

Common Workout Mistakes of Pitchers

Most high school lifting programs are created by the football coach. There is nothing wrong with the program but football is certainly different than baseball and the workout should be adjusted accordingly. In football the majority of the movements require the athlete to use their chest and “push”. In baseball the athlete needs more balance because they are using their arms to throw. This requires more upper back strength, an area that is often under worked in most workout routines.

Improper ratio of “push” vs “pull” exercises

A “push” exercise is normally an exercise used to strengthen the front of the upper body (i.e. the chest). A “pull” exercise is normally used to strengthen the back of the upper body (i.e. a seated row). Most people choose to do more chest or “push” exercises because they are easier, more common, and work the muscles that you can see in the mirror each morning. Think about it for one minute. When you look in the mirror you look at your chest, biceps, abs, and quadriceps (thigh muscles). We don’t look at our upper backs in the mirror. In addition we sit a tremendous amount during the day. We sit at our computers, sit in our classroom, sit in the car to and from school, sit to eat, etc. Because of this large amount of sitting, certain muscle imbalances are going to occur. Sitting over time causes the muscles in the front of the shoulder to get tighter and the muscles in the back of the shoulder to become longer. Any muscle group that is longer has a tendency to be weak and for a pitcher a weak upper back spells trouble.

To off set these imbalances we want to make sure our workouts incorporate more upper back strengthening exercises. The proper ratio for a pitcher is three times the amount of upper back or “pull” exercises as chest or “push” exercises. For example, if a pitcher performs three sets of bench press then he would need to do nine sets of upper back exercises (example: 3 sets of Ys, Ts, and Bent Ts). For position players the ratio should be 2:1 instead of 3:1 but the upper back should always be worked a little more frequently.

Failure to Do Enough Anaerobic Exercises

Baseball subscribes to the old school of training and it is still very common for pitchers to do a lot of running. Although having a good aerobic base is good, running long distance does not make you a more effective pitcher. Pitching is actually a power sport and any running program should include some interval sprinting to focus on power output. Always train to make the lower body more explosive and this combined with sound mechanics and proper muscle balance will help you achieve your pitching potential. See the interval sprinting program in this manual for more details.

Not Enough Emphasis on Flexibility and Muscle Balance

Too often athletes today get caught up on how big they can be or how fast they can throw. When athletes “break down” there is a flexibility and muscle balance problem that always contributes to their injury. Proper attention to a regular stretching routine for a pitcher and working on body symmetry and balance can help the pitcher throw harder with less effort. If you are lifting in a gym or at school make sure you are paying attention to your flexibility as well and don’t sacrifice flexibility just for the sake of gaining strength.

Conventional Gym Equipment Needs to be Supplemented With Body Weight Exercises

Pitching successfully requires strength, power, flexibility, and most of all balance. When you only train on machines or do the majority of your training on machines, the machine does the balance work for you. You can actually get stronger in one direction but lose strength rotationally because the machine is stabilizing your body for you. Doing some free weights (example: dumbbell squats) and single leg balance drills is a good way to work on balance while also working on the bigger muscle groups.

Do your upper back exercises on a gymnastic ball or single leg squats on a foam roll. Always mix in body weight exercises with machines to get the best of both worlds.

No Transverse Plane (Rotational) Movements Are Included in the Pitcher’s Routine

Pitching is a rotational activity. Why don’t we train rotationally? We train in one plane when we squat or bench press. We think that getting stronger with these movements will translate to increased velocity but this doesn’t always occur especially if the pitcher needs better balance and hip strength. One-legged hops with side kicks and ¼ turns with kick backs are excellent exercises to work on balance and rotational strength. The “rewind throwing drill is an excellent way to work on rotational strength of the lead leg and balance while also working on the pitcher’s mechanics.

Workout Modifications

The following is a list of exercises that are commonly used for the pitcher. Modification of some of the exercises will reduce the stress on the shoulder.

