ECA STRENGTH & CONDITION MANUAL

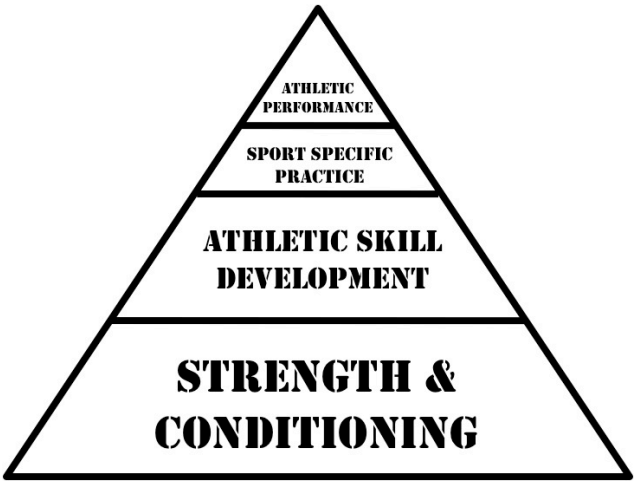
ECA STRENGTH & CONDITION PURPOSE AND PHILOSOPHY

Purpose Statement

The purpose of the ECA Strength and Conditioning Program is to assist the athletic department and individual teams and coaches by providing opportunities and coaching to improve the strength, conditioning, mobility, mental toughness, and competitive nature of ECA athletes as well as the general fitness of non-athlete students.

The Priority of Strength

For the purpose of the ECA Strength and Conditioning Program, strength will be defined as the ability to move oneself and other objects at various speeds in a variety of ways. Conditioning is then simply the ability to maintain this movement over a specific time period. With this definition in place, it is easy to see why strength should be prioritized. All sports are basically different combinations of moving one's own body and/or something else (whether it be a ball or the opponent themselves) faster and more accurately than the opponent. Of course, strength alone does not make an athlete, but strength directed through proper athletic skill and performance. Yet, strength is absolutely necessary. So much so that improvement in athletic performance and sport specific skills are limited by the athlete's strength. The figure below express this thought, showing strength as the foundation of all athletic performance.



The graph shows that each successive level of athletic development is dependent upon and limited by the size of its preceding level. One's individual athletic performance can only improve insomuch as they practice their specific sport. This practice in turn will be limited the athlete's athletic skills, which finally can only be improved insofar as their strength and conditioning will take them. Let us use volleyball as an example to show how this graph would apply to a specific sport.

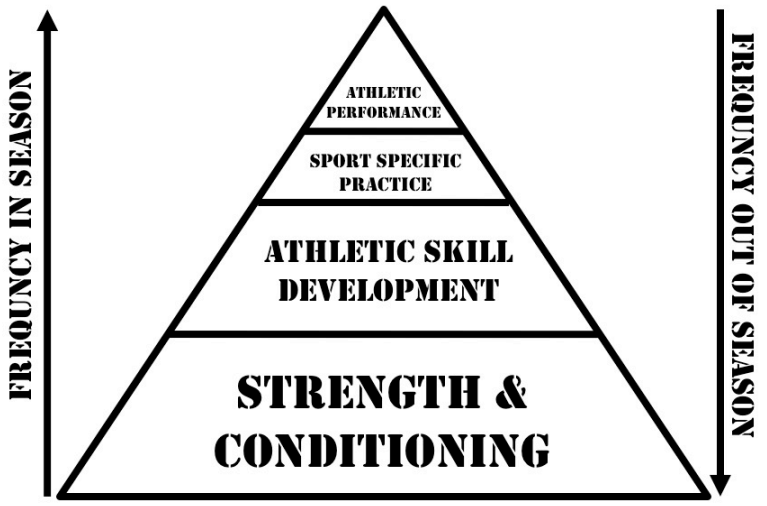
As we see in the graph, an individual athlete's performance in a volleyball match will be dependent upon their training in the team's daily practice. However, that athlete's ability to improve during their practice will be restricted by their ability to jump. This ability to jump is then based on their leg strength and power, which are trained through squats and other explosive movements.

