Strength and Conditioning Program

A voluntary program for prospective Varsity and JV Baseball players
The Goals of Strength & Conditioning For Baseball

Our strength and conditioning goals for baseball is grouped into 3 categories: off-season, pre-season and in-season. During the off-season workouts consist of mostly core lifts and a total fitness program that is not “sport specific.” However, as we get closer to the baseball season we shift into more of a pre-season mindset, where workouts consist of more “baseball-specific” exercises. While baseball is in-season we exercise to recover and prevent injury, while also maintaining our strength goals. Here’s a summarized breakdown of the 3 different sets of goals:

(1) **OFF-SEASON GOAL:** To prepare a general fitness base to build functional strength, especially focusing on core and cardio-respiratory exercises.

(2) **PRE-SEASON GOAL:** To train to compete, developing functional speed, strength, and power using baseball specific exercises and workouts in addition to continuing core strength workouts.

(3) **IN-SEASON GOAL:** To train for ongoing functional strength, recovery and injury prevention.

Principles of Strength & Conditioning For Baseball

Baseball training should focus on gaining strength, not bulky beach muscles. Strength training and bodybuilding are two very different things. Baseball training focuses on explosiveness and power (core) while also caring for the smaller muscles and such as those in the throwing arm. Some basic principles of baseball weight training are:

- Do more exercises using medicine balls, kettle bells, and bands that simulate real baseball movements
- Do plyometrics to increase power and explosiveness
- Avoid heavy overhead lifts (military press, any raises above the shoulder)
- Avoid straight bar bench press, instead use Swiss bar bench press and/or dumbbell bench press
- Pitchers avoid back squats; instead do either front squats or dumbbell squats
- Pitchers avoid power cleans (potential problems with wrist and elbow)

**Strength...** Basic strength or functional strength is the foundation on which every baseball player should be built. You cannot hit, throw, or run if you are unable to move and control your own body weight. Strength can be broken down into three main areas; lower body, core, and upper body. All three are dependent upon one another, so if you have a deficiency in one, there is no way to maximize your potential as a ballplayer.

The lower body exercises we will use to develop strength are: squat, front squat, step up, and lunge. Each exercise should be modified to best suit the level of strength for each individual.

The core exercises we will use are: floor abdominal work, dead lift, medicine ball twist and throws, floor lower back work, hyperextensions, and reverse hyperextensions. The majority of these exercises are done with body weight, with exception of the dead lift and medicine balls.
The upper body exercises we will use to develop strength are: bench press, push-ups, pull-ups, row, lat pull, shoulder raises, extensions, and wrist rolls. The joints that comprise the upper body have the highest rate of injury amongst baseball players. It is imperative to train every muscle, not just the large ones, to give each joint the maximum amount of support.

**Speed**...There is an old saying that speed kills. This is especially true on the baseball field. A player who is able steal bases has an immeasurable worth to his team. Many people believe you are either born fast or slow. This is true to a degree, but anyone can be made faster by teaching technique. Speed progression is broken down into acceleration, top end speed, and deceleration. The most important aspect for a baseball player is the acceleration phase. This is termed the "jump", as in "he got a good jump." This aspect is trained through weighted exercises such as; sled pulls and/or hill runs. We will also spend a lot of time on proper first steps. The body has to learn exactly where to step to optimize forward propulsion.

The second aspect we will train is top end speed. As a baseball player you never get to spend a whole lot of time in this phase, unless you’re an outfielder. An exercise we might use for this would be running down hill.

The last phase is deceleration, and players should work on this phase to prevent injury. There are two types of deceleration in baseball—sudden and gradual. Sudden stops are all various forms of slides. These are primarily used on the base path but are also used on occasion when fielding a ball. Gradual stops are the easiest thing to learn and we will spend the least amount of time on teaching this aspect.

**Power**... This might be the most under trained aspect among most baseball teams. All baseball players, hitters and pitchers, must have explosive power. It does not matter whether we are talking about throwing, hitting, or running; all involve triple extension at a high rate of speed. This triple extension, simultaneous movement of the hip, knee, and ankle, is best trained by exercises such as power shrugs and plyometric exercises, which is explosive movement of just a player’s body weight. These exercises include jumps, hops, and bounds.

**Agility**... Agility is the ability to change the direction the body is traveling quickly and efficiently. It is utilized both in fielding and running bases. For example, a player on first has to be able to get back when a pitcher throws to first, even though his body movement is directed towards second; or when fielding a ground ball and the ball takes an unexpected bounce the player must change direction in order to field the ball. We will work on this aspect of training through the use of cone drills.

**Injury Prevention**... Injury prevention is a high priority. If a player is hurt then he cannot play and help the baseball team. This is why it is vital for every athlete to work out properly in the off-season, preseason, in-season, and post-season.

