



PHOTO BY BORUSSIA DORTMUND

THE FOOTBALL+

A comprehensive warm-up to prevent injuries and improve performance

MANUAL

The **Football+** Manual

*An evidence-based warm-up regime to mitigate injuries and improve performance.
Designed, developed, and Launched by the Movement and Training Science Group, Institute for Sport
and Sport Science, TU Dortmund University in cooperation with Borussia Dortmund (BVB09).*

Introduction

Welcome to the Football+ manual, a comprehensive guide designed to instruct trainers, coaches, players, and scientists about the Football+ program. This manual is your key to understanding the program's principles, implementation, and the science that drives it. Before you dive into the program, take some time to familiarize yourself with this manual.

Overview

The Football+ program has been developed through a thorough evaluation of studies conducted over the past two decades. These studies have provided insights from various angles, including injury incidences, biomechanical risk factors, physiological measures, training interventions, adherence to programs in real football-world football, and the challenges encountered during implementation.

Tailoring a well-accepted and practical injury prevention program in a form of a warm-up modality requires careful consideration. Serving as the final phase of athlete preparation, the warm-up regimen aims to reduce injury risk and optimize performance. The Football+ program integrates a set of key elements essential for addressing these aims, which are specifically tailored for football players. It encompasses a range of football-specific exercises meticulously crafted to enhance motor performance while also targeting injury risk factors.

The Football+ effects on motor performance and biomechanical risk factors

The primary studies strongly emphasize that the Football+ optimizes both acute and long-term performance, compared to other injury prevention programs and traditional warm-ups. Its effects on biomechanical risk factors have been validated against other programs and traditional warm-ups. While further studies are needed to explore all aspects of the program comprehensively, initial findings show promising efficacy for the Football+.

Field Set-Up

The layout and equipment of the field were strategically organized to ensure seamless execution of the exercises. The Football+ requires no additional equipment and can be easily implemented in any circumstances. To set up the field for running exercises, strength exercises, and dynamic stretches, all you need is eight to ten pairs of disc cones spaced approximately four to five meters apart in length and width. For plyometric exercises, you'll require five to seven pairs of hurdles with a height of 30-50 cm, depending on the players' level and progression."

Implementation and progression to the next level

The Football+ adopts a 3-level difficulty system to facilitate progression. As players undergo training and enhance their abilities, they advance to more challenging exercises and intensities, ensuring a gradual and safe journey toward peak performance. The progression is designed to adapt every 4-6 weeks based on player feedback, allowing continual enhancement of skills and readiness for the main training body. While implementing the program twice a week offers advantages, optimal efficiency is achieved by following the program thrice weekly.

We Value Your Feedback

We want this manual to be as informative and user friendly as possible. After you've had a chance to review it, please provide your feedback and suggestions. Your insights help us enhance this resource and ensure that it meets your needs and expectations. Thank you for choosing the Football+ program, and we look forward to your success and safety as you embark on this exciting training journey.

Best regards,

The Football+ Team

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The Football+ Exercises

Part 1. Foundation Building: Running and Strength Exercises

1. Running straight
 2. Crossover running
 3. Running hip-in&out
 4. Running forward/backward
 5. Dynamic hip swing
 6. Lateral lunge with hip stretch
 7. Walking lunge
 8. Single leg squat (**beginner-intermediate-advanced**)
 9. Hamstring walkout
 10. Modified Nordic hamstring exercise (**beginner-intermediate-advanced**)
 11. Copenhagen plank (**beginner-intermediate-advanced**)
 12. Super plank (**beginner-intermediate-advanced**)
 13. Mountain climbers plank (**beginner-intermediate-advanced**)
 14. Dynamic plank (**beginner-intermediate-advanced**)
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Part 2. Ball-Based Training: Small-Sided Games