Broad Base and Specific Sport Training

The ECA strength and conditioning program will focus on building broad base strength and explosive athletic power through core movements and explosive lifts. This includes building lower body strength and mid-line stabilization by squatting and deadlifting, building upper body strength with various forms of pushing and pulling, and developing complex explosiveness through the Olympic lifts. While this strength program is purposefully broad to build overall strength, it can and will be adapted for the needs of athletes in specific sports. This includes limiting mass gain for endurance and distance athletes and protecting shoulder health for baseball and volleyball players. Individual coaches should consult with the strength and conditioning coaches about the issues their athletes face.

Training Cycles

While strength is prioritized in athletic improvement, this does not it always receives the most training time. Within an athlete's season, most of their time will be spent competing and in sports specific practice. In the offseason, the athlete should prioritize strength and condition improvement and skill development. The chart below shows how an athlete's seasons are connected with their training schedule.



This time we will use basketball as an example. During the basketball season, a basketball player will compete in two or three games per week and have team practice on the other two or three days. During those practices, players will likely spend some time practicing their shooting, dribbling, and passing skills, but most practice time will be spent preparing for the next game. Hopefully, the basketball coach will also make some time for maintaining their strength during the season (heavy squatting, deadlifting, and/or pressing once a week). Unless a player is new to athletics or the sport it is not likely their overall strength or specific basketball skills will improve during the season. However, once the basketball season is over, an athlete may only compete in a pick up game once a week or get together with teammates to scrimmage from time to time. Most of their offseason training should be building their overall strength and developing their passing, shooting, and dribbling skills.

Training Phases

Assessment Stage

While strength training is essential to athletic performance not all athletes will be ready to begin heavy squats or presses during their first training session. When an athlete begins working in the strength and conditioning program, their first several (or more) sessions will focus on structural integrity and the identification of the athlete's main strength and mobility issues. The athlete will assessed to see if they are able to able to perform the core movements with proper form. If not, the reason for their inability will be addressed before a heavy load is introduced to their training. Lifting with bad form is the quickest way to decrease strength because it will almost invariably lead to injury or additional muscle imbalances. Corrective training will include addressing mobility issues, coordination, and mental focus for proper lifting form. The goal of this stage is to develop proper form and body control on the core movements of squats, deadlifts, presses, and pulls.

Foundational Strength Stage

Once an athlete is ready to begin lifting heavy loads, weight increases will be introduced slowly. While an athlete's may adapt to their initial training weeks quickly, slow and steady progress will provide the student with a greater opportunity for long-term strength gains rather than rapid short-term jumps in their numbers. The goal of this stage is to develop overall strength. The best and most effective way to achieve this is to concentrate on the core movements of squats, deadlifts, presses, and pulls at heavy loads.

Explosive Training Stage

As students become more proficient at the core movements, the complex explosive Olympic lifts (clean and snatch) will be introduced. These exercise are based on combining the core movements and will be introduced once an athlete has the ability to perform them properly independently. The core movement will still be prioritized in order to continue to build overall strength. The goal of this stage is produce explosive speed and strength. The best and most effective way to achieve this is to add the clean and snatch, which require fast explosive movement.

Conditioning

Throughout this progression, students will also take part in conditioning sessions that are scaled for their abilities. Since conditioning can be gained and lost quickly, the purpose of these sessions is not to prepare athletes for peak competition performance, but to maintain a fitness level appropriate for their offseason training. Individual coaches should conduct conditioning for peak competition performance in their pre-season and early season practices.

ECA STRENGTH & CONDITION INSTRUCTIONAL STANDARDS

POWER LIFTS

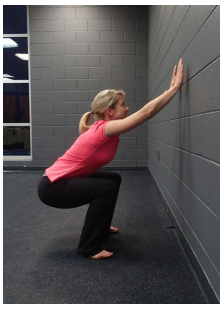
Squat - https://goo.gl/9uQ8tz

Standards

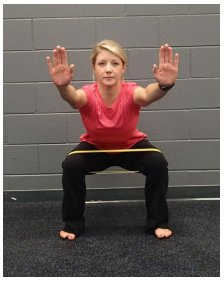
- ☐ Feet Under Shoulders
- ☐ Toes Slightly Out - No Duck Feet
- ☐ Tight Abs/Butt
- ☐ Flat Back
- ☐ Weight on Heels
- ☐ Push Hips/Butt Back
- ☐ Bend at Knees
- ☐ Drive Knees Out
- ☐ Knees Parallel with Hips
- ☐ Drive up from the Heels