Bench Press

The bench press is not a bad exercise. The problem is that if done to a point where your chest muscles become tight (which is what happens in 90% of the cases I see) you will cause more stress on the arm with the throwing motion. The second problem is that when performed with a wide grip it places the shoulder in a position of vulnerability. Modifications that can be made are to place a towel roll or foam roll on the chest so the bar will not touch your chest upon descent. Another modification that is helpful is to use a narrow grip. You get

the same chest workout but you don't place your shoulders in such a "bad" position. The third suggestion is to do push-ups on a ball since this is working on your trunk muscles and balance at the same time. Remember that it is the trunk muscles that help you throw hard with less stress on your arm.



Standard bench press placing

shoulder in vulnerable position

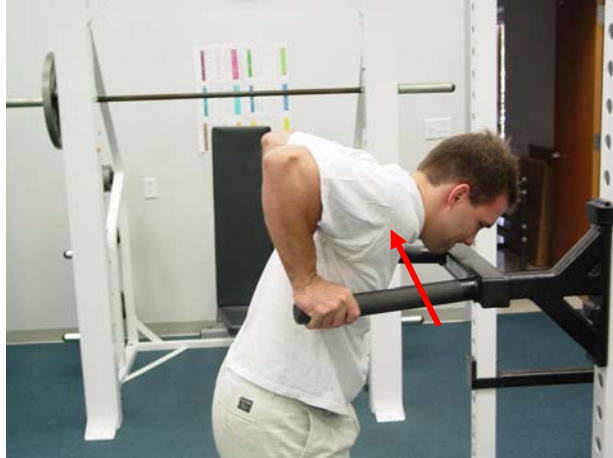


Bench Press with $\frac{1}{2}$ foam roll on chest. Notice how the shoulders are not as extended compared to the previous picture

Dips

This exercise is just simply too stressful on the shoulder for the potential good that can occur. Dips strengthen your triceps (muscles on the back of your arms). You should find another way to strengthen these muscles such as kick backs or push downs to strengthen these muscle so you want place extra stress on the shoulder. Remember that pitching requires you to use your arm overhead quite a bit. Why would you want to do another exercise overhead that could potentially put stress on your arm if you could work the same muscle another way that is much safer. If you must do dips then do only go half-way down to minimize the stress on the front of your shoulder.

Notice how the dip puts the shoulder in a bad position. of this position it is advantageous for you to find another way to strengthen your triceps



Because

Lat Pulldowns

Although this exercise is considered a “pull” exercise it is often done behind the head. When you bring the bar behind your head you must “stick” your head out. This feeds into bad posture and also decreases the activity of the upper back muscles. To make this exercise more effective you should lean back and pull in front of your body to your chest. By doing this you make the movement more of an upper back strengthening exercise.



front of your body to your chest. By doing this you make the movement more of an upper back strengthening exercise.

Lat pull down behind the head. Notice how the head comes forward and it can feed into a forward head posture.

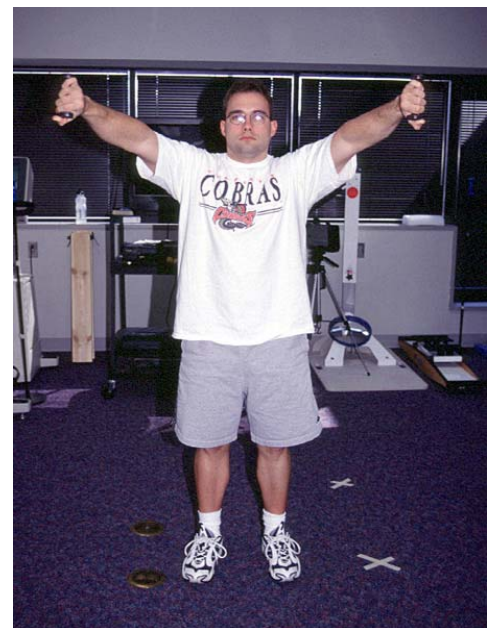


**Modified Lat-pulldown to chest.
down more
exercise.**

**This makes the pull-
of an upper back**

Empty Can Exercise

This exercise was once thought to be the most effective exercise to strengthen the rotator cuff muscles in particular the supraspinatus. In fact most professional baseball players still use it during their rotator cuff program. By doing this exercise with the thumb down you can actually place your shoulder in a vulnerable position and not even effectively work your rotator cuff muscles. New studies show that the "T" exercise with thumbs up is the best exercise for the rotator cuff muscles and it also works the upper back muscles which is the key to a healthy shoulder. If you use this exercise turn your thumb up instead or simply quit doing the exercise in favor of the "T" movement on a ball.