15. Mirror dribbling drill
 16. One vs. one
 17. Active passing
 18. Directional agility ball drill
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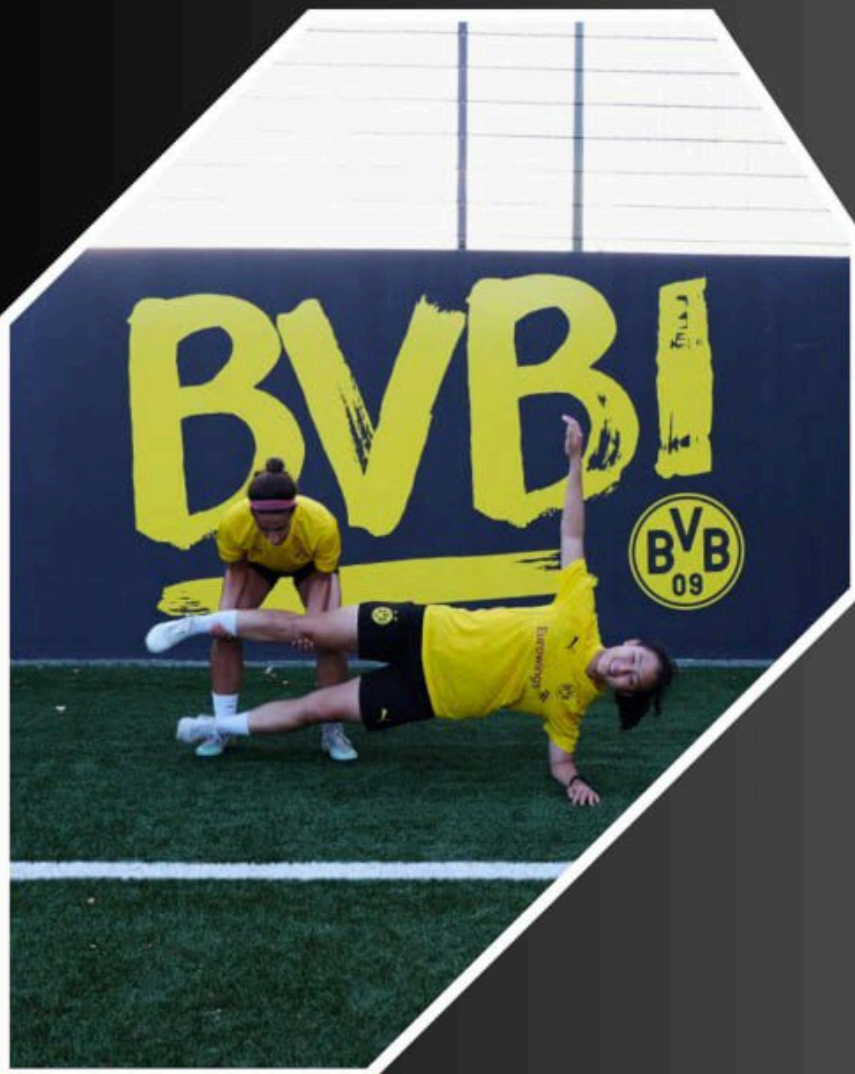
Part 3. Explosive Performance: Plyometric, Agility, and Sprinting Drills

19. Hurdle hops
 20. Zigzag hops
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**Duration in practice: 25±2 minutes*

PART 1

RUNNING & STRENGTH EXERCISES



Part1. Foundation Building: Running and Strength Exercises

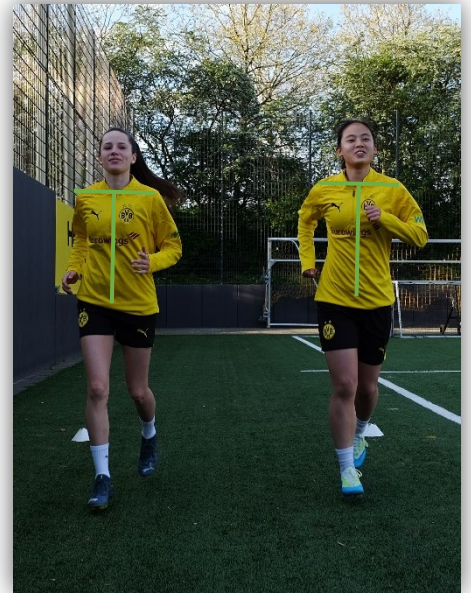
The Football+ program comprises a well-structured warm-up routine that sets the stage for an effective and safe training session. In this part, we delve into the exercises that make up the initial phase of the program, preparing players for the challenges of the football pitch.