Common Problems & Fixes

1. Rounded Back/Weight on Toes
    a. Coaching Cue - Focus on tight core and glutes before hip bend.
    b. Coaching Cue - Heals nailed to the floor.
    c. Wall Squat - Squat facing a wall keeping your arms in front of you and elevated, but don't lean on the wall for support. Start no further than necessary from the wall and slowly get closer as able to. Focus on pushing the hips back before bending the knees and keeping a vertical chest.
    d. Ankle Mobility - Foam Roll Calves, Ankle Wall Stretch, Ankle ABCs



2. Valgus Knees
    a. Coaching Cue - Consciously concentrate on knee drive out throughout the movement
    b. Reactive Neuromuscular - Secure band around your knees to help activate the external rotators of your hips.
    c. Program single leg assistance exercises to strengthen adductors.



3. Lack of Depth/Balance
    a. Pole Squat - Squat while holding the upright of the rack in order to maintain balance. Focus on full depth to the bottom of the squat, achieving a vertical shin by pushing the hips back before bending the knees, and consciously driving the knees out over the toes. Take less and less of a grip on the pole with each squat, until you are only using your fingertips on the pole to guide you into position.
    b. Calf Stretch for ankle mobility.

4. Hip Mobility
    a. Thomas Stretch - Lay flat on a high box and pull one leg to the chest while allowing the other leg to hang over the edge of the box. Switch legs. - https://goo.gl/fU9XXo
    b. Quadruped Rocking - On all fours, push with your arms and drive your hips backwards until your hips are on your heels. - https://goo.gl/oignp8
    c. Squat Holds - Start in the Wall or Pole and progress to Air Squat. Hold bottom position for two minutes. Progress by bringing feet closer together. Maintain form throughout.

5. Gluteal Activation
    a. Glute Bridges - Lie with flat back and feet on the floor, knees up. Extend hips by pushing pelvis into the air. - https://goo.gl/Ovp2EH
    b. Quadruped Hip Extensions - On all fours, raise one leg begin the body keeping knee bent through full hip extension. - https://goo.gl/JE4qMv
    c. Program Box Squats and Bulgarian Split Squats

Shoulder Press - https://goo.gl/lAHpe2 (Shoulder), https://goo.gl/1UXIW2 (Push)

Standards

- ☐ Feet Under Shoulders
- ☐ Toes Slightly Out - No Duck Feet
- ☐ Tight Abs/Butt
- ☐ Flat Back
- ☐ Weight on Heels
- ☐ Hands Just Outside Shoulders
- ☐ Drive from the Heels (Slight Dip for Push Press)
- ☐ Push to Overhead - Bar Over Shoulders
- ☐ Lock out Shoulders/Elbows
- ☐ Dip to Receive

Common Problems & Fixes

1. Inability of Proper Front Rack Position
    a. Coaching Cue - Elbows up
    b. Lack of Shoulder/Forearm Mobility
        i. PVC Triceps Stretch
        ii. Finger Pull Forearm Stretch
2. Too Far Front/Back Finish
    a. Coaching Cue - Head back through beginning of lift/Push head through after bar clears the head

Deadlift - https://goo.gl/UKYKD5

Standards

- ☐ Feet Under Shoulders
- ☐ Toes Straight - No Duck Feet
- ☐ Tight Abs/Butt
- ☐ Butt slightly above hips
- ☐ Flat Back
- ☐ Big Chest/Wide Shoulders
- ☐ Weight on Heels
- ☐ Hands Just Outside Shoulders
- ☐ Push from the Heels

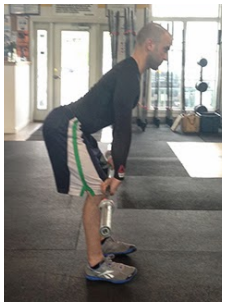
- ☐ Open Knees and Hips together
- ☐ Thrust Hips Forward for Full Hip Extension

