

THE "11+"

A complete warm-up programme to prevent injuries

MANUAL

F-MARC
FOOTBALL FOR HEALTH
FIFA

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THE "11+" MANUAL

A COMPLETE WARM-UP PROGRAMME TO PREVENT INJURIES

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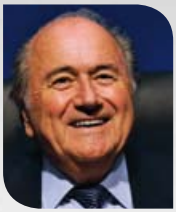
PREFACE



Joseph S. Blatter



Prof. Jiri Dvorak

Physical exercise is the best preventive measure for many diseases – this is a scientifically proven fact. Major scientific studies have shown football to be an ideal sport to improve physical fitness as well as to provide social benefits due to it being a team game. Playing recreational and even competitive football is a safe physical activity if participating players are well prepared by regularly performing the "11+".

In recent decades, football has gained increasing popularity among men and women, to such an extent that there are currently about 300 million registered players, referees and technical staff, approximately 40 million of whom are female football players. There is no doubt that football is the world's most popular sport, and the FIFA World Cup™ is the biggest sporting event on the planet with the beautiful game not only filling stadiums but also pulling in 30 billion TV spectators. FIFA is aware not only of this development but also of its responsibility to care for the health of players. Football injuries can be incurred with and without contact with another player. The Laws of the Game and their appropriate implementation through strict refereeing, fair play and the improvement of technical skills all have a positive effect on the reduction of contact injuries. Non-contact injuries can be best prevented by thorough preparation. With this in mind, FIFA and its Medical Assessment and Research Centre, F-MARC, have developed an injury prevention programme, the "11+". Major clinical research studies have clearly indicated that the consistent implementation of the "11+" can lead to a 30–50% reduction in injuries.

On the basis of these results, FIFA decided to roll this programme out across the world and to use the 2010 FIFA World Cup™ in South Africa to launch the programme within the member associations. Development programmes are used to educate coaches, trainers, referees and technical staff about the background and about how to perform the exercises correctly with their teams. A manual, together with an instructional DVD (www.FIFA.com/medical), are the tools needed to facilitate the implementation all over the world, free of charge, for every football player.

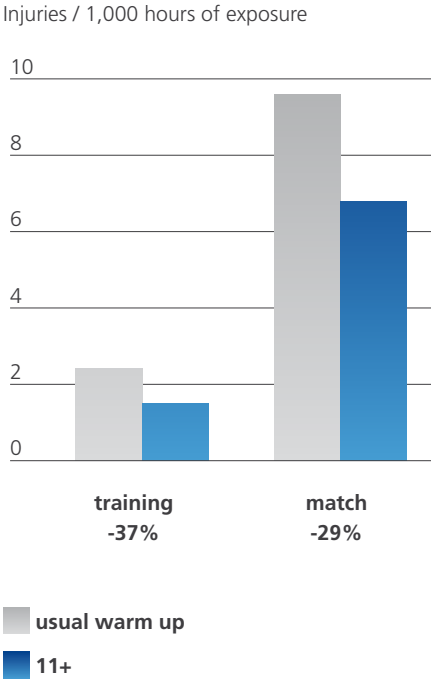
Joseph S. Blatter
FIFA President

Prof. Jiri Dvorak
FIFA Chief Medical Officer, F-MARC chairman

Playing football requires various skills and abilities, including endurance, agility, speed, and a technical and tactical understanding of the game. All of these aspects will be taught and improved during training sessions, but playing football also entails a substantial risk of injury. Thus, an optimal training session should also include exercises to reduce the risk of injury.

The "11+" is an injury prevention programme that was developed by an international group of experts based on their practical experience with different injury prevention programmes for amateur players aged 14 or older. It is a complete warm-up package and should replace the usual warm-up prior to training.

In a scientific study, it was shown that youth football teams using the "11+" as a standard warm-up had a significant lower risk of injury than teams that warmed up as usual.



(Instead of control/intervention: usual warm-up/the "11+")

Teams that performed the "11+" regularly at least twice a week had 37% fewer training injuries and 29% fewer match injuries. Severe injuries were reduced by almost 50%. This study was published in the British Medical Journal in 2008.



The "11+" has three parts with a total of 15 exercises, which should be performed in the specified sequence at the start of each training session.

Part 1: running exercises at a slow speed combined with active stretching and controlled partner contacts;

Part 2: six sets of exercises focusing on core and leg strength, balance and plyometrics/ agility, each with three levels of increasing difficulty; and

Part 3: running exercises at moderate/high speed combined with planting/cutting movements.

A key point in the programme is to use the proper technique during all of the exercises. Pay full attention to correct posture and good body control, including straight leg alignment, knee-over-toe position and soft landings.

BODY POSITION

CORRECT





Straight leg alignment

Knee over toe position

WRONG



The key elements of effective injury prevention programmes for football players are core strength, neuromuscular control and balance, eccentric training of the hamstrings, plyometric and agility.

Core training: The "core" represents a functional unit, which not only includes the muscles of the trunk (abdominals, back extensors) but also of the pelvic-hip region. The preservation of core stability is one of the keys for optimal functioning of the lower extremities (especially the knee joint). Football players must possess sufficient strength and neuromuscular control in their hip and trunk muscles to provide core stability. There is growing scientific evidence that core stability has an important role to play in injury prevention.

Neuromuscular control and balance: Neuromuscular control does not represent a single entity, but rather complex interacting systems integrating different aspects of muscle actions (static, dynamic, reactive), muscle activations (eccentric more than concentric), coordination (multi-joint muscles), stabilisation, body posture, balance and anticipation ability. There is strong empirical and growing scientific evidence that sport-specific neuromuscular training programmes can effectively prevent knee and ankle injuries.

Plyometrics and agility: Plyometrics are defined as exercises that enable a muscle to reach maximum strength in as short a time as possible. Eccentric muscle contractions are rapidly followed by concentric contractions in many sport skills. Consequently, specific functional exercises that emphasise this rapid change in muscle action must be used to prepare athletes for their sport-specific activities. The aim of plyometric training is to decrease the amount of time required between the yielding eccentric muscle contraction and the initiation of the overcoming concentric contraction. Plyometrics provide the ability to train specific movement patterns in a biomechanically correct manner, thereby strengthening the muscle, tendon and ligament more functionally. Plyometrics and agility drills were the important components of the programme that proved to be effective in prevention, especially of ACL injuries, but also of other knee and ankle injuries.

Percentage of injured players	Performed the "11+"	Warmed up as usual	Reduction
All	13.0%	19.8%	-34.3%
Acute injuries	10.6%	15.5%	-31.6%
Overuse injuries	2.6%	5.7%	-54.4%
Knee injuries	3.1%	5.6%	-44.6%
Ankle injuries	4.3%	5.9%	-27.1%
Severe injuries	4.3%	8.6%	-47.7%

The coach should be aware of the importance and efficacy of injury prevention programmes. Not all football injuries can be prevented, but especially knee injuries, ankle sprains and overuse problems can be significantly reduced by regular performance of preventive exercises.

Players are the essential assets of the club and the coach: if (key) players are injured, coaches have fewer options in their squad, and the team usually wins fewer points. Therefore, injury prevention strategies should be part of every training session.

It is crucial that the coach motivates the players to learn the "11+" and perform the exercises regularly and correctly. Research has shown that compliance is the key factor for efficacy. Teams that practised the "11+" more often had fewer injured players than other teams. The easiest way is to perform the "11+" as a standard warm-up at the beginning of every training session, and parts 1 and 3 also as a warm-up before matches.

References:

Soligard T, Myklebust G, Steffen K, Holme I, Silvers H, Bizzini M, Junge A, Dvorak J, Bahr R, Andersen TE (2008) A comprehensive warm-up programme to prevent injuries in female youth football: a cluster randomised controlled trial. BMJ Dec 9; 337:a2469. doi: 10.1136/bmj.a2469

Soligard T, Nilstad A, Steffen K, Myklebust G, Holme I, Dvorak J, et al. Compliance with a comprehensive warm-up programme to prevent injuries in youth football. Br J Sports Med 2010;44(11):787-793.

Start with highlighting the importance of injury prevention: all players should clearly understand this message. Only then, start the explanation and instruction of the exercises.

Start with highlighting the importance of injury prevention: all players should clearly understand this message. Only then should you begin to explain the exercises and give instructions.

The key for efficient teaching is to start at level 1 and focus on how to perform the exercises correctly. Carefully correct all mistakes! Good body positioning is crucial. This allows for better neuromuscular work and a more efficient training session. When the players are able to perform the exercises correctly, the duration and the number of repetitions can be raised to the proposed intensity.

The following steps are helpful in teaching a single exercise:

– explain briefly and demonstrate one exercise

– instruct the players to practise the exercise and give general feedback/corrections

– discuss some of the problems with all of the players, and then demonstrate the exercise again (maybe with one player who performs it well)

– instruct the players to perform the exercise again, and give individual feedbacks/corrections.

