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PRACTICAL GUIDELINES FOR RUGBY WARM-UPS

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Providing coaches, referees, players, and administrators with the knowledge, skills, and leadership abilities to ensure that safety and best practice principles are incorporated into all aspects of contact rugby.

INTRODUCTION

Rugby Union has been described as “a sport consisting of multiple activities at different velocities and intensities”. Due to the high incidence of injuries in rugby, the focus has shifted from participating and coaching, to the implementation of strategies which contribute to a reduction in the risk of injury. One such strategy is the warm-up before training or matches. Although the inclusion of a proper warm-up is not something new to the rugby environment, due to the limited time the coach has with the team, the warm-up is sometimes compromised, resulting in an increased risk of injury. It is important that all the support staff and the players understand the importance of the warm-up so that it can become part of the routine preparation.

A structured warm-up should consist of progressive activities combined with dynamic flexibility (stretching within active movements) and followed by specific movements that are close to the motor mechanics (rugby movement patterns) of the sport. However, when asking players and coaches why they complete a warm-up you often hear them comment, “I heard it is important.” If well planned and executed, stretching becomes an important tool, be it assisting in injury prevention or increasing player performance during a match or coaching session.

WARM-UP OBJECTIVES

The objectives of the warm-up are as follows:

- Assisting in injury prevention by executing functional movements. Functional movements are any movements that are normally done within the sport and are replicated in the warm-up at different speeds. Examples include straight-line running, stepping, jumping, accelerating, jumping for a ball, falling down, getting up, and backwards running.
- Physical preparation
- Mental preparation

The warm-up should meet the needs of the individual and the team. If the coach is going to involve physical contact during the training session, it is important that contact preparation is included in the warm-up. For example, double shield hits, 1-1 scrumming and eventually a 3-on-3 scrum would be the progression in preparation of the forwards to prepare them for a scrumming session later in the coaching session. During the match warm-up, movements that have been the focus during the coaching sessions earlier in the week, in preparation for the match, can be rehearsed. Such movements may include anything from running patterns (lines), contact skills or specific activities like stepping, swerving, turning, etc.

The type, duration and intensity of every warm-up will be manipulated by the type of coaching session (static, active or collision-type), the objective of the coaching session or match (what are the goals of the session?), the time allocation (how long is the coaching session and how much time is available?) and the equipment available.

PHYSIOLOGY BEHIND THE WARM-UP

The physiological benefits of a warm-up before a coaching session or match are:

- Increased body temperature
    - An increase in body temperature will cause a slight sweat on the forehead. As soon as this happens, one can be sure that an optimal core temperature (the internal temperature of the body) has been reached and that there are other physiological benefits which accompany an increase in body temperature.
- Increase in muscle elasticity (elastic ability / stretching ability of the muscle)
    - A warm muscle can move through a larger range of motion at a higher speed compared to a cold muscle.
- Specificity (Muscular movements within specific activities)
    - Specificity in both the coaching drills and in the warm-up is crucial. For example, 1-on-1 and 2-on-1 grids and exercises represent attacking and defensive situations in rugby. By completing these drills, the player mimics the exact movements needed for the match and is thus physically prepared for the 1-on-1 and 2-on-1 demands. For the best effect the movements have to be completed at the same speed during the warm-up, as they would be done during a match. The match warm-up should include all important components of the skills that were trained during the week leading up to that match. For example, if the ball has to be passed over 15 metres during the match, the warm-up during coaching sessions in the week should focus on a warm-up that includes distance passing. If the match is going to be played on a wet surface, the warm-up should include time passing a wet ball.
- Stimulates the Cardiorespiratory (heart and lungs) and Central Nervous Systems (CNS)
    - The cardiovascular system and the central nervous system (the network in the body that transmits messages to and from the brain and muscles) is the body's 'engine' and

needs to be in excellent condition to send messages back and forth, and to generate 'horsepower' for the needs of the sport. The warm-up prepares these systems to function optimally during the coaching session or match. The section *THE WARM-UP EFFECTS AND HOW LONG IT SHOULD LAST* identifies the benefits and negative variables as a result of achieving intensities during the warm-up that are either too high or too low. In summary, the goal of the warm-up should be to transfer the physiological changes induced by the warm-up into the training session or match – therefore the timing of the warm-up has to be carefully planned.

- Improved muscle coordination
    - Muscle coordination requirements in rugby are similar to those of gymnasts and circus experts, who also have to do more than one movement at a time. A circus juggler handling 3-5 balls at once is a good example of hand-eye coordination. In the case of muscles, it is important to have muscle synergy in achieving movement goals. Consider the situation where a player on attack has defenders coming from the side. He steps left, then steps right, accelerates through the gap, hands off an opponent on the right (while shifting the ball from the right hand to the left) and then swerves around an opponent to score a try. Muscles working together in such a way that they maintain balance, slow down, accelerate and then swerve, is an example of muscle coordination. Warmer muscles are better coordinated than cooler muscles.
- Improved reaction time due to the stimulation of the CNS
    - There are many examples of attacking and defending situations in a rugby match where improved reaction time is advantageous for performance.
- Energy can be produced at a faster rate.
    - A consequence of an increased body temperature, improved cardiorespiratory and CNS functioning, muscle elasticity and increased blood flow which occurs with warming up, results in an increased metabolic rate. This makes it easier to suddenly accelerate energy demands, as may occur at the start of a high-paced game.

TYPES AND PHASES OF THE WARM-UP

Passive – warming up using external soures such as a shower, warm bath, bean bag, etc. This technique is best used in injury rehabilitation, where no active movements are needed for warming up the muscle.

Active – warming up by completing active movements on the field, creating an increase in core temperature and inducing many other physiological benefits. This warm-up can also be sport-specific if the movements during the warm up simulate the movements during training or competition. For example, rugby-specific movements such as jumping, stepping, catching, tackling, kicking, passing, accelerating and decelerating are used during the warm-up.

General – Involving the whole body by completing activities that require most of the muscles to function (jogging, cycling) with effects on the heart, lungs and blood vessels. It does not allow for very specific movement patterns.

The type of warm-up will be determined by:

- The player's fitness level
    - The fitter the player, the more intense the warm-up can be. Players who are not fit will get premature fatigue during the match if they warm up at a high intensity. Less fit players need more rest and lower intensity during the warm up.

Phase 1 – General Aerobic (Low intensity); Combined with Dynamic stretching.

The focus of this phase is to increase body temperature, improve cardiorespiratory function of the lungs and heart, and improve muscle elasticity slightly. During this stage, the players complete a light jog with dynamic stretching during their breaks. An example would be to jog across the width of the field in twos or threes while passing the ball in depth at different distances and completing a lower-body dynamic stretch every time they reach the other side. Including passing during the easy jogging is beneficial in achieving passing and catching movement patterns (specificity).

Phase 2 – General Skill (Medium Intensity)

Rugby movement patterns are stimulated and the mental preparation begins. At the start of this stage, the team completes any grid skill as explained under *DYNAMIC WARM-UPS*. Communication and visual awareness are other benefits during this phase.

Phase 3 – Specific Skill (High Intensity)

Position-specific exercises are completed. This stimulates the muscle contraction speed and stimulates reaction time. Exercises done during this phase are to be completed at match-pace. Outside backs do 30-40 metre speed run-throughs with a swerve at maximum pace, loose forwards and inside backs complete turning with acceleration and a subsequent ball steal against a hit shield, while the tight forwards complete turning in a short space and 1-1 scrumming. Passing and catching are practised at the distance and speed required during the match. Upper-body warm-ups on the hit shields are done at the same intensity as during a tackle or ruck clean-out on the playing field.

