Strength and Conditioning: The Foundation of Performance

Chris Joyner, CSCS, RSCC
Contributors to My Philosophy

- FMS, Cressey, Starrett, Yoga (Mobility and Correctives)
- Dan John (Simple Strength)
- Leslie Bonci (Nutrition)
- Circadian Technologies (Sleep)
Risk Factors:

- Previous Injury = #1
- Asymmetries (Right vs. Left Side of Body)
- Neuromuscular Control
- Body Size and Body Fat %
- Multiple Factors?
- Chronic overuse studies - you have an impact year-round!
Sports Performance

The Functional Performance Pyramid

- Skill
- Performance
- Movement

- Proprioception
- Flexibility
-Mobility/Stability
- Plyometric Power
- Strength
- Speed
- Agility

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PREPARE

“You have to move well before you can move more.”

- Gray Cook
Mobilization is “a movement-based integrated full-body approach that addresses all the elements that limit movement and performance including short and tight muscles, soft tissue restriction, joint capsule restriction, motor control problems, joint range of motion dysfunction, and neural dynamic issues. In short, mobilization is a tool to globally address movement and performance problems”.

- Dr. Kelly Starrett
Mobility Areas of Focus:

- T-Spine
- Glutes and Adductors
- Hip Flexors, Quads and Hamstrings
- Calves and Ankles

"By failing to prepare you are preparing for failure.”
- Benjamin Franklin
PREPARE

- Soft Tissue:
  - Foam Rollers
  - Lacrosse Ball or Peanut
  - Stick
PREPARE

- FMS Corrective Exercises
- Determined by assessment screen
- To be done as a warm-up or integrated into workout program
**Prepare**

- Functional Warm-Up (Before Practice and Game)
  - **Multi-Joint:**
    - Spiderman Walk->Rotation, Knee Pull->Lunge->Hip Lift
  - **Moving:**
    - High Knees, Butt Kicks, Side Shuffles
  - **Neural Excitement:**
    - Quick Feet, Speed Skips, “ABC” Steps
- Increase Core Temperature
Nuts & Bolts
GOALS FOR EXERCISE Rx

- Maintain the strength, speed, power and level of conditioning that was developed in the off-season and spring training
- Decrease injury risk and increase durability
- Enhance performance by improving athletic ability
- Maximize career longevity
- Players have to do the basic things well before progressing
PROGRAM COMPONENTS

- Soft Tissue Maintenance
- Mobility and Stability Enhancement
- Strength, Power, and Speed Development
- Core Stability and Integrity
- Sport and Position Specific Conditioning
Program Components

- Train movements and movement patterns not muscles
  - Think function not isolation
- Address all the major muscle groups of the upper and lower body
- Intensity and volume will be adjusted throughout the season and training year
- Active recovery weeks to avoid overtraining
WORK

- Push
- Pull
- Squat
- Hinge
- Loaded Carry / Core
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<th>EXERCISE</th>
<th>WEEK 1</th>
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**Core:**
- ANTI-ROTATION / ANTI-LATERAL FLEXION
- METABOLIC
- ANTI-FLEX/EXT
- METABOLIC
- METABOLIC
- METABOLIC
- CORE ENGAGEMENT
- METABOLIC
- METABOLIC