Internal Rotation with Tubing

This is another common mistake in the training program of pitchers. Think about which muscles turn the arm inward (internal rotation)..... the chest muscles and the latissimus. Both of the muscles are very large. Now think about which muscles turn the arm outward (external rotation)..... the infraspinatus and teres minor which are two very small rotator cuff muscles. Most pitchers perform internal rotation (turning in) with tubing the same amount as external rotation (turning out) with tubing. Since our bodies are naturally imbalanced (some muscle groups are stronger than others) you need to



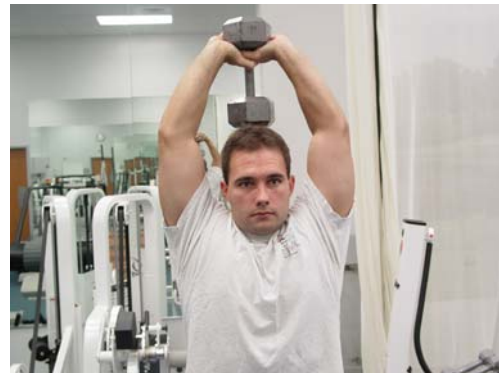
work the external rotators much more. Cut out the tubing for internal rotation and double up on the tubing for external rotation.

Military Press

This is another chest exercise that requires an overhead movement. Again, ask yourself the question.. "If I am going to make a living with using my arm overhead i.e. pitching, why would I want to do an exercise that is going to potentially stress my shoulder overhead and work the "push" muscles". Cut this exercise out from your routine.

Triceps Strengthening

This is another area that the athlete often strengthens but does so in a way that puts his shoulders in a "bad" position. Too common mistakes are the overhead press or the one arm triceps press. Better exercises are the triceps push-down and the triceps kick back.



Overhead tricep press and single arm tricep press are not the best way for pitchers to work their triceps. Work the triceps in a way that does not excessively place your arm in an overhead position. You do that enough as a pitcher!



Tricep Kickbacks (see picture to left) or push downs on a cable column are better ways to work your triceps. The red arrow shows how the shoulder is in a neutral position.

Rows

This is another common exercise in the pitcher's routine. Most athletes will do this exercise and keep their elbows in tight to their sides because they can pull more weight. By doing this, the athlete is working the latissimus more and not the upper back. Although this is a "pull" exercise it can more effectively strengthen the upper back if the elbow is kept away from the side. When you do this make sure you feel the exercise work the upper back and arm not your upper trap region.



Rows with elbows away from the side. This works the upper back more efficiently than a row with the elbows at the side.

Lower Body Routine

Add some rotation and balance training not just straight plane movements. Too often the pitcher ends up doing squats, leg presses, or leg extensions to work his leg muscles. The problem is that these are all straight movements and pitching is a rotational activity. These exercises are fine to do but need to be incorporated in with some $\frac{1}{4}$ turns and kickbacks, rotational lunges, etc.

Trunk Strengthening

This is often a neglected part of the strengthening routine. At the very least it is kept to the very end when everyone is tired and more likely to cut out early. Your traditional abdominal exercises are fine to do but you also need some lower abdominals and rotational strengthening exercises. There are a thousand different ways to do this but make sure you can perform heel taps for 2 minutes

and a single leg bridge for 30 reps before progressing to more advanced exercises. You should never feel an abdominal exercise work the lower back muscles. This is an indication that either your form is incorrect or you are doing an exercise that is too advanced.

Flexibility

Make this a normal part of your work out routine. Follow the instructions for the stretches in this manual. Pay particular attention to your hip flexibility, forearm stretch, "sleeper stretch", "prayer stretch", and make sure your elbow straightens out equally to your other elbow. These areas can easily become tight in pitchers and lead to overuse injuries.