USA PRIME BASEBALL & SOFTBALL

OFFSEASON STRENGTH & CONDITIONING GUIDE

2026–2027

7U THROUGH 18U • ATHLETES • PARENTS • COACHES

20	5	4	14
WEEK PROGRAM	AGE GROUPS	TRAINING PHASES	FULL WORKOUTS

Educational resource only • Not medical advice • Athletes should be medically cleared before beginning any training program

TABLE OF CONTENTS

Welcome & Important Notice 3
USA Prime Baseball & Softball Training Philosophy 4
How To Use This Guide 5
Long-Term Athletic Development 6

AGE-GROUP PROGRAMS

7U – 9U Program: Athletic Foundations 8
10U – 12U Program: Movement & Strength Foundations 9
13U – 14U Program: Performance Development 10
15U – 16U Program: Advanced Athletic Development 11
17U – 18U Program: HS Performance & College Prep 13

PLANNING THE OFFSEASON

Baseball & Softball Considerations 15
Offseason Training Calendar 17

THE WORKOUTS

Complete Workout Programs 19
Workouts: 7U – 9U 20
Workouts: 10U – 12U 22
Workouts: 13U – 14U 24
Workouts: 15U – 16U 26
Workouts: 17U – 18U 28

TRAINING LIBRARIES

Speed & Agility Library 30
Plyometric Development 32
Rotational Power & Medicine-Ball Training 33
Strength Exercise Library 34

HEALTH, RECOVERY & SAFETY

Arm Care 37
Mobility 39
Conditioning 40
Recovery & Athlete Education 41
Training Safety 43

TOOLS & RESOURCES

At-Home Training Options 44
Athlete Tracking Sheets 46
Offseason Athlete Scorecard 48
How Parents Can Help Their Athlete 50
Coach Guide 51
Frequently Asked Questions 52
Sources & References 54

This guide is educational and is not medical advice. Athletes should be cleared by a physician before beginning a training program, and any pain or injury should be evaluated by a qualified medical professional.

WELCOME & IMPORTANT NOTICE

READ THIS PAGE BEFORE STARTING THE PROGRAM

This guide is the official offseason strength and conditioning resource for USA Prime Baseball & Softball athletes, ages 7U through 18U, for the 2026–2027 offseason. It was built from published position statements, peer-reviewed sports science, and established youth athletic development practice, then organized into a single system our athletes, parents, and coaches can actually use.

Our goal is not to make young athletes tired. Our goal is to make them **better movers, stronger, faster, more explosive, and more durable** — and to keep them healthy enough to still love this game at 18, at 22, and beyond.

IMPORTANT — PLEASE READ

This guide is educational information, not medical advice. It is not a substitute for care from a physician, athletic trainer, or physical therapist, and it is not an individualized return-to-throwing or return-to-play program.

- Every athlete should be cleared by a physician (annual sports physical at minimum) before beginning a training program.
- Athletes with a current injury, a history of injury, a medical condition, or any ongoing pain must be evaluated and cleared by a qualified medical professional first. Follow that professional's instructions over anything in this guide.
- **Pain is never something to train through.** Arm pain, joint pain, back pain, sharp pain, or pain that lingers after a session means stop, report it, and get it looked at.
- Athletes under 14 — and any athlete new to resistance training — should train under the direct supervision of a qualified adult.
- USA Prime Baseball & Softball does not recommend dietary supplements for minors. Nutrition guidance in this manual is general education only. Individual nutrition questions belong with a physician or registered dietitian.

WHAT THIS GUIDE IS

- A complete 20-week offseason plan (November 2026 – March 2027) divided into four training phases.
- Five separate, age-appropriate programs — not one program shrunk down for younger kids.
- Full workouts with sets, reps, rest, coaching cues, common mistakes, and easier/harder options.
- Libraries for speed, plyometrics, rotational power, strength, arm care, and mobility.
- Home options for athletes without gym access, plus printable tracking sheets.
- Education for parents and coaches, an FAQ, and a full source list.

WHAT THIS GUIDE IS NOT

- It is not a throwing program, a pitching program, or a hitting program. Strength and conditioning *supports* skill work — it never replaces it, and it never competes with it for an athlete's recovery.
- It is not a weighted-ball or velocity program. Those decisions belong to your throwing coach and medical staff.
- It is not a guarantee. No training program eliminates injury risk. Good programming, honest communication, and smart workload management reduce it.

THE ONE THING TO REMEMBER

A 7-year-old is not a small 18-year-old. Their bones, nervous system, hormones, attention span, and training history are all different. That is why this manual has five different programs instead of one. Find your athlete's age group and start there — not where their friend, sibling, or teammate is training.

USA PRIME BASEBALL & SOFTBALL TRAINING PHILOSOPHY

THE PRIME STANDARD — HOW AND WHY WE TRAIN

Baseball and softball are short-burst, high-effort, rotational sports. A game is a long series of near-maximal efforts — a swing, a throw, a first step, a sprint to a ball in the gap — separated by rest. Our training reflects that reality. We train to be **explosive and resilient**, not to be exhausted.

THE SIX PILLARS OF THE PRIME STANDARD

PILLAR	WHAT IT MEANS	WHAT IT LOOKS LIKE IN TRAINING
1. Athlete First, Player Second	General athleticism is the foundation. A better athlete becomes a better ballplayer faster than a specialist becomes a better athlete. All youth should be treated as athletes and given the chance to build athleticism in a developmentally appropriate way.[2]	Sprinting, jumping, landing, crawling, skipping, throwing, changing direction — in every age group, every phase.
2. Move Well Before Move Hard	Technique earns load. An athlete owns a movement pattern with body weight before adding resistance, and owns resistance before adding speed or height.	Squat pattern before goblet squat; goblet squat before barbell. Snap-down before box jump. Landing before bounding.
3. Train The Right Quality	Speed, power, and strength are developed with quality reps and full rest. Conditioning is developed separately. Mixing them ruins both.	Sprints early in the session with long rest. Never "sprint until tired."
4. Rotate & Resist Rotation	These are rotational sports, but the core's first job is to *resist* unwanted motion so the hips and torso can rotate fast and safely.	Anti-extension, anti-rotation, and anti-lateral-flexion core work alongside medicine-ball throws.
5. Protect The Throwing Arm	The arm is the asset. We build the shoulder, scapula, forearm, and mid-back, we respect total throwing volume, and we take real time off from overhead throwing every year.[4,5]	Arm care in every session. Honest reporting of soreness. Coordinated lifting, lessons, and throwing.
6. Consistency Beats Intensity	Three honest sessions a week for twenty weeks beats two brutal weeks and a month off. Sleep, food, and showing up are part of the program.	Tracking sheets, attendance, and a scorecard at the start, middle, and end of the offseason.

WHY "DEVELOPING ATHLETES" BEATS "GETTING THEM TIRED"

A session that leaves an athlete gassed is easy to design and easy to feel. It is also, for these sports, mostly the wrong stimulus. Fatigue is not the goal — **adaptation** is. When an athlete is fatigued, sprint speed drops, jump height drops, bat speed and throwing intent drop, and movement quality gets sloppy. Training in that state teaches the nervous system to produce force slowly and reinforces poor mechanics, which is the opposite of what a hitter, pitcher, or infielder needs.

So we build sessions in a deliberate order: the qualities that require a fresh nervous system come first (speed, jumps, throws, heavy or fast strength work), and the qualities that tolerate fatigue come last (accessory work, core, mobility, conditioning). Athletes should finish most offseason sessions feeling *worked but not wrecked*.

> **COACH'S NOTE: "HARD" IS NOT THE SAME AS "EFFECTIVE"**
>
> If an athlete's sprint times are slower in week 12 than in week 4, the program is not working — no matter how hard the sessions felt. That is exactly why we test and track.

THE QUALITIES WE BUILD

QUALITY	WHY BASEBALL & SOFTBALL ATHLETES NEED IT
Athletic movement & coordination	The base for every skill. Athletes who can control their body learn skills faster and break down less.
Strength	The parent quality. Strength underpins power, speed, deceleration, and tissue tolerance.
Speed & acceleration	Home-to-first, first step in the field, stealing bases. Almost all of it happens inside 20–30 yards.
Explosiveness & rotational power	Bat speed, exit velocity, and throwing velocity are expressions of fast force through the hips and torso.
Agility & change of direction	Reading a ball off the bat, crossing over, breaking on a dive, rounding a base.
Deceleration	The most under-trained quality in youth sport. Stopping safely is how athletes stay healthy.
Single-leg strength & balance	Hitting, pitching, and sprinting are single-leg events. Two-leg strength alone does not cover it.
Core strength & stability	Transfers force from the ground through the hips to the hands. Weak middle = power leak.
Mobility	Hips, ankles, thoracic spine, and shoulders must have range for mechanics to work.
Shoulder & scapular stability	Control of the shoulder blade is the foundation of a healthy throwing shoulder.
Arm-care habits	Habits — not one-time fixes. Done year-round, in small daily doses.
Recovery habits	Sleep, food, and rest days are where adaptation actually happens.

HOW TO USE THIS GUIDE

A FIVE-STEP PATH FOR ATHLETES, PARENTS, AND COACHES

STEP	DO THIS	DETAILS
1	Get cleared	Current sports physical. Any current pain or past injury goes to a medical professional before training starts.
2	Find your age group	Go to your athlete's age-group section (7U–9U, 10U–12U, 13U–14U, 15U–16U, 17U–18U). Read the whole section, including *why* it is built that way.
3	Check training age, not just birthday	Use the Training Readiness Check in the Long-Term Athletic Development section. A 15-year-old who has never lifted starts in the 13U–14U program and progresses from there. There is no shame in it — it is how you avoid getting hurt.
4	Follow the calendar	The Offseason Training Calendar runs 20 weeks, Nov 2, 2026 through Mar 21, 2027, in four phases. Each age group has its own weekly schedule.
5	Track it	Print the tracking sheets. Complete the Offseason Athlete Scorecard at week 1, week 10, and week 20.

HOW THE WORKOUTS ARE WRITTEN

Every workout in this manual follows the same ten-block template, so athletes always know what comes next:

#	BLOCK	PURPOSE
1	Dynamic Warm-Up	Raise body temperature, wake up the nervous system.
2	Movement Prep	Open hips, ankles, t-spine, shoulders; groove positions used later.
3	Speed / Acceleration	Short, fast, full rest. Always early while fresh.
4	Plyometrics / Jumps	Learn to land, then learn to launch. Age-appropriate only.
5	Medicine Ball / Rotational Power	Fast hips, connected torso, intent over ball weight.
6	Primary Strength	The big movement patterns: squat, hinge, push, pull, single-leg.
7	Accessory Strength	Fill in the gaps: posterior chain, upper back, arms, calves.
8	Core / Stability	Anti-extension, anti-rotation, anti-lateral flexion, plus controlled rotation.
9	Arm Care & Mobility	Cuff, scapula, forearm, and the ranges the sport takes away.
10	Cooldown / Recovery	Breathe down, note how the session felt, log it.

WHERE TO FIND CUES, MISTAKES, REGRESSIONS & PROGRESSIONS

To keep workout pages readable, each workout table lists the exercise, sets, reps, rest, and the single most important cue. The **Strength Exercise Library**, **Plyometric Development**, **Rotational Power**, and **Speed & Agility Library** sections then give the full breakdown for every exercise: detailed cues, the common mistakes we see, an easier regression, and a harder progression. Look the exercise up there the first few times you perform it.

READING THE PRESCRIPTIONS

NOTATION	MEANING
3 × 8	3 sets of 8 repetitions.
3 × 6/side	3 sets of 6 repetitions on each side (12 total per set).
3 × :30	3 sets of 30 seconds.
Rest 60s	Rest 60 seconds between sets. Rest is prescribed on purpose — do not cut it short.
RIR 2	"Reps In Reserve." Finish the set feeling like you could have done 2 more good reps. This is how we manage load without max testing. RIR 3–4 is light; RIR 1–2 is heavy for our purposes.
Tempo 3-1-1	3 seconds lowering, 1 second pause, 1 second lifting.
BW	Bodyweight.
DB / KB / MB	Dumbbell / Kettlebell / Medicine Ball.

THE STOP RULES — EVERY ATHLETE, EVERY SESSION

Stop the exercise and tell a coach or parent if you feel: **sharp pain**, **pain in a joint**, **any arm or elbow pain**, **numbness or tingling**, **dizziness or chest tightness**, or **your technique breaking down and not coming back**. Stopping a set is never a failure. Hiding pain is.

LONG-TERM ATHLETIC DEVELOPMENT

WHY YOUNGER ATHLETES MUST NOT TRAIN LIKE HIGH-SCHOOL ATHLETES

This is the most important section in the manual. If you read only one part of this guide, read this one.

CHILDREN ARE NOT MINIATURE ADULTS

The NSCA's position statement on long-term athletic development is built on a simple idea: children and adolescents differ from adults physically, psychologically, and socially, and they experience uneven swings in growth and fitness along the way — so training has to be matched to the individual rather than copied down from an adult program.[2,3] Practically, that means four things are different for a young athlete:

WHAT'S DIFFERENT	WHAT IT MEANS FOR TRAINING
Growth plates are open	The ends of long bones are still cartilage and remain vulnerable to repetitive stress until the mid-to-late teens. Repetitive high-volume throwing, not lifting, is the main documented driver of youth arm injuries.[4,6]
The nervous system leads	Before puberty, most strength gains come from improved coordination and motor-unit recruitment, not bigger muscles. So young athletes get a huge return from learning to move well — and very little from heavy loading.[1]
Growth spurts change everything	During peak growth, limbs lengthen faster than coordination adapts. Athletes often get temporarily clumsier, tighter, and more injury-prone. Volume comes down and movement quality goes up during this window.
Motivation is different	A 12-year-old is not motivated by a 3-year strength plan. They are motivated by competition, games, variety, and success. Programming that ignores this gets abandoned.

WHAT THE RESEARCH ACTUALLY SAYS ABOUT KIDS AND WEIGHTS

The NSCA's position is that a **properly designed and supervised** resistance training program is relatively safe for youth, can improve muscular strength and power, can improve cardiovascular risk profile and bone health, can enhance motor-skill and sports performance, and can help reduce injury risk in sport — provided age-specific guidelines are followed.[1] The risk in youth training comes from *bad supervision, poor technique, and inappropriate loading* — not from resistance training itself.

THE REAL YOUTH SPORTS PROBLEM: VOLUME, NOT WEIGHTS

Major sports-medicine organizations converge on the same volume guidance for young athletes:[6,7,8,22,25]

- **Hours rule:** do not participate in more organized sport hours per week than the athlete's age in years (an 11-year-old should not exceed ~11 hours/week), with a practical ceiling of about 16 hours/week for older athletes.
- **Months rule:** avoid playing a single sport more than about 8 months per year. Take real time away.
- **Rest rule:** take at least 1–2 days off per week from organized sport.
- **Specialization:** delay year-round single-sport specialization as long as reasonably possible; multi-sport participation is associated with lower overuse-injury risk and does not appear to cost long-term performance in sports like ours where peak performance comes in adulthood.

USA Prime Baseball & Softball supports multi-sport athletes. Basketball, soccer, football, hockey, track, and volleyball all build qualities our sport needs. If your athlete plays a winter sport, they should train *less* in this program, not more — see the Coach Guide for how to coordinate.

THROWING VOLUME IS THE NON-NEGOTIABLE

MLB and USA Baseball's Pitch Smart program sets daily pitch maximums and required rest by age — for example, 50 pitches (ages 7–8), 75 (9–10), 85 (11–12), 95 (13–16), and 105 (17–18) — with required calendar-day rest that scales with pitch count, and no pitcher appearing as a pitcher on three consecutive days regardless of count.[4] USA Baseball also recommends taking at least 4 months off from competitive throwing each year, with 2–3 of those months continuous.[5] **The offseason is when that time off happens.** Softball pitchers need planned rest from the circle for the same reason — the windmill pitch produces shoulder distraction forces comparable to overhand throwing.[9,10,12]

THE DEVELOPMENT LADDER

STAGE	PRIMARY JOB	WHAT WINS AT THIS STAGE	WHAT WE AVOID
7U–9U Athletic Foundations	Learn to move and enjoy training	Skipping, sprinting, jumping, landing, crawling, tumbling, throwing many different objects, games and competition, bodyweight strength	Barbells, heavy loads, structured sets-and-reps grinding, conditioning "punishment"
10U–12U Movement & Strength Foundations	Build movement and strength foundations	Bodyweight mastery, light external load with excellent technique, med-ball intro, sprint mechanics, landing mechanics	Max testing, heavy barbell work, high-volume plyos, adult program templates
13U–14U Performance Development	Learn structured performance training	Technique on the main patterns, progressive load with reps in reserve, unilateral strength, acceleration mechanics, controlled plyos	Ego lifting, training through growth-spurt pain, chasing numbers over positions
15U–16U Advanced Athletic Development	Develop strength, speed and power	Progressive overload, posterior chain emphasis, real sprinting, deceleration and change of direction, rotational power	Program hopping, social-media max-out culture, ignoring recovery

17U–18U HS Performance / College Prep	Advanced performance and next-level preparation	Planned progression, power development, sprint training, workload management, professional habits, testing that matters	Unmanaged total load across lifting + lessons + throwing + showcases

TRAINING READINESS CHECK

Chronological age alone does not determine readiness. Before an athlete moves up to the next program, they should be able to answer **yes** to all of these:

	READINESS CRITERION
☐	Can follow instructions from a coach and stay on task for a full session.
☐	Performs a bodyweight squat to at least parallel with heels down, chest up, knees tracking over toes.
☐	Performs a hip hinge (touching a wall with the hips) with a flat back.
☐	Performs 5 clean push-ups (or incline push-ups) with a rigid body line.
☐	Holds a front plank for 30 seconds without the hips sagging.
☐	Lands a two-foot jump quietly, with knees tracking over toes, and holds the landing for 2 seconds.
☐	Balances on one leg for 20 seconds per side without touching down.
☐	Reports honestly when something hurts.

If an athlete cannot check every box, they are not being held back — they are being built. Spend 2–4 weeks in the prior program's Phase 1 work and re-check.

TRAINING AGE VS. BIRTHDAY

Training age is how long an athlete has trained consistently and competently. A 16-year-old with zero training age should begin in the 13U–14U program and progress within 4–8 weeks. A 13-year-old with three years of quality supervised training may use the 15U–16U loading parameters while keeping 13U–14U volume. Coaches and parents should make this call together, and always err toward the more conservative option.

7U – 9U PROGRAM: ATHLETIC FOUNDATIONS

LEARN TO MOVE AND ENJOY TRAINING

WHY THIS PROGRAM LOOKS THE WAY IT DOES

At this age the highest-value adaptation available is **coordination**. Strength improvements in pre-adolescent athletes come almost entirely from the nervous system learning to recruit muscle more efficiently, not from muscle growth — so the fastest way to make a 8-year-old stronger and more athletic is to have them practice a wide variety of movements with good quality and high enjoyment.[1,2] A barbell adds nothing here that a well-coached bodyweight session and a game of tag do not already provide, and it adds supervision risk.

The second reason is retention. Kids who enjoy training keep training. Kids who are drilled into boredom at 8 quit at 12. Every session at this age should contain competition, variety, and a win.

PHYSICAL QUALITIES WE ARE BUILDING

QUALITY	HOW WE BUILD IT
Body control & coordination	Animal crawls, skipping, marching, hopping patterns, obstacle courses, tumbling-style rolls.
Balance	Single-leg stands and reaches, beam/line walks, freeze games, single-leg hops to a stick.
Sprint mechanics	Short sprints (10–20 yd), wall drives, A-marches, "fast feet, tall posture" games. Always fully rested.
Jumping & landing	Two-foot jumps, stick-the-landing games, low hops, quiet landings.
Bodyweight strength	Squats, push-up variations (usually incline), rows with bands or a bar, bear crawls, planks, bridges.
Throwing athleticism	Throwing many implements — different balls, different weights, different hands — underhand and overhand. Sport-general, not sport-specific.
Fun & competition	Relay races, tag variations, obstacle-course timing, "beat your own score."

WHAT WE DO NOT DO AT 7U–9U

- No barbells, no heavy dumbbells, no weight machines, no max-effort testing.
- No depth jumps, no high-volume plyometrics, no hurdle hopping for height.
- No long-distance running, no conditioning used as punishment.
- No year-round baseball/softball-only training. Play other sports.
- No overhead throwing programs layered on top of training. This age group should be *off* from competitive pitching for most of this block.[5]

WEEKLY SCHEDULE

2 organized sessions per week, 35–45 minutes each, plus daily free play. Free play is not filler — it is the most important training stimulus available at this age.

