

The Power Behind Performance®

IMPULSE AGILITY LADDER™

**IMPORTANT INFORMATION
PLEASE READ AND KEEP**

DISCLAIMER

The following guidelines should be observed when using the Impulse Agility Ladder™.

- Always consult your physician before participating in any physical activity.
- Read all instructions carefully before using.
- Always use the Impulse Agility Ladder™ on a level surface free from obstructions.
- The Impulse Agility Ladder™ is intended for use only as described in this document. It is in no way designed to be used as a ladder or other climbing device.
- Power Systems, Inc. assumes no liability for injuries, accidents or damages that may occur with the use or misuse of the Impulse Agility Ladder™.

For more information on the Impulse Agility Ladder™
or other training products and programs contact:

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1-800-321-6975

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IMPULSE AGILITY LADDER™

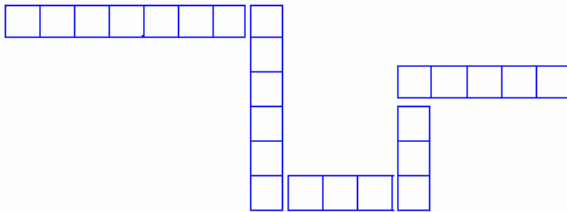
The Impulse Agility Ladder™ is a portable footwork training tool designed to enhance quickness and agility. The unit consists of five separate ladders; one 11'6" ladder with 8 rungs, one 10' ladder with seven rungs, one 8' ladder with six rungs and two 5' ladders with four rungs each. All sections measure 20 inches wide and all rungs are spaced 18 inches apart.

This guide will offer several drills for use with the Impulse Agility Ladder™. The drills are listed in order of difficulty from easiest to most difficult. The ladder uses, however, are as broad as your imagination. For best results, use drills that are specific to your particular sport and position.

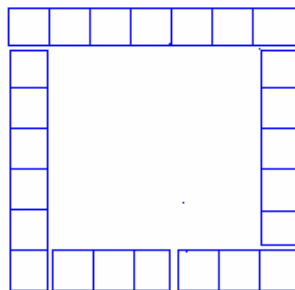
LADDER PREPARATION

Position the ladder on a level surface free from any obstructions. Ideal training surfaces include practice and game fields and gymnasium floors. The ladder can be secured to the ground using weight plates on each end. The nylon loops at the end of the ladder can be threaded through the hole in the weight plate for added stability. The ladder units can be combined in a variety of patterns, limited only by your imagination. Use the set up variations shown below to get started or use your own:

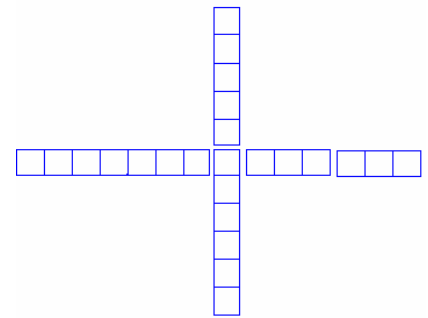
Maze



Box



Agility Cross



DRILLS (based on the configurations provided)

Please refer to the diagrams listed after this section for instructions to perform the footwork patterns identified in the drills section.

MAZE CONFIGURATION

This configuration is ideal for drill sequences that involve directional changes. The Impulse Agility Ladder™ can be configured to match the configuration above of the sections can be organized in a variety of patterns. Consult with your coach / training partner to develop the pattern which will help you meet your training goals.

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Sample training pattern:

1. Start at end of ladder maze. Run through the first section of ladder using a good knee drive and quick feet until you reach the start of section two.
2. Quickly change direction and shuffle through section two. Keep your hips low and focus on pulling with the lead leg and driving with the trailing leg as you shuffle. Avoid letting feet cross during this segment.
3. Run through section three as quickly as possible.
4. Shuffle sideways through section four before running through section five to complete the drill.

Additional patterns that can be utilized using the “MAZE” include, but are not limited to:

| "MAZE" CONFIGURATION PATTERNS | | | | |
|-------------------------------|-------------|--------------|-------------|--------------|
| Section 1 | Section 2 | Section 3 | Section 4 | Section 5 |
| Forward Run | Carioca | Forward Run | Carioca | Forward Run |
| Forward Run | Lateral Hop | Forward Run | Lateral Hop | Forward Run |
| Forward Hop | Shuffle | Forward Hop | Shuffle | Forward Hop |
| Skip | Shuffle | Skip | Shuffle | Skip |
| Backward Run | Shuffle | Backward Run | Shuffle | Backward Run |
| Backward Hop | Carioca | Backward Hop | Carioca | Backward Hop |

NOTE: For additional difficulty perform hopping sequences using only one foot.

