calendar.

How to Track Your Velocity Over Time

The power of PitchForge data comes from trends — not individual readings. Set a baseline in the first week of a new training block and compare consistently. Use the same conditions when possible (same warm-up, same distance, same time of day). The goal is not to obsess over daily numbers — it's to notice when a pattern breaks from your normal range.

FORGE DATA TRACKING SYSTEM

- **Establish a baseline:** 5–10 consecutive sessions at the start of each block
- **Flag drops of 3+ mph:** Log the date, the drop amount, and any contextual factors (game the day before, increased bullpen volume, schedule change)
- **Track over the season:** A gradual decline across 4–6 weeks is almost always cumulative fatigue
- **Compare to arm feel:** If your data drops and your arm feels fine, watch carefully. If both drop together, rest immediately.

CatchForge Pop Time as an Arm Health Tool

Pop time — the time from pitch receipt to ball arrival at second base — is one of the most measurable arm metrics in baseball. A catcher who normally throws 1.95–2.00 and drops to 2.10–2.15 over the course of a week hasn't gotten slower mentally or mechanically. Their arm is fatigued. CatchForge tracks this pattern automatically.

- Baseline your pop time at the start of each season and after each rest period
- 0.05 seconds added to pop time across 2+ sessions: arm rest day recommended
- 0.10 seconds added and persistent: take 3–5 days of bands-only throwing
- Sudden pop time drop (getting faster): normal early-season improvement — document and celebrate

Building Your Arm Health Log

The most effective arm care athletes keep a simple log — not a complicated spreadsheet, just a daily note. Date, throwing activity, velocity or pop time, arm feel (1–10), and any notable soreness. Over weeks and months, this log becomes your personal arm health database. You'll start to see patterns: your arm always feels best after 2 full rest days; your velocity peaks on Day 3 after a start; dead arm always follows your high-pitch weeks. That knowledge is power.

YOUR ARM IS YOUR INVESTMENT

Every professional pitcher who has ever lost a season or a career to a UCL tear started with a small, manageable warning that was ignored. Every single one. The data, the warning signs, the protocols in this book exist for one reason: to give you the knowledge to catch that warning when it's still small. Your arm is your career. Protect it like the investment it is.

CHAPTER-BY-CHAPTER QUICK REFERENCE

- **Ch. 1:** Mindset — arm care is everything you do as an athlete
- **Ch. 2:** Pre-throw protocol — 8–12 min, 11 exercises, every single session
- **Ch. 3:** Long toss — stretch out, peak distance, pull down. Bands first, always.
- **Ch. 4:** In-season — 4-day cycle, game-day timeline, bullpen management
- **Ch. 5:** Off-season — shutdown, ramp-up, weighted balls, strength
- **Ch. 6:** Recovery — band flush, ice protocol, sleep, nutrition, soft tissue
- **Ch. 7:** Warning signs — dead arm, sharp pain, medial elbow, velocity drop
- **Ch. 8:** Position protocols — pitcher, catcher, infielder, outfielder
- **Ch. 9:** Forge data — velocity and pop time as arm health barometers

BUILT FOR PLAYERS WHO LAST.

The Arm Care Blueprint is the comprehensive arm health and longevity system for baseball players at every position. Every protocol is built on the work of Alan Jaeger, Driveline Baseball, and the best arm care specialists in the game — translated into practical, daily-use tools for youth and high school players.

FLEETFORGE ATHLETICS

APPENDIX A

PRE-THROW ROUTINE QUICK-REFERENCE CARD

Complete before EVERY throwing session. No exceptions. Total time: 8–12 minutes.

#	Exercise	Duration / Reps
1	Arm Circles (forward)	30 sec — small to large
2	Arm Circles (reverse)	30 sec — reverse direction
3	Band Pull-Aparts	15 reps — shoulder-width
4	External Rotations (low)	12 reps each arm
5	Elevated External Rotations	12 reps each arm
6	Internal Rotations (low)	12 reps each arm
7	Band Pull-Backs / Reverse Throws	12 reps each arm
8	Diagonal Pull-Downs	12 reps each arm
9	Horizontal Abduction	15 reps
10	Shoulder Flexion	12 reps each arm
11	Wrist Flexion / Extension	15 reps each direction

DYNAMIC PREP — AFTER BANDS, BEFORE BASEBALL

- Wrist Flicks (30 ft) — 30 sec, fingers and wrist only
- Elbow-Height Warm-Up Throws — 60 sec at easy effort
- Walk to starting distance — begin throwing program at 40–50 ft

Bands first. Dynamic prep second. Baseball third. Every time.

APPENDIX B

POST-THROW RECOVERY CARD

Complete within 30 minutes of your last throw.