Exercise 1. Running straight: The program kicks off with a 2-minute self-estimated run across the pitch at approximately 40% of the maximal pace. Run slightly more quickly (approximately 50%*) on the way back.

Tips:

- Make sure you keep your upper body straight.
- The hip, knee, and ankle should be aligned.
- Repetitions: 3-4x
- The pace increases at levels 2-3 to 50-60%.

****Running at 50% intensity means jogging at a pace that is halfway between walking and sprinting. To estimate this pace, players should focus on their perceived effort level rather than exact speed measurements. At 50% intensity, players should be able to maintain a conversation while running without feeling overly breathless or fatigued. Additionally, they should feel that they are exerting moderate effort without pushing themselves to the point of discomfort.*



Exercise 2. Crossover running: Start with a slight side jog, maintaining the arms parallel to the shoulders and the elbows fully extended. As you run, consciously lift your knee up and cross the leg in front of the other with each step. The crossover should be deliberate and controlled without overreaching. Continue this pattern half of the way, change your direction and do the next side. Run smoothly on the way back.

Tips:

- The hip, knee, and ankle of the supporting leg should be aligned.
- Gradually increase your pace as you become more comfortable with the movement.
- Repetitions: 1x



Exercise 3. Running hip-in&out: Jog through the cones while alternatively performing hip-in movement through the right and left legs. Lift your knee to the side, rotate it forward and put your foot down. Perform the hip-out exercise on the way back.

Tips:

- Make sure that you keep your pelvis horizontal
- The hip, knee, and ankle of the supporting leg should be aligned.
- Repetition: 1x



Exercise 4. Running forward/backward: Begin by running forward at a moderate pace towards the next cone, ensuring proper technique is maintained. Once the forward running segment is completed, transition to running backward toward the previous cone. Continue through the pathway following the algorithm of two cones forward, one cone backward.

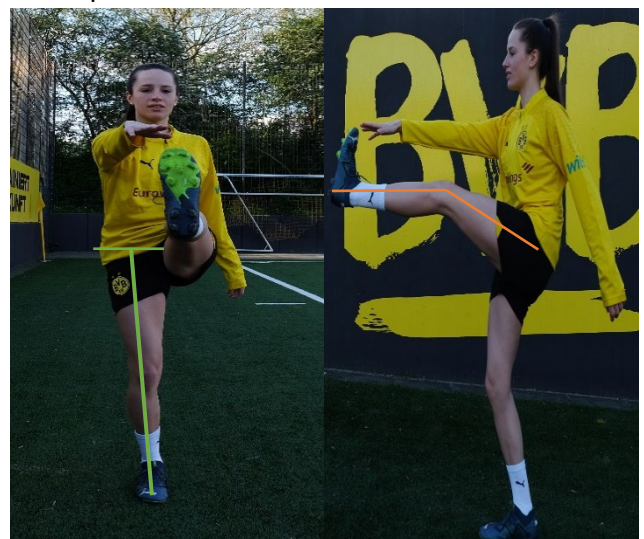
Tips:

- Safety precautions should be taken during this exercise to maintain proper footing and encourage players to be mindful of their surroundings to avoid collisions or injuries.
- Focus on maintaining good posture and keeping the upper body stable while running.
- Incorporate variations such as changing the pace, and adding directional changes in levels 2-3.

Exercise 5. Hip-forward swing: Jog through the cones while alternatively performing hip-forward swing in a controlled and dynamic motion. As you swing the leg forward, allow it to reach a position parallel to the ground, engaging the hip flexors. Maintain a smooth and natural rhythm, focusing on the continuous swinging motion. Run smoothly on the way back.

