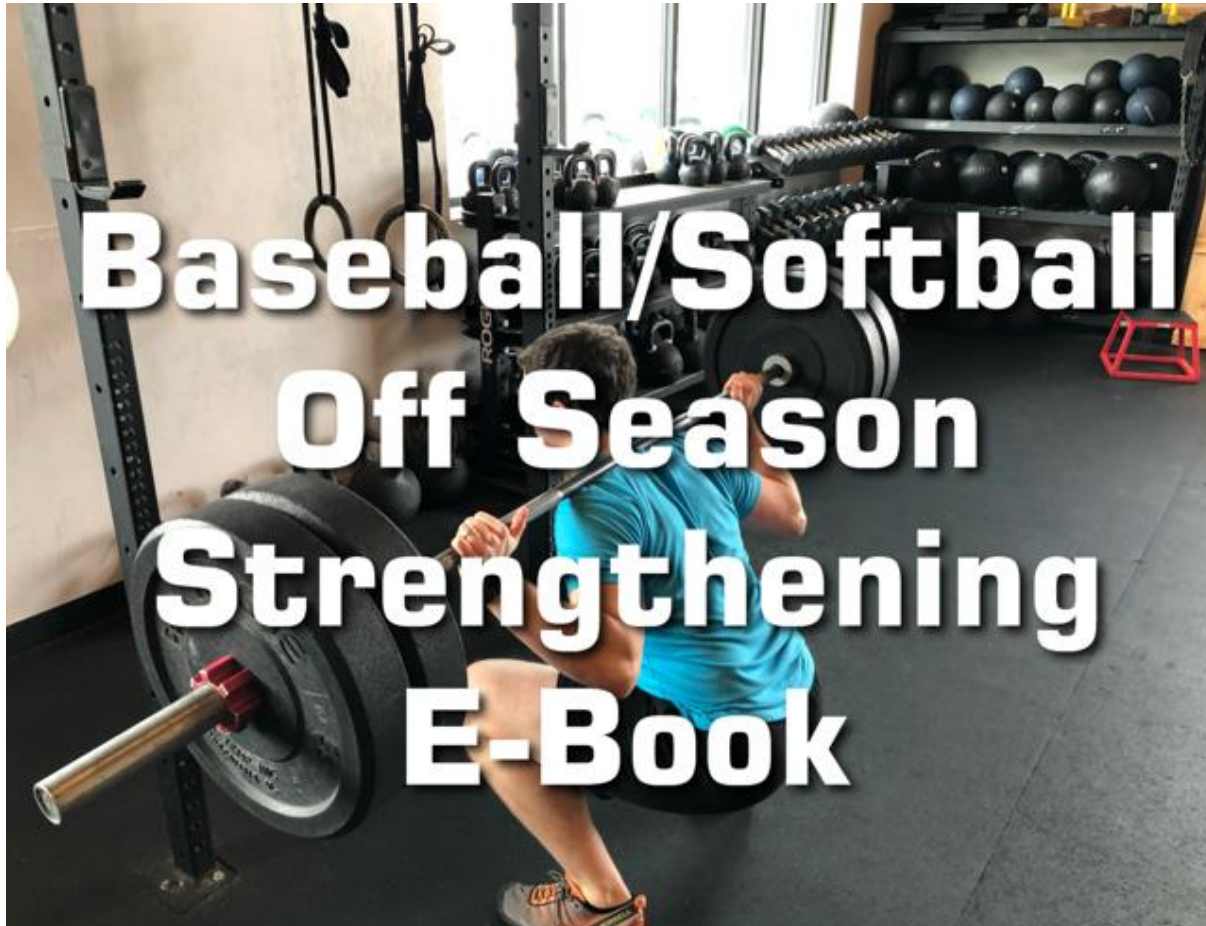




HEALING MOTION  
**PHYSICAL THERAPY**

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## COVID-19 Special Note

First, we are sorry to all of our youth athletes who are missing most if not all of their sports season due to COVID-19. Even though it may not be your choice, by complying with our government's and healthcare expert's recommendations, you are making a positive difference in our world.