MON	TUE	WED	THU	FRI	SAT	SUN
Session A	Free play	Rest / other sport	Session B	Free play	Other sport / play	Rest

An optional Session C can replace a free-play day for athletes who want more, but two quality sessions plus play is the target. Never three consecutive structured days.

HOW THE PHASES PROGRESS

PHASE	WEEKS	EMPHASIS AT 7U–9U
1 — Foundation	1–4	Teach the movements. Quiet landings, tall sprint posture, clean squat and plank. Lots of instruction, low volume.
2 — Strength	5–10	Add reps and a little bodyweight difficulty (incline push-up gets lower, plank gets longer, add a light 2–4 lb medicine ball).
3 — Strength + Power	11–15	Add simple jump variety (broad jump, lateral hop) and short reaction games. Still full rest.
4 — Speed + Power	16–20	More competition and games, short sprints and base-running shapes, athletic movement carried into preseason.

PARENT REALITY CHECK

If your 8-year-old comes home from a session sweaty, smiling, and talking about a game they won, the session worked. If they come home exhausted and sore, something was programmed for the wrong age.

10U – 12U PROGRAM: MOVEMENT & STRENGTH FOUNDATIONS

BUILD MOVEMENT AND STRENGTH FOUNDATIONS

WHY THIS PROGRAM LOOKS THE WAY IT DOES

This is the window where structured resistance training earns its place. Properly designed, supervised youth resistance training is safe and effective at this age and can improve strength, motor skill, bone health, and sport performance.[1] What changes from 7U–9U is *structure* — real sets, reps, and rest — not *intensity*. The athlete is learning a system they will use for the next decade.

This is also the ideal window to build landing and deceleration mechanics. Neuromuscular training programs that combine plyometrics, strength, and balance appear to be most effective at reducing knee-injury risk in female athletes when started in early adolescence, before the riskiest years.[17] For our softball athletes especially, the jumping and landing work here is injury-risk-reduction work, not just performance work.

PHYSICAL QUALITIES WE ARE BUILDING

QUALITY	HOW WE BUILD IT
Bodyweight strength mastery	Push-up, inverted row, split squat, glute bridge, plank family — owned before load is added.
Introductory resistance	Goblet squat, DB RDL, DB row, band press/pull, step-up. Light load, 8–12 reps, technique first.
Sprint mechanics & acceleration	Wall drives, A-march/A-skip, 10–15 yd accelerations, full rest.
Jumping & landing	Snap-downs, pogo hops, broad jump with a stuck landing, lateral bound to stick. Landing quality gates everything.
Medicine-ball work	Intro throws with 4–6 lb: chest pass, scoop toss, rotational wall throw. Speed, not weight.[18,19]
Mobility & coordination	Hip, ankle, t-spine work; crawling and skipping retained from the previous stage.
Shoulder & scapular health	Band pull-aparts, wall slides, prone Y-T-W. Introduction to arm care as a daily habit.

WEEKLY SCHEDULE

2–3 sessions per week, 45–55 minutes, non-consecutive days when possible.

	MON	TUE	WED	THU	FRI	SAT	SUN
2-day	Workout A	Play / other sport	Rest	Workout B	Play	Other sport	Rest
3-day	Workout A	Play / mobility	Workout B	Rest	Workout C	Other sport	Rest

LOADING RULES FOR THIS AGE GROUP

RULE	DETAIL
Rep range	8–15 reps on strength exercises. Higher reps with lighter load teaches technique and is safer.[1]
Effort	RIR 3–4. The athlete should finish every set looking like they could do several more clean reps.
Progression	Add reps first, then add a small amount of weight (typically 2.5–5 lb) only after the top of the rep range is hit with perfect form on all sets, on two separate sessions.
Max testing	None. No 1-rep maxes, no "how much can you squat" days.
Supervision	Direct adult supervision required for all resistance work.
Session count	2–3 per week, never on consecutive days for the same major pattern.

HOW THE PHASES PROGRESS

PHASE	WEEKS	STRENGTH	SPEED / POWER
1 — Foundation	1–4	Bodyweight only. 2–3 × 10–12. Teach patterns.	Sprint mechanics drills, snap-downs, pogo hops. No jumping for max height.
2 — Strength	5–10	Introduce light DB/KB: goblet squat, DB RDL, DB row. 3 × 10–12, RIR 3–4.	Broad jump to stick, 10–15 yd accelerations. Med ball 4–6 lb, 3 × 5/side.
3 — Strength + Power	11–15	Same exercises, top of rep range, small load increases. 3 × 8–10.	Add lateral bounds and skater hops. Rotational wall throws for speed.
4 — Speed + Power	16–20	Maintain strength; volume trims slightly.	More sprinting, base-running shapes, reaction games, competition.

WHAT WE DO NOT DO AT 10U-12U

- No barbell back squat, barbell bench press, or deadlift from the floor with meaningful load. Patterns yes, barbells no.
- No 1RM testing or "what can you max" culture.
- No depth jumps or box jumps for height. Jumps are for landing quality.
- No training a sore or painful arm. Report it and rest it.
- No unsupervised lifting.

13U – 14U PROGRAM: PERFORMANCE DEVELOPMENT

LEARN STRUCTURED PERFORMANCE TRAINING

WHY THIS PROGRAM LOOKS THE WAY IT DOES

This is usually the age band where athletes move through their fastest period of growth. Limbs get longer before coordination catches up, so athletes commonly feel clumsier, tighter, and more prone to aches during this window. Programming responds by **raising the priority of movement quality and lowering tolerance for sloppy volume**. This is not the year to chase numbers.

It is, however, the year to build a real training habit. Athletes here learn the main movement patterns properly, learn what "reps in reserve" feels like, learn to warm up without being told, and learn to log their training. Those habits are worth more over five years than any single training block.

PHYSICAL QUALITIES WE ARE BUILDING

QUALITY	HOW WE BUILD IT
Strength (technique-led)	Goblet/front-loaded squat, trap-bar or DB deadlift, DB bench/push-up, row, chin-up progression. 6–12 reps, RIR 2–3.
Unilateral strength	Split squat, rear-foot-elevated split squat, step-up, single-leg RDL. Exposes and fixes side-to-side gaps.
Acceleration & sprint mechanics	Wall drives, falling starts, 10 and 20 yd accelerations with 1:20+ work-to-rest.
Plyometrics (controlled)	Snap-down, pogo, broad jump, skater bound, single-leg landing progressions. Volume capped by landing quality.
Rotational power	Med ball 6–8 lb: scoop toss, rotational wall throw, shot-put throw, step-behind. Intent and sequencing over ball weight.[18]
Mobility	Daily routine becomes non-negotiable, especially through a growth spurt.
Shoulder & scapular stability	Full arm-care circuit becomes a standing part of every session.

WEEKLY SCHEDULE

3 sessions per week, 55–70 minutes. A fourth optional movement/mobility day is allowed if the athlete's total sport load is low.

MON	TUE	WED	THU	FRI	SAT	SUN
Workout A Lower emphasis	Mobility / arm care or other sport	Workout B Upper emphasis	Rest or other sport	Workout C Total body + speed	Other sport / play	Full rest

LOADING RULES FOR THIS AGE GROUP

RULE	DETAIL
Rep range	Primary lifts 6–12. Accessory 10–15.
Effort	RIR 2–3 in Phases 1–2, RIR 2 in Phase 3. Never grind a rep at the cost of position.
Progression	Hit the top of the rep range on all sets with clean technique on two sessions → then add 5–10 lb on lower-body, 2.5–5 lb on upper-body.
Barbell use	Only with a qualified coach, only after the pattern is mastered with DB/KB/trap bar, and only in Phases 3–4. Trap-bar deadlift is preferred over conventional for this age.
Growth spurt protocol	If the athlete is growing fast, has knee/heel pain (common growth-plate-related pain at this age), or feels newly awkward: cut plyometric and sprint volume by half, hold loads steady, add mobility, and get persistent pain evaluated.
Max testing	No 1RM. Track performance with broad jump, 10-yd sprint, and med-ball throw instead.

HOW THE PHASES PROGRESS

PHASE	WEEKS	PRIMARY STRENGTH	POWER & SPEED
1 — Foundation	1–4	3 × 10–12, RIR 3–4, tempo 3-1-1	Landing mechanics, snap-downs, pogos, sprint drills. Med ball 3 × 5/side, light.
2 — Strength	5–10	4 × 8–10, RIR 2–3	Broad jumps, skater bounds 3 × 4/side. 10 yd accelerations 6–8 reps.
3 — Strength + Power	11–15	4 × 6–8, RIR 2, plus one fast-intent lift	Contrast pairs (strength then jump). Step-behind med-ball throws. 10–20 yd sprints.
4 — Speed + Power	16–20	3 × 5–6, RIR 2, volume reduced	Sprint and change-of-direction emphasis, reactive drills, base-running shapes, med ball for speed.

GROWTH-RELATED PAIN IS COMMON — AND IT IS NOT "JUST GROWING PAINS" TO IGNORE

Pain at the front of the knee, the bottom of the kneecap, or the back of the heel is common during this growth window and is usually load-related. The answer is to reduce jumping and sprinting volume, keep training the patterns that do not hurt, and have it evaluated if it persists more than a couple of weeks or limits daily activity. Do not train through it and do not let an athlete hide it.

15U – 16U PROGRAM: ADVANCED ATHLETIC DEVELOPMENT

DEVELOP STRENGTH, SPEED AND POWER

WHY THIS PROGRAM LOOKS THE WAY IT DOES

By this stage most athletes have enough training age and enough hormonal support to respond strongly to progressive resistance training. This is the highest-return window for building the strength base that everything else sits on. Athletes who build real lower-body and posterior-chain strength now have a much higher ceiling for power, sprint speed, and rotational output at 17U–18U and in college.

It is also the window where **deceleration and change of direction** must be trained deliberately. Knee injuries in female athletes rise sharply through the mid-to-late teens, and multi-component neuromuscular training — plyometrics, strength, balance, and movement technique together — is the best-supported way to reduce that risk.[17] Our softball athletes get this as a permanent part of the program; our baseball athletes get it because stopping is how you play defense.

PHYSICAL QUALITIES WE ARE BUILDING

QUALITY	HOW WE BUILD IT
Lower-body strength	Front squat / back squat (with coaching) or heavy goblet, trap-bar deadlift, Bulgarian split squat, step-up.
Posterior chain	RDL, hip thrust, Nordic curl progression, back extension, single-leg RDL. Hamstrings and glutes are the sprint engine.
Upper-body strength	DB bench / landmine press, chin-up, single-arm row, inverted row, push-up variations, face pull.
Rotational power	Med ball 8–10 lb: full progression including shuffle-to-throw and step-behind. Measured for distance/velocity when possible.[18]
Speed & acceleration	10, 20, and 30 yd sprints. Base-stealing and home-to-first specific starts.
Deceleration & change of direction	Depth drops to stick, lateral shuffle to stop, 5-10-5, crossover mechanics, reactive cuts.
Plyometrics	Bounding, single-leg hops, reactive hops. Volume managed by ground-contact count.
Recovery literacy	Sleep, fueling, soreness, and load management become the athlete's responsibility, not just the parent's.

WEEKLY SCHEDULE

3–4 sessions per week, 60–80 minutes. Choose based on total sport load — a three-sport athlete or an athlete in a winter sport season uses the 3-day template.

	MON	TUE	WED	THU	FRI	SAT	SUN
3-day	A — Lower + Speed	Arm care / mobility	B — Upper + Rotational	Rest	C — Total Body + Change of Direction	Optional light play	Full rest
4-day	A — Lower + Speed	B — Upper + Rotational	Mobility / arm care	C — Lower + Change of Direction	D — Upper + Accessory	Optional conditioning	Full rest

LOADING RULES FOR THIS AGE GROUP

RULE	DETAIL
Rep range	Primary 4–10. Accessory 8–15. Power/speed work 1–5 reps with full rest.
Effort	RIR 2–3 in Phase 1–2, RIR 1–2 in Phase 3, RIR 2–3 in Phase 4 (intent shifts to speed).
Barbell use	Permitted with competent coaching and demonstrated technique. Squat and press variations should be loaded before deadlift variations from the floor.
Bench pressing	Allowed, but not the priority lift. Prioritize pulling volume — we program at least 2 pulling reps for every 1 pressing rep to protect the throwing shoulder and upper back. Consider DB and landmine variations, which allow a friendlier shoulder path.
Overhead pressing	Only for athletes with full, pain-free overhead range and clean scapular control. Landmine and incline pressing are the default alternatives for throwers.
Testing	Test broad jump, vertical jump, 10 yd, 20 yd, and rotational med-ball throw at weeks 1, 10, and 20. Use rep-max estimates (5RM or 8RM) rather than true 1RM for strength tracking.
Deload	Every 4–6 weeks, or any week with heavy travel, heavy school load, or accumulated fatigue: cut sets by ~40% and keep the loads.

HOW THE PHASES PROGRESS

PHASE	WEEKS	PRIMARY STRENGTH	POWER & SPEED
1 — Foundation	1–4	3 × 10–12, RIR 3, tempo work, re-teach positions	Landing and deceleration mechanics, pogos, snap-downs, sprint drills. Med ball light and fast.
2 — Strength	5–10	4 × 6–8, RIR 2–3, progressive load	Broad/vertical jumps, skater bounds, 10–20 yd accelerations. Med ball 3–4 × 5/side.
3 — Strength + Power	11–15	4–5 × 4–6, RIR 1–2, plus contrast pairing	Bounding, single-leg hops, 5-10-5, crossover starts, 20–30 yd sprints. Med ball heavier progressions.

4 — Speed + Power	16–20	3–4 × 3–5 moved fast, RIR 2–3, volume down ~30%	Max-intent sprinting, reactive change of direction, base-running specific work, med ball for velocity.

17U – 18U PROGRAM: HIGH SCHOOL PERFORMANCE & COLLEGE PREPARATION

ADVANCED PERFORMANCE AND PREPARATION FOR THE NEXT LEVEL

WHY THIS PROGRAM LOOKS THE WAY IT DOES

These athletes can handle real training — and they usually have the least available recovery. Between varsity seasons, travel schedules, showcases, lessons, throwing programs, school, jobs, and college recruiting, the limiting factor at 17U–18U is almost never willingness. It is **total workload**. So this program is built around progression *and* subtraction: knowing what to cut in a heavy week matters as much as knowing what to add in a light one.

The second priority is preparation for the next level. College strength staffs expect incoming athletes to know how to squat, hinge, press, pull, sprint, land, and warm themselves up — and to show up with honest training logs and honest reporting of injury history. That is what this block builds.

PHYSICAL QUALITIES WE ARE BUILDING

QUALITY	HOW WE BUILD IT
Maximal & relative strength	Squat and hinge variations progressed across 20 weeks with planned intensity waves.
Power & rate of force development	Jump variations, med-ball throws, trap-bar jumps, and contrast pairs (heavy lift paired with an explosive movement).
Sprint speed	Acceleration to 30–40 yd, with true max-velocity exposure for outfielders and base stealers.
Rotational power	Complete med-ball progression at 8–12 lb, measured where possible. Rotational throw output tracks with bat speed and throwing velocity in college-aged players.[18]
Deceleration & change of direction	Reactive cuts, crossover work, closing speed drills, planned eccentric exposure.
Mobility & arm care	Daily, non-negotiable, and specific to what the athlete's position takes away.
Workload management	Weekly load log covering lifting, throwing, lessons, games, and sleep.
Professional habits	Warm-up without being told. Track every session. Report pain early. Fuel and sleep on purpose.

WEEKLY SCHEDULE

3–5 sessions per week, 60–90 minutes, selected by total load. Most USA Prime athletes in this band should be on the 4-day template through Phases 2–3 and drop to 3 days in heavy competition or showcase weeks.

	MON	TUE	WED	THU	FRI	SAT	SUN
3-day high sport load	A — Lower + Speed	Arm care / mobility	B — Upper + Rotational	Rest	C — Total Body	Light play / recovery	Full rest
4-day standard	A — Lower + Speed	B — Upper + Rotational	Mobility / arm care	C — Lower + COD	D — Upper + Accessory	Optional conditioning	Full rest
5-day low sport load only	A — Lower + Speed	B — Upper + Rotational	E — Movement / Recovery	C — Lower + COD	D — Upper + Accessory	Conditioning + arm care	Full rest

LOADING RULES FOR THIS AGE GROUP

RULE	DETAIL
Rep range	Primary 3–8 depending on phase. Accessory 8–15. Power 1–5 with full rest.
Effort	RIR 1–2 on primary lifts in Phase 3. Never below RIR 1 in a team setting without direct supervision.
Pull:push ratio	Minimum 2:1 pulling to pressing across the week. Throwers need upper-back volume.
Overhead work	Earned, not assumed. Requires pain-free overhead range and clean scapular upward rotation. Landmine press is the default for pitchers.
Testing	Weeks 1, 10, 20: broad jump, vertical jump, 10 yd, 30 yd, rotational med-ball throw, and a 5RM or 3RM estimate on squat and trap-bar deadlift.
Deload	Planned in weeks 8 and 15, plus any week with a showcase, a college visit, or an exam week.
Throwing coordination	Heavy lower-body days should not sit the day before a heavy throwing day when avoidable. Upper-body pressing volume drops in weeks where throwing volume climbs.

HOW THE PHASES PROGRESS

PHASE	WEEKS	PRIMARY STRENGTH	POWER & SPEED
1 — Foundation	1–4	3–4 × 8–10, RIR 3, tempo, position re-set, unilateral emphasis	Landing, deceleration, pogos, sprint mechanics, submaximal med ball.
2 — Strength	5–10	4 × 5–8, RIR 2, progressive load. Week 8 deload.	Broad/vertical jumps, bounding, 10–20 yd accelerations. Med ball 4 × 4/side.
3 — Strength + Power	11–15	4–5 × 3–5, RIR 1–2, contrast pairs. Week 15 deload.	Max-effort jumps, trap-bar jumps, 20–30 yd sprints, 5-10-5, reactive COD.

4 — Speed + Power / Preseason	16–20	3 × 3–5 at 70–80% moved with maximum speed, volume down ~35%	Max-velocity sprinting, base-stealing starts, home-to-first, position-specific movement, med ball for velocity. Ramp into throwing.

COLLEGE PREPARATION CHECKLIST

- Can demonstrate and coach a squat, hinge, lunge, press, row, and chin-up.
- Can warm up independently and correctly in under 12 minutes.
- Knows their own numbers: broad jump, 10 yd, 30 yd, vertical, rotational throw, and current working loads.
- Keeps a training log — and can hand it to a college strength coach.
- Has an accurate injury history and knows their own arm-care routine cold.
- Sleeps 8–10 hours and eats breakfast. Every day. This one is not optional.[13,14]

BASEBALL & SOFTBALL CONSIDERATIONS

ONE SYSTEM, WITH POSITION-SPECIFIC EMPHASES

Baseball and softball athletes run the same program. Both sports demand rotational power, short-burst speed, single-leg strength, a healthy throwing arm, and the ability to stop. The differences are real but narrower than people assume — and they show up in *emphasis and volume*, not in a different set of exercises.

WHERE BASEBALL AND SOFTBALL DIFFER

FACTOR	BASEBALL	SOFTBALL	TRAINING IMPLICATION
Field dimensions	Longer base paths and outfield distances; more 20–40+ yd sprinting and longer throws.	Shorter base paths (60 ft) and a compressed field; the first 10–15 yards matter enormously.	Both train acceleration first. Baseball adds more max-velocity exposure; softball adds more first-step and 5–10 yd work.
Reaction time at the plate	Longer flight time from a longer distance.	Very short reaction window from 43 ft.	Softball benefits from extra emphasis on reactive drills and the ability to stay back and still rotate fast.
Pitching motion	Overhand, extreme external rotation, high elbow valgus stress.	Underhand windmill; shoulder travels through a full circle at high speed.	Different motions, similar demand. Windmill pitching produces shoulder distraction forces near body weight — comparable to overhand throwing.[9,10,11,12]
Knee-injury risk profile	Lower baseline non-contact knee-injury rate.	Higher non-contact ACL risk, rising through the mid-to-late teens.	Landing, deceleration, and neuromuscular training are emphasized for all athletes and never dropped for softball athletes.[17]
Season structure	Fall ball plus spring/summer; heavy tournament weekends.	Fall ball plus spring/summer; heavy tournament weekends, pitchers often throw multiple games.	Both need a genuine offseason with reduced throwing. Pitcher workload tracking is critical in both sports.