Tips:

- Make sure that you keep your upper trunk upright.
- Bend the knee of supporting leg slightly for balance.
- The hip, knee, and ankle of the supporting leg should be aligned.
- Repetition: 10X for each side.



Correct

Incorrect

Exercise 6. Lateral lunge with hip stretch: Starting by standing with your feet together and maintaining an upright posture. Take a step to the side, leading with one leg, and lower your body into a lunge position, keeping the other leg straight. While in the lunge, gently push your hip outward to the side to create a stretch in the hip area. Stand up; repeat the movement by taking a step to the side with the same leg. Continue this pattern halfway, switch to the other side, and repeat the exercise. Run smoothly backward on the way back.



Tips:

- Repetition: 10X for each side.
- Make sure that you keep your pelvis horizontal.

Exercise 7. Walking lunge: Starting by standing with your feet together and maintaining an upright posture. Take a step forward with one leg, ensuring a comfortable stride length. Lower your body into a lunge position, with both knees bending at approximately 90 degree angles. As you lunge forward, keep your back straight and chest up. After reaching the lunge position, push through the heel of the leading leg to return to a standing position. Immediately step forward with the opposite leg and repeat the lunge. Run slowly on the way back.



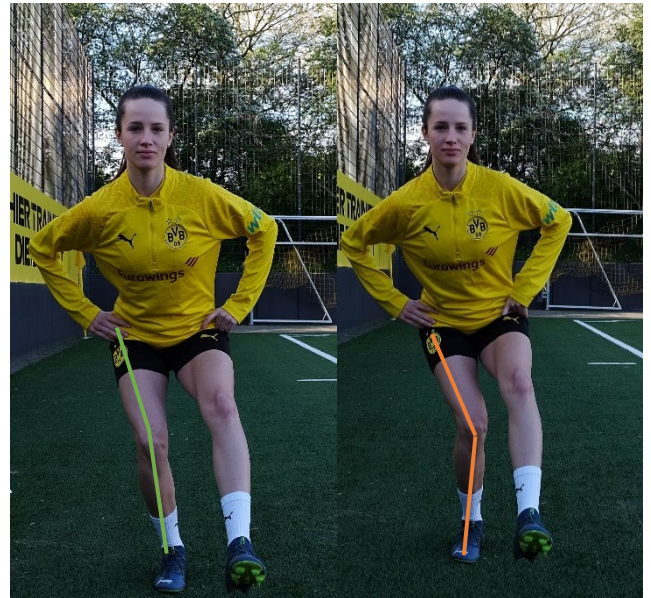
Tips:

- Make sure that you keep your upper trunk upright.
- Make sure that you keep your pelvis horizontal.
- Repetition: 1X

Exercise 8. The single-leg squat: Stand with your feet shoulder-width apart. Shift your weight onto one leg while keeping the other foot slightly lifted off the ground. Begin the movement by bending your knee and lowering your body down as if sitting back into a chair, while maintaining a proper alignment through the ankle, knee and hip. Keep your chest up and your back straight as you descend. Lower yourself as far as you can comfortably go while maintaining balance and control. Push through your heel to return to the starting position.

Tips:

- Keep your non-working leg extended in front of you for balance.
- Level 2: Perform the single-leg squat as described above, but aim to lower yourself deeper toward the ground, using a slower tempo to challenge your muscles further.
- Level 3: Aim to lower yourself as close to the ground as possible while maintaining proper form.
- Do not allow the knees to buckle in (Valgus position)



Correct

Incorrect

Exercise 9. Hamstring walkout: Begin by lying on your back with your knees bent and feet flat on the ground, hip-width apart. Lift your hips off the ground, coming into a shoulder bridge position with your body forming a straight line from shoulders to knees. Slowly extend your legs out in front of you, walking your feet away from your body until your heels touch the ground, feeling a stretch in your hamstrings. Return to the starting position by walking your feet back towards your body, lifting your hips high in the bridge position.