This method is particularly recommended for the six exercises in part 2. The running exercises in parts 1 and 3 may need less explanation and consequently less learning time. Usually, it will take a minimum of 2–3 training sessions until the players are able to perform all exercises of the "11+" (level 1) correctly.

PROGRESSION TO THE NEXT LEVEL

Players should begin with level 1. Only when an exercise can be performed without difficulty for the specified duration and number of repetitions should the player progress to the next level of this exercise.

There are three options:

a) Ideally, progression to the next level is determined individually for each player.

b) Alternatively, all players can progress to the next level for some exercises but continue with the current level for other exercises.

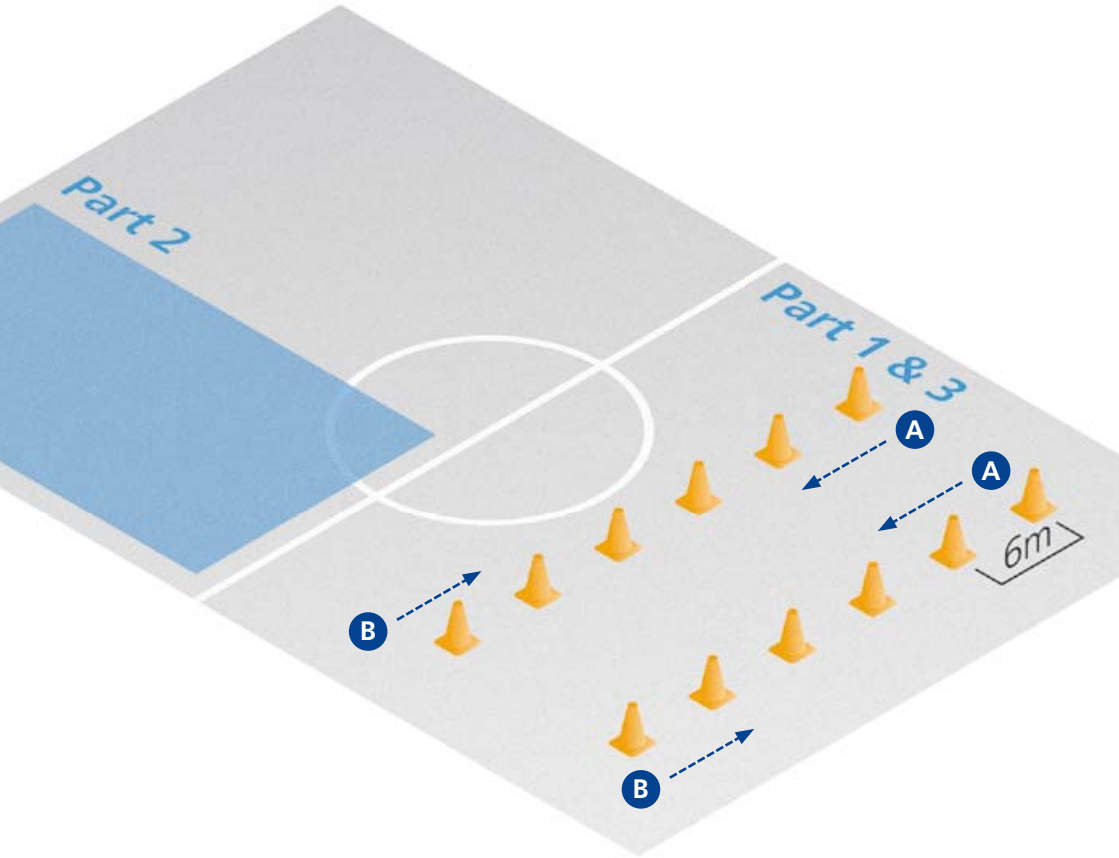
c) For simplicity, all players can progress to the next level of all exercises after three or four weeks.

Important: For all exercises, correct performance is of great importance. Therefore the coach should supervise the programme and correct the players if necessary.

FIELD SET-UP

The course is made up of six pairs of parallel cones, approximately 5–6m apart. Two players start at the same time from the first pair of cones, jog along the inside of the cones and do the various exercises on the way. After the last cone, they run back along the outside. On the way back, speed can be increased progressively as players warm up.

A Excercises
B Way back



NOTES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PART 1:
RUNNING EXERCISES

1 Straight ahead

2 Hip out

3 Hip in

4 Circling partner

5 Jumping with shoulder contact

6 Quick forwards and backwards sprints



1 RUNNING **STRAIGHT AHEAD**

Jog straight to the last cone. Run slightly more quickly on the way back.

Do the exercise twice.

Important when performing the exercise:

1. Make sure you keep your upper body straight.
2. Your hips, knees and feet should be aligned.

▼ Do **not** let your knees buckle inwards.

1 RUNNING **STRAIGHT AHEAD**

CORRECT



WRONG



2 RUNNING **HIP OUT**

Jog to the first cone. Stop and lift your knee forwards. Rotate your knee to the side and put your foot down. Jog to the cone and do the exercise on the other leg. When you have finished the course, jog back.

Do the exercise twice.

Important when performing the exercise:

1. Make sure that you keep your pelvis horizontal and your core still.
2. The hip, knee and foot of the supporting leg should be aligned.

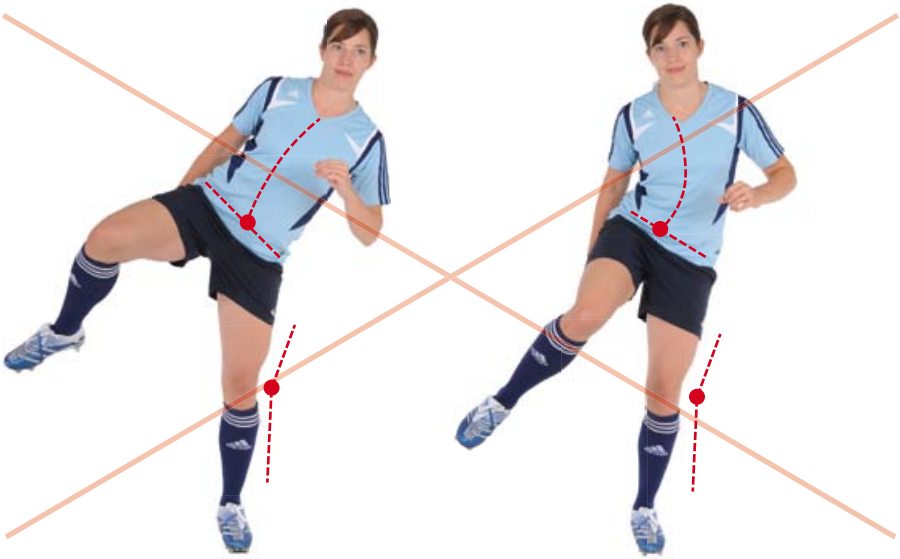
▼ Do **not** let the knee of the supporting leg buckle inwards.

2 RUNNING **HIP OUT**

CORRECT



WRONG



3 RUNNING **HIP IN**

Jog to the first cone. Stop and lift your knee to the side. Rotate your knee forwards and put your foot down. Jog to the next cone and do the exercise on the other leg. When you have finished the course, jog back.

Do the exercise twice.

Important when performing the exercise:

1. Make sure that you keep your pelvis horizontal and your core still.
2. The hip, knee and foot of the supporting leg should be aligned.

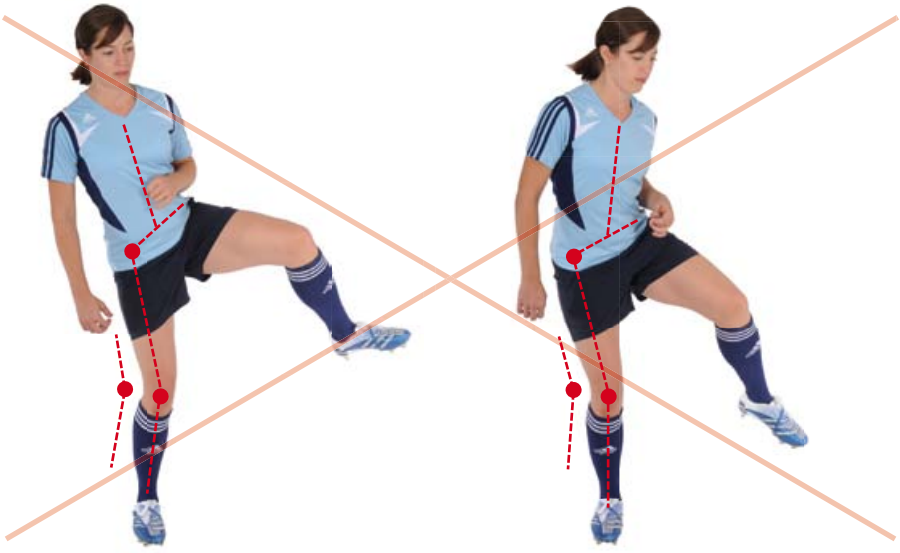
▼ Do **not** let the knee of the supporting leg buckle inwards.