THE MYTH WE NEED TO KILL

"Underhand is natural, so softball pitchers don't need arm care." The biomechanics say otherwise. Peak compressive forces at the shoulder and elbow during the windmill pitch have been measured at roughly 70–98% of body weight, with substantial demand on the biceps-labrum complex to simultaneously resist distraction and flex the elbow — a combination that makes it susceptible to overuse injury.[9] Youth windmill pitchers show elbow and shoulder loads similar to those reported for baseball pitchers.[10] **Softball pitchers need arm care, workload limits, and planned rest from the circle.**

POSITION-SPECIFIC EMPHASES

Everyone does the base program. These are the accessory emphases we layer on top — typically 1–2 extra exercises per session, or a slight redistribution of volume.

POSITION	PHYSICAL DEMANDS	OFFSEASON EMPHASIS
Baseball Pitchers	Single-leg force production and absorption, hip and thoracic mobility, shoulder external/internal rotation balance, repeated high-velocity efforts.	Heavy emphasis on single-leg strength and lateral hip work; posterior chain; scapular control and cuff strength; t-spine rotation; hip internal rotation on the back leg. **Reduce or eliminate overhead pressing.** Take real time off from the mound. Lower-body strength is the highest-value training input for a pitcher.
Softball Pitchers	Long aggressive stride, front-leg braking, full-circle shoulder path at speed, high repetition counts within a weekend.	Front-leg eccentric strength (split squats, single-leg RDLs, lateral lunges) to handle braking; glute and adductor strength; shoulder cuff *and* biceps/forearm endurance; t-spine and lat mobility; core anti-extension so the torso doesn't hyperextend at release. Plan rest from the circle.
Catchers	Hundreds of deep squats per game, repeated high-effort throws from a compromised base, knee and hip loading, thoracic extension demands.	Ankle dorsiflexion and hip mobility; heavy posterior-chain and single-leg strength for knee resilience; hip adductor strength; anti-rotation core; t-spine extension and rotation. Transfer-and-throw footwork drills in Phase 4. Catchers who also pitch need especially careful workload tracking.[5]
Infielders	Lateral first step, low athletic positions, short-range deceleration, throws from awkward angles, quick transitions.	Lateral bounds and skater hops; crossover and shuffle mechanics; 5-10-5 and reactive change of direction; single-leg strength; hip adductor/abductor work; rotational med-ball from low and unbalanced positions.
Outfielders	Longest sprint distances in the sport; drop-step and crossover starts; closing speed; long throws.	True max-velocity sprint exposure (30–40 yd); bounding and single-leg plyometrics; drop-step and crossover mechanics; hamstring strength (Nordic progression, RDLs) for sprint-speed protection; deceleration for wall and gap work.
Position Players (all)	Rotational power, bat speed, base running, repeated short sprints.	Full med-ball progression; base-stealing and home-to-first acceleration; hip mobility; posterior chain; anti-rotation core; balanced pulling volume for shoulder health.
Two-Way Players	Everything above, plus the highest total workload risk in the organization.	The *lowest* added volume and the *strictest* load tracking. When a two-way athlete's week is full, the strength session gets trimmed — not the recovery.

A WORD ON THROWING PROGRAMS

This manual deliberately does not prescribe a throwing program, long-toss protocol, weighted-ball protocol, or pitch-count plan for an individual athlete. Those decisions belong to your throwing/pitching coach and, when there is any injury history, to a medical professional. What strength and conditioning does is build the body that *supports* throwing: legs, hips, core, upper back, scapula, cuff, and forearm. Follow Pitch Smart guidance for pitch counts and required rest, and take the recommended annual time off from competitive throwing.[4,5]

OFFSEASON TRAINING CALENDAR

20 WEEKS • NOVEMBER 2, 2026 – MARCH 21, 2027

The USA Prime Baseball & Softball offseason runs 20 weeks in four phases. Every age group follows the same phase structure — what changes is the training frequency, the loading, and the complexity inside each phase. Athletes who join late should start at Phase 1 regardless of the calendar date and compress later phases, not skip Phase 1.

PHASE OVERVIEW

PHASE	WEEKS	DATES	PURPOSE
Phase 1 Movement Quality & Foundation	1–4	Nov 2 – Nov 29	Restore what the season took away. Re-teach positions, build tissue tolerance with moderate loads and controlled tempo, rebuild mobility, install the warm-up and arm-care routines, and re-learn how to land. Baseline testing happens in week 1. **This is also when the throwing arm gets its real rest.**
Phase 2 Strength Development	5–10	Nov 30 – Jan 10	The biggest block. Build the strength base with progressive load in moderate rep ranges. Jumps and med-ball work are present but submaximal. Includes a built-in rest week over the holidays (week 8).
Phase 3 Strength + Power	11–15	Jan 11 – Feb 14	Convert strength into power. Heavier primary lifts paired with explosive work, full plyometric progressions, change of direction, and the fastest med-ball throwing of the offseason. The most demanding block of the year.
Phase 4 Speed + Power / Preseason	16–20	Feb 15 – Mar 21	Sharpen. Strength volume drops, bar speed and sprint speed become the point, and training looks more like the sport: base-running shapes, reactive movement, position-specific work. Throwing volume climbs as lifting volume falls. Final testing in week 20.

WEEK-BY-WEEK MAP

WEEK	WEEK OF	PHASE	FOCUS & NOTES
PHASE 1 — MOVEMENT QUALITY & FOUNDATION			
1	Mon Nov 2	Phase 1	**Testing week.** Baseline: broad jump, vertical, 10 yd, 20/30 yd, rotational med-ball throw, bodyweight. Complete the Athlete Scorecard. Teach the warm-up and arm-care routine.
2	Mon Nov 9	Phase 1	Technique focus. Tempo strength work, landing mechanics, mobility every day.
3	Mon Nov 16	Phase 1	Add volume slightly. Introduce med-ball scoop and rotational wall throws.
4	Mon Nov 23	Phase 1	Holiday week — Thanksgiving Nov 26. Two sessions is fine. Do not skip the week entirely; do not make it up by doubling.
PHASE 2 — STRENGTH DEVELOPMENT			
5	Mon Nov 30	Phase 2	Load introduction. Establish working weights at RIR 2–3.
6	Mon Dec 7	Phase 2	Progress load or reps. Broad jumps and skater bounds added.
7	Mon Dec 14	Phase 2	Heaviest week of the block so far. Watch technique on the last set.
8	Mon Dec 21	Phase 2 — **Deload**	**Holiday rest week.** Cut sets ~40%, keep loads. Two short sessions, mobility, play. Enjoy the break — it is programmed on purpose.
9	Mon Dec 28	Phase 2	Return to full sessions. Rebuild to week 7 loads.
10	Mon Jan 4	Phase 2	**Mid-point testing (week 10).** Re-test jumps and sprints. Complete the mid-offseason Scorecard.
PHASE 3 — STRENGTH + POWER			
11	Mon Jan 11	Phase 3	Intensity rises, reps drop. Introduce contrast pairs (13U+).
12	Mon Jan 18	Phase 3	Full plyometric progressions. Change-of-direction work added.
13	Mon Jan 25	Phase 3	Heaviest strength week of the offseason for 15U–18U.
14	Mon Feb 1	Phase 3	Maintain intensity, trim accessory volume. Med-ball throws for max distance/velocity.
15	Mon Feb 8	Phase 3 — **Deload**	Cut sets ~40%. Prepare for the shift to speed emphasis. Begin ramping throwing volume with your throwing coach.
PHASE 4 — SPEED + POWER / PRESEASON PREPARATION			
16	Mon Feb 15	Phase 4	Speed becomes the priority. Lifts move fast at moderate load. Sprint volume up.
17	Mon Feb 22	Phase 4	Base-running shapes, home-to-first, base-stealing starts, reactive change of direction.
18	Mon Mar 1	Phase 4	Position-specific movement. Conditioning shifts to repeated-sprint format.
19	Mon Mar 8	Phase 4	Volume drops again. Quality over quantity. Throwing volume near in-season levels.
20	Mon Mar 15	Phase 4	**Final testing week (ends Sun Mar 21).** Re-test everything from week 1. Complete the final Scorecard. Transition to the in-season maintenance plan.

TRAINING DAYS BY AGE GROUP

	ORGANIZED SESSIONS /	SESSION	FULL REST DAYS /

AGE GROUP	WEEK	LENGTH	WEEK	NOTES
7U–9U	2	35–45 min	2–3	Plus daily free play. Never 3 structured days in a row.
10U–12U	2–3	45–55 min	2–3	Non-consecutive days preferred.
13U–14U	3	55–70 min	2	Optional 4th mobility/movement day only.
15U–16U	3–4	60–80 min	1–2	3 days if in a winter sport season.
17U–18U	3–5	60–90 min	1–2	5 days only when total sport load is genuinely low.

MISSED WEEKS, TRAVEL, AND REAL LIFE

- **Missed one session:** move on. Do not double up.
- **Missed a full week:** repeat the previous week rather than jumping ahead.
- **Missed 2+ weeks:** drop back a full phase for at least one week before resuming.
- **Sick:** no training with fever, body aches, or a chest cold. Return at 50% volume for 2–3 sessions.
- **Winter sport in season:** use the 3-day template, drop conditioning entirely, and keep arm care and mobility.

COMPLETE WORKOUT PROGRAMS

THE UNIVERSAL WARM-UP, THEN AGE-SPECIFIC SESSIONS A / B / C / D

Every USA Prime Baseball & Softball session opens with the same two blocks. Athletes should be able to run this warm-up on their own by week 4 — and by 17U, without being asked.

BLOCK 1 — DYNAMIC WARM-UP (ALL AGES, 6–8 MINUTES)

EXERCISE	DOSE	KEY CUE	COMMON MISTAKE
Jog / jump rope / bike	2–3 min easy	Just get warm — nasal breathing, conversational.	Starting hard. This is not conditioning.
Leg Swings, front-to-back	10/leg	Stand tall, swing from the hip, no back arch.	Swinging the torso instead of the leg.
Leg Swings, side-to-side	10/leg	Hips square, toes forward.	Rotating the pelvis to get more range.
Walking Knee Hug	6/side	Rise to the toe of the stance leg; hug the knee to chest.	Rounding the back to pull the knee up.
Walking Quad Pull + Reach	6/side	Squeeze the glute of the stretched leg; reach the opposite arm tall.	Letting the low back arch.
Walking Toe Touch (Frankenstein)	6/side	Straight leg, flat back, reach to the toe.	Rounding the spine to touch.
Lateral Lunge	6/side	Sit into the bent hip, keep the trail leg straight, chest up.	Knee caving in on the loaded leg.
Inchworm to Push-Up Position	5	Walk the hands out, hold a rigid plank, walk the feet in.	Sagging hips in the plank position.
A-March	10 yd	Tall posture, toe up, knee up, drive the foot down under the hip.	Leaning back and reaching the foot out front.
A-Skip	10 yd	Same shape, add rhythm and pop off the ground.	Sloppy arms and a collapsing ankle.
High Knee Run → Butt Kick	10 yd each	Quick ground contact, stay tall.	Reaching the leg forward instead of cycling under the hip.
Build-Up Runs	2–3 × 20 yd	Accelerate to ~70–80%, decelerate under control.	Going 100% cold.

BLOCK 2 — MOVEMENT PREP (ALL AGES, 4–6 MINUTES)

EXERCISE	DOSE	KEY CUE	COMMON MISTAKE
90/90 Hip Switch	8/side	Stay tall, move from the hips, keep both knees on the ground.	Using the hands to force the knees down.
World's Greatest Stretch	4/side	Long lunge, elbow to instep, then open the chest to the ceiling.	Rotating from the low back instead of the mid-back.
Ankle Rock (knee to wall)	8/side	Heel stays down, knee travels over the second toe.	Letting the heel lift.
Glute Bridge	10	Squeeze the glutes, ribs down, finish with a straight line knee-to-shoulder.	Arching the low back to get higher.
Band Pull-Apart	15	Straight arms, pull the shoulder blades apart-then-together, ribs down.	Shrugging the shoulders up to the ears.
Wall Slide	10	Low back flat on the wall, slide the forearms up without losing contact.	Ribs flaring off the wall.
Bird Dog	6/side	Long from fingertip to heel; hips level.	Rotating the hips or arching the back.

BLOCK 10 — COOLDOWN & RECOVERY (ALL AGES, 3–5 MINUTES)

Every session finishes the same way: 5 slow nasal breaths lying on the back with feet elevated (exhale twice as long as the inhale), then 2–3 stretches for whatever felt tightest that day (see the Mobility section), then **fill out the training log** — loads used, how it felt, sleep last night, any pain. Two minutes of logging is what makes the next 19 weeks work.

WORKOUTS: 7U – 9U

SESSIONS A, B AND C • 35–45 MINUTES • GAMES-BASED

Use the universal warm-up (shortened to ~5 minutes) and movement prep. Sessions are taught as challenges and games. "Rest" at this age is usually the natural pause between turns — keep it moving without making it a conditioning session.

SESSION A — RUN, JUMP, CRAWL

BLK	EXERCISE	SETS × REPS	REST	COACHING CUE / GAME
1–2	Warm-up + Movement Prep	~8 min	—	Make it a follow-the-leader line.
3	Wall Drive Hold	3 × :10/side	30s	Tall body line, heel up, toe up, knee up.
3	10 yd Sprint (from a start line)	6 reps	45s	Race a partner. Push the ground back, stay low for 3 steps.
4	Snap Down to Athletic Stance	3 × 5	30s	Jump the feet out and freeze like a statue. Quiet feet.
4	Two-Foot Jump & Stick	3 × 5	45s	Land soft, knees over toes, hold 2 seconds. "Ninja landing."
5	Overhead Ball Slam (light ball, 2–4 lb)	3 × 5	45s	Reach tall, throw hard, catch the bounce.
6	Bodyweight Squat	3 × 8	45s	Sit back to a bench and stand up tall.
6	Incline Push-Up (bench/wall)	3 × 6	45s	Straight body, chest to the bench, push the floor away.
7	Bear Crawl Relay	3 × 10 yd	45s	Knees just off the ground, hips low, opposite hand and foot.
8	Front Plank	3 × :20	30s	Straight line, squeeze everything. "Don't let me push you over."
8	Dead Bug	2 × 6/side	30s	Low back glued to the floor.
9	Band Pull-Apart + Wall Slide	2 × 10 each	30s	Shoulder blades do the work.
10	Breathing + Log	3 min	—	Five slow breaths. Sticker or check on the attendance sheet.

SESSION B — BALANCE, THROW, MOVE

BLK	EXERCISE	SETS × REPS	REST	COACHING CUE / GAME
1–2	Warm-up + Movement Prep	~8 min	—	Add a "freeze" call for reaction practice.
3	Line Shuffle	4 × :08	40s	Feet never cross, stay low, chest up.
3	Start-on-Command Sprint, 10 yd	5 reps	45s	Coach claps — react and go.
4	Pogo Hops	3 × 8	40s	Stiff ankles, little bounces, like a basketball.
4	Single-Leg Balance + Reach	2 × 4/side	30s	Stand like a flamingo, reach the foot forward and tap.
5	Chest Pass into Wall (2–4 lb)	3 × 6	45s	Push hard and fast, catch it clean.
5	Scoop Toss (2–4 lb)	3 × 5/side	45s	Load the back hip and throw the ball with your hips.
6	Split Squat (hold a bench)	3 × 6/side	45s	Back knee straight down, front foot flat.
6	Band Row / Inverted Row	3 × 8	45s	Pull the elbows to the ribs, squeeze the shoulder blades.
7	Glute Bridge	3 × 10	40s	Push through the heels, squeeze the back pockets.
8	Side Plank (knees down)	3 × :15/side	30s	Push the ground away, hips high.
9	Prone Y-T-W	2 × 6 each	30s	Thumbs up, small movement, big squeeze.
10	Breathing + Log	3 min	—	What was the best thing you did today?

SESSION C — OPTIONAL ATHLETIC GAMES DAY

GAME / DRILL	DOSE	PURPOSE & COACHING NOTE
Obstacle Course (crawl, hurdle step, balance beam line, sprint)	4–6 rounds	Coordination and problem solving. Time it and let athletes beat their own score, not each other's.
Tag Variations (freeze tag, partner tag)	3 × 60–90s	Change of direction, deceleration, reaction — all disguised as fun.
Relay Races (sprint, shuffle, backpedal legs)	4–6 rounds	Competitive speed work with built-in rest.
Throw-Anything Station (different balls, both hands, under and overhand)	5–8 min	Builds general throwing athleticism without adding pitching volume.
Animal Crawl Circuit (bear, crab, inchworm)	3 rounds × 10 yd each	Upper-body and core strength through play.
Jump Rope	3 × :30	Ankle stiffness, rhythm, coordination.

COACHING 7U–9U: THREE RULES

- **Demonstrate, don't explain.** Show it twice, cue it in five words or fewer.
- **Everybody finishes with a win.** End on something they are good at.
- **Stop before they are done.** Leave them wanting the next session.

WORKOUTS: 10U – 12U

WORKOUTS A, B AND C • 45–55 MINUTES • LIGHT LOAD, HIGH QUALITY

Loads shown are Phase 2–3 targets. In Phase 1, run everything at bodyweight. Effort target throughout: **RIR 3–4** — always leave several good reps in the tank.

WORKOUT A — LOWER EMPHASIS

BLK	EXERCISE	SETS × REPS	REST	KEY CUE
1–2	Universal Warm-Up + Movement Prep	10–12 min	—	Same every session. Learn it.
3	Wall Drive, single exchange	3 × 5/side	30s	Tall line from heel to head, punch the knee.
3	10 yd Acceleration	6 × 10 yd	45–60s	Push the ground behind you; rise gradually, don't pop up.
4	Snap Down	3 × 5	45s	Fast down, freeze in the athletic position.
4	Broad Jump & Stick	3 × 4	60s	Arms swing, jump far, land quiet, hold 2 seconds.
5	MB Scoop Toss (4–6 lb)	3 × 5/side	45s	Load the back hip, throw with the legs.
6	Goblet Squat	3 × 10–12	75s	Elbows inside the knees, chest tall, heels down.
6	DB Romanian Deadlift	3 × 10	75s	Push the hips back, flat back, feel the hamstrings.
6	Split Squat (BW or light DB)	3 × 8/side	60s	Straight down, front shin mostly vertical.
7	Glute Bridge / Hip Thrust (BW)	3 × 12	45s	Ribs down, squeeze at the top for 1 second.
7	Calf Raise	2 × 15	45s	Full range, pause at the top.
8	Front Plank	3 × :30	45s	Squeeze glutes, tuck ribs.
8	Pallof Press (band)	3 × 8/side	45s	Don't let the band twist you. Slow.
9	Arm Care Circuit A (see Arm Care)	1 round	—	Light bands, perfect control.
10	Cooldown + Log	3–5 min	—	Breathe, stretch, write it down.

WORKOUT B — UPPER EMPHASIS

BLK	EXERCISE	SETS × REPS	REST	KEY CUE
1–2	Universal Warm-Up + Movement Prep	10–12 min	—	—
3	Lateral Shuffle, 10 yd	4 × 2 (down & back)	45s	Low hips, feet never cross, push off the outside foot.
3	Crossover Start, 10 yd	4/side	60s	Open the hip, first step goes where you're going.
4	Pogo Hops	3 × 10	45s	Stiff ankles, minimal knee bend, fast off the floor.
5	MB Rotational Wall Throw (4–6 lb)	3 × 6/side	45s	Hips first, then torso, then arms. Throw it hard.
6	Push-Up (incline as needed)	3 × 8–12	75s	Rigid plank, elbows about 45°, full range.
6	Inverted Row	3 × 8–10	75s	Body straight, pull the chest to the bar.
6	Half-Kneeling Landmine or Band Press	3 × 10/side	60s	Ribs down, squeeze the glute of the down leg.
7	Single-Arm DB Row	3 × 10/side	60s	Elbow to the hip pocket, don't twist the torso.
7	Face Pull (band)	3 × 12	45s	Pull to the forehead, thumbs back.
8	Dead Bug	3 × 8/side	45s	Low back flat the whole time.
8	Side Plank	3 × :20/side	45s	Straight line from ankle to ear.
9	Arm Care Circuit B	1 round	—	Slow tempo, light resistance.
10	Cooldown + Log	3–5 min	—	—

WORKOUT C — TOTAL BODY & ATHLETICISM

BLK	EXERCISE	SETS × REPS	REST	KEY CUE
1–2	Universal Warm-Up + Movement Prep	10–12 min	—	—
3	Reaction Start (partner or coach cue), 10 yd	6 reps	60s	React, don't guess. Low first three steps.
3	Home-to-First Run-Through, 15 yd	4 reps	75s	Run through the bag, don't slow down early.
4	Lateral Bound & Stick	3 × 4/side	60s	Push sideways off the outside leg, land and freeze.
4	Skater Hop (continuous)	2 × 6/side	60s	Land balanced before pushing back the other way.
5	MB Shot-Put Throw (4–6 lb)	3 × 5/side	45s	Push from the back hip through the front side.
6	Goblet Squat	3 × 10	75s	Same standard as Workout A.
6	Push-Up	3 × 8–12	60s	Quality reps only — stop the set when the hips sag.
6	Step-Up (box at knee height)	3 × 8/side	60s	Drive through the whole foot on the box; control the way down.

