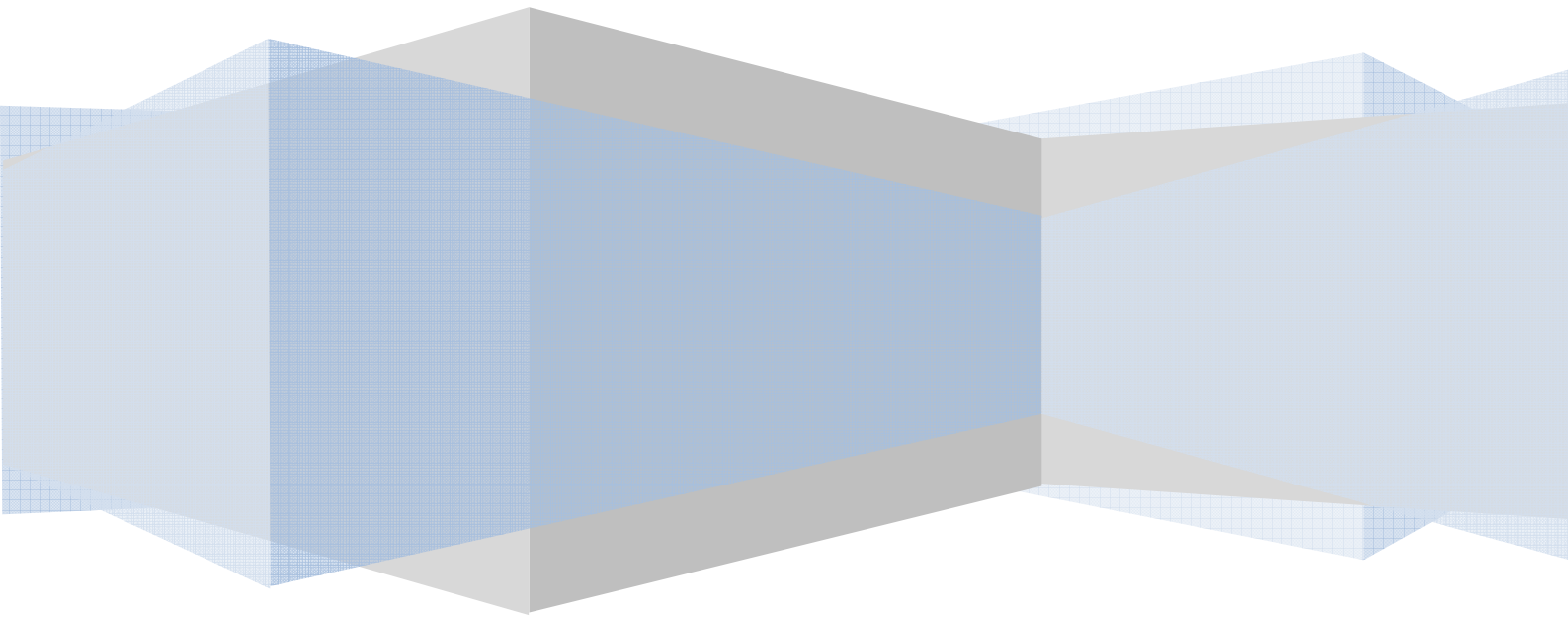


Welsh Netball
Pêl rwyd Cymru
Fitness Testing Guidelines and Standards for
Players and Umpires



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Introduction

These guidelines and standards are for netball players of all ages and abilities and have been grouped into categories depending upon age and playing position. Standards for umpires are also included; however, as there is limited information regarding the appropriate fitness levels required of umpires for the recommended tests, these are guidelines only.

The purpose of fitness testing is:

- To assess the physical strengths and weaknesses of your players at various stages throughout the season so that appropriate training can be implemented.
- To assess the players following a period of training to measure whether they have improved to the required standards.
- To determine whether a player is ready for the physical demands of international games especially in tournament situations where there is play on consecutive days.
- To assess whether a player has returned to previous fitness levels following an injury or a period away from training or playing.

When to Test

The following is a guideline as to when fitness testing could be conducted.

HUB & U15/U17/U19/U21 Player

- Early September once school starts and preseason training has commenced to get initial assessment of players.
- Immediately before the competition starts to review the training and assess whether players have improved and are ready for the competitive season.
- Prior to Netball Europe teams being selected or once Welsh age group teams have been selected.

National Under 21 Player / Wales A / Senior Squad

- When in squad camps.
- Prior to trials.
- During screening camps.
- As scheduled in annual plan

Umpires

- At the commencement of preseason training
- Immediately before competition starts

What to Test

Which of the tests to use to assess your players, depends on the access to equipment and suitably qualified personnel to conduct the tests. Some of the tests can be conducted by a HUB, school and/or club coach while others may need to have certified personnel to administer them. If you have access to electronic timing lights within your area i.e. netball area owns them or you can borrow them from other sports organizations then it is recommended that you assess the players speed and acceleration as part of your testing battery. If you do not have access to timing lights then do not include speed testing in your testing battery.