BAND FLUSH SEQUENCE — 5 MINUTES

- Exercise 7: Band Pull-Backs — 2 sets × 20 reps, light resistance only
- Exercise 9: Horizontal Abduction — 2 sets × 20 reps, scap retraction
- Exercise 10: Shoulder Flexion — 2 sets × 15 reps each arm

Action	When	Notes
Band flush (3 exercises)	Within 30 min post-outing	Light resistance. Restore blood flow.
Hydration	Immediately post-outing	16–24 oz water minimum
Protein	Within 60 min	20–40 g protein to begin repair
Soft tissue work	1–2 hours post-outing	Foam roll lat, pec, posterior capsule
Ice	Only if significant soreness or swelling	15–20 min max. NOT every outing.
Heat	24–48 hours post-outing	Before next session to restore circulation
Sleep	8–9 hours that night	Most tissue repair happens during deep sleep

APPENDIX C

OFF-SEASON 12-WEEK ARM DEVELOPMENT CALENDAR

A structured 12-week ramp from full shutdown to game-ready. Pair with the full 11-exercise band routine and the long-toss progression in Chapter 3.

Week	Phase	Throwing	Bands / Weights	Notes
1–2	Shutdown	NONE	Light bands, weight room	Complete tissue recovery. No baseball.
3	Shutdown	NONE	Bands + strength	Begin adding weight room intensity
4	Ramp-Up	30–45 ft, 50%, 3×/wk	Full band routine daily	First throws post-shutdown
5	Ramp-Up	45–75 ft, 60%, 3–4×/wk	Full bands + weights	Increase distance gradually
6	Ramp-Up	75–120 ft, 65%, 4×/wk	Full bands + weights	Begin pull-down phase
7	Ramp-Up	120–180 ft, 70%, 4×/wk	Full bands + weights	Extend to comfortable max
8	Full LT	Full long toss, 80%, 4–5×/wk	Full bands + weights	All phases, full session
9	Weighted	Full LT + wall work intro	Full bands + weights	Add PlyoCare wall routine
10	Weighted	Full LT + roll-in throws	Full bands + weights	Increase weighted ball intensity
11	Weighted	Full LT + plyo partner	Full bands + weights	Peak weighted ball training
12	Peak	Full LT + bullpen work	Full bands + weights	Pre-season prep. Game-ready.

APPENDIX D

IN-SEASON WEEKLY PLANNER

Starting Pitcher Template (4-Day Rotation)

Day	Activity	Band Routine	Recovery
Start Day	Pre-game full protocol + game	Full 11-ex pre-game	Band flush post-game (30 min)
Day +1	Rest	Bands only — flush	Hydration, sleep, soft tissue work
Day +2	Active recovery	Full bands + light LT	Heat 24–48 h post-start
Day +3	Bullpen (30–45 pitches)	Full bands pre-bullpen	Band flush post-bullpen
Day +4 (next start)	Full pre-game protocol	Full 11-ex + LT + flat	Compete

Position Player / Catcher Weekly Template

Day	Game Schedule	Arm Care	Recovery Priority
Monday	Game or practice	Full bands pre + flush post	Standard
Tuesday	Game or practice	Full bands pre + flush post	If back-to-back games: rest day priority
Wednesday	Game or practice	Full bands pre + flush post	Midweek recovery check-in
Thursday	Practice or light	Full bands, short LT session	Active recovery day
Friday	Pre-game day	Full bands pre-game	Sleep priority
Saturday	Game day	Full bands pre + flush post	Post-game recovery
Sunday	Rest day	Light bands only	Mandatory recovery. No baseball.

APPENDIX E

WARNING SIGNS CHECKLIST

Run through this checklist before and after every outing. If ANY item is checked, follow the recommended action immediately.

STOP THROWING — SEE A DOCTOR IMMEDIATELY

- Pain on the inside (medial) of the elbow during or after throwing
- Sharp, stabbing pain anywhere in the arm or shoulder during a throw
- Pain that wakes you up at night
- Visible swelling or warmth in the elbow or shoulder
- Sudden loss of 5+ mph that does not return after rest
- Pain that gets WORSE as you continue throwing (not better)
- Numbness or tingling down the arm or into the fingers

REST 3–5 DAYS — MONITOR CLOSELY

- Dull aching soreness that doesn't resolve in 48 hours with rest and bands
- Velocity drop of 3+ mph that persists across two consecutive sessions
- CatchForge pop time trending up 0.05+ sec above baseline for 2+ sessions
- Dead arm feeling — heavy, powerless, ball has no life
- Stiffness in the shoulder or elbow that doesn't loosen up with warm-up

MONITOR — ADJUST TRAINING

- Normal fatigue soreness that resolves within 24–48 hours
- Velocity slightly below baseline in a single session (1–2 mph)
- Mild stiffness that fully resolves during warm-up
- Feeling tired but not painful after consecutive high-volume days

REMEMBER

- This checklist is a guide — not a substitute for professional medical evaluation.
- When in doubt, sit out. A season lost to caution is far better than a career lost to an ignored injury.

- Your arm is your investment — protect it accordingly.