7	Band Pull-Apart	3 × 15	45s	Straight arms, blades together.
7	Suitcase Carry	3 × 20 yd/side	60s	Stand tall, don't lean. Squeeze the handle.
8	Bird Dog	3 × 6/side	45s	Hips level, slow and long.
8	Hollow Hold	3 × :20	45s	Low back pressed down, arms and legs long.
9	Arm Care Circuit A	1 round	—	—
10	Cooldown + Log	3–5 min	—	—

PHASE ADJUSTMENTS FOR 10U–12U

Phase 1 (wks 1–4): bodyweight only, 2–3 × 10–12, no med ball in week 1–2. **Phase 2 (wks 5–10):** as written. **Phase 3 (wks 11–15):** same exercises, 3 × 8–10, small load increase, add lateral bounds to Workout A. **Phase 4 (wks 16–20):** drop one accessory exercise per session, add 2 extra sprint reps and one reaction game.

WORKOUTS: 13U – 14U

WORKOUTS A, B AND C • 55–70 MINUTES • TECHNIQUE-LED LOADING

Sets and reps shown are Phase 2 defaults. Adjust by phase using the table at the end of this section. Effort target: **RIR 2–3**. If technique changes, the set is over — regardless of the rep count on the page.

WORKOUT A — LOWER BODY + SPEED

BLK	EXERCISE	SETS × REPS	REST	KEY CUE
1–2	Universal Warm-Up + Movement Prep	12 min	—	Athlete-led by week 4.
3	Wall Drive Exchange	3 × 5/side	30s	Rigid line, aggressive foot strike under the hip.
3	Falling Start → 10 yd Sprint	4 reps	60s	Fall, then catch yourself with the first step. Stay low.
3	20 yd Acceleration	4 reps	90s	Gradual rise — no popping upright at 5 yards.
4	Broad Jump & Stick	4 × 3	60s	Max distance, absolutely quiet landing.
5	MB Scoop Toss (6–8 lb)	3 × 5/side	60s	Legs drive, ball goes high and far.
6	Goblet or Front-Racked Squat	4 × 8–10	90s	Brace, sit between the hips, drive the floor apart.
6	Trap-Bar or DB Deadlift	4 × 8	90s	Flat back, push the floor away, hips and shoulders rise together.
6	Rear-Foot-Elevated Split Squat	3 × 8/side	75s	Torso slightly forward, back knee straight down.
7	Single-Leg RDL (DB)	3 × 8/side	60s	Hips square, reach the back heel to the wall.
7	Lateral Lunge	3 × 8/side	60s	Sit into the bent hip, keep the trail leg long.
8	Pallof Press	3 × 10/side	45s	Resist the twist. Slow out, slow back.
8	Side Plank w/ Reach	3 × :25/side	45s	Hips high, don't rotate.
9	Arm Care Circuit A + Hip Mobility	1 round	—	Every session, no exceptions.
10	Cooldown + Log	4 min	—	—

WORKOUT B — UPPER BODY + ROTATIONAL POWER

BLK	EXERCISE	SETS × REPS	REST	KEY CUE
1–2	Universal Warm-Up + Movement Prep	12 min	—	—
3	Lateral Shuffle → Sprint, 5+10 yd	4/side	60s	Low shuffle, then turn and go without a stutter step.
4	Pogo Hops	3 × 10	45s	Ankles like springs, ground contact as short as possible.
4	Vertical Jump & Stick	3 × 4	60s	Arms drive up, land soft and balanced.
5	MB Rotational Wall Throw (6–8 lb)	4 × 5/side	60s	Back hip turns first; the arms just hold on.
5	MB Shot-Put Throw (6–8 lb)	3 × 4/side	60s	Push through the front side, finish tall.
6	DB Bench Press or Push-Up	4 × 8–10	90s	Shoulder blades set, elbows ~45°, control down.
6	Chin-Up (assisted as needed)	4 × 4–8	90s	Full hang to chin over bar; no kipping.
6	Half-Kneeling Landmine Press	3 × 8/side	75s	Ribs down, glute squeezed, press up and slightly forward.
7	Chest-Supported Row	3 × 10	60s	Pull with the back, not the hands.
7	Face Pull	3 × 12–15	45s	Thumbs back, elbows high.
7	DB Curl + Forearm Work	2 × 12	45s	Elbow health for throwers. Controlled.
8	Ab Rollout (from knees) or Body Saw	3 × 8	60s	Ribs down, don't let the back arch.
8	Half-Kneeling Chop	3 × 10/side	45s	Rotate through the mid-back, hips stay put.
9	Arm Care Circuit B + T-Spine Mobility	1 round	—	—
10	Cooldown + Log	4 min	—	—

WORKOUT C — TOTAL BODY + CHANGE OF DIRECTION

BLK	EXERCISE	SETS × REPS	REST	KEY CUE
1–2	Universal Warm-Up + Movement Prep	12 min	—	—
3	Crossover Start, 10 yd	4/side	60s	Open the front hip, first step covers ground.
3	5-10-5 Shuttle	4 reps	2 min	Get low to stop, plant on the outside foot, drive out.
4	Skater Bound & Stick	3 × 4/side	60s	Push far sideways, land balanced on one leg.
4	Depth Drop to Stick (12–16 in box)	3 × 4	60s	Step off, absorb, freeze. Learn to stop before learning to bounce.
5	MB Step-Behind Throw (6–8 lb)	3 × 4/side	75s	Momentum into the back hip, then explode through.
6	Goblet Squat or Front Squat	3 × 8	90s	Same standard as Workout A.
6	Hip Thrust or Glute Bridge (loaded)	3 × 10	75s	Ribs down, chin tucked, squeeze at the top.

6	Push-Up (weighted or deficit)	3 × 10–12	75s	Rigid body, full range.
6	Single-Arm DB Row	3 × 10/side	75s	Elbow to hip pocket, torso square.
7	Nordic Curl Eccentric or Slider Leg Curl	3 × 5	75s	Lower as slowly as you can control. Hamstrings protect sprint speed.
7	Copenhagen Plank (short lever)	2 × :15/side	60s	Adductor strength. Start short, progress slowly.
8	Farmer Carry	3 × 30 yd	60s	Tall, ribs down, grip hard.
8	Dead Bug w/ Band	3 × 8/side	45s	Back flat, breathe out on the reach.
9	Arm Care Circuit A + Ankle/Hip Mobility	1 round	—	—
10	Cooldown + Log	4 min	—	—

13U–14U PHASE ADJUSTMENTS

PHASE	PRIMARY STRENGTH	PLYOS & MED BALL	SPEED
1 (wks 1–4)	3 × 10–12, RIR 3–4, tempo 3-1-1, lighter loads	Snap-downs, pogos, landings only. MB 3 × 5 light.	Drills + 10 yd only, 4–6 reps.
2 (wks 5–10)	As written: 4 × 8–10, RIR 2–3	Broad jumps, skater bounds. MB 6–8 lb.	10 and 20 yd, 6–8 total reps.
3 (wks 11–15)	4 × 6–8, RIR 2. Pair squat with a broad jump (contrast).	Add depth drops, single-leg landings. MB for max distance.	10–20 yd, add 5-10-5 and reactive starts.
4 (wks 16–20)	3 × 5–6 moved fast, RIR 2–3. Drop one accessory per day.	Reactive hops, bounding intro. MB for speed.	Sprint volume up: base-running shapes, reaction, position work.

WORKOUTS: 15U – 16U

WORKOUTS A, B, C AND D • 60–80 MINUTES • PROGRESSIVE STRENGTH

Phase 2 defaults shown. On the 3-day template, run A, B, and C. On the 4-day template, run A, B, C, and D. Effort: **RIR 2–3**, tightening to RIR 1–2 in Phase 3.

WORKOUT A — LOWER BODY + SPEED

BLK	EXERCISE	SETS × REPS	REST	KEY CUE
1–2	Universal Warm-Up + Movement Prep	12 min	—	—
3	Wall Drive Exchange + A-Skip	2 rounds	30s	Mechanics before speed.
3	10 yd Acceleration	4 reps	60s	Aggressive shin angle, patient rise.
3	20 yd Acceleration	4 reps	2 min	Full recovery between reps. Every rep is a max effort.
4	Broad Jump (max)	4 × 3	75s	Big arm swing, land in an athletic base.
4	Lateral Bound & Stick	3 × 4/side	60s	Cover ground sideways; hold the landing 2 seconds.
5	MB Scoop Toss (8–10 lb)	4 × 4/side	60s	Hips generate it; throw for height and distance.
6	Back Squat or Front Squat	4 × 6–8	2–3 min	Brace hard, controlled descent, drive the floor apart.
6	Trap-Bar Deadlift	4 × 6	2–3 min	Chest up, push the floor, lock the hips without leaning back.
6	Rear-Foot-Elevated Split Squat	3 × 8/side	90s	Own the bottom position before adding load.
7	Nordic Curl Eccentric	3 × 5	90s	Fight it all the way down. Hamstring insurance.
7	Single-Leg Calf Raise	3 × 12/side	45s	Full range, slow down.
8	Pallof Press + Iso Hold	3 × 8/side	45s	Anti-rotation. Do not let the torso give an inch.
8	Side Plank w/ Hip Abduction	3 × :30/side	45s	Stack the hips, lift the top leg.
9	Arm Care Circuit A + Hip Mobility	1 round	—	—
10	Cooldown + Log	5 min	—	—

WORKOUT B — UPPER BODY + ROTATIONAL POWER

BLK	EXERCISE	SETS × REPS	REST	KEY CUE
1–2	Universal Warm-Up + Movement Prep	12 min	—	—
3	Shuffle → Sprint (5+15 yd)	4/side	75s	No wasted step in the transition.
4	Vertical Jump (max)	4 × 3	75s	Countermovement fast, arms up hard.
4	Pogo Hops (continuous)	3 × 12	45s	Minimum ground contact time.
5	MB Rotational Wall Throw (8–10 lb)	4 × 5/side	60s	Back hip → torso → arms. Sequence, then speed.
5	MB Step-Behind Throw (8–10 lb)	3 × 4/side	75s	Build momentum, block with the front leg, release everything.
6	DB Bench Press or Incline DB Press	4 × 6–8	2 min	Blades set, elbows tucked ~45°, own the bottom.
6	Weighted Chin-Up or Chin-Up	4 × 5–8	2 min	Full range. Pulling volume protects the shoulder.
6	Single-Arm Landmine Press	3 × 8/side	90s	The thrower-friendly overhead alternative.
7	Chest-Supported Row	4 × 10	75s	Pause 1 second at the top of every rep.
7	Face Pull + Band Pull-Apart (superset)	3 × 15 each	45s	Upper back and rear delts. Never skipped.
7	Wrist Roller / Forearm Circuit	2 rounds	45s	Grip and forearm endurance for throwers.
8	Ab Wheel Rollout	3 × 8	60s	Anti-extension. Ribs down the entire rep.
8	Half-Kneeling Chop & Lift	3 × 10/side	45s	Rotate the mid-back, keep the hips quiet.
9	Arm Care Circuit B + T-Spine Mobility	1 round	—	—
10	Cooldown + Log	5 min	—	—

WORKOUT C — LOWER BODY + CHANGE OF DIRECTION

BLK	EXERCISE	SETS × REPS	REST	KEY CUE
1–2	Universal Warm-Up + Movement Prep	12 min	—	—
3	Crossover Start, 10 yd	4/side	60s	Open the hip, don't false-step.
3	5-10-5 Shuttle	4–6 reps	2–3 min	Lower the hips to stop, outside foot plants, drive out hard.
3	Base-Stealing Start (from a lead)	4 reps	90s	Crossover, stay low, first three steps decide it.
4	Depth Drop to Stick (18–24 in)	3 × 4	75s	Absorb through the whole foot, hips back, freeze.
4	Single-Leg Hop & Stick	3 × 4/side	60s	Land with the knee over the toe, no wobble.
5	MB Shot-Put Throw (8–10 lb)	3 × 4/side	60s	Push through the front hip, finish tall and balanced

5	MB Shot-Put Throw (8–10 lb)	3 × 4/side	60s	Push through the front hip, finish tall and balanced.
6	Front Squat or Safety-Bar Squat	4 × 5–6	2–3 min	Upright torso, elbows up.
6	Romanian Deadlift (barbell or DB)	4 × 8	2 min	Bar stays close, hips travel back, flat back.
6	Lateral Lunge or Cossack Squat	3 × 8/side	90s	Frontal-plane strength for the first step.
7	Hip Thrust	3 × 8–10	90s	Chin tucked, ribs down, full lockout.
7	Copenhagen Plank	3 × :20/side	60s	Adductor strength — especially important for softball athletes.
8	Suitcase Carry	3 × 30 yd/side	60s	Anti-lateral flexion. Stand perfectly tall.
8	Hollow Hold or Dead Bug	3 × :30	45s	Ribs down, low back flat.
9	Arm Care Circuit A + Ankle Mobility	1 round	—	—
10	Cooldown + Log	5 min	—	—

WORKOUT D — UPPER BODY + ACCESSORY (4-DAY TEMPLATE ONLY)

BLK	EXERCISE	SETS × REPS	REST	KEY CUE
1–2	Universal Warm-Up + Movement Prep	12 min	—	—
4	Skater Bound (continuous)	3 × 6/side	60s	Land, absorb, redirect. Rhythm.
5	MB Overhead Slam (8–10 lb)	3 × 6	60s	Full extension, then drive the ball down.
6	Push-Up Variation (weighted / feet elevated)	4 × 10–12	90s	Rigid plank, elbows in, full lockout.
6	Single-Arm DB Row	4 × 10/side	90s	Elbow to hip pocket, no torso twist.
6	Inverted Row (feet elevated)	3 × 10	75s	Pause at the chest.
7	Prone Y-T-W	3 × 8 each	45s	Thumbs up, small range, big squeeze.
7	DB Curl / Hammer Curl	3 × 12	45s	Elbow health for throwers — especially softball pitchers.
7	Wrist Flexion / Extension / Pronation-Supination	2 × 15 each	45s	Light. Endurance, not max load.
8	Body Saw	3 × 10	60s	Ribs down, hips level.
8	Bird Dog Row	3 × 8/side	45s	Anti-rotation with a pull.
9	Arm Care Circuit B + Full Mobility Routine	1 round	—	—
10	Cooldown + Log	5 min	—	—

WORKOUTS: 17U – 18U

WORKOUTS A, B, C AND D • 60–90 MINUTES • ADVANCED PROGRESSION

Phase 2–3 defaults shown. Athletes at this level run the same four sessions as 15U–16U in structure, with heavier primary loading, contrast pairing, longer sprint distances, and stricter load management. Effort: **RIR 2** in Phase 2, **RIR 1–2** in Phase 3, **RIR 2–3 with maximum bar speed** in Phase 4.

WORKOUT A — LOWER BODY + SPEED

BLK	EXERCISE	SETS × REPS	REST	KEY CUE
1–2	Universal Warm-Up + Movement Prep	12 min	—	Self-directed.
3	Sprint Drill Series (A-march, A-skip, wall drive)	2 rounds	30s	Posture, punch, push.
3	10 yd Acceleration	4 reps	75s	Every rep maximal.
3	30 yd Sprint (fly or from a start)	4–6 reps	2–3 min	Full recovery. This is a speed session, not conditioning.
4	Broad Jump (max) — contrast with squat	4 × 2	90s	Perform 30–60s after the heavy squat set (Phase 3).
5	MB Scoop Toss (10–12 lb)	4 × 4/side	75s	Max intent. Measure distance when possible.
6	Back Squat or Front Squat	4–5 × 4–6	3 min	Brace, control, drive. Depth consistent every rep.
6	Trap-Bar Deadlift	4 × 4–5	3 min	Neutral spine, push the floor away.
6	Rear-Foot-Elevated Split Squat	3 × 6–8/side	90s	Loaded single-leg strength is the pitcher's bread and butter.
7	Nordic Curl (full or eccentric)	4 × 4–6	90s	Control the entire descent.
7	Single-Leg Calf Raise	3 × 12/side	45s	Ankle stiffness feeds sprint speed.
8	Pallof Press w/ Iso Hold	3 × :20/side	45s	Do not rotate.
8	Weighted Side Plank	3 × :30/side	45s	Stack and stay stacked.
9	Arm Care Circuit A + Hip Mobility	1 round	—	—
10	Cooldown + Log	5 min	—	Log loads, sleep, and any soreness.

WORKOUT B — UPPER BODY + ROTATIONAL POWER

BLK	EXERCISE	SETS × REPS	REST	KEY CUE
1–2	Universal Warm-Up + Movement Prep	12 min	—	—
3	Shuffle → Sprint / Drop-Step → Sprint	4/side	90s	Outfielders: emphasize the drop-step version.
4	Vertical Jump (max) or Trap-Bar Jump	4 × 3	90s	Trap-bar jump at 20–30% of deadlift, land soft.
5	MB Rotational Wall Throw (10–12 lb)	4 × 4/side	75s	Ground up: back hip, torso, arms. Track velocity if available.
5	MB Shuffle-to-Throw (10–12 lb)	3 × 4/side	90s	Momentum into a firm front-leg block.
6	DB or Barbell Bench Press	4 × 5–6	2–3 min	Blades set and down; controlled eccentric. Not the priority lift.
6	Weighted Chin-Up	4 × 5–6	2–3 min	Full range, no kip.
6	Single-Arm Landmine Press	3 × 8/side	90s	Default overhead option for pitchers.
7	Chest-Supported Row	4 × 8–10	75s	Maintain the 2:1 pull-to-push ratio across the week.
7	Face Pull + Band Pull-Apart	3 × 15 each	45s	Rear delts and mid-traps.
7	Forearm & Grip Circuit	2–3 rounds	45s	Wrist roller, pronation/supination, plate pinch.
8	Ab Wheel Rollout (standing progression)	3 × 6–8	75s	No back arch. Stop before the ribs flare.
8	Landmine Rainbow or Cable Chop	3 × 10/side	45s	Controlled rotation through the mid-back.
9	Arm Care Circuit B + T-Spine Mobility	1 round	—	—
10	Cooldown + Log	5 min	—	—

WORKOUT C — LOWER BODY + CHANGE OF DIRECTION

BLK	EXERCISE	SETS × REPS	REST	KEY CUE
1–2	Universal Warm-Up + Movement Prep	12 min	—	—
3	Base-Stealing Start	6 reps	90s	Crossover, low, violent first three steps.
3	Home-to-First (90 ft / 60 ft), timed	4 reps	2–3 min	Run through the bag. Time it — it is a tracked metric.
3	5-10-5 Shuttle or Reactive Cut Drill	4–6 reps	2–3 min	Deceleration is the skill, not the turn.
4	Bounding (alternate leg)	4 × 20 yd	2 min	Cover ground, don't just hop. Cap total ground contacts.
4	Single-Leg Hop & Stick / Depth Drop	3 × 4/side	75s	Land, hold, no knee collapse.
5	MB Step-Behind Throw (10–12 lb)	4 × 3/side	90s	Max intent. This is the closest thing to a throw in the weight room.