3 RUNNING **HIP IN**

CORRECT



WRONG



4 RUNNING **CIRCLING PARTNER**

Jog forwards to the first cone. Shuffle sideways at a 90-degree angle towards your partner, shuffle an entire circle around one other (without changing the direction you are looking in) and back to the first cone. Jog to the next cone and repeat the exercise. When you have finished the course, jog back.

Do the exercise twice.

Important when performing the exercise:

1. Bend your hips and knees slightly and carry your body weight on the balls of your feet.

▼ Do **not** let your knees buckle inwards.

4 RUNNING **CIRCLING PARTNER**

⊕ CORRECT



⊖ WRONG



5 RUNNING **JUMPING WITH SHOULDER CONTACT**

Jog to the first cone. Shuffle sideways at a 90-degree angle towards your partner. In the middle, jump sideways towards each other to make shoulder-to-shoulder contact. Shuffle back to the first cone. Then jog to the next cone and repeat the exercise. When you have finished the course, jog back.

Do the exercise twice.

Important when performing the exercise:

1. Land on both feet with your hips and knees bent.

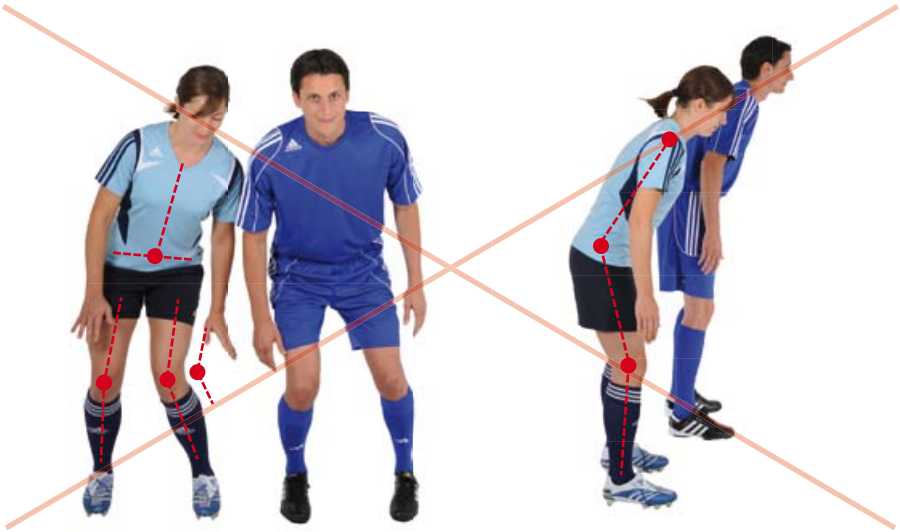
- Do **not** let your knees buckle inwards.

5 RUNNING **JUMPING WITH SHOULDER CONTACT**

CORRECT



WRONG



6 RUNNING **QUICK FORWARDS AND BACKWARDS SPRINTS**

Run quickly to the second cone then run backwards quickly to the first cone, keeping your hips and knees slightly bent. Repeat, running two cones forwards and one cone backwards. When you have finished the course, jog back.

Do the exercise twice.

Important when performing the exercise:

1. Make sure you keep your upper body straight.
2. Your hips, knees and feet should be aligned.

▼ Do **not** let your knees buckle inwards.

6 RUNNING **QUICK FORWARDS AND BACKWARDS SPRINTS**

CORRECT



WRONG



PART 2:
STRENGTH, PLYOMETRICS AND BALANCE EXERCISES

7 The bench

8 Sideways bench

9 Hamstrings

10 Single-leg stance

11 Squats

12 Jumping



7.1 THE BENCH **STATIC**

This exercise strengthens your core muscles, which is important to ensure stability of the body in all movements.

Assume the starting position by lying on your front, supporting yourself on your forearms and feet.

During this exercise, lift your upper body, pelvis and legs up until your body is in a straight line from head to foot. Draw your shoulder blades in towards your spine so that they lie flat against your back. Your elbows are directly under your shoulders. Pull in your stomach and gluteal muscles and hold the position for 20–30 seconds. Return to the starting position, take a short break and repeat the exercise.

Repetitions: 3 sets (20–30 sec. each)

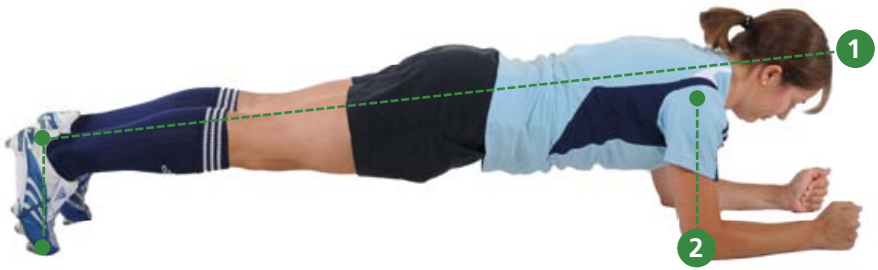
Important when performing the exercise:

1. Your body should be in a straight line from head to feet.
2. Your elbows should be directly under your shoulders.

- Do **not** tilt your head backwards.
- Do **not** sway or arch your back.
- Do **not** raise your buttocks.

7.1 THE BENCH **STATIC**

⊕ CORRECT



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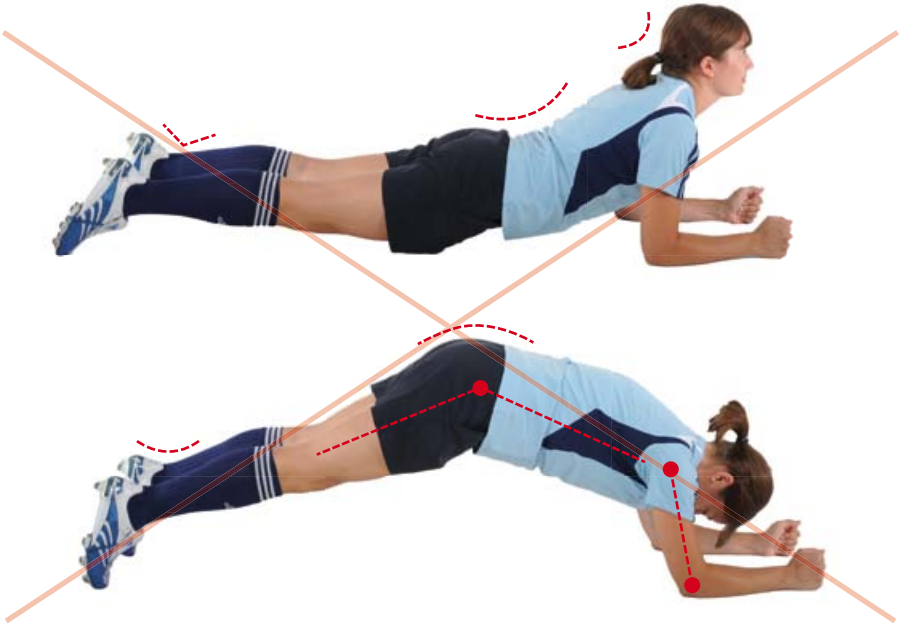


7.2 THE BENCH **ALTERNATE LEGS**

This exercise strengthens your core muscles, which is important to ensure stability of the body in all movements.

Assume the starting position by lying on your front, supporting yourself on your forearms and feet.

During this exercise, lift your upper body, pelvis and legs up until your body is in a straight line from head to foot. Draw your shoulder blades in towards your spine so that they lie flat against your back. Your elbows are directly under your shoulders. Pull in your stomach and gluteal muscles. Lift each leg in turn, holding for a count of 2 seconds. Continue for 40–60 seconds. Return to the starting position, take a short break and repeat the exercise.

Repetitions: 3 sets (40–60 sec. each)

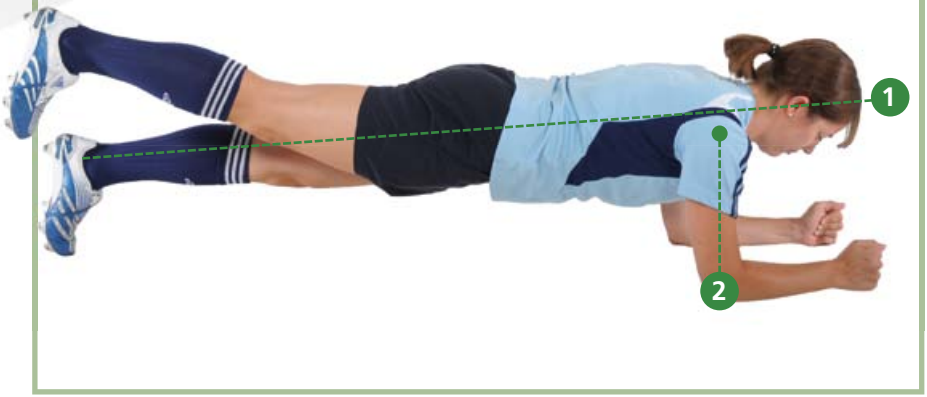
Important when performing the exercise:

1. Your head, shoulders, back and pelvis should be in a straight line.
2. Your elbows should be directly under your shoulders.