**Schedule & Exercises**

In the off-season your weekly training schedule should include 3-to-4 strength sessions per week, plus 2 or 3 cardio workouts. Strength sessions will include lifts for upper and lower body, as well as
medicine ball exercises. Cardio will include H.I.I.T. (High Intensity Interval Training), which will consist of running, agility drills, and plyometrics.

A sample schedule might look something like this:

- **MONDAY:** Strength (lower body)
- **TUESDAY:** Cardio & Plyometrics
- **WEDNESDAY:** Strength (upper body)
- **THURSDAY:** Cardio & Plyometrics
- **FRIDAY:** Strength (lower body)
- **SATURDAY:** Strength (upper body)
- **SUNDAY:** Rest (or optional cardio)

On “Strength” days, the agenda should be something like this:

- **Warm-up:** Jog 5 minutes, dynamic warm-up stretching (full body)
  - **Strength/Power:** Workload should be a weight that can be accomplished with good form in 4 sets of 8-10 explosive reps emphasizing proper form (squats 3 sets of 8-10 reps; dead lift 2 sets of 8-10 reps); 2 light warm-up sets for each lift before beginning workload
  - **Lower Body Days** – DB or BB squats, dead lift, DB lunge, 10 Med ball drills, calf raises, forearm wrist rolls, abs
  - **Upper Body Days** – DB or BB squats, DB bench, lat pull (overhand), DB incline press, triceps press, bent rows, forearm wrist rolls, 10 Med ball drills, sit-ups
- **Cool-Down:** Jog and walk 5 minutes, stretch

On “Cardio” days, the agenda should be something like this:

- **Warm-up:** Jog 5 minutes, dynamic stretching (full body)
- **Speed/Agility:** 10 Plyometrics Exercises
- **Intervals:** 20 X 100 yards (sprint down, jog back)
- **Aerobic Options:** Stair-climb or cycle (15-20 minutes), jump rope (10 minutes)
- **Cool-Down:** Jog and walk 5 minutes, stretch

**Throwing**

We will have an off-season throwing program that will include long-toss (and some pitchers bullpens). Off-season throwing will be outside on the football field on days when weather permits. During bad weather or extreme cold days we will throw into sock nets indoors.

**Swings and Hitting**

We will have the opportunity to take swings in the off-season on “cardio” days. Swings will be off tees into sock nets or dry cuts. We may also have the opportunity to incorporate some live hitting in the batting cage a couple days per week.
Nutrition

Do not take this aspect for granted. Too many young athletes waste their workouts on poor eating habits. Strength training puts a lot of stress on the body, and good nutritional habits are required in order to fully absorb and adapt to such stress, so that the stress builds the body up instead of breaking it down. It is a proven scientific fact that athletes perform better when they incorporate special nutrition practices with their strength training. Athens Baseball players should do their best to form the following nutritional habits:

HABIT #1: Eat every two or three hours. Eating frequently is proven to raise the body’s metabolism and limit fat storage. However, these frequent meals and snacks must consist of food items such as lean proteins, fruits, vegetables, and nuts.

HABIT #2: Eat lean protein on each eating occasion or as often as you possibly can. These include chicken, lean cuts of beef and pork, turkey fish, eggs, milk.

HABIT #3: Eat vegetables on every eating occasion. Most of us need to develop a better habit of choosing to eat vegetables. If you make it a rule to eat at least one small serving of vegetables every time we eat anything at all, then such a habit is attainable.

HABIT #4: Eat veggies and fruits with any meal, but other “carbs” only after exercise. Limit simple carbs from your diet except shortly after exercise (since carbohydrates are the body’s primary energy source for training. But limiting simple carbs will help to maintain lean body mass.

HABIT #5: Eat healthy fats daily. There are three basic categories of fats: saturated, polyunsaturated, and monounsaturated. Limit saturated fats and increase monounsaturated fats and polyunsaturated fats. Saturated fats are often found in fried foods (fast food restaurants), baked goods, and processed foods. Good sources of polyunsaturated and monounsaturated fats are found in fish, nuts, flaxseed, and olive oil.

HABIT #6: Don’t drink beverages with more than zero calories. Replace pop and sugary drinks with water, green tea, and protein shakes. Save the Gatorade for after athletic performance (it is extremely high in simple sugars). Every athlete should strive to drink at least 64 ounces of water per day.

HABIT #7: Eat whole foods instead of supplements. Your body is designed to absorb and metabolize unprocessed foods, fresh fruits, vegetables, seafood, and lean meats. Base your diet on these things. The only supplement you really need is a good multivitamin.

HABIT #8: Plan ahead. The easiest way to fall into bad nutritional habits is to not plan on what you will eat. Eating well requires preparation. Make this a priority in your strength training.

HABIT #9: Eat as wide a variety of foods as possible. Eat a variety of foods from all the food groups.