**Extra Work:**

**Conditioning:**
- WEEK 1
- WEEK 2
- WEEK 3
- WEEK 4

**Type 1**

**Type 2**

**Type 3**

**Motivational Quote Goes Here ->**
<table>
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<tr>
<th>DAY 1:</th>
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<tr>
<td><strong>PUSH</strong></td>
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<td><strong>PUSH/SQUAT</strong></td>
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<tr>
<td>ONE ARM CABLE PRESS</td>
<td>STANDING CABLE ROW</td>
<td>REVERSE PULL-UP</td>
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<td>DB BENCH PRESS</td>
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<td>SQUAT AND PRESS</td>
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<td>TRX CHEST PRESS</td>
<td>TRX ROW</td>
<td>REVERSE LUNGE AND PRESS</td>
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<td>PUSH-UP PLANK</td>
<td>LAT PULLDOWN</td>
<td>STEP-UP WITH PRESS</td>
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<td>TUBING FLYS</td>
<td>SEATED CABLE ROW</td>
<td>LATERAL LUNGE AND PRESS</td>
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<td>GOODMORNINGS</td>
<td>BODY WEIGHT SQUAT</td>
<td>YOGA PUSH-UP</td>
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<td>DB SLD</td>
<td>WALKING LUNGE</td>
<td>PUSH-UP WALK OUT</td>
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<td>SB LEG CURL</td>
<td>STEP-UPS</td>
<td>KETTLEBELL SWINGS</td>
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<td>REVERSE HYPERS</td>
<td>LATERAL LUNGE</td>
<td>BALANCE REACH</td>
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<td>ONE LEG SLD</td>
<td>BACK FOOT ELEVATED SQUAT</td>
<td>PILLAR BRIDGE LEG LIFT</td>
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**CORE:** ANTI-ROTATION / ANTI-FLEXION/EXTENSION

**METABOLIC**

- JUMPING JACKS
- SWING KNEELING
- HALF KNEELING ANTI-ROT PRESS
- ANTI-ROT WALKOUTS
- ANTI-ROT FRONT RAISE

**METABOLIC**

- ROPE SLAMS
- ROPE SLAM REVERSE LUNGE
- ROPE SLAM LATERAL LUNGE
- ROPE SLAM FRONT/BACK WALK
- ROPE SLAM SHUFFLE

**CORE:** GROUND-BASED STABILIZATION

**METABOLIC**

- ELBOW SIDE PLANK
- HAND SIDE PLANK
- FOREARM PLANK
- FARMERS WALK
- PUSH-UP PLANK

**METABOLIC**

- DEAD BUGS
- REVERSE CRUNCH
- TOE TOUCH
- SLINGE LEG RAISE
- BICYCLES

**CORE:** MEDICINE BALL/STABILITY BALL

**METABOLIC**

- GLUTE BRIDGE
- GLUTE BRIDGE MARCH
- SINGLE LEG BRIDGE
- BACK EXTENSION
- MB ONE ARM THROW

**METABOLIC**

- MB SIDE THROWS
- MB STANDING ROTATION
- MB WOOD CHOPS
- MB AROUND THE WORLD
- MB KNEEL SOCKS

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IN-SEASON MAINTENANCE
Parameters

- **Starters** - based on a 5-day rotation
- **Relievers** - based on number of pitches, innings thrown and status for the following day/game
- **Position Players** - widest range of lifting preferences; given more flexibility with time and day of lift
STARTING PITCHERS
DAY ONE

- Throwing Program
- Conditioning: Anaerobic Based
  - Moderate Intensity / Moderate Duration
  - Timed Poles / Cardio Intervals / Stadium Stairs
  - “Heavy” Lower Body Lift (Core Lifts)
- Core Stability: Anti-rotation / Anti-lateral Flexion
- Cuff: Kiblers or Blackburns
Day Two

- Side Day
- Conditioning: Interval Based
  - Low-Medium Intensity / Moderate Duration
  - Power Alleys / Half Poles
- Light-Moderate Upper Body Lift
- Core Stability: Medicine Ball Throws / Rotations
- Cuff: PNF w/ Trainers
DAY THREE

- Throwing Program
- Conditioning: Interval Based
  - High Intensity / Moderate Duration
  - Shuttles / Gassers
- “Light” Lower Body Lift or Kinetic Chain Exercises
- Core Stability: Stability Ball Program
- Cuff: Kiblers or Blackburns
Day Four

- Throwing Program
- Conditioning: Active Recovery / Game Preparation
  - Low-Moderate Intensity / Short Duration
  - Center Field Sprints / Striders
- Rest Body and Arm
Day Five

- Game Day
- Conditioning: Recommended Post-Game Flush/Cardio
- Cuff: Dumbbell Program
STRENGTH TRAINING OPTIONS

- Long Option (Total Body 15-17 Sets)
- Movement Training
- Short Option 1 (Total Body w/ Lower Emphasis: 8-12 Sets)
- Short Option 2 (Total Body w/ Upper Emphasis: 8-12 Sets)
More Than 20 Pitches