BOX CONFIGURATION

The box configuration can be utilized by individuals or groups at the same time. This configuration allows for a drill to be performed in both directions within the same drill. CAUTION: When using the box configuration with a group, position one individual at the start of each section to reduce the risk of individuals colliding, which could result in injury.

Sample training pattern:

1. Start at a corner of the box and run as quickly as possible through the first section. Emphasize quickly raising the knees and keeping the toe of the foot flexed upwards toward the lower leg.
2. Shuffle laterally through the next section. Do not let the feet cross and keep the hips low and torso upright.
3. Back peddle placing either one foot or both feet in each section.
4. Shuffle through the final section until you have passed the starting point.
5. Rest and repeat as prescribed by training program or coach/trainer.

Additional patterns that can be utilized using the “BOX” include, but are not limited to:

| "BOX" CONFIGURATION PATTERNS | | | |
|------------------------------|-------------|--------------|-------------|
| Section 1 | Section 2 | Section 3 | Section 4 |
| Forward Run | Carioca | Backward Run | Carioca |
| Skip | Lateral Hop | Backward Run | Lateral Hop |
| Forward Hop | Shuffle | Backward Hop | Shuffle |
| Forward Hop | Carioca | Backward Hop | Carioca |

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| | | | |
|-----------------|---------|--------------|------------|
| Backward Hop | Carioca | Backward Hop | Carioca |
| Crossover Run | In-Out | Twist Jumps | In-Out |
| Zig-Zag Shuffle | Carioca | Slalom | Front-Back |

NOTE: For additional difficulty perform hopping sequences using only one foot.

AGILITY CROSS CONFIGURATION

The agility cross adds another dimension to your agility training. Combine foot drills, with visual and audio prompts to improve coordination and reaction time. Drills can be performed by starting the individual at any point of the agility cross; however, starting the individual in the center is suggested for drills involving coaching cues focused on improving reaction.

Sample training pattern: The drills involved in this exercise are the forward and backwards run and lateral shuffle.

1. Start the individual in the central square of the cross. Both feet should be in the same square and the individual should be in an athletic stance.
2. On the coach / trainer's directional command start the drill. For this drill forwards and backward movement will be running while lateral movements will be shuffling.
3. Listen and look for subsequent cues that indicate a directional change. Focus on accurate footwork, landing each step in the proper square. Excessive contact with the rungs indicates a deficiency in coordination which can be addressed through more remedial footwork drills.
4. Continued to run and shuffle until prompted to stop.

Additional training patterns that can be used utilizing the "Agility Cross" include combinations of the following footwork drills. Please note that it is up to you, the user, and your coach / trainer to determine the number of directional changes that will occur at the central hub of the ladder. The table below contains suggestions of drills for the two posts that comprise the Agility Cross.

| "AGILITY CROSS" CONFIGURATION DRILLS | |
|--------------------------------------|-----------------|
| Section 1 | Section 2 |
| Forward / Backward Run | Lateral Shuffle |
| Forward / Backward Run | Carioca |
| Skip / Backward Run | Lateral Shuffle |
| Forward / Backward Hops | Lateral Hops |
| Twist Jumps | In-Out |
| Crossover Run / Backward Run | Front-Back |

NOTE: For additional difficulty perform hopping sequences using only one foot.

FOOTWORK TRAINING PROTOCOLS

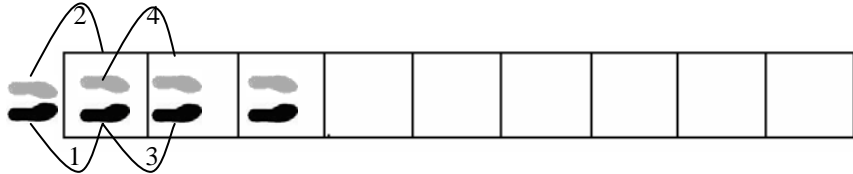
1. RUNNING STRAIGHT FORWARD: ALTERNATING STEPS

- Start at the end of the ladder. On the 'go' command step into the first square of the ladder with your right foot (1). Step into the second square with your left foot (2). Continue to alternate this pattern the length of the ladder.
- Focus on using a good knee drive and quick feet. Try to keep up on your toes and limit the time you are in contact with the ground.
- Maintain a strong arm drive to help propel you through the drill.
- This drill can also be performed running backwards.