HUB & U15/U17/U19/U21 Player

- Aerobic test – either Yo-Yo test Level 1 or the Bleep Test
- Strength endurance tests - press ups, wall pass, prone bridge, travelling lunge
- Horizontal jump test

National U21 Player / Wales A / Senior Squad

- Body composition
- Aerobic test – Yo-Yo test Level 1
- Strength endurance tests - press ups, wall pass, prone bridge, travelling lunge
- Lower body power tests –vertical and horizontal jumps and speed / acceleration over 5m, 10m and 20m

Umpires

- Aerobic test – either Yo-Yo test Level 1 or the Bleep Test

Where possible adhere to the following guidelines around fitness testing to ensure a valid result is achieved:

- Give the players at least 48 hours notice prior to testing so that the athletes are reasonably fresh and are not fatigued from training hard the day before testing.
- Conduct all testing in an indoor netball court so that the weather conditions are eliminated.
- Where possible avoid conducting testing early in the morning. Allow at least two-three hours after the athlete has woken up from sleep.
- Conduct a thorough warm-up prior to conducting speed and acceleration testing to ensure that there are minimal chances of injury and to physically and mentally prepare the body for optimal performance.
- Make sure that the player has had something substantial to eat at least 90 minutes before beginning the warm up to ensure that their energy levels are high especially if conducting a series of tests in one day.
- Conduct all subsequent testing at the same venue with the same equipment so that there is good consistency with results from test to test.

Testing Protocols

Either of the following tests can be used to assess the player's aerobic fitness levels although the Yo-Yo test is preferable:

Bleep Test (Multistage Fitness Test)

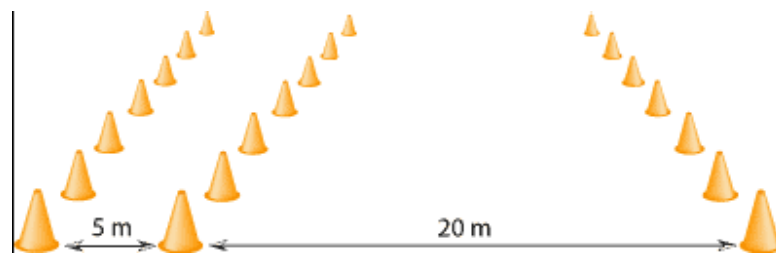
Purpose: To assess the player's aerobic fitness through the use of a continuous, graduated shuttle run test.

Protocol:

- This test involves continuous running between two lines 20m apart in time to recorded beeps.
- The test subjects stand behind one of the lines facing the second line, and begin running when instructed by the CD.
- The subject continues running between the two lines, turning when signaled by the recorded beeps.
- If the line is not reached in time for each beep the subject is warned and they must try to catch up with the pace within the next beep or shuttle.
- The test is stopped if the subject fails to reach the line for two consecutive ends.
- Conduct the beep test indoors on a wooden or rubber floor surface.
- Use existing lines spaced 20m apart or place tape on the floor indicating the turning lines. If you cannot place tape on the floor then place a cone or similar marker on the floor that indicates the turnaround point.
- Equipment: Flat non-slip surface, beep test CD, stereo/CD player, recording sheets, tape or cones, tape measure.

Yo-Yo Intermittent Recovery Test Level One

Purpose: To assess the player's aerobic fitness and ability to sustain continuous efforts over an extended period of time.



Protocol:

- Use cones to mark out three lines as per the diagram above; 20 meters and 5 meters apart.
- The subject starts on or behind the middle line, and begins running 20 m when instructed by the test CD. The subject turns and returns to the starting point when signaled by the recorded beep.
- There is a active recovery period of 10 seconds interjected between every 20 meter (out and back) shuttle, during which the subject must walk or jog around the other cone and return to the starting point.
- A warning is given when the subject does not complete a successful out and back shuttle in the allocated time, the subject is removed from the test when they do not complete two successive shuttles.
- Use the recording sheet attached to these guidelines to record the player's result.
- Equipment: Yo-Yo test CD, CD player/stereo, tape measure, tape or cones, recording sheets, flat non-slip surface.

Horizontal Jump Test

Purpose: To assess the player's lower body power

Protocol:

- The player stands with their toes on a line marked on the court. They then swing their arms back while bending their knees and hips and jump as far as possible forward landing on both feet.
- The player stays in the finish position until the measurement has been taken.
- Measure the distance from the start line to the player's heels where they landed. This is the distance jumped.
- Perform three attempts recording the best distance jumped.
- Equipment – tape measure, recording sheet

Press-Up Test

Purpose: To assess the player's upper body pushing strength and endurance.