HABIT #10: Don’t break the rules. Be committed to eating right. Good nutrition is vital to strength training.
1. **Parallel Twists (alone and with partner)**
   - Assume athletic stance with feet shoulder width apart
   - Hold medicine ball with both hands in front of your chest and your arms straight
   - Without dropping your arms, pivot on your right foot and rotate the ball and torso as far as you can to the left
   - Then reverse direction: Pivot on your left foot and rotate all the way to the right
   - With partner the ball will be handed off (do sets in both directions, then in figure 8 pattern)

2. **Woodchopper**
   - Assume athletic stance with feet just beyond shoulder width apart
   - With your arms nearly straight, hold a medicine ball above your head
   - Bend forward at your waist and mimic throwing the ball backward between your legs—but hold onto the ball the entire time
   - Quickly reverse the movement with the same intensity, and return to the starting position

3. **Rotational Recoiled Throw**
   - Assume athletic stance perpendicular to wall
   - Grasp med ball at chest level near rear shoulder; hold as if trying to crush it
   - Rotate away from wall to load hips
   - Immediately rotate toward wall and throw ball as forcefully as possible (push ball toward wall)
   - Return to start position and repeat, then perform set in opposite direction

4. **Rotational Scoop Toss**
   - Assume athletic stance perpendicular to wall
   - Hold med ball with arms extended beyond rear hip
   - Simultaneously rotate hips and core toward wall and toss ball as forcefully as possible
   - Repeat, and then perform set in opposite direction

5. **Figure 8 Slams**
   - Assume athletic stance with feet shoulder width apart
   - Hold medicine ball in both hands, rotate down around one side, then slam ball down
   - Catch ball and do the same movement opposite side (repeat)
   - Use core to rotate and explode the ball downward as hard as possible

6. **Sit-Up Throws (Overhead & Chest Pass)**
   - OVERHEAD: Get into sit-up position on the floor, holding medicine ball in two hands above head and feet in the air and spread apart with knees slightly bent; raise trunk upward and toss to partner
   - CHEST PASS: Get into sit-up position with knees slightly bent and heels on the floor; in this exercise ball will be in front of chest as you lower back slowly, then explode up and pass to partner

7. **Sit-Up Rotational Side Throws**
   - This can be combined with the sit-up chest pass
   - Lean back slightly with knees slightly bent and heels touching the floor
   - Rotate ball to opposite side and touch it to floor, then toss it to partner (repeat, then repeat other side)

8. **Reverse Sit-up Overhead Toss**
   - Sit on floor with feet spread apart and knees as stiff as possible
   - Hold medicine ball in two hands as far out in front as possible
   - Toss medicine ball backward over the head to partner
   - Partner will toss back overhead, you catch it and return to starting position and repeat

9. **Baseball Swing Throws**
   - Stand in with feet just outside of shoulders holding medicine ball as if holding a bat perpendicular to a wall
   - Initiating with the back hip, pull (don’t push) the ball across body and throw against wall
   - Initiate movement with back hip
   - Throw ball downward toward bottom of wall

10. **Throwing Arm One-Knee Backward Toss**
    - Use 4lb medicine ball
    - Get onto one knee (throwing arm knee down) with back to partner and ball in throwing arm
    - Begin at follow through position, with arm down in front of opposite knee
    - Bring throwing arm backward as you raise up, tossing the ball back to partner
    - Partner will toss back to you; catch with palm up as arm is moving forward in throwing motion (repeat)
Plyometric Exercises For Baseball Players

Perform each exercise for 2 sets of 8-10 reps following a warm up. Do 2-3 times a week.

1. Ankle Bounce or Jump Rope (60 seconds)
   - Assume athletic stance with feet shoulder width apart
   - Bounce on balls of feet using only your ankles

2. Ice-Skater
   - Assume athletic stance with feet shoulder width apart
   - Bend knees slightly and jump laterally from side to side quickly, pulling knees up toward chest on each jump
   - You may place an object in the middle to leap over
   - Do not rest between jumps; over and back is one rep

3. Squat Jump
   - Assume athletic stance with feet shoulder width apart
   - Hold hands behind head and do a normal squat
   - When you reach the lowest point of the squat (just beyond parallel), explode up as high as you can
   - Repeat without rest between reps
   - You may hold medicine ball to add extra weight as you progress

4. Tuck Jump
   - Assume athletic stance with feet shoulder width apart and arms extended straight out, parallel to floor
   - Jump as high as you can while barely bending knees
   - On each jump tuck knees into chest
   - Do not rest between reps

5. Split Jump
   - Begin by taking a large step forward, leaving right foot in front of the left at a semi-wide base
   - From that "split" position, squat down until the knee nearly touches the floor, then explode upward as high as you can
   - Repeat for 8-10 reps, then switch legs, doing the same exercise with the left foot in front of the right