Phase 4 – Functional Skill – Position specific OR Technical specificity (Positional split)

This is one of the most important phases, as it is very specific to what would happen in the match. Forwards and backs split up into separate groups. The backs kick and pass, step and sprint and the forwards jump and throw, support and drive during this initial part of this phase. Then the backs and forwards join to run through one or two plays before entering the last phase. Although this is not a coaching session the format is decided by the head coach and his assistants.

Phase 5 – Final Dynamic Stretching / Upper-body Specific Movements

By this phase all the preparation should have been completed. The only thing left to do would be the final dynamic stretches to ensure an optimal range of motion, and that the muscles can function optimally and respond quickly. The last upper-body corrections and preparations would be completed during this phase. It is the shortest of all the phases and players should rehydrate at the end of it.

Different warm-up variables that can be used are the following:

- Partner Drills
    - Two to a maximum of seven or eight
    - Mimicking different rugby movement patterns
    - Passing skills
    - Catching skills
    - Contact skills
- Functional stretches (refer to *DYNAMIC STRETCHES*)

- Supine lower back stretch
- Foot behind knee lower back stretch
- Supine lower back stretch (long leg over)
- Supine knee holds with rocking
- Seated gluteus (buttock) stretch
- Seated knee to chest
- Walking knee to chest
- Supine knee holds with rocking and release
- Prone calf walk-outs
- Soleus stretch
- Standing leg swings (Forward and backwards)
- Standing leg swings (side-ways)
- Standing knee flexion and extension
- Walking hamstring stretch
- Standing lunge walk with hip flexor stretch
- Standing groin stretch
- Supine hamstring stretch (knee to chest; knee slightly bent)
- Lunge walk
- Standing squat/quad stretch
- One-leg squat
- Overhead squat stretch
- Lateral arm across chest
- Vertical arm raise

    - Upper-body push-up and open
    - Arm rotations
- Team drills (refer to *WARM-UP DRILLS*)
    - Pop and cross
    - Pass and follow
    - Pass (in the run) and follow
    - Run and pass
    - Banana
    - Traffic
    - Passing gauntlet
    - Stepping acceleration and stepping (SAQ)
    - Cross-over
- Contact drills
    - Team contact and reaction time
    - Stepping
    - Defence on hit shield
    - Double bag hit on hit shield

PROGRESSION WITHIN THE WARM-UP

The progression to follow during the warm-up of a coaching session or match would be in the following order: General to Specific to Split (Phase 1 to 5), as explained in *TYPES AND PHASES OF THE WARM-UP,* leaving out sections that would not be used during the warm-up before a coaching session. For example, leave out the upper-body contact warm-up and/or split if you are only going to do a captain's run or a general coaching session.

An example of a warm-up through the different phases, with an allowance of 15 minutes, would be the following:

- Minute 0 – 4

Players complete phase 1.

- Minute 4 – 10

Players focus on completing dynamic activities and active dynamic stretching. This can be mimicked during the completion of speed, agility and quickness (SAQ) drills. The SAQ and dynamic exercises should be completed at a moderate intensity. Phase 2 should be completed during the warm-up before a coaching session.

- Minute 10 – 14

If there is no contact involved during the coaching session and it is important to get the players at a maximal running intensity, complete SAQ and movement specific drills (*STEPPING ACCELERATION* SAQ) for the next 4 minutes, until at the end of the 14th minute the players rehydrate and re-energise in preparation for the session. If you have contact included in the training session, complete contact with intermittent sprinting in this section instead of the SAQ session.

The transfer of this warm-up should be able to last for about 55-60 minutes.

A Professional example is listed below:

Minute 0-10: Kickers & Hookers enter the field of play

Minute 10-20: Individual warm-up per position

- Passing (Accuracy & Distance)
- Offensive / Defensive situations (2 v 1 / 3 v 2 / 1 v 1 / 2 v 2)
- Acceleration
- Sprinting
    - Tight 5: 4 x 10m Shuttles
    - Loose Forwards & Inside Backs: 2 x 20-30m sprints

- Outside Backs: 2 x 40m sprints

Minute 20-35: Team warm-up

- Handling for speed, distance and accuracy with game simulative pressure
- Defensive drill
- Positional split

Minute 35: Back into change room

Minute 43: Take the field

Minute 45: Kick-off

Different movement patterns are required for rugby. In each position, players are different and therefore they need to focus on different running lines and speeds. Making and breaking tackles are not always possible during the warm-up but a non-contact, two-hand hold can be included to simulate the tackle in rugby.

Different movement patterns performed during a match include the following:

- Scrummaging – warm-up in this regard can be done 1-1
- Jumping in a line-out – timing, support and throwing (checking wind for the direction of throwing and altitude for distance of throwing and/or kicking)
- Passing and catching – general skill
- Driving a maul and setting it
- Kicking out of hand for touch, tactical kicking, goal-kicking and dropping out
- Ripping the ball – continuous skills
- Off-loading in contact – done during split or continuous circuit
- Getting up from the ground – individual
- Acceleration, deceleration and change of direction

WARM-UP DURATION AND PERFORMANCE EFFECTS

The length of the warm-up should last on average about 25% of your training session and, depending on the focus of the session, should be directed to the movements, actions and needs of the subsequent training session. Therefore, if the training session is scheduled for an hour, the warm-up should be 15 minutes long, making the total duration of the session 75 minutes.

The beneficial effects of the warm-up last about 45 minutes. This should be considered when managing the players on the bench in a match. These players should be encouraged to stay "warmed-up". Continued sweating is a good sign that the player is ready to go onto the field and participate.

An important point to mention is that the warm-up is not a substitute for an optimal programme that will aim at improving flexibility. The warm-up is also not the time to have a flexibility workout and it must be remembered that Passive Static Stretching and Proprioceptive Neuromuscular Facilitation (PNF) will decrease the power output of the muscles if completed before the match. This will be covered in more detail under *STRETCHING.* If two players with equal pace at rest are compared after a warm-up, where the one completed dynamic stretching (mimicking rugby movements) while the other player completed static stretching (holding a stretch for a specific time), the player completing the dynamic stretching regime would win a race between the two of them after stretching.

It is a good idea to measure heart rate during warm-up sessions during the week, as this will provide information about the intensity of the different drills and ensure that the correct intensity and duration are used before matches. The intensity can be estimated as % of heart rate maximum (HR max) – if HR max is not known it can be estimated as HR max = 220 - age

During regeneration training (i.e. returning to rugby after injury) the duration should be 10-15 minutes, with a low intensity (50-75% HR max) and slow progression of passive and controlled dynamic activities.

The duration of the aerobic (light easy jogging) or anaerobic (intermittent higher intensity drills like stepping, shuttles and up-and-down routines) training phase should be 10-18 minutes at a moderate intensity (70-85% HR max) with a progression of dynamic flexibility components. The emphasis of this training phase should be on controlled and antagonistic dynamic flexibility work.

In speed training sessions (high intensity, low volume) the duration of the warm-up should be 6-12 minutes at a moderate intensity (70-85% HR max) with a progression of dynamic flexibility of controlled and antagonistic dynamic flexibility.

The pre-match phase must be between 6-15 minutes and focuses largely on the sport-specific components following the warm-up. The intensity is moderate (70-85% HR max), focusing mainly on dynamic flexibility of controlled antagonistic dynamic flexibility work.