- Do **not** tilt your head backwards.
- Do **not** sway or arch your back.
- Do **not** raise your buttocks.
- Keep your pelvis stable and do **not** let it tilt to the side.

7.2 THE BENCH **ALTERNATE LEGS**

CORRECT



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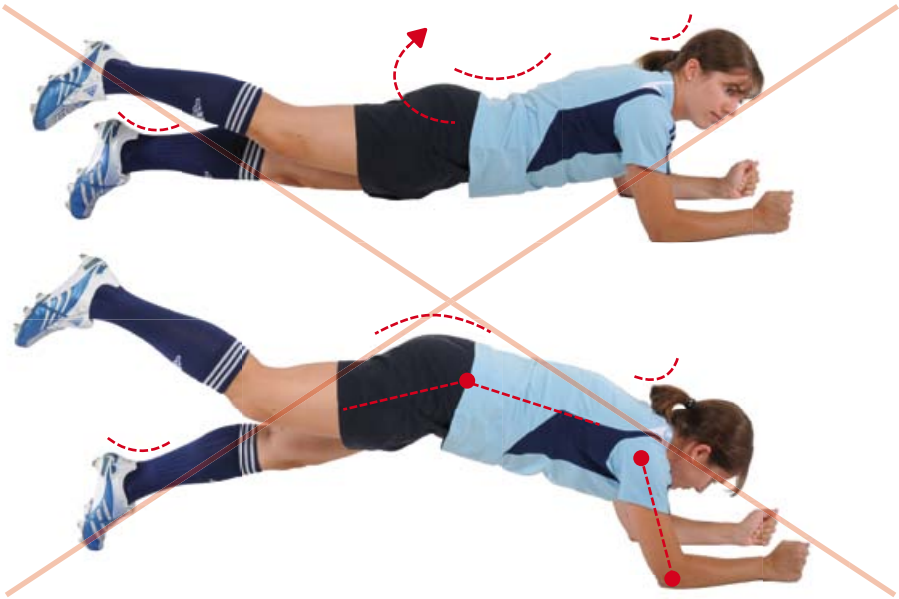


7.3 THE BENCH **ONE LEG LIFT AND HOLD**

This exercise strengthens your core muscles, which is important to ensure stability of the body in all movements.

Assume the starting position by lying on your front, supporting yourself on your forearms and feet.

During this exercise, lift your upper body, pelvis and legs up until your body is in a straight line. Draw your shoulder blades in towards your spine so that they lie flat against your back. Your elbows are directly under your shoulders. Pull in your stomach and gluteal muscles. Lift one leg about 10–15 centimetres off the ground and hold the position for 20–30 seconds. Return to the starting position, take a short break and repeat the exercise with the other leg.

Repetitions: 3 sets (20–30 sec. on each side)

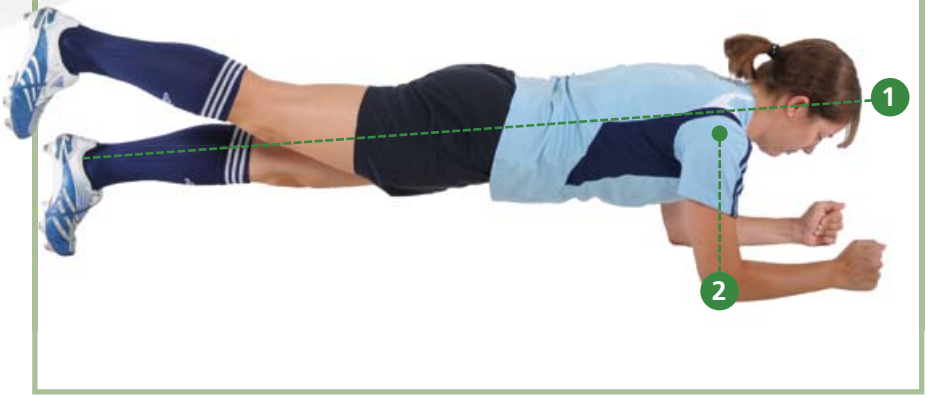
Important when performing the exercise:

1. Your head, shoulders, back and pelvis should be in a straight line.
2. Your elbows should be directly under your shoulders.

- Do **not** tilt your head backwards.
- Do **not** sway or arch your back.
- Do **not** raise your buttocks.
- Keep your pelvis stable and do **not** let it tilt to the side.

7.3 THE BENCH **ONE LEG LIFT AND HOLD**

CORRECT



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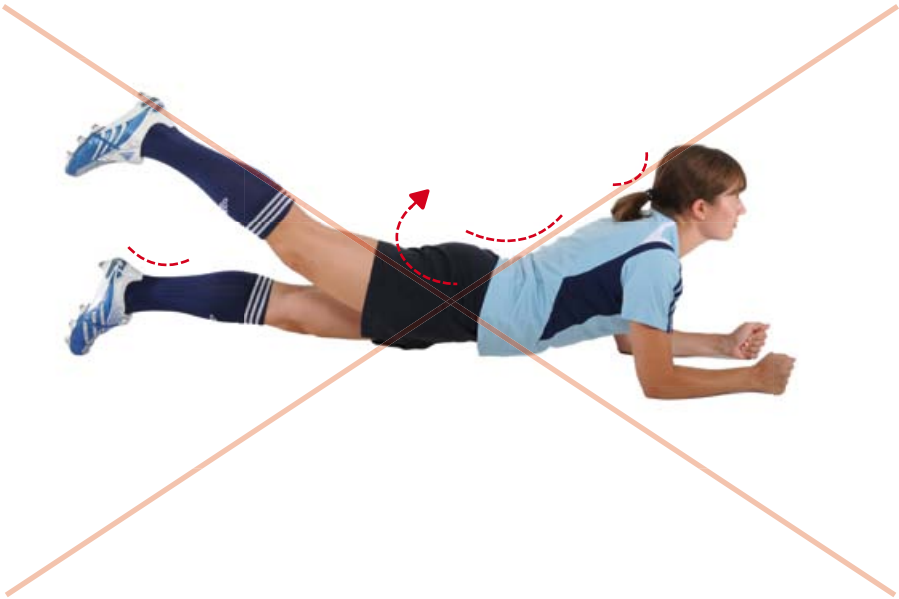


8.1 SIDEWAYS BENCH **STATIC**

This exercise strengthens your lateral core muscles, which is important to ensure stability of the body in all movements.

Assume the starting position, lying on your side with the knee of your lowermost leg bent to 90 degrees and supporting yourself on your forearm and lowermost leg.

During this exercise, lift your pelvis and uppermost leg until they form a straight line with your shoulder and hold the position for 20–30 seconds. The elbow of your supporting arm is directly under your shoulder. Return to the starting position, take a short break and repeat the exercise on the other side.

Repetitions: 3 sets (20–30 sec. on each side)

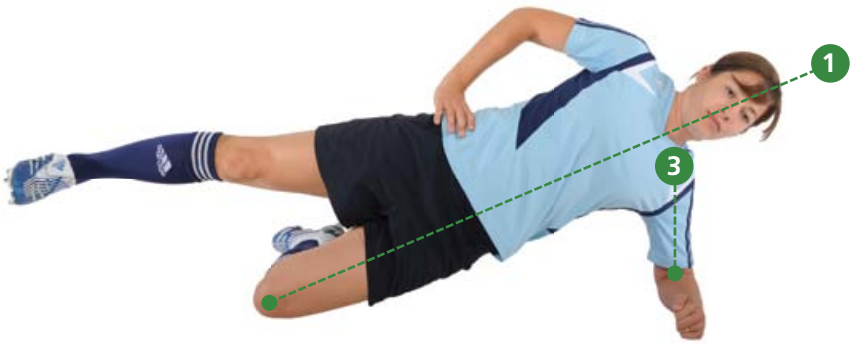
Important when performing the exercise:

1. When viewed from the front, your upper shoulder, hip and upper leg should be in a straight line.
2. When viewed from above, the shoulders, pelvis and both knees should be in a straight line.
3. Your elbow should be directly under your shoulder.

- Do **not** rest your head on your shoulder.
- Keep your pelvis stable and do **not** let it tilt downwards.
- Do **not** tilt your shoulders, pelvis or legs forwards or backwards.

8.1 SIDEWAYS BENCH **STATIC**

⊕ CORRECT



⊖ WRONG



8.2 SIDEWAYS BENCH **RAISE AND LOWER HIP**

This exercise strengthens your lateral core muscles, which is important to ensure stability of the body in all movements.