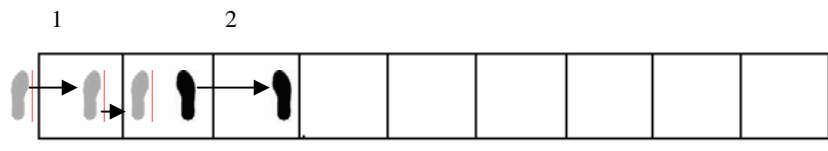
2. RUNNING STRAIGHT FORWARD: TWO FEET EACH SQUARE

- Start at the end of the ladder. On the 'go' command step into the first square of the ladder with your right foot (1). Now place the left foot into the same square (2). Repeat this pattern as quickly as possible the length of the ladder.
- Focus on using a good knee drive and quick feet. Try to keep up on your toes and limit the time you are in contact with the ground.
- Maintain a strong arm drive to help propel you through the drill.
- This drill can also be performed running backwards.



3. LATERAL RUN:

- This drill is similar to doing a lateral run drill over bags or cones. The feet should not cross and the hips and shoulders should face to the side throughout the ladder.
- Start with the left foot on the outside of the ladder and the right foot in the second square of the ladder. On 'go' move the left foot into the first square (1). Now move the right foot into the next square (2). Repeat pattern the duration of the ladder.



4. LATERAL RUN: TWO FEET IN EACH SQUARE

- This drill is similar to doing a lateral run drill over bags or cones. The feet should not cross and the hips and shoulders should face to the side throughout the ladder.
- Start with the left foot on the outside of the ladder and the right foot in the first square of the ladder (1). On 'go' move the left foot into the first square. Now move the right foot into the next square (2). Repeat pattern the duration of the ladder.



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5. CROSSOVER RUN

- Run down one side of the ladder crossing the feet over the edge of the ladder. The left foot should always land on the right side of the ladder while the right foot should always land on the left side of the ladder.



6. RUN OUT – RUN THROUGH LADDER & SPRINT OUT 20 YARDS

- This drill combines the first drill in this section with an added sprint at the end. Run through the ladder as described in item 1 above. At the end of the ladder, sprint out another 20 yards.

SKIPS (Follow the running pattern in running drill #1)

1. QUICK SKIP WITH HIGH KNEE DRIVE

- Skip through the ladder driving the knee up so that the foot is level with the opposite knee. The skipping action is the same that kids perform on the playground.

2. QUICK SKIPS FOR SPEED, LITTLE KNEE DRIVE

- Skip through the ladder using only enough knee drive to clear the next slat on the ladder. Emphasize the speed of the drill.

JUMPS

1. TWO FOOT FRONT

- Hop on both feet straight through the ladder. There should be foot contacts in each hole. Try to minimize the ground time of each contact.

2. TWO FOOT SIDE

- Hop on both feet sideways through the ladder. Keep the hips and shoulders at 90 degrees from the direction of movement. Perform one set moving to the left and one set moving to the right.

3. SINGLE FOOT FRONT

- Hop on one foot straight through the ladder. There should be a foot contact in each hole. Try to minimize the ground time of each contact. Perform one set with the left leg and one with the right leg.

4. SINGLE FOOT SIDE

- Hop on one foot sideways through the ladder. Keep the hips and shoulders at 90 degrees from the direction of movement. Perform one set moving to the left and one set moving to the right for each foot.

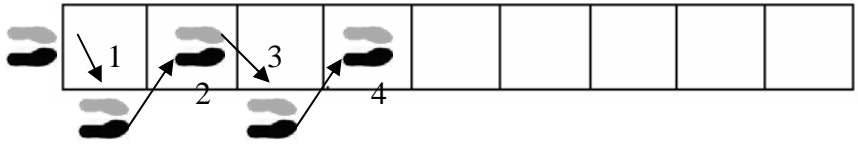
5. SLALOM

- This is a zigzag hop down one side of the ladder using both feet. See diagram for pattern.
- Advanced athletes may perform this drill using one foot for added difficulty.

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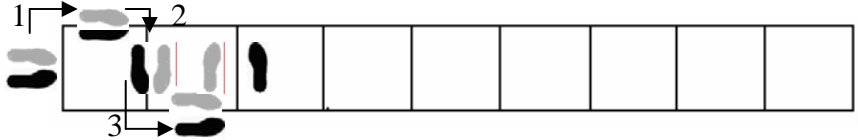
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6. TWIST JUMPS

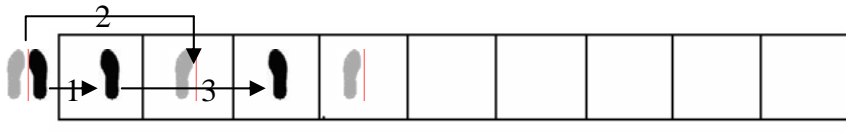
- A great drill that forces the athlete to rotate the hips. When performing this drill be sure to land keep the torso over the legs to help reduce the rotational strain place on the knees and ankles during landing. Refer to the diagram below for proper foot placement.