Please **DO NOT** go to a public gym space to perform these exercises while it is recommended you don't go to public places.

Please do these at home or in an outdoor space you don't have to drive to that has space from other people. Most of these can be done with bodyweight and light weight.

At home weight ideas:

- Fill any milk jug or pain bucket with water/sand, etc
- Fill any back with books
- Take away or subtract weight as needed

You may not have control of your school or sports schedule, but you **DO** have control over making the most of this opportunity. More time to spend with your family and more time to get stronger and more flexible to help you be a better athlete and person.

Please feel free to contact us with any questions!



## E-Book Overview

Welcome! Thanks for trusting me with helping you improve your performance as an athlete! The intent of this E-Book is to give you all the tools necessary to improve your Strength and Performance while in the Off Season of your sport. This does not mean you should not be training during your sport season, but it will look a littler different.

I have intentionally left out some specific plyometric and agility drills for the purpose of this E-Book as the comprehensiveness of the strengthening and flexibility exercises and programming may already seem to complicated to some. If you would like further guidance in the above, email me, and we can make it happen!

Any [Red Link](#) throughout this E-Book directly links to the corresponding YouTube playlist or video. You can also see all the playlists on our YouTube Channel. I will link the channel and playlists below.

I hope this E-Book helps you improve your strength and flexibility and helps you perform better both as an athlete and a person.

Stronger Together,

Dr. Dane Happeny, PT, DPT, OCS  
Doctor of Physical Therapy, Board Certified Orthopedic Specialist





## YouTube Reference

Any [Red Link](#) throughout this E-Book directly links to the corresponding YouTube playlist or video. You can also see all the playlists on our YouTube Channel. Channel and playlists are linked below. These playlists are not quite complete, but will continue to be updated weekly. We would love it if you would subscribe to our channel as well as follow us on social media!

[Healing Motion Physical Therapy YouTube Channel](#)

[Throwing/Hitting Dynamic Warmup](#)

[Throwing/Hitting Upper Body Mobility/Stretching](#)

[Throwing/Hitting Lower Body Mobility/Stretching](#)

[Throwing/Hitting Upper Body Strengthening](#)

[Throwing/Hitting Lower Body Strengthening](#)

[Throwing/Hitting Core Strengthening](#)