6	Front Squat or Safety-Bar Squat	4 × 4–5	3 min	Upright, elbows up, full depth.
6	Romanian Deadlift	4 × 6–8	2 min	Hamstring under tension the entire rep.
6	Lateral Lunge / Cossack Squat	3 × 8/side	90s	Frontal-plane strength.
7	Hip Thrust	3 × 6–8	90s	Full hip extension with ribs down.
7	Copenhagen Plank (long lever)	3 × :25/side	60s	Adductors handle the cutting and the stride.
8	Heavy Suitcase Carry	4 × 30 yd/side	75s	No lean. Grip hard.
8	Hollow Rock / Weighted Dead Bug	3 × :30	45s	Low back stays down.
9	Arm Care Circuit A + Ankle Mobility	1 round	—	—
10	Cooldown + Log	5 min	—	—

WORKOUT D — UPPER BODY + ACCESSORY

BLK	EXERCISE	SETS × REPS	REST	KEY CUE
1–2	Universal Warm-Up + Movement Prep	12 min	—	—
4	Skater Bound (continuous)	3 × 6/side	75s	Elastic, rhythmic, balanced.
5	MB Overhead Slam / Backward Overhead Throw	3 × 5	75s	Full-body extension, maximum intent.
6	Incline DB Press or Push-Up Variation	4 × 8–10	90s	Shoulder-friendly pressing angle.
6	Single-Arm DB Row	4 × 8–10/side	90s	Heavy. Square hips.
6	Inverted Row (feet elevated / weighted)	3 × 10	75s	Pause at the top.
7	Prone Y-T-W + Prone Trap Raise	3 × 8 each	45s	Lower-trap and scapular control.
7	DB Curl / Hammer Curl / Reverse Curl	3 × 10–12	45s	Elbow resilience for throwers.
7	Wrist & Forearm Circuit	3 rounds	45s	Flexion, extension, pronation, supination, ulnar deviation.
8	Body Saw / Long-Lever Plank	3 × 10	60s	Anti-extension under load.
8	Bird Dog Row	3 × 8/side	45s	Anti-rotation with a pull.
9	Arm Care Circuit B + Full Daily Mobility	1 round	—	—
10	Cooldown + Log	5 min	—	—

CONTRAST PAIRING (PHASE 3, 15U–18U ONLY)

In Phase 3, pair one heavy strength exercise with one explosive movement: perform the heavy set, rest 30–60 seconds, then perform 2–3 explosive reps (broad jump after squat; med-ball throw after deadlift; vertical jump after split squat). This works only when the athlete is **fresh and technically sound**. If the jump looks worse than it did unloaded, drop the pairing. Do not use contrast pairs at 13U–14U or below.

SPEED & AGILITY LIBRARY

SHORT, FAST, FULLY RESTED — NEVER A CONDITIONING SESSION

Baseball and softball speed is almost entirely **acceleration**. Home-to-first, the first step in the field, and a base-stealing jump are all decided inside the first 10–20 yards. That is where the majority of our speed work lives, with true max-velocity exposure reserved for outfielders and older athletes.

WORK-TO-REST RATIOS — THE RULE THAT MAKES IT SPEED WORK

Speed is a quality of the nervous system, and it degrades fast when the athlete is tired. If rest is cut, the athlete is no longer training speed — they are training to run slowly while fatigued, which is exactly what we do not want.

DISTANCE	APPROX. WORK	REST BETWEEN REPS	RATIO	TOTAL VOLUME GUIDELINE
5–10 yd	1–2 s	45–60 s	~1:30	6–10 reps
15–20 yd	2.5–3.5 s	90–120 s	~1:40	4–8 reps
30–40 yd	4–6 s	2–3 min	~1:40–1:60	4–6 reps (15U+)
Change of direction (5-10-5)	~5 s	2–3 min	~1:30–1:40	4–6 reps

Total sprint volume per session: 7U–9U ~60–80 yd • 10U–12U ~100–150 yd • 13U–14U ~150–250 yd • 15U–18U ~250–400 yd. If an athlete's last rep is noticeably slower than their first, the session is over.

DRILL LIBRARY

DRILL	DOSE	COACHING CUES	COMMON MISTAKES	EASIER / HARDER
FIRST-STEP QUICKNESS & ACCELERATION				
Wall Drive (hold & exchange)	3×5/side	Hands on wall, body in a straight line from heel to head. Toe up, knee up, drive the foot down and back under the hip.	Hips sagging; sitting back off the wall; reaching the foot out in front.	Easier: single-leg hold. Harder: continuous exchanges.
Falling Start	4–6 reps	Lean forward from the ankles until you have to catch yourself, then sprint. Aggressive shin angle for the first 3 steps.	Bending at the waist instead of leaning from the ankles; popping upright immediately.	Easier: 2-point start. Harder: partner-released or reactive start.
5 yd Acceleration	6–8 reps	Three violent steps. Push the ground behind you.	Over-striding; standing up on step one.	Easier: from a staggered stance. Harder: on command.
10 yd Acceleration	4–8 reps	Patient rise — stay leaned for 5–6 steps, then gradually come up.	Upright after 2 steps; short choppy steps.	Harder: resisted with a sled or band (15U+).
20 yd Sprint	4–6 reps	Accelerate all the way through the line. Tall at the finish, relaxed face and hands.	Decelerating before the line; tensing the shoulders.	Harder: add 30 yd (15U+).
BASEBALL / SOFTBALL SPECIFIC				
Base-Stealing Start	4–6 reps	From a primary lead: open the back hip, crossover step, stay low. Eyes and weight go where you're going.	False step backward; standing tall on the crossover; leading with the head.	Easier: no lead, standing start. Harder: on a reaction cue.
Home-to-First Run-Through	4 reps	Simulate the swing finish, first three steps low and hard, run *through* the bag.	Slowing down 10 ft early; looking at the bag; jumping at the base.	Harder: time it. This is a tracked metric at 15U+.
Drop-Step & Go (OF)	4/side	Open the hip behind you, first step gains ground, eyes stay on the ball.	Stepping forward first; crossing over in front instead of opening.	Harder: react to a thrown or hit ball.
Infield First-Step Series	4–6/side	From a ready position: shuffle step, crossover, or drop-step based on the cue. Stay low through the move.	Popping straight up out of the ready position; heavy, flat feet.	Harder: reactive, coach-directed.
LATERAL MOVEMENT & CHANGE OF DIRECTION				
Lateral Shuffle	4×10 yd	Hips low, chest up, push off the outside foot. Feet never cross or click together.	Standing tall; bouncing up and down; crossing the feet.	Harder: add a band around the hips.
Crossover Mechanics	4/side	Open the lead hip first, then swing the trail leg across. The first step goes toward the target, not up.	False step; turning the shoulders before the hips.	Easier: walk it. Harder: full-speed on a cue.
5-10-5 Shuttle	4–6 reps	Lower the hips to decelerate, plant on the outside foot, drive out. The stop is the skill.	Stopping upright; rounding the turn; planting on the inside foot.	Easier: 5-5-5 at 70%. Harder: reactive direction call.

Reactive Cut (mirror drill)	3–4 × :08	Mirror a partner's movement. React, don't anticipate.	Guessing; crossing the feet; getting too tall.	Easier: partner moves slowly. Harder: add a ball.
DECELERATION				
Sprint-to-Stop	4–6 reps	Sprint 10 yd, then stop inside 3 steps in an athletic position and hold for 2 seconds.	Stopping with a straight front leg; stopping upright; taking 6 steps.	Easier: jog-to-stop. Harder: longer approach or on a cue.
Backpedal-to-Break	4/side	Backpedal under control, then open and sprint on the cue.	Falling backward; crossing the feet in the transition.	Harder: reactive break.

DO NOT TURN SPEED WORK INTO CONDITIONING

Cutting the rest interval is the single most common mistake in youth speed training. "Sprint 10 × 40 with 20 seconds rest" is a conditioning drill wearing a speed drill's clothes — it makes athletes better at running slowly. Speed work is done **early in the session, fully rested, at maximum intent, and it ends when quality drops.**

PLYOMETRIC DEVELOPMENT

LEARN TO LAND BEFORE YOU LEARN TO LAUNCH

Every jump ends in a landing. The force an athlete has to absorb on landing is greater than the force they produced to get off the ground, which is why we teach **landing first, always**. An athlete who cannot land quietly and hold the position has no business doing depth jumps or bounding, regardless of age.

LANDING MECHANICS — THE FIVE CHECKPOINTS

#	CHECKPOINT	WHAT TO LOOK FOR
1	Quiet	You should barely hear the landing. Noise means the athlete is landing stiff and letting the joints take the force.
2	Knees over toes	Knees track in line with the second toe. A knee collapsing inward is the single most important thing to correct — especially in our softball athletes.[17]
3	Hips back	The hips absorb first, then the knees, then the ankles. Not a straight-legged stomp, not a full squat.
4	Whole foot	Land through the ball of the foot and settle into the mid-foot. Not flat-footed, not on the toes only.
5	Stick for 2 seconds	If they cannot hold it, the jump was too big. Reduce the height or distance.

THE PROGRESSION LADDER

LEVEL	EXERCISE	AGES	CUES & NOTES	COMMON MISTAKES
1. Absorb	Snap Down	7U+	From tall, snap the feet out and hips back into an athletic stance. Freeze. Teaches the landing position with no flight.	Landing with straight legs; slow, soft snap.
1. Absorb	Depth Drop to Stick	13U+	Step off a 12–24 in box (height by age and competence), land, absorb, hold 2 seconds. No jumping.	Box too high; jumping off instead of stepping; knees caving.
2. Stiffness	Pogo Hops	7U+	Small, fast bounces. Stiff ankles, minimal knee bend. Think "basketball, not beanbag."	Deep knee bend on every hop; slow ground contact.
2. Stiffness	Line Hops (fwd/back, side/side)	7U+	Quick feet over a line, stay tall.	Looking down; heavy heel contact.
3. Concentric Power	Broad Jump & Stick	10U+	Arms swing back then drive forward. Jump for distance, land and hold.	No arm swing; landing and falling forward.
3. Concentric Power	Vertical Jump & Stick	10U+	Fast countermovement, arms up hard, land soft under control.	Slow dip; landing stiff.
4. Lateral	Lateral Bound & Stick	10U+	Push sideways off the outside leg, land on one leg, hold 2 seconds.	Landing on two feet; knee caving; no pause.
4. Lateral	Skater Hop (continuous)	12U+	Bound side to side with rhythm; land balanced before redirecting.	Rushing; landing off-balance and "catching" with the arms.
5. Single Leg	Single-Leg Hop & Stick	13U+	Hop forward on one leg, land on the same leg, hold. Knee over toe.	Any knee collapse — stop and regress immediately.
5. Single Leg	Single-Leg Lateral Hop & Stick	13U+	Same rules, moving sideways.	Hopping too far for the landing competence.
6. Elastic	Bounding (alternate leg)	15U+	Cover maximum ground per stride. Drive the knee, land under the hip.	Hopping up instead of out; short, choppy strides.
6. Elastic	Repeat Broad Jumps	15U+	3–4 continuous broad jumps with minimal ground time.	Losing the landing position by jump 3.
7. Reactive	Depth Jump	17U+	Drop from a low box (12–18 in), minimize ground contact, jump up. **Only for athletes with a strength base and clean landings.**	Box too high; long ground contact; used too early.

VOLUME GUIDELINES (GROUND CONTACTS PER SESSION)

AGE GROUP	LOW-INTENSITY CONTACTS	HIGH-INTENSITY CONTACTS	NOTES
7U–9U	30–50	0	Hops, snap-downs, and games only.
10U–12U	40–60	10–20	Broad jumps and lateral bounds count as high-intensity.
13U–14U	50–80	20–40	Cut in half during a growth spurt or with knee/heel pain.
15U–16U	60–100	40–60	Bounding counts double per contact.
17U–18U	60–120	40–80	Depth jumps capped at 10–15 contacts.

Plyometrics go **early** in the session, after the warm-up and speed work, before heavy strength work. Never at the end when the athlete is tired.

ROTATIONAL POWER & MEDICINE-BALL TRAINING

SPEED OF THE BALL, NOT WEIGHT OF THE BALL

Medicine-ball throws are the closest thing in the weight room to a swing or a throw: the athlete produces force from the ground, sequences it through the hips and torso, and releases it into an object. In college-aged baseball players, rotational medicine-ball throw performance has been found to relate to bat swing velocity, batted-ball velocity, and pitching velocity.[18]

BE HONEST ABOUT WHAT MED-BALL WORK DOES

Rotational throws are excellent for teaching sequencing, training intent, and giving athletes a measurable, competitive output. But the evidence that adding medicine-ball work by itself increases throwing velocity is mixed — one classic study found conventional weight training produced greater throwing-velocity improvement than medicine-ball training in non-strength-trained junior players,[19] and an 8-week medicine-ball intervention in prepubescent softball players did not improve bat swing velocity. **Treat med-ball work as a valuable complement to strength training, not a replacement for it.**

BALL SELECTION

AGE GROUP	ROTATIONAL THROWS	OVERHEAD / SLAM	RULE
7U–9U	2–4 lb	2–4 lb	If the athlete's hips slow down or the sequence falls apart, the ball is too heavy. **Speed is the variable we are training, not load.** Use a non-bouncing wall ball for wall throws and a bouncing slam ball for slams.
10U–12U	4–6 lb	4–8 lb	
13U–14U	6–8 lb	8–10 lb	
15U–16U	8–10 lb	10–12 lb	
17U–18U	10–12 lb	12–15 lb	

THE PROGRESSION

THROW	SETS × REPS	CUES	COMMON MISTAKES	EASIER / HARDER
1. Chest Pass Intro • 7U+	3 × 6	Athletic stance, push the ball hard and fast into the wall, catch and reset. Teaches intent and catching.	Lobbing it; standing straight-legged.	Harder: add a step.
2. Scoop Toss Hip power • 7U+	3–4 × 5/side	Ball low outside the back hip. Load the back hip, then throw the ball high and forward using the legs and hips. Arms stay long.	Lifting with the arms and low back; no hip load.	Easier: two-hand front scoop. Harder: add a step-in.
3. Rotational Wall Throw Core • 10U+	3–4 × 5/side	Stand side-on, feet about shoulder width. Turn the back hip first, let the torso follow, arms last. Throw hard, catch off the wall, reset.	Arms leading the rotation; spinning off the back foot; no front-leg block.	Easier: half-kneeling. Harder: add a shuffle.
4. Shot-Put Throw Push • 10U+	3 × 4–5/side	Ball at the shoulder. Load the back hip, then push through the front side and release. Finish tall and balanced.	All arm; falling toward the wall; front leg collapsing.	Easier: from a tall kneeling position. Harder: step-behind entry.
5. Step-Behind Throw Momentum • 13U+	3–4 × 3–4/side	Take a lateral step-behind to build momentum, then stride and throw. Front leg blocks firmly — that block is what converts momentum into rotation.	Drifting onto a soft front leg; lunging at the wall; losing the back hip.	Easier: no step-behind. Harder: shuffle-to-throw.
6. Shuffle-to-Throw Max intent • 15U+	3 × 3–4/side	2–3 lateral shuffles into a firm front-leg block and a maximal rotational throw. The most transferable throw in the progression.	Losing posture during the shuffle; arms firing early.	Harder: measure velocity/distance and compete.
7. Overhead Slam Full-body • 10U+	3 × 5–6	Reach fully overhead, then drive the ball down using the whole body. Use a non-bouncing slam ball.	Throwing with the arms only; rounding the back at the finish.	Easier: lighter ball, half range.
8. Backward Overhead Throw Extension • 13U+	3 × 4–5	Squat down, then throw the ball up and back over the head with full triple extension. Great for jump and extension power.	Throwing with the arms; not extending the hips.	Harder: measure distance.

PROGRAMMING RULES FOR MED-BALL WORK

- **Placement:** after speed and plyometrics, before heavy strength. Never at the end of a session.
- **Rest:** 45–90 seconds between sets. These are power exercises, not conditioning.
- **Reps:** 3–6 per set. Quality drops fast — more reps is not better.
- **Balance both sides:** throw both directions even though the sport is one-directional. Dominant side can carry slightly more volume, but never train one side only.
- **Measure it:** distance or velocity gives athletes feedback, creates intent, and makes it competitive. It is also a tracked metric on the scorecard.

STRENGTH EXERCISE LIBRARY

CUES, COMMON MISTAKES, REGRESSIONS AND PROGRESSIONS FOR EVERY MOVEMENT

This is the reference section for every exercise in the workouts. Look up an exercise here the first few times you perform it. **Ages** shows the earliest age group we introduce that variation with proper supervision.

LOWER BODY — SQUAT PATTERN

EXERCISE	AGES	COACHING CUES	COMMON MISTAKES	REGRESSION → PROGRESSION
Bodyweight Squat	7U+	Feet shoulder-width, toes slightly out. Sit between the hips, chest tall, heels down, knees tracking over the toes. Drive up through the whole foot.	Heels lifting; knees caving in; chest dropping; cutting depth short.	**Reg:** box squat to a bench. **Prog:** goblet squat.
Goblet Squat	10U+	Hold a DB/KB at the chest. Elbows inside the knees at the bottom. The weight in front helps keep the chest up — use that.	Letting the weight pull the chest down; rounding at the bottom.	**Reg:** bodyweight squat. **Prog:** front squat.
Front Squat	14U+	Bar on the front delts, elbows up and forward. Upright torso. Brace before you descend.	Elbows dropping; bar rolling forward; leaning over.	**Reg:** goblet squat. **Prog:** heavier load / tempo.
Back Squat	15U+	Bar on the upper back, grip firm, brace hard. Descend under control, hips and chest rise together.	Hips shooting up first; knees caving; inconsistent depth.	**Reg:** safety-bar or front squat. **Prog:** pause squat.
Safety-Bar Squat	15U+	Excellent option for throwers — the shoulders don't have to externally rotate under a bar.	Letting the torso fold forward.	**Reg:** goblet squat. **Prog:** heavier load.

LOWER BODY — HINGE PATTERN

EXERCISE	AGES	COACHING CUES	COMMON MISTAKES	REGRESSION → PROGRESSION
Hip Hinge (wall touch)	7U+	Stand a foot from a wall, push the hips back to touch it, flat back, slight knee bend. This is the teaching drill for everything below.	Squatting instead of hinging; rounding the back.	**Prog:** dowel hinge, then DB RDL.
DB Romanian Deadlift	10U+	DBs close to the legs. Push the hips back, feel the hamstrings load, stop when the back would round. Squeeze the glutes to stand.	Bending the knees too much; letting the weights drift forward; rounding.	**Reg:** hinge with a dowel. **Prog:** barbell RDL.
Trap-Bar Deadlift	13U+	Preferred deadlift for youth — the load is centered and the back is easier to keep neutral. Chest up, push the floor away.	Hips shooting up first; jerking the bar off the floor; rounding.	**Reg:** DB deadlift from blocks. **Prog:** heavier / from the floor.
Barbell RDL	15U+	Bar stays in contact with the thighs. Hips travel back, not down. Neutral neck.	Bar drifting away; hyperextending at the top.	**Reg:** DB RDL. **Prog:** deficit or tempo.
Single-Leg RDL	12U+	Hips square, reach the back heel toward the wall behind you. Torso and back leg move as one unit.	Opening the hip to the side; rounding the back; rushing.	**Reg:** hand on a wall / kickstand stance. **Prog:** heavier, no support.
Hip Thrust / Glute Bridge	7U+ (BW)	Ribs down, chin tucked, push through the heels, squeeze at the top for 1 second. Finish in a straight line, not an arch.	Arching the low back to get higher; pushing through the toes.	**Reg:** floor glute bridge. **Prog:** barbell hip thrust, single leg.
Nordic Curl (eccentric)	13U+	Ankles anchored, body straight from knee to head, lower as slowly as possible, catch with the hands. Push back to the start.	Breaking at the hips; dropping fast; doing too many.	**Reg:** band-assisted or slider leg curl. **Prog:** full Nordic.
Back Extension	12U+	Hinge at the hip, spine stays neutral, squeeze the glutes to return. Stop at a straight line.	Hyperextending at the top; using the low back to yank up.	**Reg:** bird dog. **Prog:** add load at the chest.

LOWER BODY — SINGLE LEG & FRONTAL PLANE

EXERCISE	AGES	COACHING CUES	COMMON MISTAKES	REGRESSION → PROGRESSION
Split Squat	7U+	Long stance. Drop the back knee straight down, front foot flat, torso tall. Push through the front heel to stand.	Stance too short; front knee diving forward; leaning.	**Reg:** hold a rack for balance. **Prog:** add DBs.
Reverse Lunge	10U+	Step back, drop straight down, push the front heel to return. More knee-friendly than a forward lunge.	Short step; front knee caving; falling backward.	**Reg:** split squat. **Prog:** deficit or loaded.
Rear-Foot-Elevated Split Squat	13U+	Back foot on a bench, torso slightly forward, front shin near vertical. The single most valuable single-leg exercise we program.	Stance too short; back leg doing the work; losing balance and rushing.	**Reg:** split squat. **Prog:** heavier DBs, tempo, front-foot elevated.

Step-Up	10U+	Box at knee height. Drive through the whole foot on the box, do not push off the back foot. Control the way down.	Pushing off the floor leg; box too high; bouncing down.	**Reg:** lower box. **Prog:** higher box, add load.
Lateral Lunge	7U+	Step wide, sit into the bent hip, keep the trail leg straight and the foot flat. Chest up.	Knee caving; heel lifting; rounding forward.	**Reg:** shorter step. **Prog:** goblet-loaded, Cossack squat.
Cossack Squat	13U+	Deep lateral squat with the opposite leg straight and the toe up. Builds adductor strength and hip range together.	Heel lifting; forcing depth before the range exists.	**Reg:** lateral lunge. **Prog:** hold a plate at the chest.
Calf Raise	7U+	Full range, pause at the top, control the lowering. Ankle stiffness is a sprint quality.	Bouncing through partial range.	**Prog:** single leg, add load.