Sprinting repetitions during the latter part of the warm-up must be limited to 6-8, and a work:rest ratio of 1:6 for fit players; and 4-6 repetitions and a work:rest ratio of 1:8 or greater for less fit players (i.e. if it takes 6 seconds to complete a 40m sprint then the rest period should be 48 seconds for a work:rest of 1:8. The activities (the actual sprint effort) should last between 4-10 seconds and should incorporate all the movements, such as sharp turning and acceleration at maximal speed with maximal power.

MATCH VS PRACTICE

To decide the construction of the warm-up the following questions need to be answered:

- How much time do I have available?
  If there is sufficient time, complete phases 1-5, but if time is of limited then prioritise. There are no sections of the warm-up (phases 1-5) that can be excluded from the match warm-up.

- What equipment do I have available?
  Plan ahead and take the necessary equipment to away matches.

- Will we involve contact (tackling or scrumming) during the session?
  Contact warm-up prior to a contact session is a non-negotiable as most injuries in rugby happen during contact. Contact preparation during the warm-up prior to a match, is non-negotiable.

- Will the training session be undertaken at a low (60% HR max), medium (70% HR max) or high (85% HR max) intensity?
  If the intensity of the session is low, the intensity of the warm-up should be kept at an elevated level (just above the expected coaching session intensity). The reason for this is that the increase in body temperature will take longer to become significant if the intensity of the warm-up is too low. The activities completed during the warm-up prior to the match should be done at match-pace.

- Players should aim to be back in the changeroom about 8-10 minutes before kick-off.
  Keep in mind facilities, venue (how far from the pitch did you get dressed...will you have enough time to get back from the dressing room to the field?).

EQUIPMENT LIMITATIONS

Balls – Do not complete individual skills if only a few (1-2) balls are available. Rather complete a warm-up grid as in *WARM-UP DRILLS*.

Speed ladders – If no speed ladders are available, use beacons to mark out the blocks needed.

Agility poles – Use beacons to mark out the distances as you would have done with agility poles.

Tackle bags – Seldom used in the warm-up due to the difficulty transporting them. Hit shields can provide the same contact area.

Hit (contact) shield – This piece of equipment is important for a proper warm-up as it assists in correct tackling technique and helps with upper-body preparation. If none are available, players should start warming up their shoulder joints with push-ups and make low-intensity tackles on their teammates, or commit to 1-1 scrumming techniques with their fellow players.

WARM-UP DRILLS

Rugby players enjoy a change in warm-up activities, especially when they have mastered the art of the specific activity or drill. Challenge them with more complex stages of the existing warm-up drills. Refer to the *VARIATIONS* in each of the drills under *WARM-UP DRILLS.*

STRETCHING / FLEXIBILITY

Flexibility is the ability to move a joint or series of joints smoothly and easily throughout a full range of motion.

Stretching should be sport specific and movement specific, and directly related to the activity that will follow. Stretching prepares the muscles for the forthcoming activity and ensures they can contract and relax at the same match-specific intensity and speed, and at an optimal range of movement.

Restricted ranges of movement create an opportunity for injuries and decreased performance outcomes. A sprinter with tight hamstrings will not go to full hip flexion (knee towards the chest with subsequent knee flexion) and this will thus shorten his stride length. The lack of flexibility results in uncoordinated movements and predisposes the player to possible muscle strains.

STRETCHING NOTES

- Stretch slowly and smoothly (if choosing static stretching) without any jerking or bouncing movements. Remember to choose the right stretches at the right time.
    - Do Active Dynamic stretches (*DYNAMIC STRETCHES)* before a session or match and passive static stretching at the end of the session or match.
- Avoid pain and do not complete stretches that feel uncomfortable
    - When you experience pain it is a warning sign that the muscle has reached the end-point in its range of movement.
- Breathe normally; do not hold your breath
    - Normal breathing is important for the control of blood pressure.
- Repeat the stretch on both sides, e.g. legs, arms and side of body.

FACTORS THAT AFFECT FLEXIBILITY

- Bony structures like calcium deposits in a joint space from a previous fracture.
- Excessive fat may also limit the ability to reach the optimal range of motion. Excess fat on the abdomen can cause a decrease in flexibility during trunk flexion.
- Muscles, their tendons and their surrounding fascial sheaths can cause limiting range of movement especially on returning after injury. Athletes who try to improve the elastic ability of their muscles can, over time, improve the flexibility of the specific joint.
- Following immobilisation for a few weeks (as would happen during a joint injury and the support of a protective cast) ligaments and joint structures may lose elasticity. This needs to be considered when a player returns from injury.
- Athletes with very slack ligaments and joint capsules are generally referred to as hyper-flexible. An example would be an elbow or knee that can hyperextend beyond 180 degrees (its normal range of motion).
- Age, gender and bony structures are factors that cannot be altered when it comes to striving for an increased range of motion.

STRETCHING TECHNIQUES

Ballistic stretching = repetitive, bouncing movements. An example of this would be an uncontrolled leg swing going past the normal range of movement. This type of stretching has been criticised due to the high risk of injury. Injury can occur if the forces applied are higher than the tissue's extensibility.

Static stretching = stretching a muscle to the point of discomfort and then holding it at that point for an extended period of time. Recent data shows that the optimal time to hold a stretch is 30 seconds, repeated 3-4 times.

Controlled and safe stretching methods are commonly used in injury rehabilitation of sore or strained muscles.

Proprioceptive Neuromuscular Facilitation (PNF) makes use of alternating contractions and stretches. Different PNF techniques are being used for stretching, including a) Slow-reversal-hold-relax, b) Contract-relax and c) Hold-relax. Below is an example of a hamstring stretch using the slow-reversal-hold-relax technique:

The athlete lies supine (on his back, face up) with the knee extended, ankle flexed at 90 degrees while the trainer or coach passively flexes the hip joint to the point at which there is slight discomfort.

- At the point of slight discomfort the trainer holds the leg at an angle close to the end-point while the player pushes against the trainer's resistance by contracting the hamstring muscle.
- The push against resistance lasts for 10 seconds, after which the hamstring is relaxed and the agonist quadriceps muscle is contracted by the player. The trainer applies slightly more pressure to assist the agonist (quadriceps) muscle in stretching the hamstring muscle further. The subsequent effect is an increase in hip joint flexion.
- The athlete instructs the trainer when to stop (as soon as the next muscle end-point has been reached) applying pressure, after which the next 10-second hamstring contraction starts at the new joint angle.
- This sequence of pushing and relaxing is repeated at least three times.

IN SUMMARY

The following points are important for an effective warm up:

- Be specific and plan well; be pro-active.

- Create an increase in body temperature to get all the other physiological benefits.
- Make the warm-up fun and simple.
- Do not include new drills before a match.
- Complete active dynamic stretches during the warm-up of a coaching session or match and static stretches at the end of the training session or match.
- All stretches must be controlled and be as movement specific as possible.
- Do not stretch into pain.
- Consider the outside temperature and manipulate the duration of the warm up accordingly.
- To get a good physical response, complete the SAQ drill at the same tempo as in a match.

THE COOL-DOWN

The cool-down enables the body temperature to decrease and for the heart rate to return to a resting state.

This period should last between 5-10 minutes but will depend on the intensity and duration of the preceding session or match. The cool-down period is often neglected because of post match activities or fatigue. However, this is not best practice as a cool-down initiates the recovery process (see RECOVERY STRATEGIES).