Assume the starting position, lying on your side with both legs straight and supporting yourself on your forearm.

During this exercise, raise your pelvis and legs (only the outside of the lowermost foot remains on the floor) until your body forms a straight line from the uppermost shoulder to the uppermost foot. Now lower your hips to the ground and raise them back up again. Repeat for 20–30 seconds. The elbow of your supporting arm is directly under your shoulder. Take a short break, change sides and repeat.

Repetitions: 3 sets (20–30 sec. on each side)

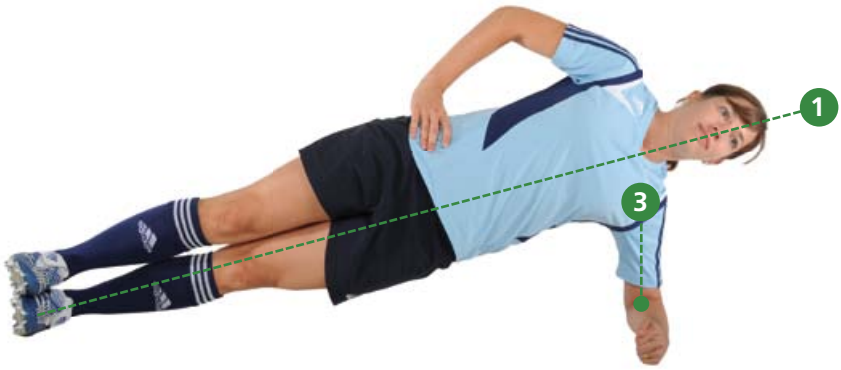
Important when performing the exercise:

1. When viewed from front, your upper shoulder, hip and upper leg should be in a straight line.
2. When viewed from above, your body should be in a straight line.
3. Your elbow should be directly under your shoulder.

- Do **not** rest your head on your shoulder.
- Do **not** tilt your shoulders or pelvis forwards or backwards.

8.2 SIDEWAYS BENCH **RAISE AND LOWER HIP**

CORRECT



WRONG



8.3 SIDEWAYS BENCH **WITH LEG LIFT**

This exercise strengthens your lateral core muscles, which is important to ensure stability of the body in all movements.

Assume the starting position, lying on your side with both legs straight and supporting yourself on your forearm and lower leg.

During this exercise, raise your pelvis and legs (only the outside of the lowermost foot remains on the floor) until your body forms a straight line from the uppermost shoulder to the uppermost foot. Now lift your uppermost leg up and slowly lower it down again. Repeat for 20–30 seconds. The elbow of your supporting arm is directly under your shoulder. Take a short break, change sides and repeat.

Repetitions: 3 sets (20–30 sec. on each side)

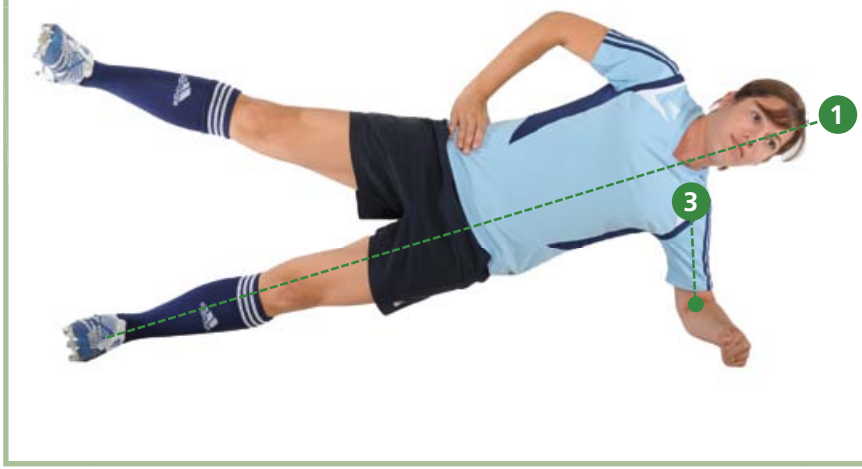
Important when performing the exercise:

1. When viewed from the front, your upper shoulder, hip and upper leg should be in a straight line.
2. When viewed from above, your body should be in a straight line.
3. Your elbow should be directly under your shoulder.

- Do **not** rest your head on your shoulder.
- Keep your pelvis stable and do **not** let it tilt downwards.
- Do **not** tilt your shoulders or pelvis forwards or backwards.

8.3 SIDEWAYS BENCH **WITH LEG LIFT**

⊕ CORRECT



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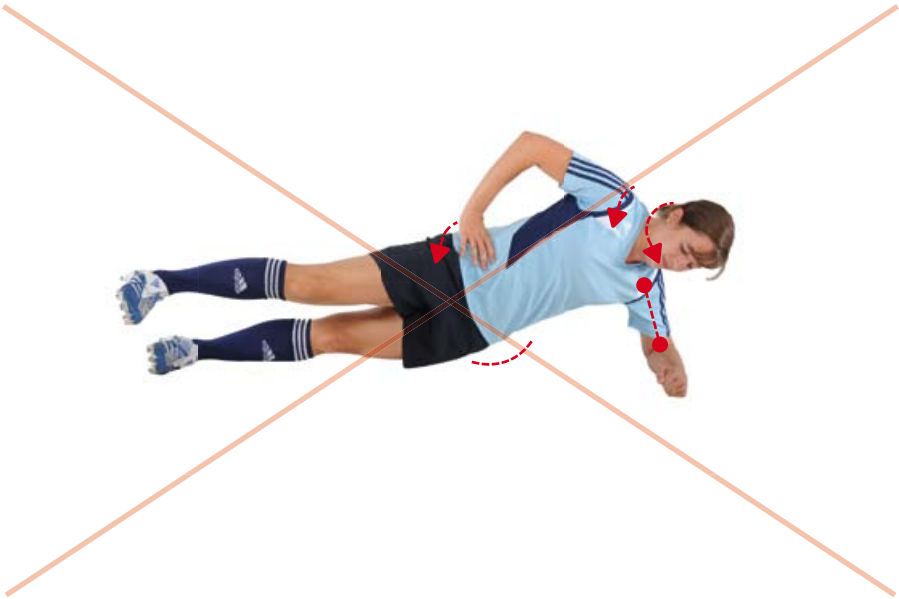


9 HAMSTRINGS **BEGINNER – INTERMEDIATE – ADVANCED**

This exercise strengthens your rear thigh muscles.

Assume the starting position, kneeling on a soft surface with knees hip-width apart and crossing your arms across your chest. Your partner kneels behind you and with both hands grips your lower legs just above the ankles while pushing them with his body weight to the ground.

During this exercise, your body should be completely straight from the head to the knees. Slowly lean forwards, trying to hold the position with your hamstrings. When you can no longer hold the position, gently take your weight on your hands, falling into a press-up position.

9.1 **BEGINNER**
Repetitions: 1 set (3 – 5 repetitions)

9.2 **INTERMEDIATE**
Repetitions: 1 set (7 – 10 repetitions)

9.3 **ADVANCED**
Repetitions: 1 set (minimum 12 – 15 repetitions)

Important when performing the exercise:

1. Your partner keeps your lower legs firmly on the ground.
2. Your head, upper body, hips and thighs should be in a straight line.
3. The movement is only in the knee joints.
4. Perform this exercise slowly at first, but once you feel more comfortable, speed it up.

▼ Do **not** tilt your head backwards.

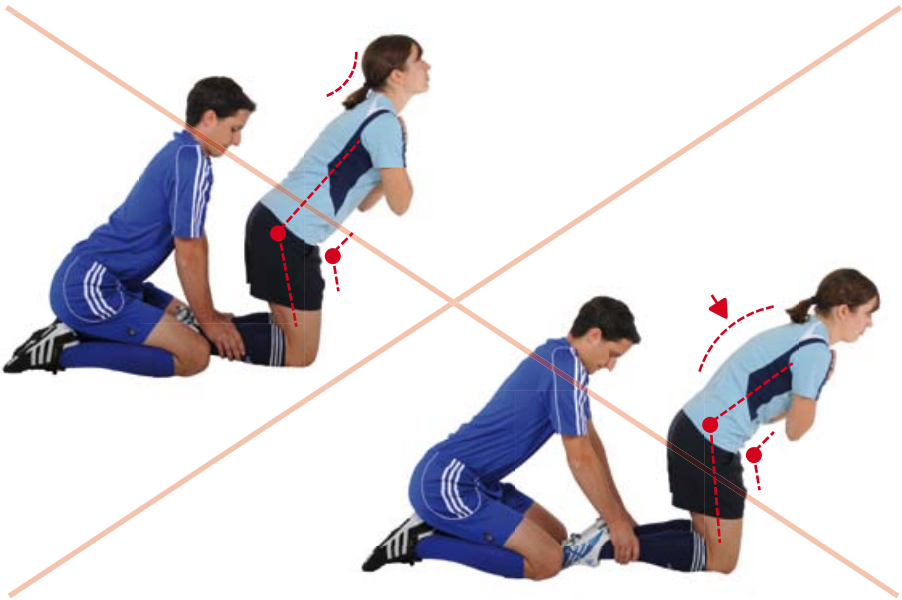
▼ Do **not** bend at your hips.

