

Australian Baseball Federation

NATIONAL STRENGTH PROGRAM FOR YOUNG PLAYERS

A critical foundation of Long Term Athletic Development

Introduction

These circuits are designed to build some basic strength, power, range of motion and endurance throughout the body. They form a suitable alternative to a gym session, for those athletes who are just starting their LTAD progression or as an alternative for those who do not have access to a gym.

It is imperative however that the athlete successfully complete each stage (including a progression of the rep ranges) before going on to the next stage. Moving to a more challenging level before you have really mastered the current level is a very common cause of injury. It takes time and effort for real adaptation to occur: don't rush it.

Progression from Stage 1 to Stage 2 could take as little as 8 weeks, however a *Training Age of at least 12 months would be expected before any of the exercises in Stage 3 be attempted.

Within each Stage, there are three sections: Lower Body, Core, and Push/Pull. Each of these sections is designed to be done as a circuit. For example, each of the three Lower Body exercises in Stage 1 should be done one after the other, with a little rest in between. It may take a while to be able to manage this, but once you have done each exercise once, repeat the sequence until you have done it three times. You can then move onto the Core Exercises, once again to be done as a circuit.

These routines are very valuable, and form the basis of a full body, on-field conditioning program that requires very little equipment.

** Training age refers to the amount of time the athlete has been in a structured, progressive training program*

Stage 1: Static and Slow Exercises

In Stage 1, most of the exercises are static: postures that are held for a period of time to develop strength and stability. All of the lower body exercises are done this way.

Lower Body

Start with holds of 30 secs in good posture. Back should be straight (neutral) in all postures.

- Squat Hold: the top of thigh should be parallel to the ground each rep (below left)



- Split Squat Hold (Left & Right foot forward): the front knee should be above the ankle and back knee should be 5cms off the ground (above right).
- Arabesque Hold (SL Supermans, Right & Left foot stance): the body should be completely straight from fingertips to the bottom of the outstretched heel (below).



Core

Start with a hold of 30 secs in good posture. Back should be straight (neutral) at all times.

- 4-point Bridge (on knees): hold the ab muscles strong to keep the body in a perfect line (below).



- Back Bridge: keep the hips up so that the shoulders, hips and knees are all in line (below).



Push/Pull (using Theraband)

Maintain good posture: legs in an athletic stance, trunk upright and straight (neutral) at all times. The body stays perfectly still throughout each exercise.

- Rows: concentrate on moving the shoulder blades, under control, forward and backward through the biggest range possible (below).



- Bi-lateral external rotations: keep the shoulder blades back, elbows steady at the sides (below).



Progression to Stage 2 is permitted once the athlete can successfully

1. maintain all static postures for 30 secs with good form for 3 sets
2. complete 3 sets of 30 repetitions each of the slow exercises

Stage 2: Controlled Dynamic exercises

Stage 2 consists of exercises that should be completed slowly and in a controlled manner so that you can concentrate on maintaining the proper form throughout full range of movement. Athletes should start at 1 set of 10 of each exercise and progress up to 3 sets of 20 of each. Stage 2 consists of the following exercises:

Lower Body

Remember, the back should be straight (neutral) during all movements, and the toes should point forwards in these exercises.

- Body-weight Double-Leg (DL) Squats: the top of the thigh should be parallel to the ground with the back still straight/neutral at the bottom of each squat; 10-20 repetitions (below left).



- Single Leg (SL) Romanian Deadlift (RDL), or “Drinking Bird” (above right). 10 reps with each leg.
- Side Squat (below left): the knee of the bending leg should be kept above the ankle, so you will need to stick your backside out. Keep the other leg straight and the both feet flat on the floor. 10 reps with each leg.



- Split Squat (above right): Front knee should be above the ankle and the back knee should be 5cms off the ground at the bottom of the squat. 10 reps with each leg.

Core

Start with one hold in each exercise of 30 secs in good posture, building up to three. Back should be straight (neutral) at all times.

- 4-point Bridge on toes (below): hold the ab muscles strong to keep the body in a perfect line. Hold for 30 secs.



- Side Bridges (below left): hold the core muscles strong to keep the body in a perfect line. (30 secs each side)



- Single-leg (SL) Back Bridge (above right): keep the hips level and hold them up so that the shoulders, hips and knees are all in line. Point the free leg straight up.
- Swimmers (below): in the same position as for the front bridge, and staying as still as possible, slowly touch the right hip with the right hand, then the left hip with the left hand (10 times each hip).



Push/Pull (using Theraband tubing)

Maintain good posture: legs in an athletic stance, trunk straight (neutral) at all times.

- Bow & Arrows: use the whole body to lean as far forward and get the greatest range possible in the movement, keeping the front arm right alongside the tubing throughout. Keep both elbows at shoulder height and squeeze the shoulder blades together at the end of the movement. 10 reps each side.



- Lying Supermans: the slower the better, and keep the forearm parallel to the ground throughout the movement. 10 reps.



- Robbery: involve the whole body; upper arm should be at about 45° and elbows bent at right angles in the back position. 10 reps.



- Low Pull: hands face backwards, squeeze scaps together at finish of movement. 10 reps.