Protocol:

- The player assumes the press up start position with their hands slightly wider than shoulder width and directly under the shoulders i.e. not in front or behind the shoulders, with palms flat on the ground. Their feet are slight spread about hip width apart. The body is held straight with no bowing or arching of the core area.
- A partner, or the tester, places a closed fist on the ground, with the thumb side up, under the player's chest.
- The player lowers their body by bending at the elbows, keeping their body straight, until their rib area touches their partner's hand and then fully extends the elbows until the arms are straight again.
- The player continues doing as many press-ups in succession ensuring that they touch their partner's fist until they cannot do any more.
- Record the number of repetitions completed.

- Equipment: Recording sheet

Prone Plank Test

Purpose: To assess the player's core strength and endurance.

Protocol:

- The player assumes the start position with their elbows on the ground, feet approximately hip width apart and body straight with no arching or bowing. The hands can be grasped or placed flat on the ground. The head should be facing toward the ground and not looking forward.
- The player maintains a straight body for as long as possible ensuring that normal breathing is maintained. Once the player can no longer keep their body straight i.e. they excessively arch or bow then they are to stop the test.
- Record the time that the player maintains a good position.
- Equipment: stopwatch, recording sheet.

Wall Pass Test

Purpose: to assess the player's ability to perform technically proficient passes under fatigue

Protocol:

- The player stands 3 meters from a wall and performs continuous chest passes for 1 minute.
- The number of passes completed in the minute is the athlete score.
- In addition to the number of passes the quality of the passes is equally important. Along with the pass count each player receives a quality score based on the scoring criteria below.
 - 10 = maintains perfect form throughout the entire minute
 - 8 = started perfect and slightly faded toward the end
 - 6 = started with poor technique and maintained that technique throughout the entire minute

- 4 = started with poor technique and got worse
- 2 = technique is very bad

Travelling Lunge

Purpose: to assess the player's lower body strength, balance and co-ordination

Protocol:

- Standing tall with your shoulders back and down and abdominals engaged, place your feet together. Your arms can be flat at your side or holding your hips.
- Breathing normally, step forward with your right foot, bending both knees so that your front knee is aligned over your ankle and the back knee comes close to the floor. Your back heel is lifted off the floor.
- Before your back knee touches the floor, push up with your back left leg, forcing the weight of your body through your right heel, simultaneously bringing your left foot together with your right foot.
- Without pausing, alternate legs, lunge forward with your left foot, bending both knees so that your front knee is aligned with your ankle and the back knee comes close to the floor. Your back heel is lifted off the floor.
- Before your back knee touches the floor, push up with your back right leg, forcing the weight of your body through your left heel, simultaneously bringing your right foot together with your left foot.
- Continue to perform the steps above, alternating legs for the width of a netball court.
- In addition to completing the test each player receives a quality score based on the scoring criteria below.
 - 10 = maintains perfect form throughout the entire test
 - 8 = started perfect and slightly faded toward the end
 - 6 = started with poor technique and maintained that technique throughout the entire test
 - 4 = started with poor technique and got worse
 - 2 = technique is very bad

Fitness Testing Standards

The following standards should be used as a guide only. They should be used as a target to get to if you are only just beginning to train for netball. If you reach the recommended target then you should continue to improve your performances and not be content to just reach the standards and not continue.

If you are strong in one area of your performance profile and weak in another then you should spend more time on the areas that you are weak to ensure that you eventually become a well rounded athlete who has limited weaknesses. For example if you do well in the Yo-Yo test but can only do a few press ups then you should spend more time improving your upper body strength as opposed to neglecting this area and spending more time getting aerobically fit.

Some tests will have a positional target i.e. GK & GS while others will have a playing level. You need to determine your playing level and also your preferred position and use this information to determine which standard for each test you are trying to achieve.

Aerobic Fitness Minimum Standards

	Yo-Yo Test			Bleep Test		
	GK/GS	GA/GD	WA/WD/ C	GK/GS	GA/GD	WA/WD/C
HUB & U15	13	13	13	9	9	9
U17	15.1	16.1	17.1	10	10.5	11
U19	15.3	16.3	17.3	10.5	11	11.6
National Under 21 Player	15.5	16.5	17.5	10.5	11	11.6
Wales A & National Player	16.5	17.5	18.5	11	11.6	12
Umpires – Male	17.1			12		
Umpires – Female	15.1			10		

Horizontal Jump Minimum Standards

	GK/GS	GA/GD	WA/WD/ C
HUB & U15	150	150	150
U17	170	170	170
U19	170	170	170
National Under 21 Player	190	190	190
National & Wales A Player	200	200	200

Strength Endurance Minimum Standards

	Press-Ups			Prone Plank		
	GK/GS	GA/GD	WA/WD/ C	GK/GS	GA/GD	WA/WD/C
HUB & U15	15	15	15	1:00	1:00	1:00
U17	15	15	15	1:00	1:00	1:30
U19	15	20	20	1:30	1:45	2:00
National Under 21 Player	20	25	25	1:30	1:45	2:00
National & Wales A Player	20	25	30	2:00	2:30	3:00