

Strength and Flexibility Programs

Prepared by Ray Brown- Baseball Development Officer - Oceania Region

There are three methods used to develop strength. One is **isometric** which involves lifting weights, push ups or pull ups. Another is **isotonic** which involves equal tension exercises such as surgical tubing exercises and the third is **isostatic** which involves using equal pressure exercises, these are exercises that use your strength against an object of equal strength so there will be no movement. When developing a strength training program you should consider the age of the athlete. There are some experts that suggest weight training could cause structural damage in the young athlete because he is still growing. These experts suggest that you rely on stretching and flexibility exercises until they reach the age of 16 or 17. There are other experts who believe if the weight being lifted is not overly heavy and the lifting is done correctly there should not be a problem. These experts believe injury happens when the young or older athlete is lifting incorrectly and trying to lift past his limits. Which ever theory you choose you must make sure that your athletes are supervised and instructed in proper strength and flexibility training.

You will find two programs that have been put together for you. One is for the younger athlete that is just starting to get involved with strength training and the other is for the older athlete that has already developed physically.

Beginner Strength Program

1. Squats - 3x10 2. Dead Lifts - 3x10 3. Bench Press - 3x10 4. Flys - 3x10
5. Wrist Curls / Reverse - 3x10 6. Pull overs - 3x10
7. Forearm Curls /Reverse - 3x10 8. Rotators - 3x25 9. Roll ups - 3x fatigue
10. Push ups - 3x start at 25 11. Sit ups - 3x start at 50

Advanced Strength Training Program

Most strength training programs run for a period of 12 weeks. The first four weeks are geared toward developing strength endurance or a base to start from. The next four weeks are geared toward maximum strength development and the third four-week session is geared toward developing quickness.

1. Always run, stretch and do 3-sets of warm-up lifts on squats, bench press, behind neck press and dead lifts before you begin your program. Start with 50% of your working weight and add 30% for each of the next two sets. Each set will contain the same number of repetitions as your working weight program.
2. Do exercises in the exact order as indicated
3. Do exercises three times a week - Mon - Wed - Fri
4. Work with the recommended percentages of your maximum on all lifting days. With a joint use a weight that is comfortable and add to it as you improve your strength and flexibility.
5. On alternate days do your cardiovascular work, long distance running, swimming or wind sprints. You can alternate the exercises.

**Advanced Strength Training - This is a 12-week program divided into 3 - 4 week sessions.
Session One - is Strength Endurance – Use 60% to 70% of Max.**

NAME - _____

START DATE -	FINISH DATE -
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Monday	Max.	Work	Week 1	Week 2	Week 3	Week 4
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[illegible]

Squats			3x8	3x10	3x12	3x14
Leg Extensions			3 x max	3 x max	3 x max	3 x max
Pull – Ups			3 x max	3 x max	3 x max	3x14
Push – Ups			3 x max	3 x max	3 x max	3x25
Bench Press			3x8	3x10	3x12	3x14
Behind Neck Press			3x8	3x10	3x12	3x14
Wrist Curls			3 x max	3 x max	3 x max	3xMax
Reverse Wrist Curls			3 x max	3 x max	3 x max	3xMax
Rotators			3 x max	3 x max	3 x max	3xMax
Wednesday	Max.	Work				
Dead Lifts			3x8	3x10	3x12	3x14
Hyper Extensions			3 x max	3 x max	3 x max	3x15
Pull – Ups			3 x max	3 x max	3 x max	3x10
Push – Ups			3 x max	3 x max	3 x max	3x25
Pull Overs			3x8	3x10	3x12	3x14
Wrist Curls			3 x max	3 x max	3 x max	3xMax
Rotators			3 x max	3 x max	3 x max	3xMax
Friday Squats	Max.	Work				
Dead Lifts			3x15	3x15	3x15	3x15
Pull – Ups			3 x max	3 x max	3 x max	3x10
Push – Ups			3 x max	3 x max	3 x max	3x25
Bench Press			3x8	3x10	3x12	3x14
Behind Neck Press			3x8	3x10	3x12	3x14

Abdominal Work - Crunch Sit – Ups and Alternate Leg Sit –Ups

Count of 3 going up - Pause - Count of 2 coming down - 3 x 20 of each.

