

# RUGBY FITNESS TRAINING

## FITNESS FUNDAMENTALS GUIDE

Hi,

Welcome to your guide on the Fundamentals of Rugby Fitness. My name is Ben Wilson. I am author of the book Rugby Fitness Training: A Twelve Month Conditioning Programme and I help rugby players increase their conditioning. For almost 10 years I have been helping players of all standard increase their fitness and on field performance.

This report is designed to give you an overview of the fitness requirements of rugby and gives you some exercises to follow in each of the component parts that a solid rugby conditioning plan should contain. If you have any questions then please email me. I am always happy to help. I also send a newsletter which covers more about Rugby Fitness, Rugby Nutrition and Rugby skills. Keep an eye out for it.

This guide will introduce you to the fundamentals of rugby training. If after reading this report you feel you would like to have a personal plan designed for you full details are available on the website:

<http://www.rugbyfitnessstraining.com/Products/Rugby-fitness-training-player-of-the-year-plan.htm>

Best wishes

*Ben Wilson*

Rugby Fitness Training



**Ben Wilson** is a personal trainer and conditioning coach. Author of the book [Rugby Fitness Training – A Twelve Month conditioning Programme](#) he is a specialist at providing the non-professional player with the same training opportunities as that of the professionals. A regular in the media he has been featured in Rugby World, The East Terrace and various newspapers and magazines.

## Fitness Requirements for Rugby

Both forwards and backs need to have a well rounded approach to fitness. In all positions there is a demand to be able to handle high levels of lactic acid within the muscles. This requires a strong aerobic and anaerobic metabolism.

In addition to this, all players need to maximize their strength and speed. With speed being more important for backs than for forwards but still vital to both. Agility is a key element of the game as many movements are not performed in a straight line, instead, using multi linear patterns or involving changing direction. Strong agility skills can give an advantage over a quicker straight line player.

Rugby union is one of the toughest sports there is, for exactly the reasons above. The way to succeed is to be the biggest, strongest, fastest and fittest player on the park. These attributes offset each other. This is why the sport allows for such a wide variety of players to be successful even within the same position.



## Individual Training

For you to optimize your performance you should address every aspect needed on the field of play. Pay special attention to your weakest areas.

Every rugby player should be looking to establish a strong aerobic fitness with excellent speed and agility skills, while having sufficient strength, size and core function. This in combination with perfect posture will allow you to fulfill physically your potential, and thus optimize your performance.

To ensure that the many aspects of fitness required for rugby are addressed, you must use different training techniques. These are:

- Aerobic endurance training - An essential base for any rugby player
- Strength training - A decisive factor in speed and contact situations
- Sprint training - Critical for success and high level performance
- Agility training - The skills to change speed and direction are vital
- Plyometrics – Develops the muscle's ability to use energy and to aid speed and strength
- Core - The absolute base upon which everything else is built
- Flexibility - Another foundation of performance

This may seem to be a lot, but it can easily be introduced into your training, whether you train 2 hours a week or twice a day. It can be helped further if your rugby coach uses these within your team training sessions.

You should employ all these areas within your training plan but pay special attention to the particularly weak areas of your game. This will produce the quickest results on the field of play.

The following section outlines the basic principles within the main training methods.



## **Aerobic Endurance Training**

The purpose of aerobic endurance training is to increase your aerobic fitness. This will allow you to perform throughout the 80 minutes and be able to cover as much work on the field as possible during this time. Aerobic fitness is made up from two main components.

### **1) Aerobic Power**

Aerobic power is the ability to produce the maximum amount of energy using oxygen from the air. It is critical for effective performance as it supplies the majority of energy production at certain points of a game and is crucial in the recovery processes from anaerobic periods of play.

### **2) Lactate Tolerance.**

Lactic acid is the by-product of the chemical reactions performed during intense exercise. The build up of lactic acid interferes and impairs the muscles ability to contract. Lactate tolerance is the ability to continue exercising despite the presence of lactic acid in the muscles. Lactic acid interference is the main fatiguing factor for Rugby like most other team sports.

## **Aerobic Training Techniques**

For a rugby player it is prudent to use jogging / running techniques exclusively, unless prevented by injury. The purpose of aerobic endurance training is to increase your aerobic power and lactate tolerance, as it is used in a game. Therefore spending time on the rower or bike will not be as effective compared to running.

### **Example Aerobic Training Session 1**

Distance : 3 km jogging

Intensity : Same effort level throughout

Notes : Ensure you are working hard from start to finish and do not go mad in the last 500m

### **Example Aerobic Training Session 2**

Distance : 3 km

Intensity: Spend 300m going faster than comfortable pace, then 100m at a easy pace and repeat

Notes ; The change in speed is fairly subtle from the fast paced jogging to slow paced jogging. Ensure you tune into how hard the exercise feels and moderate your pace so that you can finish the 3km.