- Assuming You Won’t Throw for 48 hrs.
  - Long Option
  - Movement Training
  - Short Option 1
  - Day Off
  - Short Option 2

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LESS THAN 20 PITCHES

- Possibility of Going Back-To-Back Days
  - Short Option 1 (Early)
  - Movement Training
  - Short Option 2 (Early)
  - Day Off
LONG / MIDDLE RELIEF

- Days Off When Needed & Lift 2-3 Days A Week
  - Long Option
  - Movement Training
  - Short Option 1
  - Day Off
  - Short Option 2
FACE ONE OR CLOSER

- Mainly Short Option Work
Relief Pitcher Conditioning

- Warm-Up / Stretch
- Tubing Warm-Up / Throwing Program
- Conditioning Program
  - Day 1: Speed Power (Sprints) / Agility (Ladder or Cones)
  - Day 2: Interval Running (Gassers / Hollow Sprints)
  - Day 3: Speed Endurance (Timed Pole Variations)
  - Day 4: Speed Power (Sprints) / Agility (Ladder or Cones)
  - Day 5: Interval Running (Gassers / Hollow Sprints)
  - Day 6: Speed Endurance (Timed Pole Variations)
  - Day 7: Off
9 Reasons Why We Don’t Run Distance:

1. Immunity Concerns (depressed immune function - general health)
2. Endocrine Concerns (hormone environment “mess”)
3. Mobility Concerns (lower extremity dysfunction - faulty patterns)
4. Negative Effects On The Stretch-Shortening Cycle (too slow)
5. Strength and Power Reductions (no marathon runners throw 95 mph)
6. Inappropriate Intensities (heart rate related)
7. Nobody Likes To Babysit (not injury prevention - actually increases risk)
8. Ignores Existing Imbalances (actually creates more imbalances)
9. It’s Really Boring (see it as punishment - limits development)

(Source: Eric Cressey 2008, A New Model for Training Between Starts Part 1)
Position Players
SEASON OPTIONS

- Total Body Lifts
- Split Routine
  - Upper Body Lift
  - Lower Body Lift
Total Body Lifts

- Lift Early In The Day or After Game
- Three Total Body Lifts Per Week
  - On Non-Consecutive Days
  - No More Than 15 Sets In A Given Day
- Get Work In and Get Out!

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**Split Routine**

- Two Upper Body Sessions Per Week
- Two Lower Body Sessions Per Week
- Short sessions, but good for ensuring that there is ample time for more frequent foam rolling and mobility drills
Position Player Conditioning

- Warm-Up / Stretch
- Conditioning Program
  - Day 1: Speed Power (Linear Sprints)
  - Day 2: Multi-Directional Agility (Ladder/Cone Drills)
  - Day 3: Speed Endurance (Shuttles/Gassers)
  - Day 4: Speed Power (Linear Sprints)
  - Day 5: Multi-Directional Agility (Ladder/Cone Drills)
  - Day 6: Speed Endurance (Shuttles/Gassers)
  - Day 7: Off
What It’s All About...
Off-Season Preparation

- Physical and Mental Rest
- Opportunity to concentrate on improving the following qualities without game activity or focus on baseball skills:
  - Flexibility, Mobility and Stability
  - First-Step Quickness and Agility
  - Strength, Speed and Power
RECOVER

- Soft Tissue
- Mobility
- Correctives
- Hydrotherapy
- Compression
- Nutrition
- Sleep
PREPARE
WORK
RECOVER
(REPEAT)
REPEAT

- Have A Repeatable Program
- Don’t Out Think Yourself
- Simplify
Repeat

- Have A Plan
- Structure Your Day / Week
- Keep A Journal
- Be Proactive With Management and Coaches
**REPEAT**

- Consistency

- “If it’s important do it everyday.”
  - Dan John
Contact Information

Email: chris.joyner@bluejays.com
RESOURCE LINKS

Dr. Andrews - www.asmi.org
NSCA - www.nsca.com
FMS - www.functionalmovement.com
Eric Cressey - www.cresseyperformance.com
Dan John - www.danjohn.net
Kelley Starrett - www.mobilitywod.com
Leslie Bonci - @lesliebonci (Twitter)
Circadian Technologies - www.circadian.com
Thank You!