Session Two - Maximal Strength Development - Use 80% to 90 % of Max.						
NAME - START DATE - FINISH DATE -						
Monday	Max .	Work	Week 1	Week 2	Week 3	Week 4
Squats			3x6	3x8	3x8	3x8
Leg Extensions			3 x max	3 x max	3 x max	3x8
Pull – Ups			3 x max	3 x max	3 x max	3x10
Push – Ups			3 x max	3 x max	3 x max	3x25
Bench Press			3x6	3x8	3x8	3x8
Behind Neck Press			3x6	3x8	3x8	3x8
Wrist Curls			3 x max	3 x max	3 x max	3xMax
Reverse Wrist Curls			3 x max	3 x max	3 x max	3xMax
Rotators			3 x max	3 x max	3 x max	3xMax
Wednesday	Max .	Work				
Dead Lifts			3x6	3x8	3x8	3x8
Hyper Extensions			3 x max	3 x max	3 x max	3x15
Pull – Ups			3 x max	3 x max	3 x max	3x10
Push – Ups			3 x max	3 x max	3 x max	3x25
Pull Overs			3x6	3x8	3x8	3x8
Wrist Curls			3 x max	3 x max	3 x max	3xMax
Rotators			3 x max	3 x max	3 x max	3xMax
Friday	Max .	Work				
Squats			3x10	3x10	3x10	3x10
Dead Lifts			3x10	3x10	3x10	3x10
Pull – Ups			3 x max	3 x max	3 x max	3x10
Push – Ups			3 x max	3 x max	3 x max	3x25

Bench Press			3x10	3x10	3x12	3x14
Behind Neck Press			3x10	3x10	3x12	3x14
<p align="center">Abdominal Work - Crunch Sit – Ups and Alternate Leg Sit -Ups- Count of 3 going up - Pause - Count of 2 coming down - 3 x 20 of each.</p>						

Session Three – Speed and Quickness - Use 60% to 80% of Max

Name -	START DATE -	FINISH DATE -
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START DATE - _____ **FINISH DATE -** _____

FINISH DATE -

Monday	Max.	Work	Week 1	Week 2	Week 3	Week 4
Squats			3x10	3x12	3x12	3x14
Leg Extensions			3 x max	3 x max	3 x max	3x14
Pull - Ups			3 x max	3 x max	3 x max	3x14
Push - Ups			3 x max	3 x max	3 x max	3x25
Bench Press			3x10	3x12	3x12	3x14
Behind Neck Press			3x10	3x10	3x10	3x14
Wrist Curls			3 x max	3 x max	3 x max	3xMax
Reverse Wrist Curls			3 x max	3 x max	3 x max	3xMax
Rotators			3 x max	3 x max	3 x max	3xMax
Wednesday	Max.	Work				
Dead Lifts			3x10	3x12	3x12	3x14
Hyper Extensions			3 x max	3 x max	3 x max	3x15
Pull – Ups			3 x max	3 x max	3 x max	3x10
Push – Ups			3 x max	3 x max	3 x max	3x25
Pull-Overs			3x10	3x12	3x12	3x14
Wrist Curls			3 x max	3 x max	3 x max	3xMax
Rotators			3 x max	3 x max	3 x max	3xMax
Friday	Max.	Work				
Squats			3x10	3x15	3x15	3x15
Dead Lifts			3x10	3x15	3x15	3x15
Pull – Ups			3 x max	3 x max	3 x max	3x10
Push – Ups			3 x max	3 x max	3 x max	3x25
Bench Press			3x10	3x15	3x15	3x14
Behind Neck Press			3x10	3x10	3x12	3x14

Abdominal Work - Crunch Sit – Ups and Alternate Leg Sit -Ups

Count of 3 going up - Pause - Count of 2 coming down - 3 x 20 of each.

Surgical Tubing Stretches

During the 12-week strength-training period use your tubing after your lifting sessions, one repetition of each exercise with each arm. During your non-lifting period you should use your tubing on a daily basis, at least two repetitions with each arm. Tension should be adjusted to your requirements so that the full range of motion is always completed. One repetition would be to exhaustion.

1. Shoulder Adduction - arm at your side, body facing sideways, hold tubing behind your back and extend it to full range of motion

2. Shoulder Flexion - arm at your side, body facing straight ahead, hold tubing at your side and extend it forward using full range of motion

3. Shoulder Horizontal Extension - arm across your chest with elbow bent, extend tubing full range of motion

4. Shoulder External Rotation - elbow at your side with bent arm, pull tubing through full range of motion

5. Shoulder Extension - arm at your side, body facing tubing, hold tubing at your side and extend it backwards using the full range of motion

6. Shoulder Internal and External Rotation - use throwing motion, making sure you complete full range of motion

7. Tricep Extension - hold tubing with one hand behind your back, hold other end of tubing and extend it upwards using full range of motion

8. Chest Expanders - hold tubing in front of your chest with both hands and extend it sideways using full range of motion

Conditioning

The conditioning of players is usually an area that some coaches tend to neglect. These coaches don't consider the positive aspects of conditioning, so very little time, if any is spent.