UPPER BODY — PUSH

EXERCISE	AGES	COACHING CUES	COMMON MISTAKES	REGRESSION → PROGRESSION
Push-Up	7U+	Body rigid from head to heels, hands under the shoulders, elbows about 45°, chest to the floor, push the floor away and let the shoulder blades spread at the top.	Hips sagging or piking; elbows flaring to 90°; partial range.	**Reg:** incline on a bench or wall. **Prog:** feet elevated, weighted, deficit.
DB Bench Press	13U+	Shoulder blades set down and back, feet planted, elbows ~45°. Control the lowering, press without losing the blades.	Flaring the elbows to 90°; bouncing off the chest; shoulders rolling forward.	**Reg:** push-up or floor press. **Prog:** heavier, barbell (15U+).
Incline DB Press	13U+	30–45° bench. Often the friendliest pressing angle for throwers.	Bench too steep, turning it into an overhead press.	**Prog:** heavier load.
Half-Kneeling Landmine Press	10U+	Down knee under the hip, glute squeezed, ribs down. Press up and slightly forward. **The default overhead-pattern option for pitchers.**	Ribs flaring; low back arching; leaning back to press.	**Reg:** band press. **Prog:** standing, heavier.
Overhead Press	15U+*	*Only for athletes with full, pain-free overhead range and clean scapular control. Ribs down, press in a straight line, finish with the biceps by the ears.	Arching the back to get the bar up; pressing around the head.	**Reg:** landmine press. **Prog:** heavier, single arm.
Dip	Not programmed	We do not program dips for throwing athletes. The bottom position puts the shoulder in an extreme extended, internally rotated position with high load. There are better options.		

UPPER BODY — PULL (MINIMUM 2:1 PULL-TO-PUSH VOLUME ACROSS THE WEEK)

EXERCISE	AGES	COACHING CUES	COMMON MISTAKES	REGRESSION → PROGRESSION
Inverted Row	7U+	Body rigid, pull the chest to the bar, squeeze the shoulder blades, pause, lower under control.	Hips sagging; shrugging; half range.	**Reg:** raise the bar / bend the knees. **Prog:** feet elevated, weighted.
Single-Arm DB Row	10U+	Hand and knee on the bench or a hip-hinge stance. Elbow drives to the hip pocket. Torso stays square.	Twisting the torso to move more weight; yanking with the arm.	**Reg:** chest-supported row. **Prog:** heavier, bent-over.
Chest-Supported Row	10U+	Chest on an incline bench. Removes the low back from the equation — great for high-volume pulling.	Lifting the chest off the bench; using momentum.	**Prog:** pause 1s at the top.
Chin-Up / Pull-Up	10U+	Full hang, shoulder blades down first, chin over the bar, control the lowering. Chin-up (palms toward you) is easier on the shoulder for most throwers.	Kipping; partial range; shrugging at the bottom.	**Reg:** band-assisted or eccentric only. **Prog:** weighted.
Lat Pulldown	10U+	Set the shoulder blades down first, pull to the collarbone, control the return.	Leaning way back; pulling behind the neck (never do this).	**Prog:** chin-up.
Face Pull	7U+	Band or cable at face height. Pull toward the forehead, thumbs back, elbows high. Rear delts and mid-traps.	Turning it into a row; shrugging.	**Prog:** heavier band, add a 2s hold.
Band Pull-Apart	7U+	Straight arms, ribs down, pull the band apart until it touches the chest.	Bending the elbows; shrugging; arching the back.	**Prog:** thicker band, different angles.

CORE — THE FOUR CATEGORIES

Baseball and softball athletes need a core that *resists* unwanted motion so the hips can rotate fast. We program all four categories every week.

EXERCISE	CATEGORY	COACHING CUES	COMMON MISTAKES	REGRESSION → PROGRESSION
Front Plank	Anti-extension	Straight line, glutes and abs squeezed, ribs tucked down, breathe.	Hips sagging or piking; holding the breath.	**Reg:** from the knees. **Prog:** long lever, add load.
Dead Bug	Anti-extension	Low back pressed flat into the floor the entire time.	Low back lifting off the floor;	**Reg:** arms or legs only.

		Exhale as the limbs extend.	moving too fast.	**Prog:** band-resisted, weighted.
Ab Wheel Rollout	Anti-extension	From the knees, ribs down, roll only as far as you can keep the back flat.	Back arching at the end range; going too far too soon.	**Reg:** body saw. **Prog:** from the feet.
Pallof Press	Anti-rotation	Band to the side at chest height. Press straight out without letting the torso rotate. Slow out, slow back.	Rotating toward the anchor; rushing; band too heavy.	**Reg:** half-kneeling, lighter band. **Prog:** add an iso hold, standing.
Bird Dog / Bird Dog Row	Anti-rotation	Hips level, long from fingertip to heel. The row version adds a DB pull without letting the hips turn.	Hips rotating; back arching; rushing.	**Reg:** arm or leg only. **Prog:** add the row.
Side Plank	Anti-lateral flexion	Stack the hips and shoulders, push the ground away, hips high.	Hips dropping; rolling forward.	**Reg:** knees down. **Prog:** top-leg abduction, add load.
Suitcase Carry	Anti-lateral flexion	One heavy DB/KB. Walk perfectly tall — no lean toward or away from the weight.	Leaning; shrugging; short choppy steps.	**Reg:** farmer carry (two sides). **Prog:** heavier, longer distance.
Half-Kneeling Chop & Lift	Rotation	Rotate through the mid-back with the hips quiet. Controlled — this is a stability exercise, not a power exercise.	Rotating from the low back; using momentum.	**Reg:** tall kneeling. **Prog:** standing, heavier.
Copenhagen Plank	Adductor	Top leg on a bench, hold the body in a straight side-plank line. Start with a short lever (knee on the bench).	Starting with the long lever; hips dropping; too much volume too soon.	**Reg:** short lever, adductor squeeze. **Prog:** long lever, add reps.
Hollow Hold	Anti-extension	Low back pressed down, arms and legs long and low.	Back lifting off the floor.	**Reg:** tuck the knees. **Prog:** hollow rock.
Sit-Ups / Russian Twists	Limited use	We use these sparingly. High-volume spinal flexion and loaded twisting add repetitive stress to the low back without training what these sports actually need. Anti-rotation and controlled chops give more return.		

SHOULDER & SCAPULAR

EXERCISE	AGES	COACHING CUES	COMMON MISTAKES	REGRESSION → PROGRESSION
Prone Y-T-W	7U+	Face down, thumbs up, lift the arms using the shoulder blades. Small range, big squeeze, 2-second holds.	Shrugging; using momentum; lifting too high.	**Prog:** light plates (2–5 lb), longer holds.
Wall Slide	7U+	Low back and forearms on the wall, slide up without losing contact. Trains upward rotation of the scapula.	Ribs flaring off the wall; shrugging.	**Prog:** add a band, lift off at the top.
Band External Rotation (at side)	7U+	Elbow at the side, towel under the arm, rotate out slowly, control the return. **Light resistance — this is not a strength contest.**	Band too heavy; the elbow drifting away; using the whole body.	**Prog:** at 90° abduction (13U+).
Band Internal Rotation	10U+	Same setup, rotating in. Balance is the goal — the cuff works both ways.	Rushing; too much resistance.	**Prog:** at 90° abduction.
Prone Trap Raise (Y at 135°)	10U+	Thumb up, arm at about 135°, lift and hold 2 seconds. Targets the lower trapezius.	Shrugging the upper trap; jerking.	**Prog:** light plate.
Serratus Punch / Push-Up Plus	10U+	At the top of a push-up or floor press, push the shoulder blade forward around the ribcage.	Bending the elbows instead of moving the blade.	**Prog:** from a push-up position.
Bottoms-Up KB Carry	13U+	KB upside down, elbow at 90°. Grip hard, ribs down, walk tall. Excellent shoulder stability.	Letting the wrist bend; leaning.	**Reg:** hold in place. **Prog:** heavier, overhead.
Forearm Circuit flexion / extension / pronation / supination / ulnar deviation	10U+	Light DB or hammer. 12–15 controlled reps each. Elbow resilience for throwers — especially softball pitchers, whose biceps and forearm work hard through the release.[9]	Going too heavy; rushing through the range.	**Prog:** wrist roller, plate pinch.

ARM CARE

THE HABIT THAT PROTECTS THE ASSET

READ THIS FIRST

This section is **general education**. It is not a rehabilitation program, not a return-to-throwing program, and not a substitute for a physician, athletic trainer, or physical therapist. **Pain is never to be ignored or trained through.** Arm pain during or after throwing, pain that wakes an athlete up, pain that lingers more than a few days, loss of velocity or control alongside discomfort, numbness, or tingling — all of these mean stop throwing and get evaluated. An athlete who hides arm pain to stay in the lineup is trading a season for a career.

WHAT ACTUALLY PROTECTS YOUNG ARMS

The evidence is consistent: the dominant driver of youth throwing injuries is **volume and fatigue** — too many throws, too often, without enough rest, over too many months of the year.[4,5,6] Strength and mobility work supports the arm, but nothing in this manual replaces managing how much an athlete throws.

FACTOR	WHAT TO DO
Pitch counts & rest	Follow Pitch Smart daily maximums and required calendar-day rest for the athlete's age, in every league, tournament, and showcase. No pitcher appears as a pitcher on three consecutive days regardless of pitch count.[4]
Annual time off	USA Baseball recommends at least 4 months off from competitive throwing per year, with 2–3 months continuous.[5] Phase 1 of this offseason is part of that window. Softball pitchers need planned time away from the circle for the same reason.[9,10]
Multiple teams	Avoid pitching for more than one team in the same period. The counts do not reset when the uniform changes.
Catcher + pitcher	Avoid catching on days a player is not pitching. It is the highest-throw-volume position on the field.[5]
Fatigue	Loss of velocity, loss of command, dropping the elbow, or a change in mechanics late in an outing are signs of fatigue. Come out.
Breaking balls	Pitch Smart recommends that pitchers under 13 throw fastballs and change-ups only.[4] Command comes first; spin can wait.

THE FIVE COMPONENTS OF ARM CARE

COMPONENT	WHY IT MATTERS	WHAT WE TRAIN
Shoulder mobility	Throwing athletes commonly gain external rotation and lose internal rotation on the throwing side. Maintaining total range matters more than maximizing any one direction.	Sleeper-style and cross-body stretches (gentle, never painful), lat stretching, controlled shoulder circles.
Scapular control	The shoulder blade is the base the arm moves on. If it doesn't rotate upward and stabilize properly, the shoulder joint takes the stress.	Wall slides, prone Y-T-W, prone trap raise, serratus punch, rows and face pulls.
Rotator cuff strength	The cuff decelerates the arm. Deceleration is where the damage happens, and it demands endurance more than max strength.	Light-band external and internal rotation, side-lying ER, 90/90 variations (13U+). High reps, light load, perfect control.
Forearm & wrist strength	The forearm and elbow absorb enormous load at ball release — and in the windmill pitch the biceps-forearm complex works hard to resist distraction while flexing the elbow.[9]	Wrist flexion/extension, pronation/supination, ulnar deviation, wrist roller, grip work.
Thoracic mobility	If the mid-back doesn't rotate and extend, the shoulder and elbow make up the difference.	Open books, quadruped t-spine rotation, thread-the-needle, foam-roll extensions.

ARM CARE CIRCUIT A (DAILY / AFTER EVERY SESSION — 6–8 MINUTES)

EXERCISE	DOSE	CUE
Band Pull-Apart	2 × 15	Straight arms, ribs down.
Wall Slide	2 × 10	Low back on the wall the whole time.
Band External Rotation (at side)	2 × 12/side	Towel under the elbow, slow both directions.
Band Internal Rotation	2 × 12/side	Same control, opposite direction.
Prone Y-T-W	1 × 8 each	Thumbs up, 2-second hold at the top.
Wrist Flexion / Extension	2 × 15 each	Light. Full range.
Open Book (t-spine)	8/side	Exhale into the rotation, knees stay stacked.

ARM CARE CIRCUIT B (ALTERNATE DAYS — 6–8 MINUTES)

EXERCISE	DOSE	CUE
Face Pull	2 × 15	Thumbs back, elbows high.
Prone Trap Raise (Y at 135°)	2 × 10	2-second hold, no shrug.

Serratus Punch / Push-Up Plus	2 × 10	Move the shoulder blade, not the elbow.
Side-Lying External Rotation	2 × 12/side	Very light DB or band, slow tempo.
Bottoms-Up KB Carry (13U+)	2 × 20 yd/side	Grip hard, ribs down, walk tall.
Forearm Pronation / Supination	2 × 12 each	Hammer or light DB, full controlled range.
Cross-Body Shoulder Stretch	2 × :20/side	Gentle. Stretch, never pain.

COMMON ARM-CARE MISTAKES

- **Bands that are too heavy.** Cuff work is endurance work. If the whole body moves, the band is too heavy.
- **Doing it once a week.** Arm care works as a daily habit in small doses, not as a weekly event.
- **Only doing it on throwing days.** The offseason is exactly when these tissues can be built without competing with throwing volume.
- **Stretching into pain.** Aggressive shoulder stretching — especially sleeper stretches done hard — can do more harm than good. Gentle is the standard.
- **Treating it as a substitute for rest.** No circuit offsets too many throws.

MOBILITY

A DAILY ROUTINE AND A SHORTER PRE-TRAINING ROUTINE

Mobility work has two jobs for our athletes: restore the range the sport takes away (hips, thoracic spine, shoulders), and prepare the body to produce force in the positions the sport demands. Do it consistently and in small doses — ten minutes a day beats an hour on Sunday.

DAILY MOBILITY ROUTINE (12–15 MINUTES • EVERY DAY, INCLUDING REST DAYS)

AREA	EXERCISE	DOSE	CUE
Ankles	Knee-to-Wall Ankle Rock	10/side	Heel flat, knee over the second toe, move slowly to end range.
Ankles	Calf Stretch (straight & bent knee)	:30/side each	Bent knee targets the deeper calf muscle.
Hips	90/90 Hip Switch	10/side	Stay tall, drive from the hips, no hands.
Hips	Frog Rock	10 reps	Knees wide, rock back only as far as the low back stays flat.
Hip flexors	Half-Kneeling Hip Flexor Stretch	:30/side	Squeeze the back glute, ribs down — do not arch the low back.
Hamstrings	Supine Leg Lower / Active Hamstring	10/side	Low back stays down, straight leg, slow.
Hamstrings	Hip Hinge Stretch (elevated heel)	:30/side	Flat back, hinge from the hip.
Adductors	Adductor Rock Back	10/side	One leg out to the side, rock back gently.
Adductors	Cossack Squat (unloaded)	8/side	Heel down, control the bottom.
T-Spine	Open Book	8/side	Exhale into the rotation; knees stay stacked.
T-Spine	Quadruped T-Spine Rotation	8/side	Hand behind the head, rotate the mid-back, hips stay still.
T-Spine	Foam Roll Extensions	8 reps	Roller under the mid-back, support the head, extend gently.
Shoulders	Wall Slide	10 reps	Forearms and low back stay on the wall.
Shoulders	Lat Stretch (bench or wall)	:30/side	Hips back, exhale, sink the chest.
Shoulders	Cross-Body Stretch	:20/side	Gentle. Never into pain.

PRE-TRAINING MOBILITY (5–6 MINUTES • BEFORE EVERY SESSION, AFTER THE DYNAMIC WARM-UP)

EXERCISE	DOSE	WHY
Knee-to-Wall Ankle Rock	8/side	Ankle range for squatting, landing, and acceleration.
90/90 Hip Switch	8/side	Hip internal and external rotation for rotation and stride.
World's Greatest Stretch	4/side	Hip flexors, adductors, and t-spine in one movement.
Quadruped T-Spine Rotation	6/side	Mid-back rotation so the shoulder doesn't have to compensate.
Wall Slide	10 reps	Scapular upward rotation before any pressing or throwing.
Glute Bridge	10 reps	Wake up the glutes before they are asked to produce force.

MOBILITY RULES

- **Before training:** active and dynamic. Long static holds right before explosive work are not ideal.
- **After training and on rest days:** longer static holds are fine and useful.
- **Breathe.** Exhale into every stretch — holding your breath fights the stretch.
- **Stretch is not pain.** A 4–6 out of 10 discomfort is the target. Sharp or pinching means stop.
- **Consistency beats intensity.** Ten minutes daily changes tissue. One aggressive session does not.

CONDITIONING

OUR SPORTS ARE NOT DISTANCE-RUNNING SPORTS

A baseball or softball game is a long series of short, near-maximal efforts separated by substantial rest: a swing, a sprint to first, a throw across the diamond, a break on a fly ball. Nothing about it resembles a continuous 3-mile run. So our conditioning develops two things: **the ability to repeat explosive efforts**, and **a general aerobic base that helps athletes recover between efforts, between innings, and between sessions.**

WHY WE DO NOT USE LONG-DISTANCE RUNNING AS THE MAIN TOOL

PROBLEM	EXPLANATION
It does not match the demand	Long slow running trains a system the sport barely uses at the expense of the systems it uses constantly.
It competes with power	High volumes of steady-state running can interfere with the speed and power work that is the actual point of the offseason.
Volume costs recovery	Miles run are recovery spent — recovery that should go toward lifting, sprinting, and throwing.
It is often used as punishment	Running as a consequence teaches athletes that training is punishment. That is a long-term motivation problem.

Where easy aerobic work does help: a general base supports recovery between high-intensity efforts and between training days. We build it with easy bike, easy jog, hiking, swimming, or simply playing another sport — 20–30 minutes at a conversational pace, 1–2 times a week, mostly in Phases 1–2. That is plenty.

CONDITIONING BY AGE GROUP

AGE GROUP	PRIMARY METHOD	FREQUENCY	NOTES
7U–9U	Games, tag, relays, free play	Daily play	No formal conditioning. None. Play is the conditioning — and it is better conditioning than anything we could program.
10U–12U	Games, relays, circuits, other sports	Built into sessions	Keep it competitive and short. If a "conditioning drill" isn't fun at this age, replace it with one that is.
13U–14U	Tempo runs, short shuttles, easy aerobic work	1–2 × / week	Introduce structured conditioning at the *end* of a session or on a separate day. Keep it well short of exhaustion.
15U–16U	Repeated-sprint work, tempo runs, bike intervals, sled/circuit work	1–2 × / week	Phases 1–2: aerobic base plus tempo. Phases 3–4: shift toward repeated-sprint format.
17U–18U	Repeated-sprint ability, tempo, aerobic base, position-specific work capacity	1–2 × / week	Cut conditioning entirely in weeks with heavy throwing, a showcase, or a competing sport season.

CONDITIONING MENU (13U+)

METHOD	PRESCRIPTION	PURPOSE & NOTES
Tempo Runs	8–12 × 60–80 yd at ~70% effort, walk back (~45s)	Builds aerobic capacity and running mechanics with very low injury risk. The best all-purpose conditioning method for our sports. Ideal in Phases 1–2.
Repeated-Sprint Ability	6–10 × 20–30 yd, 45–60s rest, 2–3 sets	Trains the exact quality the sport requires. Ideal in Phases 3–4. Stop the set when times drop off noticeably.
Base-Path Intervals	6–8 × home-to-second, full recovery	Sport-specific, competitive, and easy to measure. Great in Phase 4.
Bike / Rower Intervals	8–12 × :15 hard / :45 easy	Low-impact option for athletes managing lower-body soreness or shin/knee irritation. Good cold-weather option.
Easy Aerobic Work	20–30 min conversational	Bike, easy jog, swim, hike, or another sport. Supports recovery. Phases 1–2 mostly.
Circuit Work	4–6 exercises, :30 on / :30 off, 2–3 rounds	Use bodyweight and carries — not technical lifts. Fatigue plus a barbell is how people get hurt.

WHERE CONDITIONING FITS — AND WHERE IT DOES NOT

- **Never before** speed, plyometric, med-ball, or heavy strength work. Conditioning goes at the end of a session, or on its own day.
- **Never as punishment.** Ever. Not for errors, not for missed signs, not for losing.
- **Never a substitute** for the strength and power work that is the point of the offseason.
- **First thing cut** when the week gets heavy. Sleep, lifting, and skill work all rank ahead of it.