Two components of the cool-down are the following:

1 Static muscle stretching

2 Cardiovascular activity, to promote the circulation of blood and for the heart to return to a resting state.

If high intensity exercise is stopped suddenly, there is pooling of blood in the legs which can cause a decrease in blood pressure resulting in feelings of dizziness. Slow jogging and/or fast walking for at least 2-5 minutes reduces the pooling of blood and the accompanying symptoms.

DYNAMIC STRETCHES

Supine (Looking up to the sky) Lower Back Stretch

Lie down on your back, knees together and bent, feet on the ground, shoulders square and flat with the neck in neutral. Move from the middle to the right, left and then back to the right rhythmically.

Starting Position

Finishing Position

Foot behind knee Lower Back Stretch

Lie supine as in the stretch above. Keep the right leg in extension and put the toes of the non-extended leg (left) behind the extended leg's knee joint. On the change of direction from left to right or right to left, change the position of the toes behind the knee joint from left to right or right to left.

Starting Position

Finishing Position

Supine Lower Back Stretch (Long leg over) side-to-side movements

Lie down on your back, knees together and bent, feet on the ground, shoulders square and flat with the neck in neutral. From this position, rotate the hips and move the knees to the right. Allow your left leg to move across and over the bottom leg. Mimic this action to the left side as well. Move rhythmically from side to side by alternating legs.

Starting Position

Finishing Position

Supine Knee holds with 'rocking'

Lie supine, tuck your knees into your chest and hold it in with your arms over your knees. While holding it in, rock forwards and backwards.

Positional Reference

Seated Gluteus Stretch

Sit down on the ground and cross your one leg across the other until the crossed leg's lower half is on the other leg's thigh, just above the kneecap. Support your upper body with your hands behind you and push off from the uninvolved leg until you can feel the stretch in the crossed leg's gluteus (buttock) muscle. Move forward and backwards and try to touch your supported leg's heel with your supported leg's gluteus (buttock).

Starting Position

Finishing Position

Supine Knee to chest

Lie on your back with one leg extended and on the ground. Pull one leg towards the chest by flexing the knee and hip joints simultaneously. Try to keep the straightened leg on the surface whilst you pull the flexed leg towards the chest with both arms.

Positional Reference

Walking knee to chest

As in the *"SUPINE KNEE TO CHEST"* stretch you keep the one leg straight while the other leg is flexed at the knee and hip joints by pulling it towards the chest. The only difference is that every time you take a step forward you change legs and pull the other knee towards the chest. Keep the hold for 1-2 seconds before taking a step and swapping over.

Positional Reference

Supine Knee holds with 'rocking' and release

Lie supine, tuck your knees into your chest and hold it in with your arms over your knees. Release your knees and straighten your legs out when moving down and forward in the 'rocking movement'. At the end of the movement, move your hands towards your feet by straightening your arms and sliding your hands down your shins. Move back into the starting position as soon as you have 'attempted' to touch your toes. Rock backwards again with your knees tucked in, and complete another 'toe touch' at the end of the downward movement. The second option is a split in legs and allowing a slight groin stretch.

Starting Position

1st option (Legs together)

2nd Option (Legs split)

Prone Calf walk-outs

Support your body on your hands and on the balls of your feet as if getting into a push-up position. Move your buttocks slightly up and start stepping downward with your heels towards the ground in a rhythmical manner. Alternate your feet.

Left calf stretching

Right calf stretching

Soleus Stretch

Start erect with the legs slightly split (± 30cm apart). The one foot will be in front of the other. The heel of the back leg is kept on the ground while the knee joint of that same leg (backwards leg) is slightly flexed. Complete a rhythmic up and down movement while keeping the heel on the ground.

Positional Reference

Standing leg swings (Forward and backward)

Stand erect and on one leg. The supported leg's knee joint should be bent slightly. Start swinging the unsupported leg forward and backwards within a pain-free range of motion. The player must start by holding on to the players next to him. As soon as the players improve their balance they should complete the exercise without holding on.

Starting Position

Finishing Position

Standing leg swings (Sideways)

Stand erect and on one leg. The supported leg's knee joint should be bent slightly. Start swinging the unsupported leg sideways past the midline (supported leg) within a pain-free range of motion. The player must start by holding on to the players next to him. As soon as the players improve, they should complete the exercise without holding on.

Starting Position

Finishing Position

Standing Knee flexion/extension

Stand erect and on one leg (supported). Flex the knee of the unsupported knee joint by contracting the hamstring muscle and then extend forwards by contracting the quadriceps muscles again. Advanced: Increase the speed of the movement.

Hamstring Curl

Quadriceps contraction

Walking Hamstring Stretch

Stand erect and take a small step forward. At the same time as the step is taken, reach with the opposite side's hand towards your opposite foot's (the one at the front) big toe. On the next step, cross over to the other hand and foot, e.g. right hand and left foot. Keep looking forward.

Right hand, left foot

Left hand, right foot

Standing Lunge Walk with Hip Flexor stretch

Complete a slight forward lunge. At the end of the lunge, extend the arm of the back leg straight up towards the sky. Hold it there for 2-5 seconds and take another lunge forward with subsequent change of extended arm.

Left arm, left hip flexor

Right arm, right hip flexor

Standing Groin stretch

Stand erect and spread your legs apart to about 30cm wider than your shoulder width on both sides. Point your buttock slightly back and bend forward in your hips at approximately 45 degrees. Whilst keeping your feet on the ground, move sideways in that position, bend your knees slightly and touch your foot with both hands. Alternate sides.

Advanced: Move your feet wider apart and increase the speed of the movement.

Positional Reference

Supine Hamstring stretch (Knee to chest; knee slightly bent)

Lie supine with your shoulders down and flat and your neck in neutral. One knee is bent with the foot on the ground. The other leg is straightened and on the surface. The straightened leg is lifted towards the chest with subsequent hip flexion. Do not keep the elevated leg too straight; bend it slightly. Repeat rhythmically and change legs.

Starting Position

Finishing Position

Lunge Walk

Stand erect with the hands on the hips and feet together. Take a step forward and hold your balance for a second. Immediately push back off the front foot into the starting position. Change feet after every repetition. Change of stepping direction can be included.

Forward Lunge

Standing Squat / Quad stretch

Stand erect with your arms crossed and your hands on your shoulders. Split your feet apart to about shoulder width. Squat down as if sitting on a chair and move up to the starting position as soon as your thighs are parallel to the ground.

Advanced: Increase the speed of the movement and complete a slight jump at the end of the upward movement.

Positional Reference

One leg Squat

Stand erect and on one keg. Hold your unsupported foot in the air and slightly forward. Keep your buttocks back and bend at the supported leg's knee joint until you reach 30-45 degrees of knee flexion. Move upward to the starting position and always ensure that your toe, kneecap and hip of the supported leg are in line at all times.

Positional Reference

Overhead Squat stretch

Start erect with your arms extended upwards and your palms pointing 45 degrees to the sky. Maintain this position and squat down until you feel slight stiffness in your lower back and gluteus (buttock) area. Move up and down rhythmically.

Positional Reference

Lateral Arm across chest

Stand erect and put your left hand on your right pectoral (chest) muscles. The opposite arm is stretched out and sideways with slight rotation at the hips. The left and right hands/arms change position rhythmically.

Left hand on chest

Vertical arm raises

As in the *LATERAL ARM ACROSS CHEST STRETCH* the arms change position rhythmically from top to bottom.