If we make the player the focal point of our decisions than we realize that conditioning is important to not only his playing ability but also his health. A player that is not in good playing condition is more likely to sustain injury, than a player that has been implementing a daily conditioning program in his practice schedule.

As coaches we must remember that a well-conditioned athlete is going to be stronger, more flexible, in better athletic condition and able to perform the skills that are required during practice and games.

Most professional baseball clubs, have a professional trainer work with their players on a daily conditioning program. That program helps keep the player in the line up on a daily basis.

A good conditioning program should include - stretching - aerobic and anaerobic training. Stretching should be involved so we can reduce the chances of pulling muscles and improving flexibility. Aerobic training should be used so that we can improve our endurance level and anaerobic training should be used so that the recovery time from the short sprints that are used in baseball can be improved upon.

Aerobic Training - Any exercise that goes for at least a 15-minute period. Give examples

Anaerobic Training - Any exercise that makes the player get to a point of exhaustion in a short time. Give examples.

How To Stretch

Stretching is easy to learn. But there is a right way and a wrong way to stretch. The right way is a relaxed, sustained stretch with our attention focused on the muscles being stretched. The wrong way is to bounce up and down, or to stretch to the point of pain. These methods can actually do more harm than good.

The Easy Stretch

When you begin a stretch, spend 10 to 30 seconds in the easy stretch. No bouncing! Go to the point where you feel a mild tension, and relax as you hold the stretch. The feeling of tension should subside as you hold the position. If it does not, ease off slightly and find a degree of tension that is comfortable. The easy stretch reduces muscular tightness and readies the tissues for the developmental stretch.

The Developmental Stretch

After the easy stretch move slowly into the developmental stretch, again, no bouncing. Move a fraction of an inch further until you again feel a mild tension and hold for 10 to 30 seconds. Be in control. Again, the tension should diminish; if not, ease off slightly. The developmental stretch fine tunes the muscles and increases flexibility.

Breathing

Your breathing should be slow, rhythmical and under control. If you are bending forward to do a stretch, exhale as you bend forward and then breathe slowly as you hold the stretch. Do not hold your breath while stretching. If a stretch position inhibits your natural breathing pattern, then you are obviously not relaxed. Just ease up on the stretch so you can breathe naturally.

Counting

At first, silently count the seconds for each stretch; this will insure that you are stretching in a relaxed position, breathing properly and getting the proper amount of time required for each stretch. As you improve in your flexibility you will develop a feeling for how long you should stretch and the counting may become non-existent.

Why We Stretch

Stretching relaxes your mind, tunes up your body and should be part of your daily life. You will find that regular stretching will do the following things.

1. Reduce muscle tension and make the body feel more relaxed.
2. Help coordination by allowing for freer and easier movement.
3. Increase range of motion.
4. Prevent injuries such as muscle strains. (A strong pre stretched muscle resists stress better than a strong un-stretched muscle.)
5. Makes strenuous activities easier, stretching is a way of signaling the muscles that they are going to be used.
6. Develop body awareness. As you stretch various parts of the body, you focus on them and get in touch with them. You get to know yourself.
7. Help loosen the mind's control of the body so that the body moves for its own sake rather than for competition or ego.
8. Promotes circulation.
9. It feels good.

Conditioning, quickness and running drills

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Skipping drill regular - use skipping motion and arm pumping motion similar to running motion, there and back counts as 1, do 3.

Skipping drill touch toe - similar to above, only touch your opposite toe, example would be right hand to left toe, there and back counts 1, do 3.

Skipping drill circles - similar to above, only arms will make forward and backward circles, there and back counts 1, do 3.

Skipping drill under leg - similar to above, only hands will clap under leg, there and back counts 1, do 3.

Skipping drill elbow to knee - similar to above, only take opposite elbow to outside opposite knee, there and back counts as 1, do 3

ON ALL SKIPPING DRILLS BE SURE TO GET YOUR KNEES UP. DISTANCE SHOULD BE ABOUT 20 YARDS.

Up and Go - Have players lay on their backs, legs should be straight and arms at their sides. At your command they get up as fast as they can and sprint to you, back to where they started and back to you, they should touch the ground each time. Sprint should be no more than 20 yards. As you walk back to the other side the players prepare to do it again. Repeat drill 5 times.

One Hop, Long Strides - One long hop than run using long strides, make sure players alternate leg they start hop on, distance 20 yards, up and back counts 1, do 3.