SHUFFLES

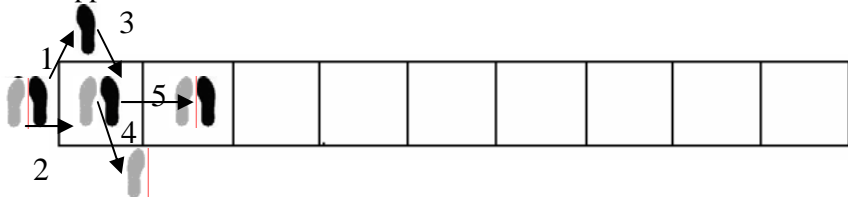
1. CARIOCA

- This drill simultaneously helps to improve leg lift and hip rotation.
- Start standing sideways at one end of the ladder. Step with the foot nearest the ladder into the first square (1). Next cross the left foot past the right leg and place it in the second square (2). Move the right foot behind the left leg into the third square (3). Repeat this patter of movement (see diagram below) for the duration of the ladder.
- Try to keep the hips low and shoulder facing forwards as you perform this drill.



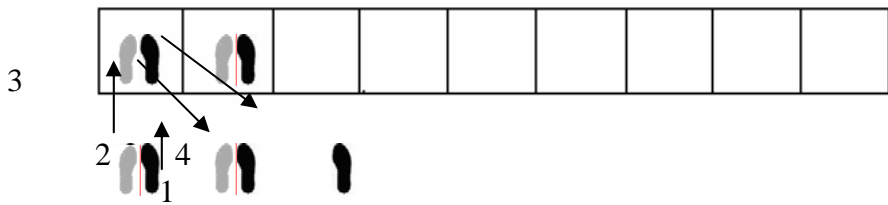
2. FRONT-BACK

- Start standing sideways at one end of the ladder. Step forwards so that your right foot lands in front of the ladder (1). Step laterally with your left foot so that it lands in the next square (2). Step back with the right foot placing it in the same square as the left foot (3). Step with the left foot placing it below the ladder and behind the right foot (4). Move the right foot laterally into the next square and then bring the left foot up into this square (5). Repeat this stepping pattern the duration of the ladder. Repeat in the opposite direction.



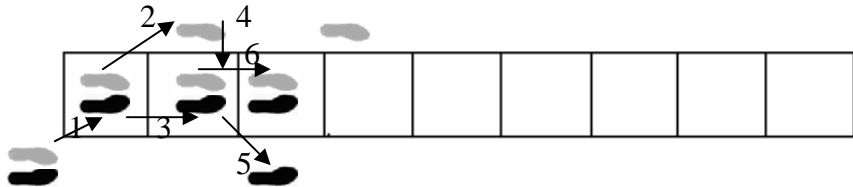
3. IN-OUT

- Start standing sideways to the ladder, behind the first square. Step with the right foot into the first square then follow with the left. Step out, behind the next square with the right foot and then the left. Repeat the pattern the duration of the ladder. Perform drill in opposite direction.
- The focus here is on quick and accurate placement of the feet. Avoid stepping on the rungs as you make your way down the ladder.



4. **ZIG-ZAG SHUFFLE**

- Start to the side of the ladder as shown in the diagram. Step with the left foot into the first square followed by the right foot (1). Step with the left foot, placing it outside of the second square (2). Step forward with the right foot into the second square (3) and then laterally move the left foot next to the right foot (4). Step with the right foot, placing it outside the third square (5). Step forward with the left foot into the third square (6). Continue to repeat the pattern for the duration of the ladder.



ADD WEIGHT BELT / WEIGHTED VEST FOR ADDED RESISTANCE

- A weighted belt or weighted vest can be worn for added resistance when performing any of these drills. Do not add more resistance until you have mastered the drills using only your body weight.
- Power Systems, Inc. offers an excellent selection of weighted vests, belts and other weighted body wear. Contact a Customer Service Representative at 1-800-321-6975 for pricing and availability or visit us on the web at www.power-systems.com.

TRAINING RECOMMENDATIONS

Use the Impulse Agility Ladder™ before strength training if both are to be done on the same day. Perform agility and foot quickness drills before doing resistance running or plyometrics. This will allow the athlete to effectively perform these drills before any muscle fatigue occurs.

- Perform 2-3 Impulse Agility Ladder™ workouts per week. Allow 48-72 hours between workouts to reduce the incidence of Overtraining Syndrome.
- Select 4-6 drills for each workout.
- Perform 3-5 sets of each drill. Keep the total number of sets per workout under 20.
- Allow sufficient recovery between each set so that maximum effort can be given to the drill.

The key when using the Impulse Agility Ladder™ is to minimize the ground time with each foot contact. The quicker the athlete's feet are off from the ground, the better the reaction time and ability to change direction.

Consult your coach or other qualified individual to assist you in designing your training program.

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