Common Problems & Fixes

1. Shoulders to Far Forward
    a. Long Femurs - Do Sumo Deadlift - https://goo.gl/kO3WuJ
    b. Coaching Cue - Start closer to the bar and drag bar up the shins.
    c. Coaching Cue - Grab bar and sit into a full squat. Raise hips to proper height before pull.
    d. Coaching Cue - Heals kneed to the floor.
2. Rounded Back
    a. Coaching Cue - Spread Chest and squeeze shoulder blades together.
    b. Flat Back Check - Use PVC pipe or stick to align head, upper back, and lower back along the stick. Have student deadlift while maintaining all three points of contact with stick.
3. Unbalanced Knee and Hip Extension
    a. Coaching Cue - Don't pull, push the ground away from you.
    b. Coaching Cue - Pull the bar toward you while pulling up.
4. Lack of Hip Extension at the Top
    a. Program Kettlebell Swings
    b. Coaching Cue - Squeeze glutes at the top - Hold in a poop.
    c. Banded Pull Throughs - Attach a band to bottom of the rack. Straddle the band. Walk out until there is tension on the band. Push the hips back, slightly bend knees, and drive hips through to full extension. - https://goo.gl/Xc3FIk

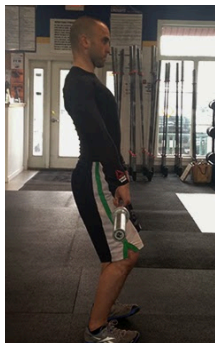
OLYMPIC LIFTS

Hang Power Clean - https://goo.gl/wiQuik



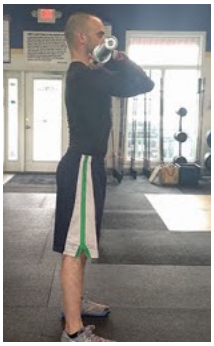
Standards

- ☐ Feet Under Shoulders
- ☐ Hands Just Outside Shoulders - Bar Makes Contact at Upper-Thigh
- ☐ Deadlift to Full Extension
- ☐ Push Hips/Butt Back Closing Hip Hinge - Bar Just Above Knees
- ☐ Thrust Hips Forward Making Contact with the Bar at Upper -Thigh
- ☐ Jump and Shrug Shoulders
- ☐ Guide the Bar Close to the Body with Hands
- ☐ Slight Dip Under the Bar
- ☐ Catch Bar in Front Rack Position - Elbow High
- ☐ Stand Up

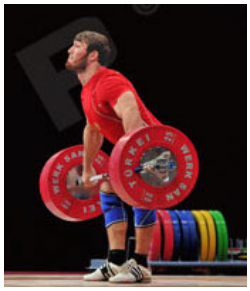


Common Problems & Fixes

1. Lack of Hip Closure
    a. Coaching Cue - Push Hips Back/Close Your Hips
2. Lack of Full/Powerful Hip Thrust/Pulling with the Arms
    a. Coaching Cue - Slam Leg into the Bar/
    b. Coaching Cue - Imagine Kettlebell on Belt - Hit Yourself in the Face with the Kettlebell
    c. Coaching Cue - Jump and Shrug
3. Lack of Front Rack Mobility
    a. See Shoulder Press Above



Hang Power Snatch - https://goo.gl/lkrE8S



- ☐ Feet Under Shoulders
- ☐ Hands Wide - Bar Makes Contact in Hip Crease
- ☐ Deadlift to Full Extension
- ☐ Push Hips/Butt Back Closing Hip Hinge - Bar Just Above Knees
- ☐ Thrust Hips Forward Making Contact with the Bar at Hip Crease
- ☐ Jump and Shrug Shoulders
- ☐ Guide the Bar Close to the Body with Hands
- ☐ Dip Under the Bar
- ☐ Catch Bar Overhead - Bar Over Shoulders
- ☐ Stand Up

Common Problems & Fixes

1. Lack of Hip Closure
    a. Coaching Cue - Push Hips Back/Close Your Hips
2. Lack of Full/Powerful Hip Thrust/Pulling with the Arms
    a. Coaching Cue - Slam Leg into the Bar/
    b. Coaching Cue - Kettlebell on Belt - Hit Yourself in the Face with the Kettlebell
    c. Coaching Cue - Jump and Shrug
3. Loosing Bar Forward
    a. Coaching Cue - Scrape Bar Up Thighs to Make Conatact at Hips

ECA STRENGTH & CONDITION PROGRAMMING

SCHEDULING

Offseason 3-Days

Monday

- Core Lifts
  - Squat
  - Press
  - Clean
- Assistance Lifts
  - Gluteal-Hamstring
  - Upper Pull
  - Core

Wednesday

- Core Lifts
  - Deadlift
  - Row
  - Snatch
- Assistance Lifts
  - Lower Push
  - Upper Push
  - Carries/Sled