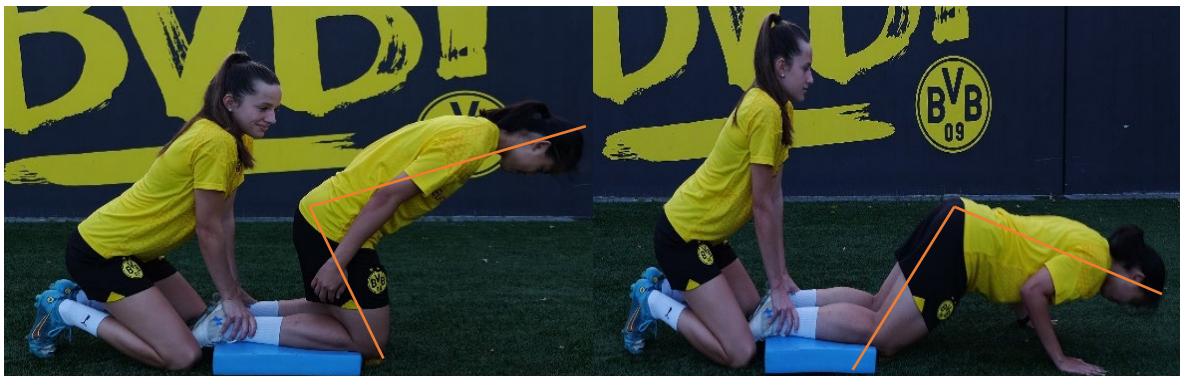
Tips:

- Focus on keeping your hips lifted, avoid overarching your lower back or letting your hips drop towards the ground.
- Move slowly and with control to maximize the stretch in the hamstrings.
- Repetitions: 10x back and forth.

Exercise 10. Nordic hamstring exercise (NHE): Kneel on the floor on a padded mat. Ask your partner to hold your feet down, securing them firmly. Maintain a straight line from your knees to your head throughout the exercise. Slowly lean forward from your knees, maintaining control and keeping your body in a straight alignment. Gradually lower your upper body toward the ground while controlling the movement with your hamstrings. The aim is to descend as far as possible while using the hamstrings to resist the lowering motion. Once you've reached your maximum range of motion or cannot control the descent any longer, put your hands on the floor to support your body and continue descending until the knees are fully extended. Then return to the starting kneeling position.



Correct



Incorrect

Tips:

- Performing the NHE with a mat under the knees helps reduce discomfort and pressure on the kneecaps.
- In level 3, aim to reach the fully extended knee position without using your hands' support.
- Repetitions: 12x

Plank variations

Exercise 11. Copenhagen plank: Strengthens the adductor muscles that often do not receive the attention they deserve. Begin by lying on your side ensure that your body is in a straight line from your head to heels, with your legs stacked on top of each other. Prop yourself up on your forearm, ensuring that your elbow is directly below your shoulder for support. Ask your partner to hold your upper leg at hip height and support the ankle and knee joints. While maintaining the side plank position, slowly lower your opposite foot toward the ground.

Tips:

- The focus should be on using the adductor muscles of the inner thigh to control movement.
- Avoid letting your hips sag or rotate during this motion.
- Repetitions: 12,14,16, each side in three levels, respectively.



Correct



Incorrect

Exercise 12. Super plank: Begin in a traditional plank position, supporting your body on your forearms and toes, maintaining a straight line from your head to heels. Now move both arms forward, increasing the angle generated by the arms and the floor. Engage your core muscles, glutes, and legs to stabilize your body and maintain the plank position. Hold this extended position for 30-45 seconds, focusing on balance and stability without allowing your body to rotate or lose alignment.

Tips:

- Breathe normally.
- Hold this position for one minute in level two
- At level three, lift one arm off the ground, extending it forward until it is parallel to the floor. Lower your arm to the starting position. Repeat the movement on the opposite side. Alternate between sides, maintaining the plank position for 45-60 seconds.