9 HAMSTRINGS **BEGINNER – INTERMEDIATE – ADVANCED**

⊕ CORRECT



⊖ WRONG



10.1 SINGLE-LEG STANCE **HOLD THE BALL**

This exercise improves leg muscle coordination and balance.

Assume the starting position, standing on one leg and holding the ball in front of you in both hands. Bend your knee and hip slightly so that your upper body leans forwards slightly. When viewed from the front, the hip, knee and foot of your supporting leg are in a straight line. Hold the raised leg slightly behind the supporting leg.

During this exercise, hold your balance and keep your body weight on the ball of your foot. Hold for 30 seconds, change legs and repeat. The exercise can be made more difficult by lifting the heel from the ground slightly or passing the ball around your waist and/or under your other knee.

Repetitions: 2 sets (30 sec. on each leg)

Important when performing the exercise:

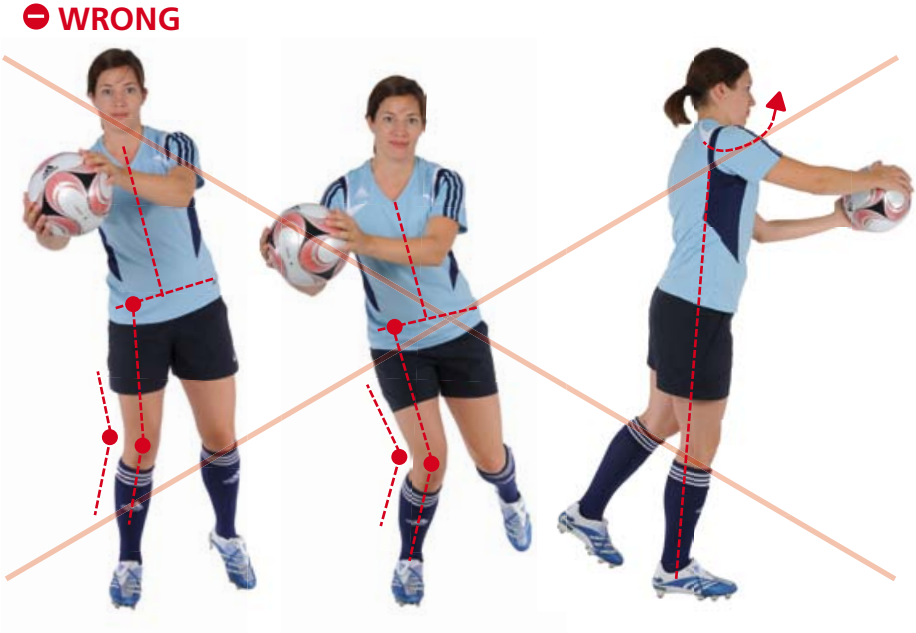
1. When viewed from the front, the hip, knee and foot of your supporting leg should be in a straight line.
2. Always keep the hip and knee of your supporting leg slightly bent.
3. Keep your weight on the ball of your foot.
4. Keep your upper body stable and facing forwards.
5. Keep your pelvis horizontal.

▼ Do **not** let your knee buckle inwards.

▼ Do **not** let your pelvis tilt to the side.

10.1 SINGLE-LEG STANCE **HOLD THE BALL**





10.2 SINGLE-LEG BALANCE **THROWING BALL WITH PARTNER**

This exercise improves leg muscle coordination and balance.

Assume the starting position, standing 2–3 metres apart from your partner, with each of you standing on one leg. Bend your knee and hip slightly so that your upper body leans forwards slightly. When viewed from the front, the hip, knee and foot of your supporting leg are in a straight line. Hold the raised leg slightly behind the supporting leg.

During this exercise, keep your balance while you throw the ball to one another. Hold in your stomach and keep your weight on the ball of your foot. Continue for 30 seconds, change legs and repeat. This exercise can be made more difficult by lifting the heel from the ground slightly.

Repetitions: 2 sets (30 sec. on each leg)

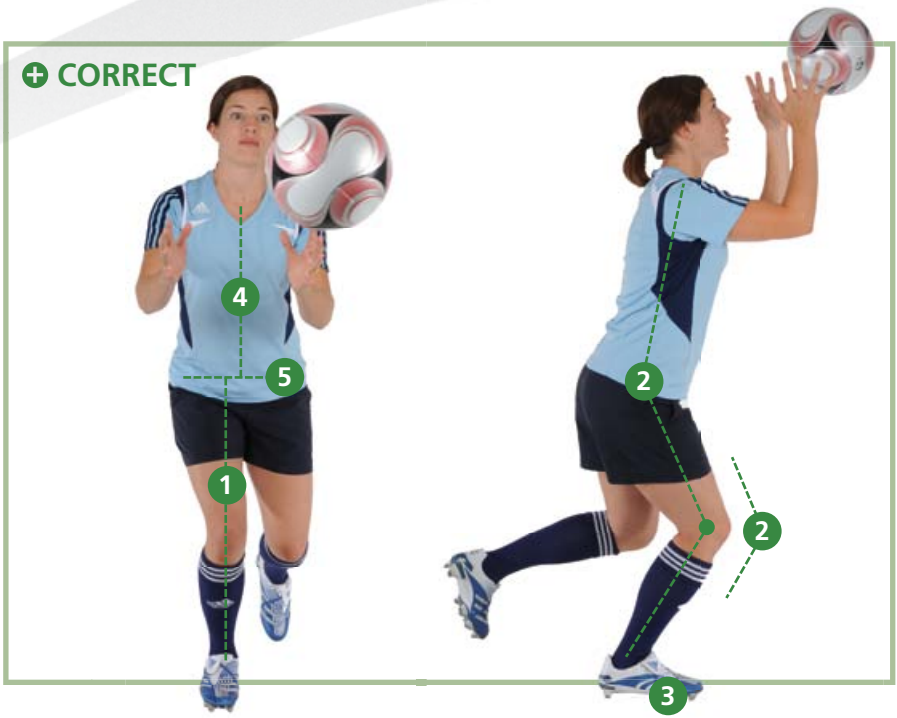
Important when performing the exercise:

1. When viewed from the front, the hip, knee and foot of your supporting leg should be in a straight line.
2. Always keep the hip and knee of your supporting leg slightly bent.
3. Keep your weight on the ball of your foot.
4. Keep your upper body stable and facing forwards.
5. Keep your pelvis horizontal.

- Do **not** let your knee buckle inwards.
- Do **not** let your pelvis tilt to the side.

10.2 SINGLE-LEG BALANCE **THROWING BALL WITH PARTNER**

CORRECT



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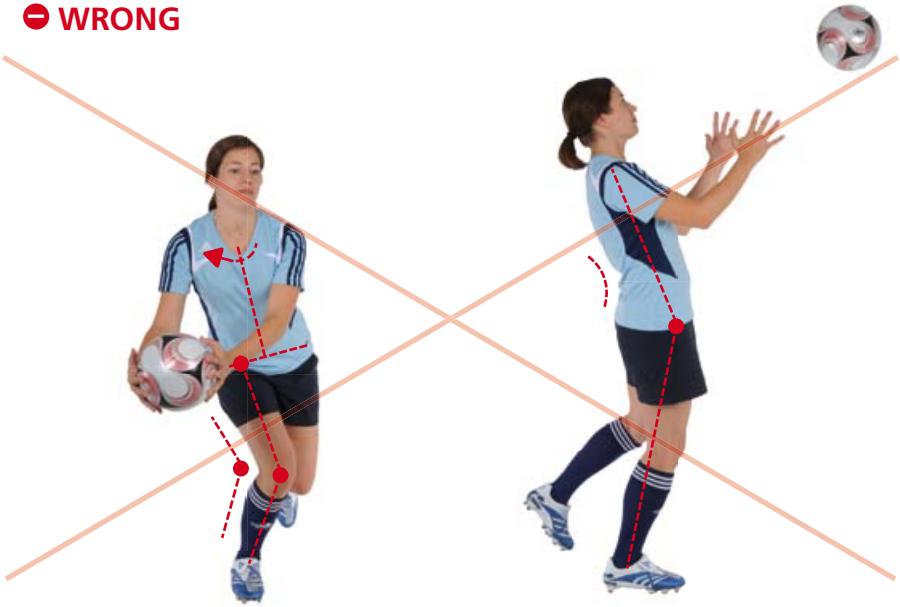


10.3 SINGLE-LEG BALANCE **TEST YOUR PARTNER**

This exercise improves leg muscle coordination and balance.