Left arm up

Upper-body Push-up and open

Complete a push-up with the hands wider than the shoulders. At the end of the upward movement, balance on one arm and rotate the upper-body away from the supported side with the hand pointing towards the sky. Change between left and right sides rhythmically.

Starting Position

Finishing Position

Arm rotations

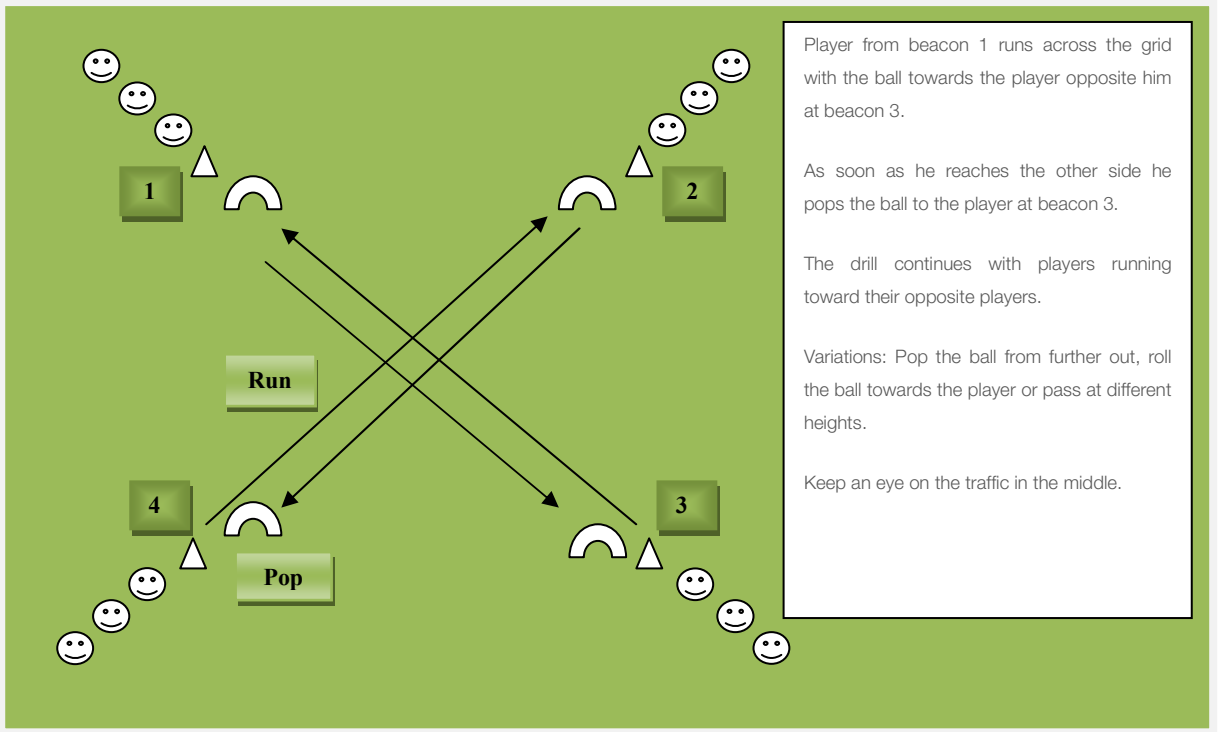
Stand erect and balanced. Point your arms sideways at 90 degrees. Point your fingers to the sky and press your hands open as if pressing against an invisible wall. Start swinging your arms forward and then switch to a backward rotation. At all times point your fingers up and press against the invisible wall.

Starting position

Upwards rotation

DYNAMIC WARM-UPS

Pop and cross grid



Player from beacon 1 runs across the grid with the ball towards the player opposite him at beacon 3.

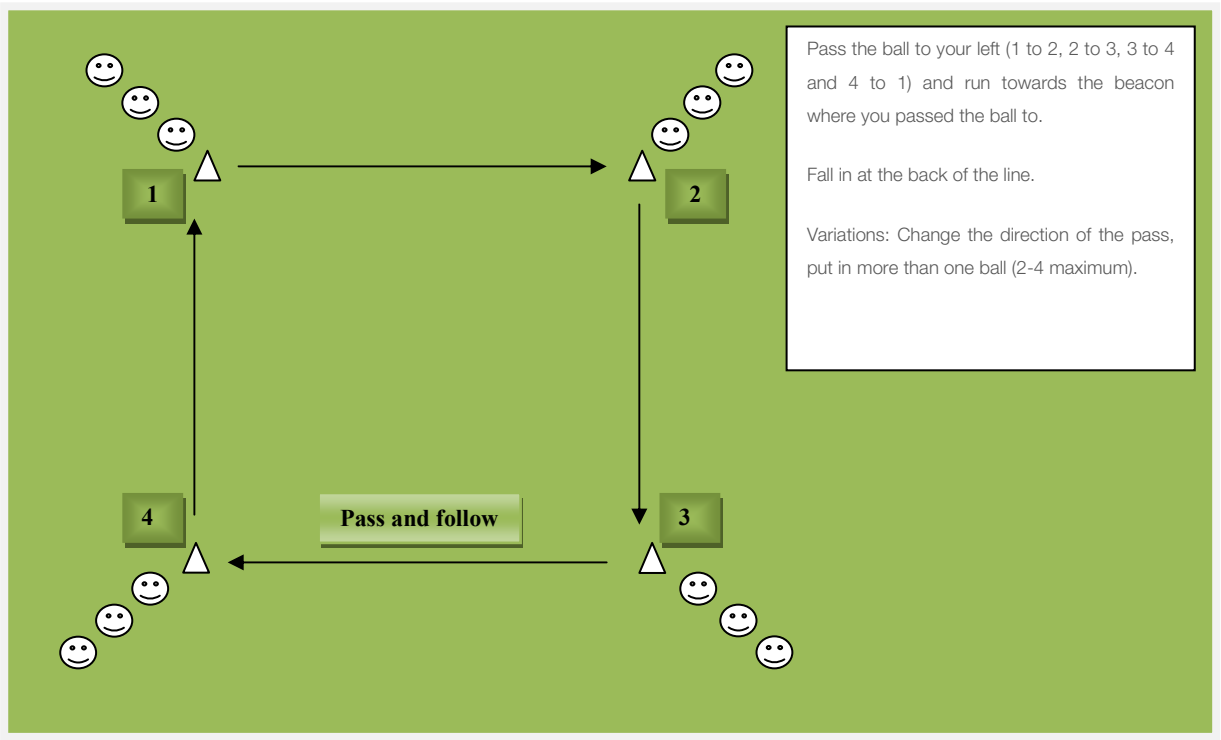
As soon as he reaches the other side he pops the ball to the player at beacon 3.

The drill continues with players running toward their opposite players.

Variations: Pop the ball from further out, roll the ball towards the player or pass at different heights.

Keep an eye on the traffic in the middle.