RECOVERY & ATHLETE EDUCATION

TRAINING IS THE STIMULUS. RECOVERY IS WHERE YOU ACTUALLY GET BETTER.

SLEEP — THE HIGHEST-RETURN HABIT IN THIS MANUAL

If a USA Prime Baseball & Softball athlete changes exactly one thing this offseason, it should be sleep. The pediatric consensus recommendation is **9–12 hours for ages 6–12 and 8–10 hours for ages 13–18**.[14] Adolescent athletes routinely fall well short of that. In a study of middle- and high-school athletes, those sleeping fewer than 8 hours per night were substantially more likely to be injured, and sleep hours were a stronger predictor of injury than hours of training.[13] Narrative reviews across adolescent athletes report the same direction of effect: under 8 hours is associated with roughly 1.7 times the injury risk.[24]

HABIT	WHAT TO DO
Consistent schedule	Same bedtime and wake time, including weekends. Consistency matters as much as total hours.
Screens off early	Phones, tablets, and consoles out of the bedroom 30–60 minutes before bed. This is the single hardest and most valuable change for most teenagers.
Cool, dark, quiet	A cooler, darker room makes falling asleep easier.
Caffeine cutoff	No caffeine after early afternoon. Energy drinks are not appropriate for young athletes.
Naps	20–30 minutes in the early afternoon can help on heavy days. Long or late naps hurt night sleep.
Travel weekends	Sleep takes the biggest hit at tournaments. Plan for it — earlier lights-out, no late-night hotel screen time.

HYDRATION

- Start the day with water, and drink consistently through the day — not just at practice.
- General practice for adolescent athletes: drink fluid in the hour before activity, sip regularly during activity, and rehydrate afterward — roughly 16–24 oz for every pound lost during a session.[16]
- Water covers most training sessions. A sports drink can help when activity runs long (roughly an hour or more), is very intense, or takes place in heat.[15,16]
- Energy drinks are not sports drinks and are not appropriate for youth athletes.
- Pale yellow urine is a reasonable everyday check. Dark yellow means drink more.

NUTRITION BASICS

WHAT THIS SECTION IS NOT

This is general nutrition education for a team audience. It is **not** an individualized meal plan and **not** medical or dietetic advice. USA Prime Baseball & Softball does not recommend dietary supplements for minors. Questions about an individual athlete's diet, weight, allergies, or any medical condition belong with a physician or a registered dietitian.

THE THREE MACRONUTRIENTS

NUTRIENT	JOB	FOOD SOURCES
Carbohydrate	The primary fuel for fast, powerful efforts and the main fuel for training. Young athletes deplete their stores relatively quickly, so carbohydrate should be spread across the day rather than loaded at one meal.[16]	Rice, pasta, bread, potatoes, oats, tortillas, fruit, milk, yogurt, beans.
Protein	Builds and repairs tissue and supports growth. Spread it across meals and snacks rather than eating it all at dinner.[15]	Chicken, beef, pork, fish, eggs, milk, yogurt, cottage cheese, beans, lentils, tofu, nuts.
Fat	Energy, hormone production, vitamin absorption, and brain development. Growing athletes need it — low-fat is not the goal.	Olive oil, avocado, nuts, seeds, nut butter, eggs, dairy, fatty fish.

A simple, useful template for a young athlete's plate at most meals: roughly a quarter protein, a quarter to a half carbohydrate, the rest fruit and vegetables, plus a source of fat and a drink. Athletes in a growth spurt or training hard usually need *more food, more often* — not different food.

AROUND TRAINING

WHEN	WHAT	EXAMPLES
2–3 hours before	A normal balanced meal with carbohydrate, protein, and some fat.	Chicken and rice with vegetables; turkey sandwich and fruit; pasta with meat sauce.
30–60 minutes before	Something light and mostly carbohydrate. Keep it small and familiar.[16]	Banana, granola bar, applesauce, yogurt, toast with jam.
During	Water for most sessions. Carbohydrate matters mainly for longer efforts or all-day tournaments.	Water; sports drink or fruit on long tournament days.

Within 1–2 hours after	Carbohydrate plus protein to refuel and repair. Do not skip it, especially on double-session or tournament days.	Chocolate milk and a sandwich; yogurt and fruit; eggs and toast; a real meal.
Every day	Eat breakfast. Athletes who skip breakfast are training on an empty tank by mid-afternoon.	Oatmeal with fruit and milk; eggs and toast; yogurt with granola.

REST DAYS, SORENESS, AND CONSISTENCY

TOPIC	WHAT ATHLETES NEED TO KNOW
Rest days	Rest days are training days — the adaptation happens there. Do the daily mobility routine, walk, play something casual, sleep well. Do not "make up" missed sessions on a rest day.
Normal soreness	Muscle soreness that shows up 12–48 hours after a new or harder session, feels like a dull ache spread over a muscle, is roughly equal on both sides, and eases as you warm up. Common in Phase 1 and after any jump in volume.
Not-normal soreness	Sharp pain, pain in a joint, pain on one side only, pain that gets worse as you warm up, pain that wakes you up, swelling, or any numbness or tingling. **Report it. Do not train through it.**
Managing soreness	Light movement, the mobility routine, food, water, and sleep. Not more soreness.
Consistency	Three sessions a week for twenty weeks is roughly sixty sessions. Missing eight of them is not a problem; missing three straight weeks is. Show up, even on a bad day — a shortened session beats a skipped one.
School, life, training	School comes first. During exam weeks, a hard week at home, or a heavy stretch of games, cut training volume rather than sleep. That is not weakness — it is the correct decision.
Burnout	Dreading practice, persistent fatigue, irritability, and declining performance are warning signs. The answer is usually less volume and more rest, not more effort. Tell a parent or a coach.

TRAINING SAFETY

FOR ATHLETES AND PARENTS

Resistance training for young athletes has a good safety record *when it is properly designed and supervised*.[1] Most youth weight-room injuries trace back to the same handful of causes: no supervision, poor technique, loads that are too heavy for the athlete's training age, and horseplay. All four are preventable.

THE EIGHT SAFETY STANDARDS

#	STANDARD	WHAT IT MEANS IN PRACTICE
1	**Proper supervision**	Athletes under 14, and any athlete new to lifting, train under the direct supervision of a qualified adult. Supervision means watching and correcting — not being in the same building.
2	**Technique before load**	The movement is owned at bodyweight before load is added, and owned with load before speed is added. A new exercise starts light regardless of how strong the athlete is elsewhere.
3	**Gradual progression**	Small, planned increases. The general rule in this manual: hit the top of the rep range on all sets with clean technique on two separate sessions, then add ~5–10 lb lower body or ~2.5–5 lb upper body.
4	**Never trade technique for weight**	If the back rounds, the knee caves, the hips shoot up, or the rep gets ugly — the set is over. A rep that looks bad taught the body something bad.
5	**Training experience beats ego**	Nobody cares what a teammate lifts or what a 16-year-old on social media posts. Compare the athlete to their own log from four weeks ago, and nothing else.
6	**Know pain vs. fatigue**	Muscular fatigue is a burn that fades in minutes. Pain is sharp, located in a joint, one-sided, or persistent. Fatigue is trained. Pain is reported.
7	**Know when to stop**	Stop for: sharp or joint pain, arm pain, numbness or tingling, dizziness, chest tightness, unusual shortness of breath, or technique that has broken down and is not coming back.
8	**Communicate injuries**	Athletes tell a parent and a coach. Parents tell the coaching staff. Coaches adjust the program. Nobody plays hero. An athlete who hides an injury puts their own season at risk — and nothing about that is tough.

ENVIRONMENT CHECKLIST

	BEFORE EVERY SESSION
☐	Clear training space — no clutter, adequate ceiling height, non-slip floor.
☐	Equipment inspected: no frayed bands, cracked plates, loose collars, or wobbly benches.
☐	Collars on any loaded barbell. Every time.
☐	Athletic shoes with a stable sole. No sandals, no cleats indoors, no bare feet on loaded lifts.
☐	Water available and accessible.
☐	Spotter available for any pressing or squatting that may approach failure.
☐	Warm-up completed — nobody starts a session cold.
☐	No horseplay. The weight room is a serious room and a fun room at the same time.

CHRONOLOGICAL AGE DOES NOT DETERMINE TRAINING READINESS

A birthday is a poor measure of what an athlete can handle. What actually matters is training age, technical competence, the ability to follow instruction, emotional maturity, and where the athlete is in their growth. Two 14-year-olds on the same team can need different programs — and that is normal, not a ranking. Use the Training Readiness Check in the Long-Term Athletic Development section, and when in doubt, choose the more conservative option.

AT-HOME TRAINING OPTIONS

NO EQUIPMENT, BANDS, DUMBBELLS, OR FULL GYM — SAME MOVEMENT PATTERNS, SAME GOALS

Winter weather, work schedules, and gym access should not decide whether an athlete trains. Every workout in this manual can be run with what you have. The rule is simple: **keep the movement pattern and the training goal, change the equipment.**

SUBSTITUTION MATRIX

PATTERN	NO EQUIPMENT	RESISTANCE BANDS	DUMBBELLS ONLY	FULL GYM
Squat	Bodyweight squat, tempo squat, jump squat, split squat	Band goblet squat, band-resisted squat	Goblet squat, DB front squat	Back / front / safety-bar squat
Hinge	Single-leg RDL (BW), glute bridge, hip hinge with a broomstick	Band RDL, band pull-through, band hip thrust	DB RDL, single-leg RDL, DB deadlift	Trap-bar deadlift, barbell RDL, hip thrust
Single Leg	Split squat, reverse lunge, step-up on stairs, lateral lunge	Band split squat, band step-up	DB split squat, DB step-up, RFE split squat	All of the above, loaded heavier
Push	Push-up (incline, standard, feet-elevated, deficit)	Band floor press, band push-up, band landmine press	DB bench, DB floor press, incline DB press	Barbell bench, landmine press, DB pressing
Pull	Inverted row under a table, towel row, doorway isometric row, chin-up on a bar	Band row, band pull-apart, band lat pulldown, band face pull	Single-arm DB row, chest-supported row, DB pullover	Chin-up, cable row, chest-supported row, lat pulldown
Core	Plank family, dead bug, hollow hold, bird dog, side plank	Band Pallof press, band dead bug, band chop	Suitcase carry, DB side plank, weighted dead bug	Cable chop, ab wheel, loaded carries
Posterior Chain	Nordic eccentric with a partner, glute bridge, single-leg bridge, back extension on the floor	Band leg curl, band good morning	DB RDL, DB hip thrust, slider leg curl	Nordic, GHR, hip thrust, RDL
Arm Care	Prone Y-T-W, wall slide, serratus punch, push-up plus	Full band circuit — the ideal tool for this work	Side-lying ER, prone raises, forearm work	Cable and band work, bottoms-up carries
Rotational Power	Shadow swings with intent, bodyweight rotational jumps, throw a ball against a wall outside	Band rotational press, band chop for speed	DB rotational punch (light, controlled)	Full medicine-ball progression
Plyometrics	All of it — snap-downs, pogos, broad jumps, bounds need no equipment	—	—	Add boxes for depth drops
Speed	Any 20–40 yd of open space, indoors or out	Band-resisted starts	—	Sled, turf, timing gates

WORKOUT 1 — NO EQUIPMENT (35–45 MIN)

EXERCISE	SETS × REPS	REST	CUE
Universal Warm-Up + Movement Prep	10 min	—	Same as always.
10–20 yd Accelerations	6 reps	60s	Driveway, yard, gym, hallway — find 20 yards.
Broad Jump & Stick	3 × 4	60s	Quiet, held landing.
Squat (3-1-1 tempo)	4 × 12–15	75s	Slow down, pause, drive up.
Push-Up (hardest variation you can own)	4 × 8–15	75s	Rigid body line.
Split Squat	3 × 10/side	60s	Straight down, tall torso.
Inverted Row (table/bar) or Towel Row	4 × 10–12	60s	Chest to the bar, squeeze the blades.
Single-Leg Glute Bridge	3 × 12/side	45s	Ribs down, squeeze at the top.
Nordic Eccentric (partner) or Slider Curl	3 × 5	75s	Fight the whole way down.
Plank + Side Plank + Dead Bug	3 rounds	45s	:30 / :20 each side / 8 per side.
Arm Care Circuit A (bodyweight version)	1 round	—	Wall slides, prone Y-T-W, serratus punch.
Cooldown + Log	4 min	—	—

WORKOUT 2 — RESISTANCE BANDS ONLY (40–50 MIN)

EXERCISE	SETS × REPS	REST	CUE
Universal Warm-Up + Movement Prep	10 min	—	—
Band-Resisted Starts, 10 yd	4/side	60s	Lean, push, don't let the band pull you upright.
Lateral Bound & Stick	3 × 4/side	60s	Land and freeze.
Band Goblet Squat	4 × 12–15	75s	Stand on the band, hold the loop at the chest.

Band Goblet Squat	4 × 12–15	75s	Stand on the band, hold the loop at the chest.
Band RDL / Pull-Through	4 × 12	75s	Hips back, flat back, squeeze to finish.
Band Floor Press or Band Push-Up	4 × 12–15	60s	Band across the upper back, control the return.
Band Row (anchored)	4 × 15	60s	Elbows to the ribs, 1-second squeeze.
Band Split Squat	3 × 10/side	60s	Same standard as loaded.
Band Pallof Press	3 × 10/side	45s	Resist the twist.
Band Chop (for speed)	3 × 8/side	45s	Rotational substitute for the med ball — move fast.
Arm Care Circuit A or B	1 round	—	Bands are the best tool for this work.
Cooldown + Log	4 min	—	—

WORKOUT 3 — DUMBBELLS ONLY (45–60 MIN)

EXERCISE	SETS × REPS	REST	CUE
Universal Warm-Up + Movement Prep	10 min	—	—
10–20 yd Accelerations	6 reps	60–90s	—
Broad Jump & Stick	3 × 4	60s	—
Goblet Squat	4 × 8–10	90s	Elbows inside the knees.
DB Romanian Deadlift	4 × 8–10	90s	Hips back, flat back.
DB Floor Press or DB Bench	4 × 8–10	90s	Elbows ~45°.
Single-Arm DB Row	4 × 10/side	75s	Elbow to hip pocket.
DB Rear-Foot-Elevated Split Squat	3 × 8/side	90s	Couch or chair works as the bench.
Half-Kneeling DB Press (light) or Landmine-Style Press	3 × 10/side	60s	Ribs down, glute squeezed.
Suitcase Carry	3 × 30 yd/side	60s	Perfectly tall.
Weighted Dead Bug + Side Plank	3 rounds	45s	—
Arm Care Circuit B	1 round	—	—
Cooldown + Log	4 min	—	—

WORKOUT 4 — FULL GYM

Use the age-appropriate Workout A / B / C / D exactly as written in the Complete Workout Programs section. That is the full-gym template.

MINIMUM HOME KIT

For roughly the cost of a bat, a family can cover almost everything in this manual: **a set of resistance bands (light, medium, heavy), one or two adjustable dumbbells or a pair of moderate fixed dumbbells, a medicine ball appropriate to the athlete's age, a jump rope, and a foam roller.** Add a pull-up bar if a doorway allows it. Twenty yards of driveway, hallway, or yard covers the speed work.

ATHLETE TRACKING SHEETS

PRINTABLE — PRINT ONE SET PER ATHLETE AT THE START OF THE OFFSEASON

What gets measured gets improved. These pages are meant to be printed and written on. Athletes at 13U and older should own their own log; younger athletes can fill it out with a parent.

SHEET 1 — WORKOUT ATTENDANCE (20 WEEKS)

Mark each completed session. Target: 80% or better. Circle any week where a phase changed.

WEEK	SESSION 1	SESSION 2	SESSION 3	SESSION 4	MOBILITY DAYS	NOTES
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

SHEET 2 — DAILY TRAINING LOG

Photocopy one per session. Date: _____ Workout (A/B/C/D): _____ Week: _____ Phase: _____

EXERCISE	SET 1 WT × REPS	SET 2	SET 3	SET 4	RIR	NOTES

SLEEP LAST NIGHT (HRS)	ENERGY TODAY (1–10)	SORENESS (1–10)	ANY PAIN? WHERE?

SHEET 3 — PERFORMANCE TESTING

Test in week 1, week 10, and week 20. Test **fresh** — after a full warm-up, before any heavy training, never at the end of a session. Same surface, same shoes, same order every time.

TEST	WEEK 1 NOV 2	WEEK 10 JAN 4	WEEK 20 MAR 15	CHANGE	NOTES
Bodyweight (lb)					
Height (in) — track growth					

Height (in) — track growth					
Broad Jump (in) — best of 3					
Vertical Jump (in) — best of 3					
10 yd Sprint (sec)					
20 yd Sprint (sec)					
30 yd Sprint (sec) 15U+					
Home-to-First (sec) 13U+					
5-10-5 Shuttle (sec) 13U+					
MB Rotational Throw — dominant (ft)					
MB Rotational Throw — non-dom (ft)					
MB Scoop Toss (ft)					
Push-Ups (max clean reps)					
Chin-Ups (max clean reps)					
Front Plank (max sec)					
Squat — 5RM estimate (lb) 15U+					
Trap-Bar DL — 5RM estimate (lb) 15U+					

SHEET 4 — WEEKLY SLEEP & RECOVERY TRACKER

Week of: _____ Photocopy one per week. Sleep target: 9–12 hrs (ages 6–12), 8–10 hrs (ages 13–18).

	MON	TUE	WED	THU	FRI	SAT	SUN
Hours slept							
Energy (1–10)							
Soreness (1–10)							
Mood / motivation (1–10)							
Ate breakfast? (Y/N)							
Hydration (1–10)							
Training session?							
Throwing (min / pitches)							
Hitting / lessons (min)							
Other sport (min)							
Any pain? (Y/N + where)							

Weekly total organized sport hours: _____ — keep this at or below the athlete's age in years, capped around 16.[7,22]

SHEET 5 — ATHLETE GOALS

GOAL TYPE	MY GOAL	HOW I'LL KNOW I HIT IT
Performance goal 1 (a number: jump, sprint, throw)		
Performance goal 2		
Strength goal		
Habit goal 1 (sleep, breakfast, mobility, arm care)		
Habit goal 2		
Attendance goal		
One thing I want to be better at on the field		

OFFSEASON ATHLETE SCORECARD

COMPLETE AT THE BEGINNING (WEEK 1), MIDPOINT (WEEK 10), AND END (WEEK 20)

ATHLETE NAME	AGE GROUP	PRIMARY POSITION	SPORT	DATE COMPLETED

PART 1 — PERFORMANCE NUMBERS

TEST	BEGINNING	MIDPOINT	END	TOTAL CHANGE
Broad Jump (in)				
Vertical Jump (in)				
10 yd Sprint (sec)				
20 / 30 yd Sprint (sec)				
MB Rotational Throw (ft)				
Push-Ups (reps)				
Chin-Ups (reps)				
Bodyweight (lb)				

PART 2 — MOVEMENT QUALITY CHECK

Scored by a coach or parent: **2 = solid**, **1 = needs work**, **0 = cannot perform safely**.

STANDARD	BEGIN	MID	END	COACH NOTES
Bodyweight squat to parallel, heels down, knees tracking				
Hip hinge with a flat back				
Push-up with a rigid body line				
Front plank :30 with no hip sag				
Two-foot landing — quiet, knees over toes, held 2 sec				
Single-leg landing — no knee collapse, held 2 sec				
Single-leg balance :20 per side				
Split squat with a tall torso, both sides even				
Overhead reach with ribs down (shoulder range)				
Ankle knee-to-wall, heel down, both sides even				
MOVEMENT SCORE (OUT OF 20)				

PART 3 — HABITS SELF-ASSESSMENT

Athlete scores honestly: **2 = almost always**, **1 = sometimes**, **0 = rarely**.

HABIT	BEGIN	MID	END	NOTES
I get my target hours of sleep on school nights				
I eat breakfast every day				
I eat something with protein and carbs after training				
I drink water throughout the day, not just at practice				
I do my mobility routine on most days				
I do my arm care every training day				
I warm up fully before every session				
I fill out my training log				
I tell a coach or parent when something hurts				
I show up even when I don't feel like it				
HABIT SCORE (OUT OF 20)				

PART 4 — REFLECTION

QUESTION	BEGINNING	MIDPOINT	END
What am I most proud of?			
What is my biggest weakness right now?			

What is my #1 goal for the next 10 weeks?			
What will I change starting tomorrow?			