Assume the starting position, standing at arm's length from your partner, with each of you standing on one leg. Bend your knee and hip slightly so that your upper body leans forwards slightly. When viewed from the front, the hip, knee and foot of your supporting leg are in a straight line. Hold the raised leg slightly behind the supporting leg.

During this exercise, keep your balance while you and your partner in turn try to push the other off balance in different directions. Keep returning to the starting position. Continue for 30 seconds, change legs and repeat.

Repetitions: 2 sets (30 sec. on each leg)

Important when performing the exercise:

1. When viewed from the front, the hip, knee and foot of your supporting leg should be in a straight line.
2. Always keep the hip and knee of your supporting leg slightly bent.
3. Keep your weight on the ball of your foot.
4. Keep your upper body stable and facing forwards.
5. Keep your pelvis horizontal.

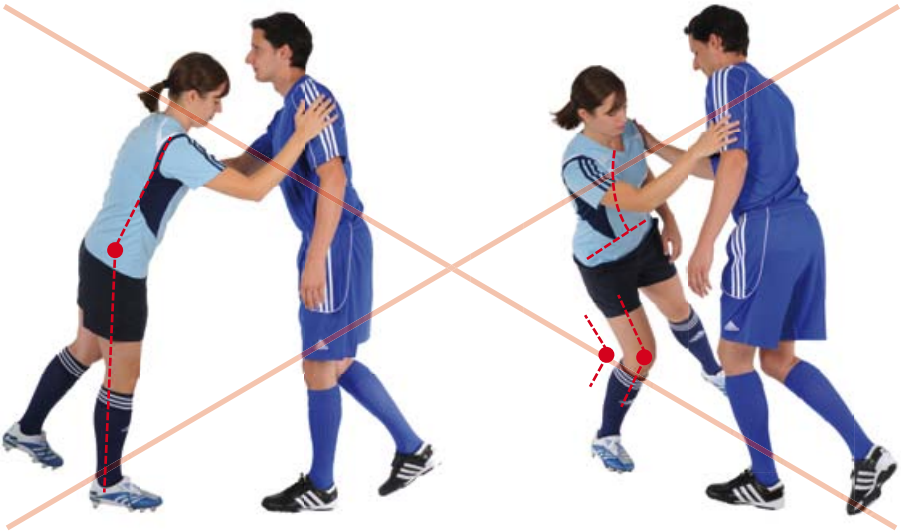
- Do **not** let your knee buckle inwards.
- Do **not** let your pelvis tilt to the side.

10.3 SINGLE-LEG BALANCE **TEST YOUR PARTNER**

CORRECT



WRONG



11.1 SQUATS **WITH TOE RAISE**

This exercise strengthens your hamstrings and calf muscles and improves your movement control.

Assume the starting position, standing with your feet hip-width apart and your hands on your hips.

During this exercise, slowly bend your hips, knees and ankles until your knees are flexed to 90 degrees. Lean your upper body forwards. Then straighten your upper body, hips and knees. When your knees are completely straight, stand up on your toes and then slowly lower yourself down again, before straightening up slightly more quickly. Repeat the exercise for 30 seconds.

Repetitions: 2 sets (30 sec. each)

Important when performing the exercise:

1. When viewed from the front, the hip, knee and foot of both legs should be in two straight parallel lines.
2. Bend your hips, knees and ankles at the same time and lean your upper body forwards.
3. When leaning your upper body forwards, keep your back straight.
4. Stand up on your toes when you straighten up.

- Do **not** let your knees buckle inwards.
- Do **not** tilt your head backwards.

11.1 SQUATS **WITH TOE RAISE**

⊕ CORRECT



⊖ WRONG



11.2 SQUATS **WALKING LUNGES**

This exercise strengthens your hamstrings and gluteal muscles and improves your movement control.

Assume the starting position, standing with both feet hip-width apart on the ground and your hands on your hips.

During this exercise, lunge forwards slowly at an even pace. As you lunge, bend your hips and knees slowly until your leading knee is flexed to 90 degrees. The bent knee should not extend beyond the toes. Keep your upper body straight and your pelvis horizontal. Do 10 lunges on each leg.

Repetitions: 2 sets (10 lunges on each side)

Important when performing the exercise:

1. Bend your leading knee to 90 degrees.
2. Keep your upper body upright.
3. Keep your pelvis horizontal.

- Your bent knee should **not** extend beyond your toes.
- Do **not** let your leading knee buckle inwards.
- Do **not** bend your upper body forwards.
- Do **not** twist or tilt your pelvis to the side.

11.2 SQUATS **WALKING LUNGES**

CORRECT



WRONG



11.3 SQUATS **ONE-LEG SQUATS**

This exercise strengthens your front thigh muscles and improves your movement control.

Assume the starting position, standing on one leg next to a partner so that you can both loosely hold on to each other. Hold the raised leg slightly behind the supporting leg.

During this exercise, bend your knee at the same time as your partner. Slowly bend your knee, if possible until it is flexed to 90 degrees, and straighten up again. Bend your knee slowly then straighten it slightly more quickly. Repeat the exercise on the other side, doing 10 squats on each leg.

Repetitions: 2 sets (10 on each side)

Important when performing the exercise:

1. When viewed from the front, the hip, knee and foot of your supporting leg should be in a straight line.
2. Lean your upper body slightly forwards and keep it stable and facing forwards.
3. Keep your pelvis horizontal.
4. Bend your knee slowly then straighten it slightly more quickly.

- Do **not** let your knee buckle inwards.
- Your bent knee should **not** extend beyond your toes.
- Do **not** twist or tilt your pelvis to the side.

11.3 SQUATS **ONE-LEG SQUATS**

CORRECT



WRONG



12.1 JUMPING **VERTICAL JUMPS**

This exercise improves your jumping power and movement control.

Assume the starting position, standing with your feet hip-width apart and your hands on your hips.

During this exercise, slowly bend your hips, knees and ankles until your knees are flexed to 90 degrees. Lean your upper body forwards. Hold this position for 1 second, then jump as high as you can. While you jump, straighten your whole body. Land softly on the balls of your feet and slowly bend your hips, knees and ankles as far as possible. Repeat for 30 seconds.

Repetitions: 2 sets (30 sec.)

Important when performing the exercise:

1. When viewed from the front, the hip, knee and foot of both legs should be in two straight parallel lines.
2. Bend the hips, knees and ankles at the same time and lean your upper body forwards.
3. Jump off both feet and land gently on the balls of your feet.
4. A cushioned landing and a powerful take-off are more important than how high you jump.

- Do **not** let your knees buckle inwards.
- Do **not** land with extended knees or on your heels.

12.1 JUMPING **VERTICAL JUMPS**

⊕ CORRECT



⊖ WRONG



12.2 JUMPING **LATERAL JUMPS**

This exercise improves your jumping power and movement control on one leg.

Assume the starting position, standing on one leg. Bend your hips, knee and ankle slightly and lean your upper body forwards.

During this exercise, jump approximately one metre to the side from your supporting leg onto your other leg. Land gently on the ball of your foot and bend your hips, knee and ankle. Hold this position for about a second and then jump onto the other leg. Keep your upper body stable and facing forwards and your pelvis horizontal. Repeat for 30 seconds.

Repetitions: 2 sets (30 sec. each)

Important when performing the exercise:

1. When viewed from the front, your hip, knee and foot should be in a straight line.
2. Land gently on the balls of your foot, bend the hip, knee and ankle at the same time and lean your upper body forwards.
3. Keep your upper body stable and facing forwards.
4. Keep your pelvis horizontal.

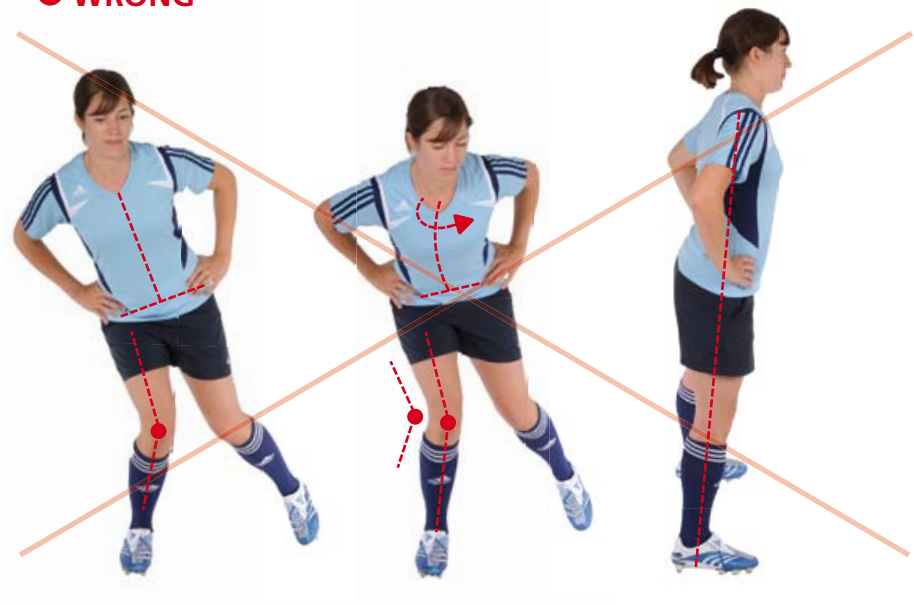
- Do **not** let your knee buckle inwards.
- Do **not** turn your upper body.
- Do **not** twist or tilt your pelvis to the side.