Pass and follow grid

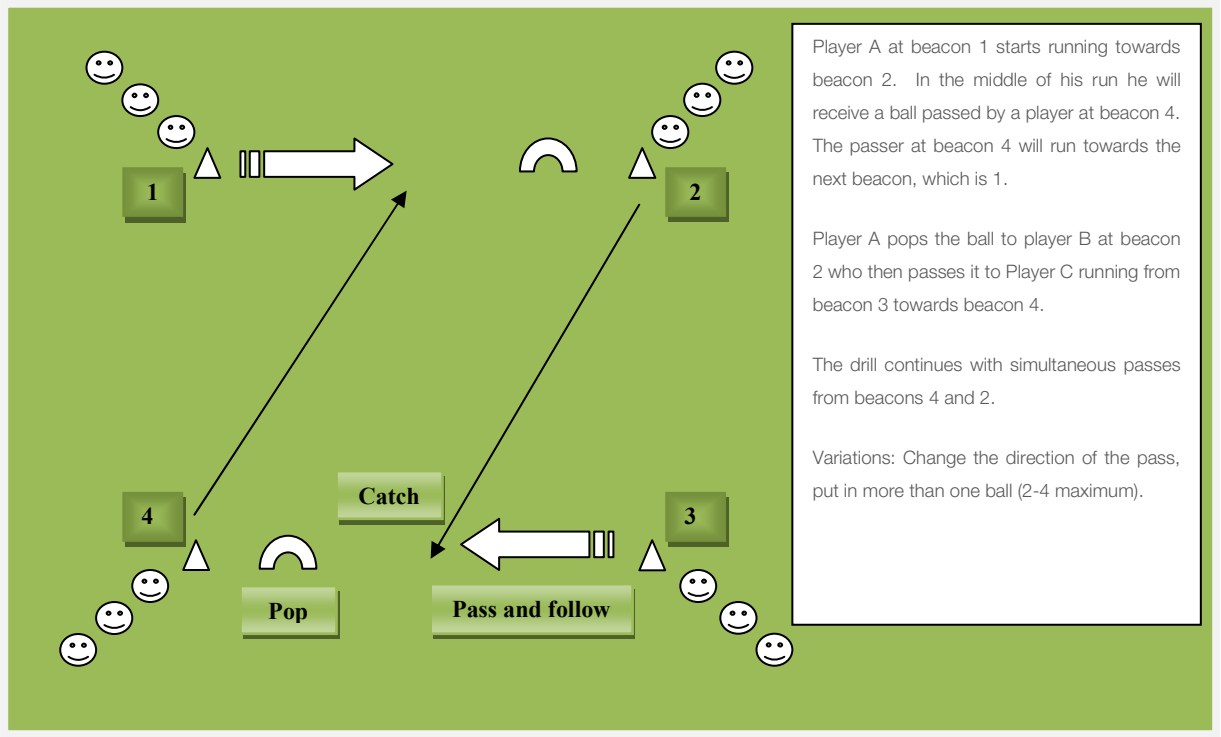


Pass the ball to your left (1 to 2, 2 to 3, 3 to 4 and 4 to 1) and run towards the beacon where you passed the ball to.

Fall in at the back of the line.

Variations: Change the direction of the pass, put in more than one ball (2-4 maximum).

Pass (In the run) and follow



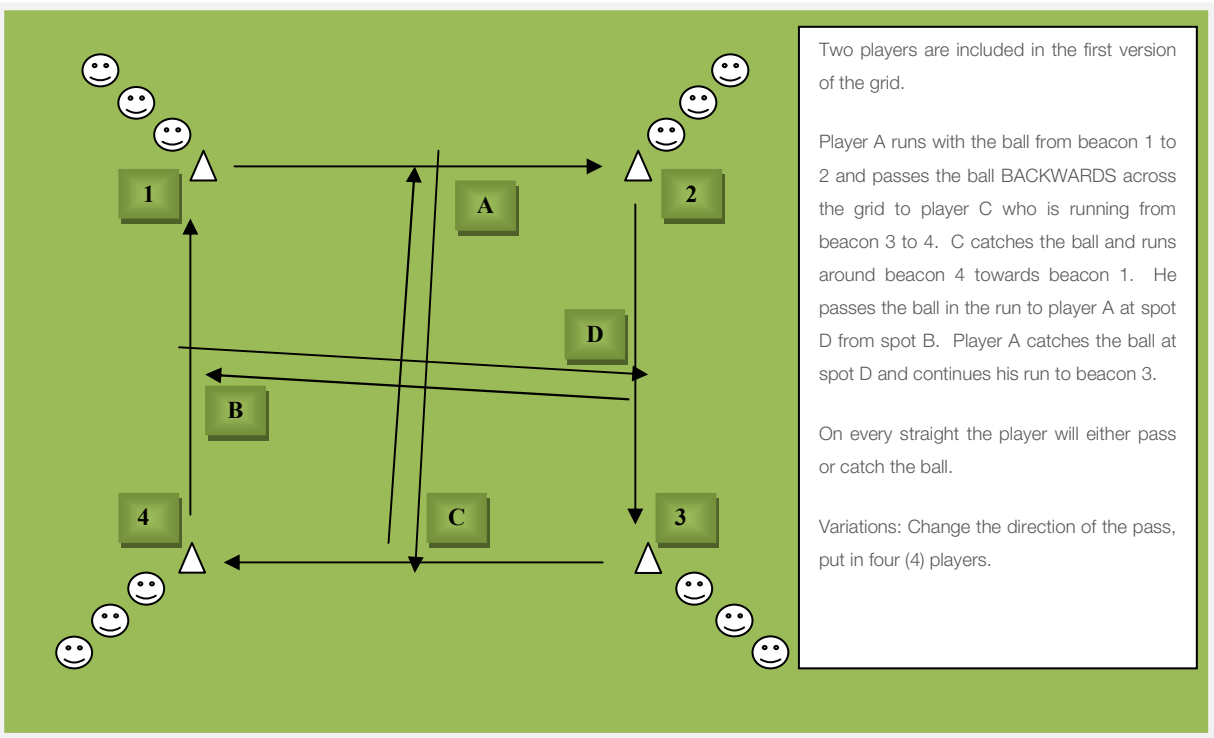
Player A at beacon 1 starts running towards beacon 2. In the middle of his run he will receive a ball passed by a player at beacon 4. The passer at beacon 4 will run towards the next beacon, which is 1.

Player A pops the ball to player B at beacon 2 who then passes it to Player C running from beacon 3 towards beacon 4.

The drill continues with simultaneous passes from beacons 4 and 2.

Variations: Change the direction of the pass, put in more than one ball (2-4 maximum).