Progression to Stage 3 is permitted once the athlete can successfully

1. maintain all static postures for 30 secs with good form for 3 repetitions
2. complete 3 sets of 30 repetitions each of the slow exercises

Stage 3: Dynamic exercises

Stage 3 consists of exercises that should be completed more quickly but still in a controlled manner. Athletes should start at 1 set of 10 of each exercise and progress up to 3 sets of 20 of each. Stage 3 consists of the following exercises:

Lower Body

Remember, the back should be straight (neutral) during all movements, and the toes should point forwards in these exercises.

- Overhead Double-Leg (DL) Squats: this is the same as the DL Squat except that both arms are kept extended overhead throughout the exercises. 10-20 repetitions.



- Single Leg (SL) Squat (other leg behind): remember that the knee of the bending leg should be kept above the ankle; aim to get the knee of the other leg down to within 5cm of the ground (quite hard!). 10 reps with each leg.



- Side Lunge: The knee of the bending leg stays above the ankle, and both feet point straight ahead. Keep the other leg straight and the both feet flat on the floor. 10 reps with each leg.



- Forward and Backward Lunges: come back to the upright position between each lunge. For each leg, step into the forward lunge, push back to upright; then step back for the backward lunge, and push back upright from there. This is one repetition. The knee of the bending leg stays above the ankle, and both feet point straight ahead. The knee of the rear leg should reach within 5cm of the floor. 10 reps with each leg.



Core

Start with one hold in each exercise of 30 secs in good posture, building up to three. Back should be straight (neutral) at all times.

- 3-point Bridge on toes: this is the same as the 4-point bridge, except you hold one leg off the floor. Work hard not to let your supporting hip swing to the side: keep the body in a perfect line. (30 secs)



- 4-point Bridge with elbow swings to side: holding the core muscles strong to keep the body in a perfect line, slowly raise one elbow to the side, then the other. The trunk does not move. (10-20 reps each side)



- Single-leg (SL) Hip Extension: keeping the hips level, raise them using one leg only. The other leg is held straight up throughout the exercise. (10-20 reps each side)



Push/Pull (using Theraband tubing)

Maintain good posture: legs in an athletic stance, trunk straight (neutral) at all times.

- Butterflies: with backs of both hands facing back, keep the shoulder blades held back and down as hands move in largest possible circular path to touch overhead then return to below hip level. 10-20 reps.



- Lawnmowers: similar to Bow & Arrows, but this time the band is anchored at ground level, so the direction of pull is up and back, rather than just back. Squeeze the shoulder blades together at the end of the movement. 10 reps each side.



Progression to Stage 4 is permitted once the athlete can successfully

1. maintain all static postures for 30 secs with good form for 3 repetitions
2. complete 3 sets of 20 repetitions each of the slow exercises

Stage 4: Ballistic exercises

Stage 4 exercises are only to be attempted once satisfactory completion of stages 1, 2 & 3 is achieved. While still being controlled, many of the movements are faster and more powerful with the aim of getting off the ground with each movement. Stage 4 exercises consist of the following:

Lower Body

These exercises involves actually leaving the ground and, of course, landing again. While this type of exercises is very good for developing quickness, it is more stressful on the joints, and too many landings can lead to overuse injuries. For this reason, it is best to limit the number of landings to no more than 30 in any session, and no more than three sessions a week.

The first two exercises should be down quickly and rhythmically. Remember, keep the knees over the ankles when you land, and the back straight (neutral) during all movements.

- **Sumo/Squat Jumps:** on each jump, move the feet so that you alternate between landing with the feet pointed forward, as in a normal squat, and landing with the feet wider and pointed out at 45°. The top of thigh should be parallel to the ground at the bottom position of each rep. 10 reps.



- **Split Squat Jumps:** from a full-depth, split squat position jump up and swap the feet then go down into a full-depth, split squat position with the feet reversed. 10 reps.



- **Skater Jumps with "stick":** standing on one leg, bring the other leg behind, then swing it vigorously to the side so as to generate momentum to jump sideways, landing on the swinging leg. "Stick" the landing (land under control and able to stand on that leg for 4 seconds if needed), then reverse the movement. In this way, jump sideways from on foot to the other, always making sure you stick the landing. 10 reps



This version of skater jumps is a bit more advanced involves swinging the other leg behind prior to jumping, which makes the jump longer.



Core

Start with one hold in each exercise of 30 secs in good posture, building up to three. Back should be straight (neutral) at all times.

- 3-point Bridge (on toes) with one arm off: keep both feet on the floor, but only one arm. This even tougher than the 3-point bridge with one foot up. Work hard keep the body still and in a perfect line. (30 secs each arm)



- 4-point Bridge with arm swings to side: holding the core muscles strong to keep the body in a perfect line, slowly raise one arm and extend it fully to the side, then the other. The trunk does not move. (10-20 reps each side)



- Single-leg (SL) Back Bridge with leg circles: in SL Back Bridge position, slowly move the free leg in the biggest circle possible. Keep the rest of the body absolutely still. 5 circles in each direction with each leg.



Push/Pull (using Theraband tubing)

Maintain good posture : legs in an athletic stance, trunk straight (neutral) at all times.

- Single-arm reverse flyes (below):: one arm at a time and keeping the elbow about shoulder height, bring the extended arm in a circular path from out in front of the shoulder to just behind. Squeeze the scaps together at the end of the movement. This exercise can be done with the palm facing forward or facing up (both versions shown). 10reps each arm.



- High-Y flyes (below): flex the knee, bend at the hips, throw both arms up and back simultaneously. 20reps.