## Social Media

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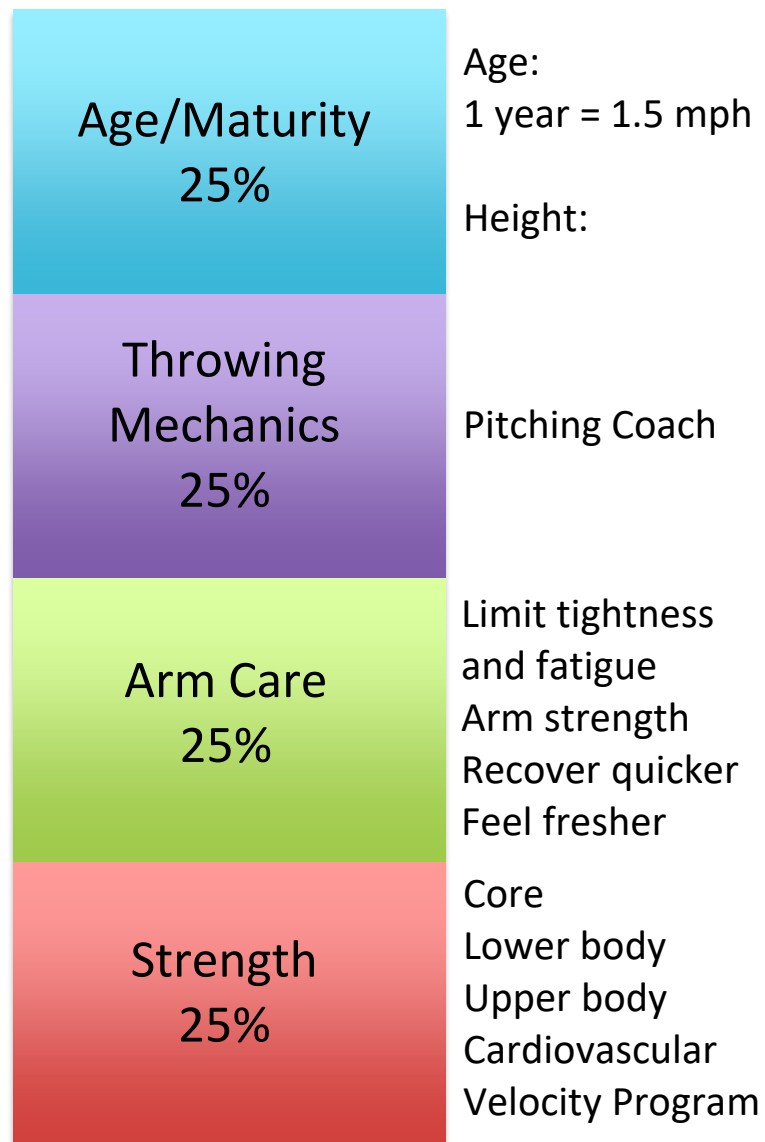
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## Throwing Performance Buckets

Adapted from Mike Reinold, PT, DPT, SCS, CSCS





## Pre-Throwing/Training Routine

### Dynamic Warmup

#### Lower

- Hip IR V Rockbacks x5
- Pigeon rockbacks x5 each
- Split adductor rockbacks x5 each
- Spiderman Lunge x3 each
  - Hip flexor (front knee <-> back heel)
  - Ham
  - Thoracic Reach for the Sky

#### Upper

- Shoulder ER/IR Corkscrews x5
- Angels in the Outfield (Prone or Standing) x5
- Pullovers x5
- Circles 3 way thumb up, back, and down, fwd and back, small to big circles
- Tree huggers 3 way thumb up, back, and down x3 each
- Ballerina throws: feet square both ways x3, throwing legs throwing side x3

### Tom House (Optional)

Saws, rock baby, scissors 3 way x5 each

- 3 way: Thumb up, palm up, palm down

Ys: elbows out thumbs up x5

Hand grip wake me ups: pull backside wake up call x5, push forward wake up call x5

- Back Wake ups: side to side, circles fwd, back, swims fwd, swims back, elbow down and touch x5 each
- Fwd Wake ups: side to side, circles fwd, back, swims fwd, swims back, elbow down and touch x5 each
- Palms together elbows together pushes thumbs toward you, in, and out x5 each

### Strength – all performed 1 arm at a time

Pre-Training: Plyo: 3 slow, 5 fast x2 each

- Cuff burnouts
- ER and IR at side
- ER and IR at 90
- Overhead forward tricep extensions
- Reverse Flies, Chest Flies
- Reverse throws, Throws
- Body/Blade Flex Bar Throwing motion x3, Hitting x3
- Plyo ER 90 ball upward or partner toss x10

### **Condensed Version:**

**Lower:** All

**Upper:**

Corkscrews

Angels

Huggers

Ballerinas

**Strength:**

ER at side or 90

Reverse Flies

Reverse Throws





## Post Throwing/Training Routine

**Strength** – all performed 1 arm at a time

Post-Training: 1x10 all normal speed

- ER and IR at side
- ER and IR at 90
- Overhead forward tricep extensions
- Reverse Flies, Chest Flies
- Reverse throws, Throws