Run and pass



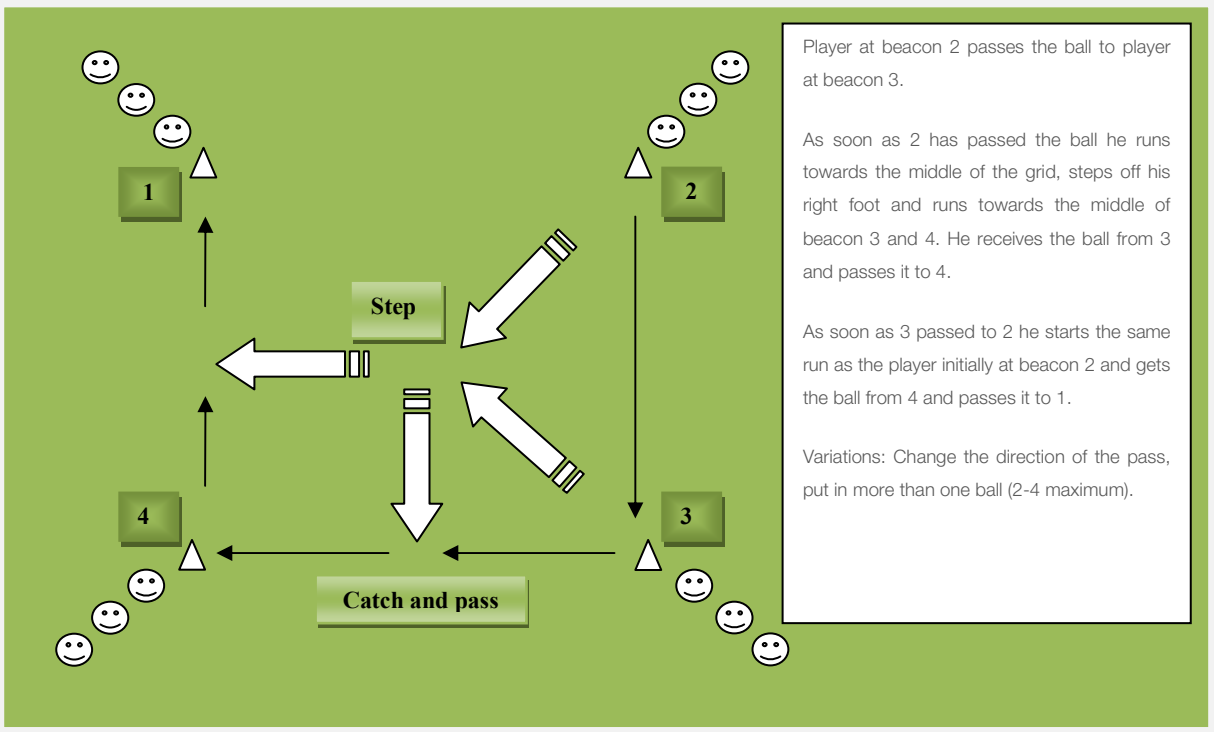
Two players are included in the first version of the grid.

Player A runs with the ball from beacon 1 to 2 and passes the ball BACKWARDS across the grid to player C who is running from beacon 3 to 4. C catches the ball and runs around beacon 4 towards beacon 1. He passes the ball in the run to player A at spot D from spot B. Player A catches the ball at spot D and continues his run to beacon 3.

On every straight the player will either pass or catch the ball.

Variations: Change the direction of the pass, put in four (4) players.

Banana Drill



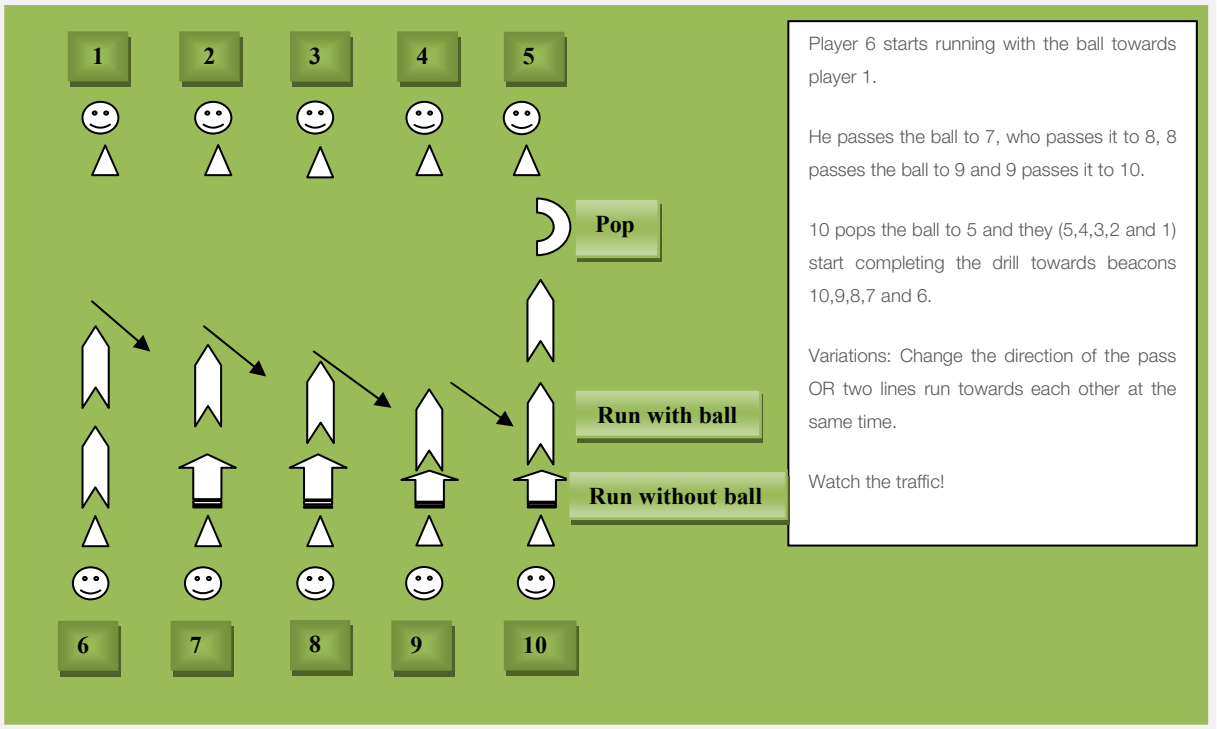
Player at beacon 2 passes the ball to player at beacon 3.

As soon as 2 has passed the ball he runs towards the middle of the grid, steps off his right foot and runs towards the middle of beacon 3 and 4. He receives the ball from 3 and passes it to 4.

As soon as 3 passed to 2 he starts the same run as the player initially at beacon 2 and gets the ball from 4 and passes it to 1.

Variations: Change the direction of the pass, put in more than one ball (2-4 maximum).

Traffic Passing Drill



Player 6 starts running with the ball towards player 1.

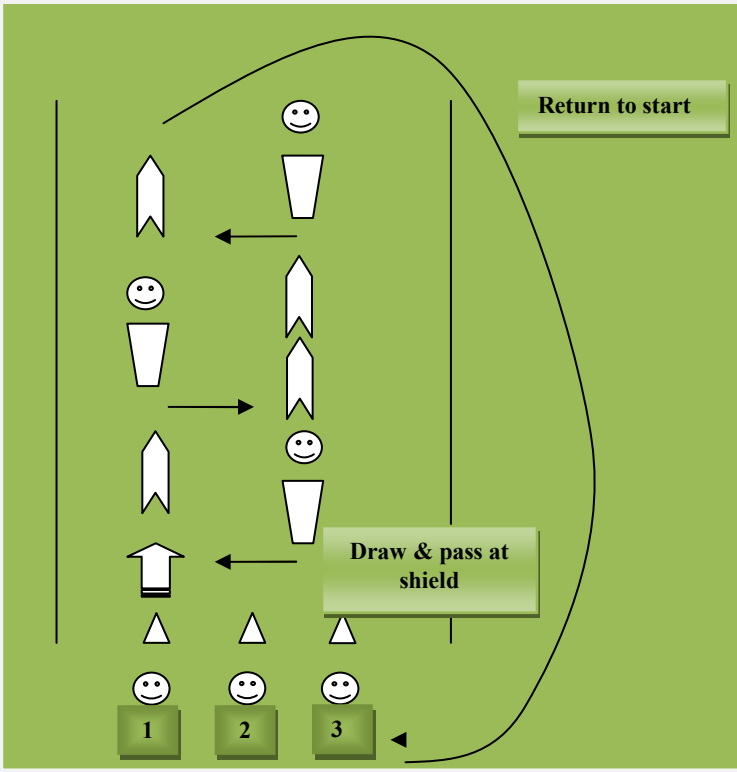
He passes the ball to 7, who passes it to 8, 8 passes the ball to 9 and 9 passes it to 10.