Correct (advanced)

Correct



Incorrect

Incorrect

Exercise 13. Mountain climbers: Begin in a traditional plank position. Make sure your arms are shoulder-width apart, and the spine is straight. Bring your right knee toward your chest as near as you can. Push it back to its original position while bringing the left knee toward your chest. The exercise looks as if you are climbing a mountain and hence the name. Alternate between sides, maintaining a controlled and stable plank position for 30-45 and 45-60 seconds at beginner and intermediate levels.

Tips:

- Breathe normally.
- At level three, bring your right knee and left hand simultaneously toward your chest as near as you can.
- Push them back to their original position while bringing the left knee and right hand toward your chest.
- Alternate between sides, maintaining a controlled and stable plank position for 45-60



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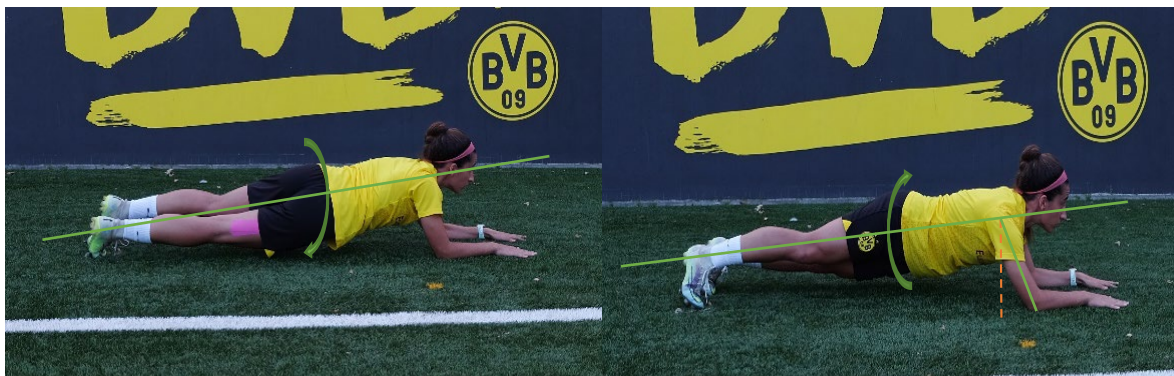


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Exercise 14. Dynamic plank: Begin in a traditional plank position, supporting your body on your forearms and toes, maintaining a straight line from your head to heels. Now move both arms forward, increasing the angle generated by the arms and the floor. While maintaining the plank position, initiate a controlled rotation of your pelvis to the right, tilting it downward. Return to the center, align your pelvis back to the starting position and repeat the rotation, this time tilting your pelvis to the left while maintaining the plank posture. Continue alternating rotations from right to left for 30 seconds, focusing on controlled and deliberate movements without excessively swaying or shifting your body weight. Maintain a stable and engaged core throughout the exercise to support the rotational movements.

Tips:

- Extend the duration to 45 and 60 seconds in the second and third levels, respectively.



Correct



Incorrect

PART 2

SMALL-SIDED GAMES



Part 2. Ball-Based Training: Small-Sided Games.

*****In each session, perform three out of the following four exercises!**

Exercise 15. Mirror dribbling drill: Divide into pairs. While each player has a ball, the first player begins dribbling and performing various maneuvers with the ball. The second player, positioned behind the first player, must precisely replicate the same maneuvers and dribbles, mimicking the movements of the first player. Switch the positions of the first and second players, and repeat the exercise.

Tips:

- Duration: 30, 40, and 50 seconds at the three levels.
- Repetitions: once each player



Exercise 16. One vs. one: Do the following steps to perform this exercise:

- The player with the ball starts dribbling in different directions and makes sudden changes in direction.
- The defending player is required to maintain a proper defensive posture, shadow the attacking player, and apply pressure (initially without taking the ball).
- Switch positions and repeat the exercise.
- At the next level, the defending player is allowed to take the ball, and the positions of the defender and attacker switch.
- In the third level, while dribbling, the attacking player begins a countdown from 100 downward in threes, such as 100, 97, 94, 91, and so on, until the end.