12.2 JUMPING **LATERAL JUMPS**

CORRECT



WRONG



12.3 JUMPING **BOX JUMPS**

This exercise improves body stability through quick movements in different directions.

Assume the starting position, standing with feet hip-width apart and imagine that there is a cross marked on the ground and you are standing in the middle of it.

During this exercise, bend your hips, knees and ankles and from this position alternate between jumping forwards and backwards, from side to side, and diagonally across the cross. Jump as quickly and explosively as possible. Land gently on the balls of your feet and bend your hips, knees and ankles. Lean your upper body forwards slightly throughout the exercise. Repeat the exercise for 30 seconds.

Repetitions: 2 sets (30 sec. each)

Important when performing the exercise:

1. When viewed from the front, the hip, knee and foot of both legs should be in two straight parallel lines.
2. Jump off both feet and land on the balls of your feet with feet hip-width apart.
3. Bend your hips, knees and ankles on landing.
4. A cushioned landing and a powerful take-off are more important than how high you jump.

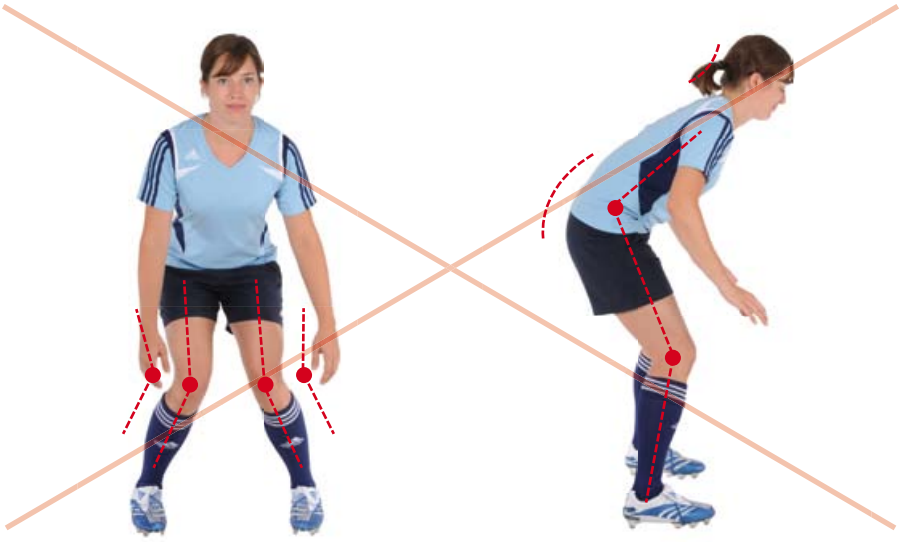
- Never let your knees meet and do **not** let them buckle inwards.
- Do **not** land with extended knees or on your heels.

12.3 JUMPING **BOX JUMPS**

CORRECT



WRONG




adidas

PART 3:
RUNNING EXERCISES

13 Across the pitch

14 Bounding

15 Plant and cut



13 RUNNING **ACROSS THE PITCH**

Run approx. 40 metres across the pitch at 75–80% of maximum pace and then jog the rest of the way. Jog back at an easy pace.

Do the exercise twice.

Important when performing the exercise:

1. Make sure you keep your upper body straight.
2. Your hips, knees and feet should be aligned.

▼ Do **not** let your knees buckle inwards.

13 RUNNING **ACROSS THE PITCH**

CORRECT



WRONG



14 RUNNING **BOUNDING**

Take a few warm-up steps then take 6–8 bounding steps with a high knee lift and jog the rest of the way. With each bound, try to lift the knee of the leading leg as high as possible and swing the opposite arm across the body. Jog back at an easy pace to recover.

Do the exercise twice.

Important when performing the exercise:

1. Keep your upper body straight.
2. Land on the ball of the leading foot with the knee bent and spring.

▼ Do **not** let your knee buckle inwards.

14 RUNNING **BOUNDING**

CORRECT



WRONG



15 RUNNING **PLANT AND CUT**

Jog four to five steps straight ahead. Then plant on the right leg and cut to change direction to the left and accelerate again. Sprint for 5–7 steps (at 80–90% of maximum pace) before you decelerate and plant on the left foot and cut to change direction to the right. Repeat the exercise until you reach the other side of the pitch, then jog back.

Do the exercise twice.

Important when performing the exercise:

1. Make sure you keep your upper body straight.
2. Your hips, knees and feet should be aligned.

▼ Do **not** let your knees buckle inwards.

15 RUNNING **PLANT AND CUT**

CORRECT



WRONG



APPENDIX: FREQUENTLY ASKED QUESTIONS ABOUT THE "11+"

What is the "11+"?
The "11+" is a complete warm-up programme that aims to reduce the most common injuries of both male and female football players. It is the advanced version of "The 11" injury prevention programme.

Who developed the "11+"?
The "11+" was developed by a group of international experts from FIFA's Medical Assessment and Research Centre (F-MARC), the Oslo Sports Trauma Research Center and the Santa Monica Orthopaedic and Sports Medicine Research Foundation. It is based on extensive experience with "The 11", PEP and other exercise-based programmes to prevent football injuries.

What are the advantages of the "11+"?
The prevention effect of the programme has scientifically been proven in a RCT. It is simple and does not require appliances, equipment (i.e. no extra costs) or specialist knowledge. It is a complete warm-up programme with different levels. It is efficient, as most of the exercises train several aspects and can replace other exercises.

Are the exercises new?
Most of the exercises are not new but yet have not become routine. The innovation is in putting these exercises together into a simple and practicable programme that should be the standard warm-up prior to every training session.

Why were these exercises in particular chosen?
The exercises are "evidence-based" or "best practice". They are designed to prevent the most frequent types of injury in football, i.e. groin and thigh strains as well as ankle sprains and knee ligament injuries.

What do the exercises achieve?
The exercises lead to a strengthening of the core and leg muscles, and in addition, static, dynamic and reactive neuromuscular control, coordination, balance, agility and jump technique are improved.

Why does the "11+" not include stretching exercises?
Research has shown that static stretching exercises have a negative influence on muscle performance, and results on the preventive effect of dynamic stretching are inconclusive. Stretching exercises are not recommended as

part of a warm-up programme, but can be performed at the end of the training session.

Who should do the "11+"?
The "11+" is specially designed for amateur and recreational players. The programme is for men and women of all levels of play and all ages (from around 14 years and up).

When should players do the "11+"?
The "11+" should be performed as a warm-up prior to every training session, and in a shortened version (parts 1 and 3) also before each match.

How often should players do the "11+"?
Before every training session (at least twice a week), and the running exercises (parts 1 and 3) before every match.

What should players pay special attention to when carrying out the exercises?
To be effective, it is important that each exercise is carried out with precision, exactly as described in this manual. Ideally, the coach should supervise the exercises and correct the players if necessary.

How long does it take to do the "11+"?
If the players are familiar with the exercises, 20 minutes in total.

How long does it take before the "11+" has an effect?
Depending on how often a player trains, about 10 – 12 weeks.

When can players stop practising the "11+"?
As long as players play football, they should perform the "11+" as the effects can diminish once training stops.

What about other preventive measures?
Other preventive measures are, of course, allowed and desired, especially fair play and wearing shin pads.

How old do players need to be to do the "11+"?
At least 14 years old. If players are younger, some exercises should not be performed, and for others, the intensity should be modified.

Do players need to warm-up before performing the "11+"?
No, the "11+" is a complete warm-up programme that replaces other warm-up exercises.

What footwear should be worn when doing the "11+"?
Ideally, the "11+" should be performed on a grass pitch in football boots.

Can the "11+" be performed in any order?
No, the sequence was chosen to provide a deliberate warm-up and progression.

When should players progress to the next level of the "11+"?
Players should begin with level 1. Only when an exercise can be performed without difficulty for the specified duration and number of repetitions should the player progress to the next level of this exercise.

The "11+" is a complete warm-up programme to reduce injuries among male and female football players aged 14 years and older.

The programme was developed by an international group of experts, and its effectiveness has been proven in a scientific study. Teams that performed the "11+" at least twice a week had 30–50% fewer injured players.

The programme should be performed, as a standard warm-up, at the start of each training session at least twice a week, and it takes around 20 minutes to complete. Prior to matches, only the running exercises (parts 1 and 3) should be performed.

For all exercises, correct performance is of great importance. Therefore, the coach should supervise the programme and correct the players if necessary.

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