### Static Stretches x30 seconds each (Post Train/Game)

#### Lower

- Foam Roll/LAX Ball/Massage Tool
  - Glutes, Hams, Calves, Hip Flexors, Quads, Adductors (groin)
- Seated Pretzel Twist with Breathing
- Hip IR V Rockbacks
- Split Adductor Rockbacks
- Pigeon
- Kneeling Hip Flexor
- Standing Quad
- Standing Hamstring
- Standing Calf knee straight and bent

#### Upper

- Foam Roll/LAX Ball/Massage Tool
  - Mid Back, Pec, Lat, Back Shoulder (cuff)
- Cobra
- Mid back thread needle or windmills
- Sleeper stretch
- Arm across body stretch
- Child's Pose Lat Stretch with Breathing
- Triceps overhead
- Neck sidebend stretch (shoulder set down)
- Doorway/Corner/Pole Pec Stretch 45, 90, and 135 degrees
- Wrist up and down

### Condensed Version:

Strength: ER at side, Reverse Flies, Reverse Throws

Lower: Cover Guy, Kneeling Hip Flexor, Standing Hamstring, Standing Calf

Upper: Midback windmills, Childs Pose Lat, Arm Across Body, Triceps, Pec 3 way

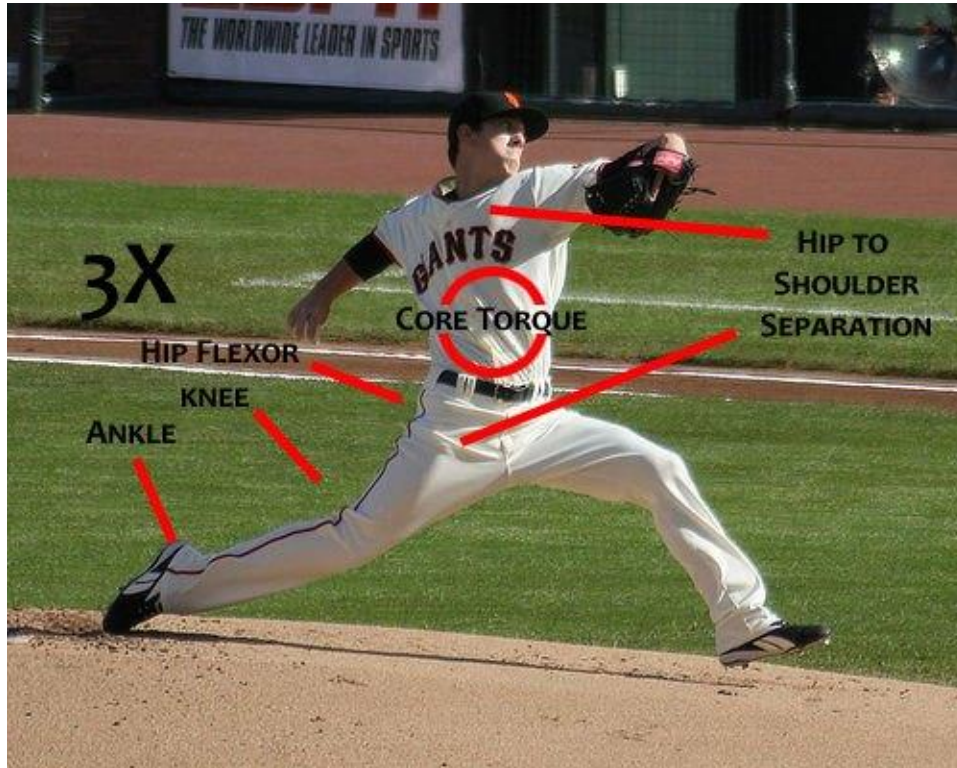






## Off Season Strengthening Program

3-5x3-12; 3-5x/week; lower body and core as much as upper body



<https://lehmansbaseball.wordpress.com/category/throwing-mechanics/>

**Lower Body → Creates Force**

**Core → Transfers Force**

**Upper Body → Dissipates Force**





## Strength Training Principles

- Before training: Always warmup!
- **Hard vs. Hurt**
  - Never push through pain. Strengthening should feel HARD for your muscles, but NOT HURT anything.
- **Challenge it to change it**
  - Reps in Reserve
    - Reps per set depend on your goals; 8-12 would be most appropriate for most peoples goals. At your rep goal, you should only have 1-4 reps in reserve with each set. That means, you are fatigued enough, you feel like you only could do 1-4 more reps before compromising your mechanics and form.
    - If you fall short of your rep goal, go through less range, use less weight, use a form of assistance, or do the exercise that isn't quite as hard.
  - The more sets you do of an exercise, 3-5, the more you will improve your strength and endurance.

Phase	Reps	Rest
Endurance	12-15	30 seconds
Hypertrophy	8-12+	30-90 seconds
Strength	4-6	90 sec – 2 min
Power	3-5	2-4 min
Max Strength/Power	1-3	5 min





### Strengthening Programming Variations

Type:	Day 1	Day 2	Day 3	Day 4
<b>Solid</b>	Lower	Upper	Core	Full Body
<b>Balanced</b>	Lower, Core	Upper, Core	Lower, Core	Upper, Core