Three Hops and Explode - Have players line up in a single file line. They should get into base running from and at your command hop on their back leg making sure that they are bending their knee, on the third hop they should push off their back leg and sprint to you. The speed at which they do the hops is not as important as making sure that they are doing them properly. Make sure to work both legs. Repeat drill ten times, there and back counts as two, distance 20 yards.

Four Hops drill - players will take 4 hops forward, than 4 hops back to their original position. The drill will continue until the players have repeated the hops backwards, sideways, left and right sides and angular, front left, right and back left and right. Make sure players get their knees up.

Criss Cross - Have players form lines of four or five. Players should be in base running form. At your command they cross one leg over the other and continue to criss cross their legs until they reach you. When all the groups get to you have them criss cross back to the starting point. Distance should be about twenty yards. Monitor foot work, make sure that they keep their heels of the ground. Repeat drill ten times.

Knees and Up - Have players put their knees on the ground. The object is for the player to get to his feet as quickly as possible, don't drag feet. Upper body should bend forward and then extend upward with legs pushing up. Feet should get to the throwing position. A good drill for catchers to develop quick feet and strong legs, use 3 sets of 10.

Hip Kickers Drill - While jogging Swing the heel backward until it bounces off the hip. Keep the upper leg relatively straight concentrating on moving the heel to the hip as quickly as possible, up and back is 1, do 3 at a distance 20 yards.

On knees drill - have player get on his knees, extend upper body to field the ball to right and left, quick feet, get up and throw. Repeat 5 times each side.

Jog, run, sprint, walk drill - players will jog for 5 seconds, run for 5 seconds and sprint for 5 seconds, they will then walk for 30 seconds. Repeat 10 times.

Backwards run drill - players will run backward as fast as they can, distance should be 20 yards. Arms should have pumping action similar to running form. Repeat 10 times.

15 minute run - players go for 15 minute run, half regular and half backward. Should be done once a week.

Conditioning Format

When strength-training starts, sit-ups and push-ups will be done according to strength training schedule. Athletes can be divided into groups one group starts with conditioning program. The other group starts with strength training. Strength training group will start conditioning with exercise number 4. On Saturday, do in order.

On Tuesday and Thursday, do the same as on Saturday, except practice will take place instead of a game.

Monday

1. Run - once around the field - 1minute
2. Pre-stretch - 12 minutes
3. 25 sit ups, left knee, right elbow - 25, right knee, left elbow - 25 push ups - 3 minutes
4. Skipping regular - 3 times, up and back is one - 3 minutes
5. Skipping touch toe - 3 times, up and back is one - 3 minutes
6. Up and go - 3 times, up and back is one - 5 minutes
7. Sit ups and push ups, same as number three
8. Criss cross - 3 times, up and back is one - 3 minutes
9. Back wards run - 3 times, up and back is one - 3 minutes
10. Post stretch - work with partner - hyper extensions, 15, hold for 5 seconds

Wednesday

1. Run - once around the field - 1 minute
2. Pre - stretch - 12 minutes
3. Sit ups and push ups, same as Monday - 3 minutes
4. Skipping circles - 3 minutes
5. Skipping under leg - 3 minutes
6. Knees and up - 3 sets, 10 to a set - 5 minutes
7. Sit ups and push ups - same as number 3 - 3 minutes
8. 3 Hops and explode - 3 minutes
9. Jog, run, sprint and walk - 5 seconds each segment, 30 seconds rest - 7 minutes
10. Post stretch - work with partner - - hyper extensions, 15, hold for 5 seconds

Friday

1. Run - once around the field - 1 minute
2. Pre stretch - 12 minutes
3. Sit ups and push ups same as Monday
4. Skipping opposite elbow to opposite knee - 3 times, up and back is one - 3 minutes
5. One hop long stride - 3 times, up and back is one - 3 minutes
6. Four hops drill - 1 time each direction
7. Sit ups and push ups - same as Monday 3 minutes
8. Hip kickers drill - 3 minutes
9. Back wards run - 3 times, up and back is one - 3 minutes
10. Post stretch - work with partner - - hyper extensions, 15, hold for 5 seconds

Saturday

1. Run - once around the field - 1 minute
2. Pre stretch - 12 minutes
3. leads and breaks - 2 regular steal - 2 delay steal - 2 secondary lead
4. Sit ups and push ups -
5. Play catch, regular, 1 hop drill and on knees and extend drill - get ready for game - make sure pitchers do proper bullpen warm up
6. After game - 15 minute run - half regular and half backwards
7. Sit ups and push ups
8. Post stretch - work with partner - hyper extensions, 15, hold for 5 seconds