6. Scissors Jump
   - Just like the squat jump, begin by taking a large step forward, leaving right foot in front of the left at a semi-wide base
   - From that "split" position, squat down until the knee nearly touches the floor, then explode upward as high as you can
   - When you at the highest point of your jump, switch your legs
   - At the landing explode up again without resting, making the same movement for 8-10 reps

7. Standing Long Jump
   - Assume athletic stance with feet shoulder width apart
   - Jump off both feet as far forward as possible, landing on right foot only
   - Immediately jump forward off right foot, landing on two feet
   - Immediately jump forward off two feet, landing on left foot only
   - Repeat this process for 8-10 reps (4 jumps is one rep)

8. Platform Depth Jump
   - Starting position is on top of a small platform
   - You will then step, not jump, off the platform
   - You want to land softly on the balls of your feet and toes, your knees will only be slightly bent
   - Once your feet hit the ground, you will then immediately explode upward jumping as high as possible
   - Step off, hit the ground, and explode up
   - Get back on top of the platform and perform this process again for 8-10 repetitions; there should be no rest in-between reps

9. Clap Push-Ups
   - Acquire the normal push up position; perform the typical negative portion of a push up
   - On the positive portion, you will literally push up off the ground (explode upward)
   - Your hands and upper body should be in the air (you may clap your hands at the apex if you can do so)
   - Land softly, and transition right back into the negative portion
   - There is no rest between each rep; perform this exercise 8-10 times

10. Pro-Agility (Baseball Specific)
    - Set up three cones five yards apart; start at middle cone in two-point stance
    - Open hips and move right or left toward cone
    - Pivot and turn as though fielding a ball backhanded at cone; touch cone with glove hand, plant foot
    - Sprint 10 yards in opposite direction to the far cone; touch cone with glove hand, plant
    - Sprint through middle cone; repeat 3-4 times with 20-30 seconds rest
# Athens High School Baseball
## Off-Season Strength & Conditioning Program

**NAME:** _____________________________________

**LOWER BODY STRENGTH**

<table>
<thead>
<tr>
<th>EXERCISE</th>
<th>WARM-UP SETS</th>
<th>WORK SETS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jog, Dynamic Warm-up stretching</td>
<td></td>
<td>5 min jog, 12 stretches</td>
</tr>
<tr>
<td>Medicine Ball Drills</td>
<td></td>
<td>10 X 2</td>
</tr>
<tr>
<td>Squats (BB or DB, pitchers front)</td>
<td>X 5 X 1</td>
<td>X 3 X 1 X 2 X 1</td>
</tr>
<tr>
<td>Calf Raises (DB)</td>
<td>X 5 X 1</td>
<td>X 3 X 1 X 2 X 1</td>
</tr>
<tr>
<td>Dead Lift</td>
<td>X 5 X 2</td>
<td>X 3 X 1 X 2 X 1</td>
</tr>
<tr>
<td>Forearms Wrist Rolls (weighted rope)</td>
<td></td>
<td>X 8-10 X 3 X 8-10 X 4</td>
</tr>
<tr>
<td>Forward Lunges (DB)</td>
<td></td>
<td>5X (forward and backward)</td>
</tr>
<tr>
<td>Sit-ups</td>
<td></td>
<td>10 X 2</td>
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</tbody>
</table>

**Body Weight:** __________________

**Cardio?**  YES  NO  
If yes, what and length/time: _______________________________________________________

**Nutrition Notes:**
ATHENS HIGH SCHOOL BASEBALL
OFF-SEASON STRENGTH & CONDITIONING PROGRAM

NAME: ________________________________________

**CARDIO & PLYOMETRICS**

<table>
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<td>Intervals (Sprints, 20 X 100 yards)</td>
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<tr>
<td>Aerobic (stair-climb, cycle, jump rope, etc)</td>
<td></td>
<td>10-15 minutes</td>
</tr>
<tr>
<td>Cool Down Jog &amp; Walk, Stretch</td>
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<td>5 minutes</td>
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Body Weight: __________________

Nutrition Notes:

Athens Bulldogs Baseball
### Athens High School Baseball

#### Off-Season Strength & Conditioning Program

**NAME:**

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**UPPER BODY STRENGTH**

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<td>Bench Press (Swiss bar or DB)</td>
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<tr>
<td>Lat Pulls (overhand)</td>
<td>X 5 X 1</td>
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<tr>
<td>Triceps Press</td>
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Total Workouts: 8-10 X 3

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Body Weight: _________________

Cardio? YES NO  If yes, what and length/time: _______________________________________________________

Nutrition Notes:
ATHENS HIGH SCHOOL BASEBALL
OFF-SEASON STRENGTH & CONDITIONING PROGRAM

NAME: _____________________________________

CARDIO

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