<b>Advanced</b>	Power 7	Upper, Core	Lower, Core	Full Body
<b>Flexible</b>	Pick	Based	Off	Feel

**Cuff Work: 3-4x/week**

**Mobility Work: Daily**

**Conditioning: 3-5x/week**

- Ladder Agility
- Sprints
  - Star Drill
  - Shuttle
  - Lines
  - All out
- Bike/Rower/Treadmill/Elliptical
  - 8-15 cal burn for time
  - Max cal burn in 15 sec
  - ¼ mile or 250 m for time
  - Intervals
    - 15-30 sec hard, 1-2 min rest and repeat





**Upper Body – 1. Shoulder Control / 2. Push / 3. Pull / 4. Carry**

**Rotator Cuff (Pick 1-3)**

- Shoulder Control: stabilizes shoulder keeping centered within the joint – controls and decelerates throwing
  - External Rotation: side with towel roll → 45 deg → 90 deg
  - Prone Ls
  - Internal Rotation: side with towel roll → 45 deg → 90 deg
  - Robbers/Burnouts: side → 45 deg → 90 deg
  - Body blade or flex bar work
  - Ball wall dribbles

**Mid Trap/Rhomboids (Pick 1-3)**

- Pull: retracts shoulder blade - lead arm power with swinging - decelerates throwing
  - Rows
  - Prone Ws → Band/Cable Ws → Face Pulls
  - Prone Ts/Reverse Flies

**Low Trap (Pick 1-3)**

- Push: upward rotates scapula – good shoulder position overhead
  - Scap wall clocks
  - Scaption V Arm Raises
  - Y wall lift off → Reach, roll, lift
  - Prone Ys → Prone Overhead Press → Standing Face Pull to OH press
  - D2 flexion (reverse throws)
  - Overhead press → Push press → Push Jerk

**Pecs/Serratus Anterior (Pick 1-3)**

- Push: protracts and up rotates scapular – good shoulder position overhead – accelerates throwing
  - Forward plank
  - Scap taps
  - Pushups with plus
  - Bench press
  - Chest flies
  - D2 extension (throwing pattern)



**Lats (Pick 1)**

- Pull: shoulder depression, down rotates scap, shoulder extension, adduction, IR – accelerates throwing
  - Lat pulldowns
  - Pullups

**Upper Trap (Pick 1-3)**

- Carry: prevents shoulder depression, elevates and up rotates scapula – carrying heavy things
  - Variations
    - Direction: Forward, Backward, Lateral, Diagonal, Pattern (box, star, etc)
    - Hold: at side, shoulder height clean, front rack (elbows fwd), out in front, out to the side, field goal, overhead
    - Walking
    - SLB march (regular or add heel raise)
    - Lunge
  - Farmer Carry: single/double
  - KB Bottom Up Carry: single/double; shoulder height or OH
  - MB, Water/Sand Bag, any other awkward heavy thing