10 pops the ball to 5 and they (5,4,3,2 and 1) start completing the drill towards beacons 10,9,8,7 and 6.

Variations: Change the direction of the pass OR two lines run towards each other at the same time.

Watch the traffic!

Passing Gauntlet



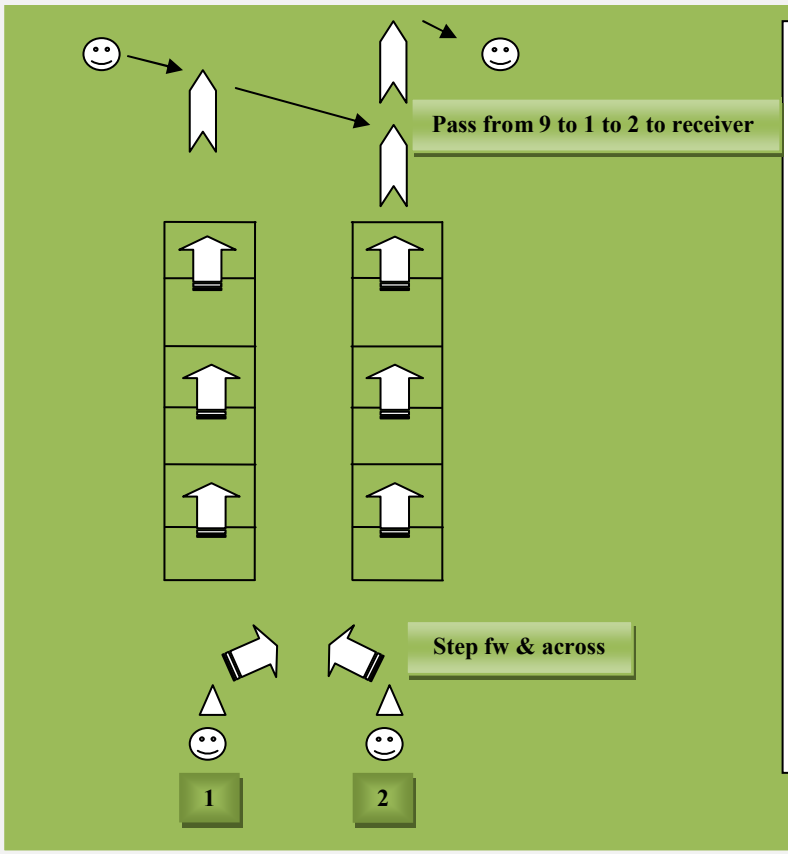
Player 1, 2 or 3 starts running with the ball towards the first shield, draws the defender and passes the ball to any of the other 2 players (1,2 or 3).

The new ball carrier either draws the next defender and passes to a support runner (1, 2 or 3) or takes the gap after he dummies.

The objective is to commit the defenders and play into space until the 3 attackers have beaten the 3 defenders.

Variations: Add more defenders, add fewer attackers or narrow the channel.

Stepping acceleration SAQ



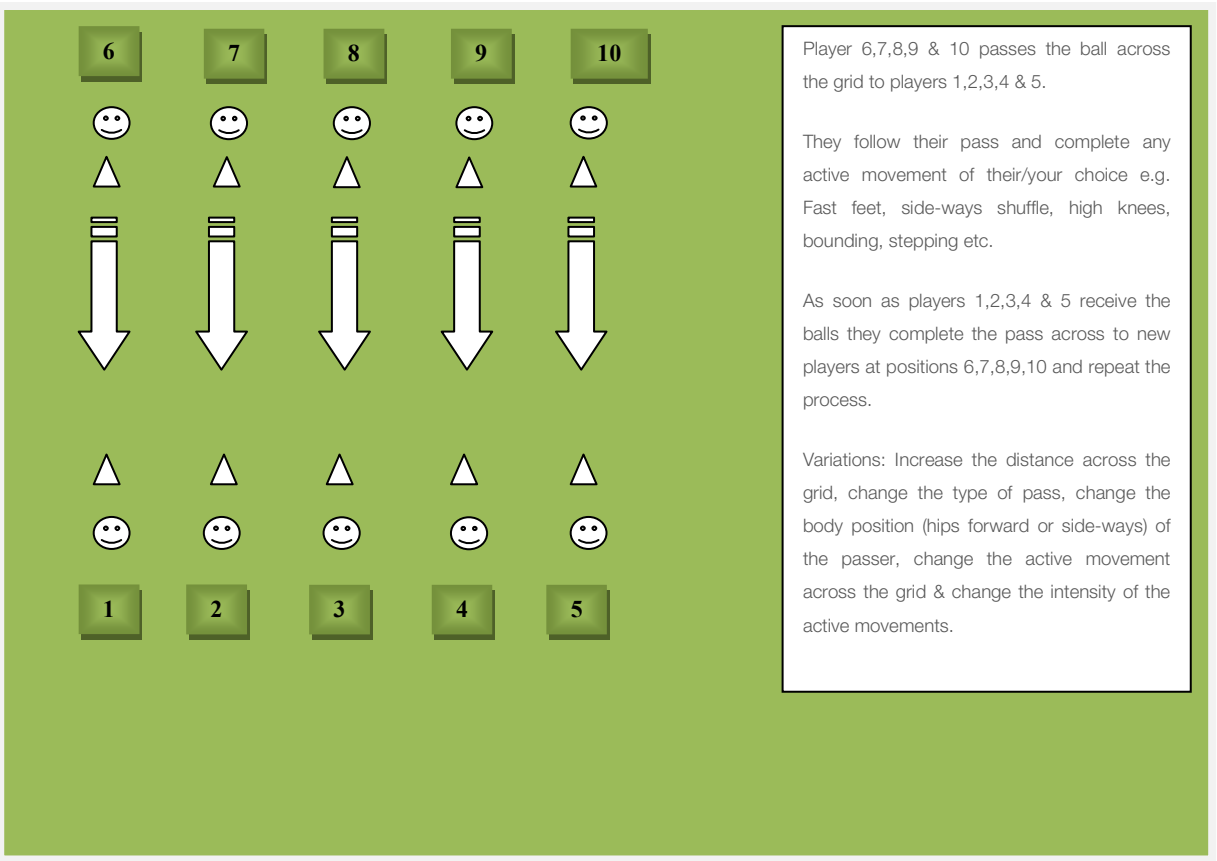
Player 1 steps (right) across the line of player 2 who steps (left) across the line of player 1.

Players can complete any ladder drill e.g. 1 foot per block, 2 feet per block, dead-leg running, normal acceleration or hops with acceleration.

At the exit of the ladder one of the two players will receive the ball from the scrumhalf (9), who then passes it to the supporting player exiting the ladder and he then passes it to the receiver outside the ladder.

Variations: Increase the distance between the ladders or passers outside the ladders, add more ladders or increase the speed inside the ladders.

Cross-over Grid



Player 6,7,8,9 & 10 passes the ball across the grid to players 1,2,3,4 & 5.

They follow their pass and complete any active movement of their/your choice e.g. Fast feet, side-ways shuffle, high knees, bounding, stepping etc.

As soon as players 1,2,3,4 & 5 receive the balls they complete the pass across to new players at positions 6,7,8,9,10 and repeat the process.

Variations: Increase the distance across the grid, change the type of pass, change the body position (hips forward or side-ways) of the passer, change the active movement across the grid & change the intensity of the active movements.

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