ATHLETE SIGNATURE	PARENT / GUARDIAN SIGNATURE	COACH SIGNATURE

HOW TO READ THE SCORECARD

The performance numbers are the most visible part of this page, and the least important one. A growing athlete's sprint times can stall for months while they add three inches of height — that is not failure. **The Movement Score and the Habit Score are the ones that predict the next five years.** An athlete who ends the offseason with a 19/20 habit score and no change in vertical jump had a good offseason.

HOW PARENTS CAN HELP THEIR ATHLETE

A SHORT GUIDE FOR THE MOST IMPORTANT PEOPLE IN THE PROGRAM

Almost everything that determines whether this offseason works happens outside the weight room — and most of it happens at home. Here is where parents make the biggest difference, roughly in order of impact.

1. PROTECT SLEEP

This is first for a reason. It is the highest-leverage thing a parent controls, and the research connecting short sleep to injury in adolescent athletes is consistent.[13,24] A firm, boring bedtime routine — phones charging outside the bedroom, lights out at a consistent time — will do more for your athlete's performance and health than any supplement, gadget, or extra lesson. Protect it on tournament weekends especially, when it is most at risk.

2. KEEP FOOD SIMPLE AND AVAILABLE

Young athletes need more food, more often — not different or specialized food. Breakfast every day. Something with carbohydrate and protein within an hour or two after training. A cooler with real food for tournament days so the weekend isn't run on concession-stand nachos. Water bottle always filled. That covers most of it. Supplements are not appropriate for minors, and the questions that matter about an individual athlete's diet belong with a physician or registered dietitian.

3. DELIVER CONSISTENCY

Getting your athlete to the gym on the Tuesday in February when nobody feels like going is a bigger contribution than anything else on this list except sleep. Twenty weeks of showing up is the whole program. Missing a session is fine; missing three weeks is not.

4. ENCOURAGE EFFORT AND HABITS, NOT OUTCOMES

INSTEAD OF...	TRY...
"Did you beat your squat number?"	"Did you get your reps in with good technique?"
"You're faster than him now, right?"	"Are you faster than you were in November?"
"How did you hit today?"	"Did you have fun? What did you work on?"
"Why aren't you getting recruited yet?"	"What's the next thing you're trying to improve?"
"Push through it, you're fine."	"Tell me exactly where it hurts. Let's get it looked at."

5. SET REALISTIC EXPECTATIONS

- **Progress is not linear.** Growth spurts, school stress, illness, and travel all interrupt it. A flat 10 weeks followed by a jump is completely normal.
- **Young athletes are not machines.** A 12-year-old will have unmotivated weeks. That is development, not a character flaw.
- **Training does not stunt growth.** There is no credible evidence that properly designed, supervised resistance training harms growth in youth; current evidence suggests appropriate weight-bearing training supports bone development.[1]
- **There are no shortcuts.** Anything promising fast velocity or exit-velocity gains to a young athlete deserves real skepticism.

6. DO NOT COMPARE

Comparison is the fastest way to make a young athlete quit. Kids mature at wildly different rates — two 13-year-olds can be four years apart biologically. The 12-year-old who is already shaving is not "better"; he is earlier. The small, late-maturing athlete very often catches and passes him. Coach and parent both do best to compare an athlete only to their own log from four weeks ago.

7. GUARD THE CALENDAR

Total sport hours per week should stay at or below your athlete's age in years (capped around 16), with at least 1–2 days per week fully off from organized sport and a real break from the primary sport each year.[7,22,25] When lessons, a winter sport, team practice, and lifting stack up, something has to come out — and the answer is almost never "sleep less." Multi-sport participation is encouraged; if your athlete plays a winter sport, they should do *less* of this program, not more.

8. TAKE PAIN SERIOUSLY, EVERY TIME

Arm pain, joint pain, back pain, or pain that lingers is a reason to stop and get evaluated — not a reason to "tough it out." An athlete who learns at 13 that reporting pain gets them help, not benched, becomes a 17-year-old who tells you about a sore elbow in week one instead of week six.

THE PARENT'S JOB, IN ONE SENTENCE

Get them there, feed them, let them sleep, love watching them play, and let the coaches coach.

COACH GUIDE

HOW USA PRIME BASEBALL & SOFTBALL COACHES REINFORCE THIS PROGRAM

You do not need to become a strength coach. What we need from our coaches is that the strength program and the baseball/softball program stop competing with each other — and that takes coordination, not certification.

WHAT COACHES SHOULD DO

DO	WHY IT MATTERS
Know the phase	Know which of the four phases the offseason is in and roughly what your athletes are doing that week. Phase 3 is the heaviest strength block — that is not the week to add three extra bullpens.
Reinforce the language	Use the same cues the strength program uses: "quiet landing," "hips first," "knees over toes," "stop at RIR 2." Repetition across contexts is how cues stick.
Warm up properly	Run the dynamic warm-up before practices and games. It takes 8 minutes and it is the same one from the manual.
Track throwing volume	Know pitch counts, bullpen counts, and catcher innings. Follow Pitch Smart across every league, tournament, and showcase — the counts follow the athlete, not the uniform.[4]
Ask about total load	Before adding a practice, ask what else is in the athlete's week: lessons, a winter sport, lifting, school. The answer changes the decision.
Report pain up	If an athlete mentions pain, it goes to the parent and the staff the same day. Never to "shake it off."
Support multi-sport athletes	A basketball or hockey season is not a defection. Adjust the training load and welcome the athleticism it builds.
Never use conditioning as punishment	It teaches athletes that training is a consequence. It also produces exactly the wrong adaptation for our sport.

WHAT COACHES SHOULD NOT DO

- **Do not write individual strength programs** unless you hold a relevant certification (CSCS, SCCC, or equivalent) or a qualified professional signs off.
- **Do not prescribe weighted-ball or velocity programs** to youth athletes. That decision belongs to the throwing coach and, where there is injury history, a medical professional.
- **Do not add volume the athlete did not plan for.** An extra bullpen "since we're here" is how weeks blow past their limits.
- **Do not diagnose or treat injuries.** Refer.
- **Do not let an athlete pitch through fatigue.** Declining velocity, dropping the elbow, or losing command late in an outing means they come out.

COORDINATING THE WEEK

The most common failure mode in youth baseball and softball is not a bad program — it is four good programs stacked on one athlete. Use this as a rough coordination guide:

IF THE WEEK INCLUDES...	THEN ADJUST...
A heavy throwing day or bullpen	Avoid heavy upper-body pressing the same day or the day before. Lower body and arm care are fine.
A tournament weekend	Cut to 2 lifting sessions that week, drop conditioning entirely, keep mobility and arm care.
Hitting or pitching lessons	Fine on a training day — do the lesson first, or on a separate part of the day. Skill work before fatigue, not after.
A winter sport in season	Use the 3-day template. Cut conditioning. Lifting becomes maintenance, not progression.
Exam week or a hard stretch at school	Cut volume ~40%, keep frequency. Protect sleep above everything.
A showcase or college camp	Treat the week like a deload. No heavy lifting within 48 hours of the event.
Return from illness or a 2+ week layoff	Drop back a phase for at least one week. Do not "catch up."

THE COACH'S NON-NEGOTIABLES

- Pitch counts and required rest are followed in every setting. No exceptions for playoffs, showcases, or "just one more inning."
- No pitcher appears as a pitcher on three consecutive days, regardless of pitch count.[4]
- Pain is always reported and never coached through.
- Athletes are never compared to each other in front of the group.
- Conditioning is never a punishment.

FREQUENTLY ASKED QUESTIONS

THE TWENTY QUESTIONS WE GET MOST

QUESTION	ANSWER
1. When should my child start lifting weights?	The better question is when they are ready, not how old they are. The NSCA's position is that youth can safely participate in properly designed and supervised resistance training when they can follow instruction and demonstrate competent technique — many children are ready around age 7–8 for bodyweight and very light resistance work.[1] In our system, structured resistance training with external load begins at 10U–12U, and barbells enter at 13U–15U depending on training age and coaching.
2. Will lifting weights stunt my child's growth?	No credible evidence supports this. It is one of the most persistent myths in youth sports. Current evidence indicates that appropriate weight-bearing training supports bone development in childhood and adolescence rather than harming it, provided age-specific guidelines are followed.[1] Growth-plate injuries in youth sports come overwhelmingly from repetitive overuse — particularly throwing volume — and from poorly supervised max-effort lifting, not from well-coached training.
3. Should baseball and softball players bench press?	They can, and many do. It is not the priority lift. We program at least twice as much pulling as pressing for shoulder health, and we often favor dumbbell, incline, and landmine variations, which let the shoulder move on a friendlier path. If bench pressing hurts an athlete's shoulder, we substitute rather than push through it.
4. How many days per week should my athlete train?	7U–9U: 2 sessions plus daily play. 10U–12U: 2–3. 13U–14U: 3. 15U–16U: 3–4. 17U–18U: 3–5, selected by total sport load. More is not better — more *recovered* is better.
5. Should pitchers lift?	Yes. Lower-body and posterior-chain strength is one of the highest-value training inputs available to a pitcher, and upper-back, scapular, and cuff work supports arm health. What we modify for pitchers: reduce or eliminate overhead pressing, avoid dips, favor landmine pressing, emphasize single-leg strength, and coordinate lifting with throwing volume so the two are not both peaking in the same week.
6. Should softball pitchers train differently?	Mostly the same program with different emphases. Windmill pitching places high demands on the shoulder — distraction forces comparable to overhand throwing[9,10,12] — so cuff, scapular, biceps, and forearm work matters just as much. The windmill also involves an aggressive stride and a firm front-leg block, so we add front-leg eccentric strength (split squats, single-leg RDLs, lateral lunges), glute and adductor work, and anti-extension core work.
7. Should baseball or softball players run long distance?	Not as their main conditioning. The sport is repeated short bursts with rest, and high volumes of steady-state running compete with the speed and power work that is the point of the offseason. Some easy aerobic work (20–30 minutes conversational, 1–2 times a week, mostly in Phases 1–2) supports recovery and is useful. Long-distance running as punishment is never useful.
8. How sore should I be?	Mildly. Normal soreness shows up 12–48 hours later, is spread across a muscle, is roughly equal on both sides, and eases as you warm up. It is most common in Phase 1 and after any jump in volume. Soreness is not a scorecard — a session that leaves you unable to train for three days was too much. Sharp pain, joint pain, one-sided pain, or pain that worsens as you warm up is not soreness. Report it.
9. How much weight should I use?	Enough to finish the set with the prescribed reps in reserve and clean technique. 10U–12U: RIR 3–4 (several reps left). 13U–14U: RIR 2–3. 15U–18U: RIR 1–3 depending on the phase. When in doubt, go lighter and move better. Nobody has ever been hurt by the weight they didn't add.
10. When do I add weight?	When you hit the top of the prescribed rep range on all sets with clean technique on two separate sessions. Then add about 5–10 lb on lower-body lifts or 2.5–5 lb on upper-body lifts. Slow and boring is the point.
11. What if I only have dumbbells at home?	You can run the entire program. Use the At-Home Training section's substitution matrix and the dumbbell-only workout. Keep the movement pattern and the goal; change the tool. A pair of dumbbells, a band set, and 20 yards of driveway covers almost everything in this manual.
12. Can I train on a day I have hitting or pitching lessons?	Yes. Do the skill work first, or at a separate time of day. Skill development requires a fresh nervous system — hitting after a heavy leg day teaches your body to swing tired. If it has to be one session, do the lesson and shorten the lift.
13. Can my athlete train while playing a winter sport?	Yes, at reduced volume. Use the 3-day template, drop conditioning entirely, and keep arm care and mobility. Multi-sport participation is encouraged — the training program adjusts around it, not the other way around.
14. What about weighted balls to increase velocity?	That is a throwing-program decision, not a strength and conditioning decision, and it belongs to your throwing coach — and to a medical professional if there is any injury history. Research on weighted-implement programs is mixed: velocity gains are reported, but so are changes in shoulder range of motion whose long-term implications are still debated.[23] This manual does not prescribe them for youth athletes.
15. Should my athlete take supplements or protein powder?	USA Prime Baseball & Softball does not recommend dietary supplements for minors. Food first, always. Questions about an individual athlete's nutrition belong with a physician or a registered dietitian, not with a coach, a teammate's parent, or the internet.
16. My 13-year-old has knee or heel pain. Should they stop training?	Pain at the front of the knee or the back of the heel is common during growth spurts and is usually load-related. Reduce jumping and sprinting volume substantially, keep training the patterns that do not hurt, and have it evaluated by a medical professional if it persists more than a couple of weeks or limits daily activity. Do not train through it and do not let the athlete hide it.
17. Will strength training make my daughter bulky?	No. Strength training makes athletes stronger, faster, and more resilient. For softball athletes in particular, the plyometric, landing, balance, and strength work in this program is exactly the combination associated with reduced knee-injury risk in female athletes — and the evidence suggests starting it in early adolescence is better than waiting.[17]
18. My athlete missed three weeks. What do we do?	Drop back a full phase for at least one week, then rebuild. Do not try to catch up by doubling sessions — that is where injuries happen. Missing time is normal; the response to it is what matters.

19. Is it okay to train the day before a game or tournament?	A light session — warm-up, a few jumps, mobility, arm care — is fine and often helps. Heavy lower-body work within 24 hours of competition is not. In Phase 4, most of our athletes train Monday through Thursday for exactly this reason.
20. How do I know the program is actually working?	Look at the Scorecard. Broad jump, sprint times, and rotational throw distance should trend up over 20 weeks. The Movement Score should improve. The Habit Score should improve. And the athlete should feel better on the field, not just tired in the gym. If numbers go backward while training feels harder, something needs to change — usually volume or sleep.

SOURCES & REFERENCES

POSITION STATEMENTS, PEER-REVIEWED RESEARCH, AND GOVERNING-BODY GUIDANCE

This guide is a USA Prime Baseball & Softball training system, built from the sources below rather than copied from any single program. Where the research is uncertain or recommendations vary, we have said so in the text rather than presenting an opinion as settled fact.

POSITION STATEMENTS & GOVERNING-BODY GUIDANCE

#	REFERENCE
1	Faigenbaum AD, Kraemer WJ, Blimkie CJR, Jeffreys I, Micheli LJ, Nitka M, Rowland TW. *Youth Resistance Training: Updated Position Statement Paper from the National Strength and Conditioning Association.* Journal of Strength and Conditioning Research. 2009;23(5 Suppl):S60–S79.
2	Lloyd RS, Cronin JB, Faigenbaum AD, Haff GG, Howard R, Kraemer WJ, Micheli LJ, Myer GD, Oliver JL. *National Strength and Conditioning Association Position Statement on Long-Term Athletic Development.* Journal of Strength and Conditioning Research. 2016;30(6):1491–1509.
3	National Strength and Conditioning Association. *Long-Term Athletic Development Position Statement* — Ten Pillars summary. nsca.com
4	Major League Baseball & USA Baseball. *Pitch Smart: Pitching Guidelines by Age Group.* mlb.com/pitch-smart
5	USA Baseball. *Pitch Count and Age-Specific Recommendations for Youth Pitchers.*
6	DiFiori JP, Benjamin HJ, Brenner JS, Gregory A, Jayanthi N, Landry GL, Luke A. *Overuse Injuries and Burnout in Youth Sports: A Position Statement from the American Medical Society for Sports Medicine.* British Journal of Sports Medicine. 2014;48(4):287–288.
7	National Athletic Trainers' Association. *Official Statement on Youth Sport Specialization.*
14	Paruthi S, Brooks LJ, D'Ambrosio C, et al. *Recommended Amount of Sleep for Pediatric Populations: A Consensus Statement of the American Academy of Sleep Medicine.* Journal of Clinical Sleep Medicine. 2016;12(6):785–786.
15	Thomas DT, Erdman KA, Burke LM. *Position of the Academy of Nutrition and Dietetics, Dietitians of Canada, and the American College of Sports Medicine: Nutrition and Athletic Performance.* 2016.
21	Behm DG, Faigenbaum AD, Falk B, Klentrou P. *Canadian Society for Exercise Physiology Position Paper: Resistance Training in Children and Adolescents.* Applied Physiology, Nutrition, and Metabolism. 2008;33(3):547–561.
25	Brenner JS; American Academy of Pediatrics Council on Sports Medicine and Fitness. *Sports Specialization and Intensive Training in Young Athletes.* Pediatrics. 2016;138(3).

YOUTH DEVELOPMENT, SPECIALIZATION & INJURY RISK

#	REFERENCE
8	Bell DR, Post EG, Biese K, Bay C, Valovich McLeod T. *Sport Specialization and Risk of Overuse Injuries: A Systematic Review with Meta-analysis.* Pediatrics. 2018;142(3).
17	Myer GD, Sugimoto D, Thomas S, Hewett TE. *The Influence of Age on the Effectiveness of Neuromuscular Training to Reduce Anterior Cruciate Ligament Injury in Female Athletes: A Meta-Analysis.* American Journal of Sports Medicine. 2013;41(1):203–215.
20	Lloyd RS, Oliver JL. *The Youth Physical Development Model: A New Approach to Long-Term Athletic Development.* Strength and Conditioning Journal. 2012;34(3):61–72.
22	Jayanthi N, Pinkham C, Dugas L, Patrick B, LaBella C. *Sports Specialization in Young Athletes: Evidence-Based Recommendations.* Sports Health. 2013;5(3):251–257.
26	Faigenbaum AD, Myer GD. *Resistance Training Among Young Athletes: Safety, Efficacy and Injury Prevention Effects.* British Journal of Sports Medicine. 2010;44(1):56–63.

BASEBALL & SOFTBALL SPECIFIC

#	REFERENCE
9	Barrentine SW, Fleisig GS, Whiteside JA, Escamilla RF, Andrews JR. *Biomechanics of Windmill Softball Pitching with Implications About Injury Mechanisms at the Shoulder and Elbow.* Journal of Orthopaedic & Sports Physical Therapy. 1998;28(6):405–414.
10	Werner SL, Jones DG, Guido JA, Brunet ME. *Biomechanics of Youth Windmill Softball Pitching.* American Journal of Sports Medicine. 2005.
11	Friesen K, et al. *Biomechanics Related to Increased Softball Pitcher Shoulder Stress: Implications for Injury Prevention.* American Journal of Sports Medicine. 2022;50(1).
12	Oliver GD, et al. *Biomechanics of Fastpitch Softball Pitching: A Practitioner's Guide.* Sports Health. 2025.
18	Taniyama D, Matsuno J, Yoshida K, Pyle B, Nyland J. *Rotational Medicine Ball Throw Velocity Relates to NCAA Division III College Baseball Player Bat Swing, Batted Baseball, and Pitching Velocity.* Journal of Strength and Conditioning Research. 2021;35(12):3414–3419.
19	Newton RU, McEvoy KP. *Baseball Throwing Velocity: A Comparison of Medicine Ball Training and Weight Training.* Journal of Strength and Conditioning Research. 1994;8(3):198–203.
23	Reinold MM, Macrina LC, Fleisig GS, Aune K, Andrews JR. *Effect of a 6-Week Weighted Baseball Throwing Program on Pitch Velocity, Pitching Arm Biomechanics, Passive Range of Motion, and Injury Rates.* Sports Health. 2018;10(4):327–333.

SLEEP, RECOVERY & NUTRITION

#	REFERENCE
13	Milewski MD, Skaggs DL, Bishop GA, Pace JL, Ibrahim DA, Wren TAL, Barzdukas A. *Chronic Lack of Sleep is Associated with Increased Sports Injuries in*

	Adolescent Athletes. Journal of Pediatric Orthopaedics. 2014;34(2):129–133.
16	Journal of the Pediatric Orthopaedic Society of North America. *Nutritional Recommendations for the Young Athlete.* 2024.
24	*Sleep, Nutrition, and Injury Risk in Adolescent Athletes: A Narrative Review.* Nutrients. 2023;15(23).

A NOTE ON CERTAINTY

Sports science is not settled science. Some recommendations in this manual rest on strong, replicated evidence — that supervised youth resistance training is safe and effective, that sleep is associated with injury risk, that throwing volume drives youth arm injuries. Others rest on reasonable inference from limited data — optimal plyometric volumes for a given age, the precise transfer of medicine-ball training to bat and throwing velocity, ideal work-to-rest ratios for a 12-year-old. We have tried to signal which is which. Where a qualified professional who knows your individual athlete disagrees with something here, **follow the professional who knows your athlete.**

USA Prime Baseball & Softball — 2026–2027 Offseason Strength & Conditioning Guide. Prepared for organization-wide distribution to athletes, parents, and coaches. This document is educational material and is not medical advice. Athletes should be medically cleared before beginning any training program. Questions about an individual athlete's health, injury history, nutrition, or readiness to train should be directed to a qualified medical professional.