**Biceps, Triceps, Forearm/Wrist Flexors, Extensors, Pronation, Supination**



**Lower Body – 1. Lower / 2. Elevate / 3. Locomote**

**Glute Max (Pick 1-3)**

- Lower/Elevate/Locomote: Extends your hip/trunk from hip – back hip accelerates swing/throw, front hip decelerates swing/throws; controls lowering for grounders and coming back up
  - Bridge/Hip Thrust
  - Hip hinge on GHD/Back Extension Machine
  - Step ups
  - DL Deadlift/RDL
  - Sled push

**Glute Med/Max (Pick 1-3)**

- Lower/Elevate/Locomote: Abducts and externally rotates your hip, stabilizes trunk laterally – similar hip function with swinging/throwing; lateral power/control with lead and fielding
  - Clamshells
  - Sidelie or standing hip abduction
  - Monster walks
  - SL RDL
  - Side plank

**Quads (Pick 1-3)**

- Lower/Elevate/Locomote: Straightens (extends) the knee and slows knee bending (flexion) – back leg acceleration from knee, front leg deceleration at knee; lowering and return up
  - Squats – regular and staggered; back to box
  - Leg press
  - Lunges – regular and 4 way
  - Split Squat
  - SL step downs/squats; back to box





### **Adductors** (Pick 1-2)

- Lower/Elevate/Locomote: Drives hip in to body or body into hip; extends hip helping glute max – back leg acceleration from hip, front initial accelerator and decelerator with throwing/hitting; lowering and returning up especially with deeper squatting
  - Cable band hip adduction
  - Adductor Copenhagen side plank

### **Hamstrings** (Pick 1-2)

- Elevate/Locomote: Bends (flexes) the knee, slows knee straightening (extension) – decelerates swing leg with sprinting, secondary extensor for accelerating back leg swinging/throwing
  - Machine curls
  - Swissball/TRX curls
  - Bridge slides
  - Nordic hamstring curls

### **Calves** (Pick 1-2)

- Lower/Elevate/Locomote: Raises heel off ground, controls shin bone over foot – back leg acceleration from ankle, ankle control in athletic stance/fielding
  - SL Heel raises – straight and bent knee
    - Level ground or off step/on incline; add weight





**Core – 1. Neutral (Transfer Force) / 2. Flex Spine / 3. Extend Spine /  
4. Rotate Spine / 5. Sidebend Spine**

- Keep spine neutral avoiding extra extension, flexion, rotation from torque created by legs and arms
- Flex and rotate the trunk forward over your legs and then also decelerate that motion
  1. Neutral (Transfer Force)
    - Ab Brace Deadbug/Bicycles/Leg Lifts
    - Q-ped Bird Dog
    - Half kneel lifts
    - Half kneel chops
    - Fwd plank
    - Wheel/ball roll outs
    - Side plank
  2. Flex Spine
    - Crunch
    - Hollow Body
  3. Extend Spine
    - Supermans
    - Reverse Hollow Body
    - Extensions on back extension machine (drive primarily with gluts)
  4. Rotate Spine
    - Oblique Crunch
    - Full body chops/lifts
  5. Sidebend Spine
    - Crunch hold sidebends
    - Sidebends on back extension machine







## Focused Strengthening Suggestions

### Upper Body 3

1. Ws
2. Ys
3. Pushup Plus

### Baseball Big 5

1. Monster Walks
2. 4 Way Lunge
3. ½ Kneel Chops and Lifts
4. DL and SL RDL
5. Forward and Side Planks

### Power 7

1. Squats
2. Deadlifts
3. Snatch/Cleans
4. Push Press/Jerk
5. Heavy Rows
6. Bench Press
7. Pullups

### Brutal 2

1. Burpies
2. Thrusters

### **Position Modifications:**

**Prone:** on swissball, q-ped, bent over DL or SL RDL hold, standing with band/cable resistance

**Standing/Upright:** SLB, holding heel raise, squat, lunge

**Equipment:** body weight, dumbbell, barbell, bands, cables, TRX

### **Key:**

**ER:** external rotation (out); **IR:** internal rotation in; **Prone:** on stomach; **q-ped:** quadruped (hands/knees); **DL:** double leg; **SL:** single leg; **SLB:** Single Leg Balance **RDL:** Romanian Deadlift (hip hinge)