Friday

- Core Lifts
  - Squat
  - Press
  - Clean
- Assistance Lifts
  - Hip Extension/Jumping
  - Upper Pull
  - Core

In Season 1-Day

- Core Lifts
  - Squat/Press
  - Row/Deadlift
- Assistance Lifts
  - Pull Ups
  - Push Ups

DYNAMIC WARM UP

Lower Body

1. Alt Side Lunges
2. High Knees
3. Butt Kicks
4. Hitler Kicks
5. Toe Walk
6. Heel Walk
7. Lunges
8. Skips
9. Carioca L/R
10. Suicides

Upper Body

1. Horizontal External Rotation L/R
2. Vertical External Rotation L/R
3. Face Pulls
4. Chest Pull-A-Parts
5. PVC Overheads
6. PVC Around heads

CORE LIFTS

Squat (M/F)

1. Goblet Squat
2. Front Squat
3. Back Squat
4. Box Squat
5. Single Leg Split Squat
6. Pause Squat
7. 1¼ Squat

Press (M/F - W)

1. Push Press
2. Shoulder Press
3. Bench Press
4. Push Jerk

Deadlift (W)

1. Deadlift
2. Trap Bar Deadlift
3. Sumo Deadlift
4. Deficit Deadlift

Pulls (W)

1. Barbell Row
2. Reverse Grip Barbell Row

OLYMPIC LIFTS

Clean (M/F)

1. Hang Power Clean
2. Power Clean
3. Hang Clean (Full Squat)
4. Clean (Full Squat)

Snatch (W)

1. Hang Power Snatch
2. Power Snatch
3. Hang Snatch (Full Squat)
4. Snatch (Full Squat)

ASSISTANCE

Gluteal-Hamstring (M)

1. **Reverse Hyper**
2. Glute Ham Raise
3. Good Mornings
4. Back Raise
5. Romanian Dead Lift

Upper Pull (M/F)

1. Pull Ups
2. **Landmine Row**
3. **One Arm Row**
4. Ring Row
5. Upright Row
6. **Weighted Pull Ups**
7. Supine Rows
8. Bench DB Rows
9. **Rope Climb (Deload)**
10. **Bar Hang (Deload)**

Core (M/F)

1. **GHD/AbMat Sit Ups**
2. **Landmine Twist**
3. Four Way Bridges
4. **Wheel/Ball/Ring Roll Out**
5. **Hip Extensions**
6. **Supermans**
7. **Hanging Knee Raises**
8. **Banded Twists**
9. **L Sit**
10. Turkish Get Up
11. **Med Ball Slams**
12. Wall Sits
13. **Ring Hold (Deload)**

Hip Extension/Jumping Hip Extension (F)

1. **KB Swings**
2. **Squat Jumps**
3. Lunge Jumps
4. **Glute Bridge**
5. **Box Jump**
6. Med Ball Back/High Toss
7. Tire Flip
8. Box Drop-Offs - 2-2/2-1/1-1
9. Depth Drops/Jumps

Lower Push (W)

1. **Lunge**
2. **Box Step Ups**
3. **Walking Lunge**
4. Overhead Squat
5. **Pistols**
6. **Wall Balls**
7. Thruster
8. Squat Hold (Deload)

Upper Push (W)

1. **Bar/Ring Dips**
2. **Push Ups**
3. **Wall Balls**
4. Thruster
5. Handstands
   a. Knees/Feet Box Handstand Hold
   b. Feet on Box Handstand Hold
   c. Handstand Hold
   d. Knees/Feet Box Handstand Push Up
   e. Handstand Push Up

Carries/Sled (W)

1. **Sled Push**
2. **Sled Drag**
3. **Sled Pull**
4. **Overhead Carries**
5. Farmers Walk
6. **Suitcase Carries**
7. Waiters Carries

PLYOMETRICS

1. Skater Jumps
2. Dot Drill
3. Speed Ladder
4. Lateral Box Shuffles
5. 3-Cone Drill
6. Short Box Step Ups

5-3-1 PERCENTAGES

5 Week

1. 65%
2. 75%
3. 85%

3 Week

1. 70%
2. 80%
3. 90%

5-3-1 Week

1. 75%
2. 85%
3. 95%

Deload Week

1. 40%
2. 50%
3. 60%