*****The countdown provides cognitive distraction and an external focus for the player performing the dribbling exercise. This external focus helps the player maintain concentration, enhance decision-making abilities, and improve performance under pressure by engaging the mind with a specific task, thereby potentially simulating game-like situations where players need to perform technical skills while multitasking or dealing with distractions.**

Exercise 17. Active passing: Do the following steps to perform this exercise:

- Place all players within the eighteen-yard box and assign each player a number from one upward.
- Players freely run within the penalty box, and upon receiving the ball, each player is responsible for passing it to the player with the next number.
- During the exercise, advise players to establish clear verbal and visual communication, assume correct positions, and maintain logical distances from the players before and after them.
- Initiate the exercise with three balls; gradually increasing the number of balls up to a maximum of half the number of players participating.



Exercise 18. Directional Agility Ball Drill:

The players stand on the penalty box line, spaced 3-4 meters apart. Upon the trainer's signal, they begin running forward with the ball on their foot as fast as possible. When instructed by the trainer, they must quickly change direction. They should turn right if the command is 'right' and left if the command is 'left', and then continue running in that direction until given a new instruction. If the command is 'stop,' they must promptly come to a halt and place their foot on the ball.



PART 3

PLYOMETRIC & SPRINTING EXERCISES



Part 3. Plyometric, Agility, and Sprinting Drills

Incorporate agility drills and sprints with plyometric exercises to enhance the ability to change direction quickly and accelerate, while also maximizing speed and explosiveness. This part involves a series of plyometric exercises that gradually increase in intensity and complexity.

Exercise 19. Hurdle hops: Set up hurdles in a straight line, spaced evenly apart to create a series of hurdles to jump over, and at a height appropriate for participants' abilities. The distance between the hurdles can vary based on the desired challenge level and the available space.

Tips:

- Players begin at one end of the course, starting by running at a moderate to fast pace toward the first hurdle.
- As players approach each hurdle, they perform a jump to clear it with minimal ground contact time while continuing to run.
- Throughout the exercise, participants focus on maintaining proper jump-landing technique, including arm swing, foot placement, upright trunk and stride length.
- When jumping over the hurdles, aim to land softly with bent knees to absorb the impact and minimize stress on the joints. Do not allow the knees to buckle.
- Jump over the last hurdle and immediately do a zigzag sprint through a pair of marker cones spaced 5 meters apart and designed in a zigzag form.
- To increase the challenge and intensity of the exercise, participants can increase the height or width of the hurdles, or the number of repetitions performed.



Correct



Incorrect

****Perform the following variations: a two-footed jump, a single-leg jump, and a lateral jump.*

Exercise 20. Zigzag hops: Set up exercise rings in a zigzag pattern, spaced evenly apart to create a series of rings to jump in.

Tips:

- Perform continuous jumps over the rings, focusing on clearing each ring with 2-3 seconds ground contact time during the first 3 repetitions, and minimal ground contact time during the last 3 repetitions.
- Maintain an upright posture, drive the knees upward to generate height and power, and ensure that your knees do not buckle in and your ankles do not pronate upon landing.
- Emphasize quick and explosive movements to navigate through the cones efficiently.
- Progression can be achieved by increasing the distance covered or increasing the width of the rings. Perform a 10-meter linear sprinting immediately after last hop.
- Repetitions: 6X



Incorrect



Correct

*****Throughout the plyometric exercises, constantly remind participants to perform each exercise as quickly and explosively as possible while maintaining proper landing form and technique. Emphasize the importance of maximizing the stretch-shortening cycle, which involves rapidly stretching the muscles (eccentric phase) followed by an immediate contraction (concentric phase) to generate explosive power. Encourage participants to push their limits while prioritizing the safety and proper execution of each plyometric exercise.**