## Return to Throwing Program

- This is just a guide/recommendation; always trust yourself, parents, coach, and mentor if you should modify this program in any way
- You should NOT throw through any pain
  - Some soreness afterward is okay
  - Soreness should resolve within 48 hours
- Incorporate pre- and post-throwing routine
  - If time is an issue, use the “condensed versions”
- Start throwing close and work back out to starting distance
  - When working to next distance, make 1-5 throws at 5 foot intervals
- Throws should be on an appropriate arc, not as hard as possible
- Throw intentionally with proper mechanics; you may crow hop as indicated
- Progress to the distance that seems within your abilities; DON'T throw beyond
  - Only throw the amount of reps within your abilities
  - If your training demands more reps than prescribed, add accordingly
  - If your training demands more distance than prescribed, add accordingly
- Can be performed daily or every other day
  - Take REST DAYS as needed
- Pitchers: throw bullpens as indicated
- Position Players: on bullpen days, substitute similar reps of throws from your position

### Reference

Reinold MM, Wilk KE, Reed J, Crenshaw K, Andrews JR. Interval sports programs: guidelines for baseball, tennis, and golf. *J Orthop Sports Phys Ther.* 2002; 32(6):294-298.





### 3 Week Return to Throwing Progression – High School/College

Day 1: A) 45 ft, 30 throws B) 60 ft, 20 throws	Day 13: A) 60 ft, 50 throws B) 90 ft, 25 throws C) Bullpen pitching 25 Fastballs only 75% effort
Day 2: A) 45 ft, 45 throws B) 60 ft, 35 throws	Day 14: A) 45 ft, 40 throws B) 90 ft, 30 throws C) 120 ft, 20 throws D) 60 ft, 40 throws
Day 3: A) 60 ft, 75 throws	Day 15: A) 60 ft, 50 throws B) 90 ft, 25 throws C) Bullpen pitching 35 FB/change-up 80% effort
Day 4: A) 60 ft, 40 throws B) 90 ft, 25 throws C) 75 ft, 20 throws	Day 16: A) Rest
Day 5: A) Rest	Day 17: A) 60 ft, 50 throws B) 90 ft, 25 throws C) Bullpen pitching 45 all pitches 100% effort
Day 6: A) 60 ft, 50 throws B) 90 ft, 30 throws C) 75 ft, 20 throws	Day 18: A) 45 ft, 40 throws B) 90 ft, 25 throws C) 120 ft, 25 throws D) 60 ft, 30 throws
Day 7: A) 60 ft, 35 throws B) 90 ft, 35 throws C) 75 ft, 35 throws	Day 19: A) Regular catch B) Scrimmage 25 pitches, position play
Day 8: A) 60 ft, 35 throws B) 90 ft, 35 throws C) 120 ft, 25 throws D) 60 ft, 20 throws	Day 20: A) 45 ft, 40 throws B) 90 ft, 20 throws C) 120 ft, 20 throws D) Long toss, 10 throws E) 60 ft, 30 throws
Day 9: A) Rest	Day 21: A) Full participation
Day 10: A) 60 ft, 40 throws B) 90 ft, 20 throws C) 120 ft, 40 throws D) 75 ft, 20 throws	
Day 11: A) 60 ft, 40 throws B) 90 ft, 20 throws C) 120 ft, 50 throws D) 75 ft, 20 throws	
Day 12: A) Rest	





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