Intensity: Maximum effort and rest as set out above.

## **Strength Training (Resistance Training)**

Resistance training is used to enhance your strength, muscle size and co-ordination.

Strength can be defined as the maximum force produced at a specific velocity (speed). This definition refers to the element of how quickly a force is applied. The speed a force is applied is an important yet often overlooked element of strength. Traditionally strength is perceived as the ability to move the heaviest weight possible. However, this is just one aspect within the overall picture.

The application of time to the definition of strength, means that it can be classified as either slow speed maximum strength or fast speed strength.

### **Slow-Speed Strength**

This is also referred to as maximum strength. It is the maximum amount of force that can be produced e.g. the heaviest weight you can lift or the most force you can push with during a ruck or maul. This is an important aspect in rugby where the player who holds the greater maximum strength will prove dominant in contact situations.

### **Fast-Speed Strength**

Fast-speed strength, or just speed strength is defined as the force produced at high velocities. It is the force produced in around 0.2 seconds or less. Training for speed strength increases the amount of force the athlete can produce within this 0.2 second time frame. Speed strength may often be called his power.

### **Resistance Training**

There are endless combinations of resistance training programmes that can be designed by adjusting the variables of reps, rest, sets, exercise order, intensity (weight used) or exercise performed.

The specific combination of these variables can dramatically change the effect of training, to produce increases in maximum strength, muscle size, endurance and power.

Most rugby players perform body builder routines, which is perhaps the least effective type of training a rugby player could do to improve his sports performance. Try one of the three outlines below:

### **Resistance Training Session 1**

Reps 5 - 15

Rest 2-3 minutes.

Exercises – All body routine (not a split routine) with multi joint large movements that targets as many muscles as possible. Pay special focus on the legs

e.g. dead lift, bench press on ball, lunge, bent over row, squat, chin ups, power press, cable twist, standing cable bench press

Notes: This training can really drain the legs and make you stiff for days afterwards. Start easy and build.

### **Resistance Training Session 2**

Reps : 4 - 10

Rest : 3 minutes +

Exercises – Multi joint large movements e.g. dead lift, squat, bench press, chins

Notes: DO NOT use maximum weight, use lighter than maximum loads and stop before fatigue is induced

See periodization to learn more about how to vary these and which ones to use.



## **Sprint Training**

To develop your speed you need to be performing sprint training. However, there are different components to speed and thus different ways to focus your training.

Speed in its simplest terms is the time it takes to cover a distance. It is a product of stride length and stride frequency. The winner over a certain distance is deemed the fastest e.g. the winner of Olympic 100m final is deemed the fastest man/woman in the world.

In rugby, as in other sports, speed is found to be more complex than first appears, being made up of three different components:

### **1) Acceleration**

The time it takes to go from a standing or slow speed to maximum or higher speed. It takes between 20 - 50m to reach top speed, elite Olympic sprinters take longer to achieve top speed (around 50m) compared to novices (20m). This means the novice athlete must focus on speed endurance more as they have longer in any sprint to maintain top speed compared to their elite counterparts. The ability to accelerate is heavily influenced by leg strength. It is the most important aspects in rugby along with speed endurance.

### **2) Maximum Speed**

This is the maximum velocity (speed) that can be achieved. The maximum top speed displayed by an athlete is dependent upon neuromuscular co-ordination and the legs' fast speed strength. Top speed is not reached immediately and for many players during a game it is never reached.

### **3) Speed Endurance**

This is the ability to maintain maximum speed or the ability to repeatedly perform successive sprints at the same speed. Speed endurance is dependent upon the metabolic conditioning of the anaerobic systems.

## **Quickness**

This is the ability to move a body part at the highest possible velocity. . In rugby, quickness is important for passing and kicking the ball or in throwing a fake directional move e.g. side-step. It is closely related to the body's neuromuscular co-ordination and speed strength.

## **Sprinting Technique.**

Underpinning your speed is your technique. This can be developed using sprint drills during warm ups and restoring ideal posture through static stretching and corrective strengthening techniques.

### **Different Training Techniques for Different Abilities**

There is no one technique that will produce dramatic improvements in each facet of speed. Instead the athlete needs to address all qualities to allow him to be seen as 'fast' across the pitch and for the whole duration of the game.

Many positions in rugby rarely need to reach maximum speed. Acceleration and speed endurance normally being the key components of speed. This is because a player rarely has time to achieve maximum speed or chooses not to reach it, e.g. it is hard to change direction at 100% full speed. Secondly, as rugby is played in a state of fatigue, it is often the least tired person with best speed endurance that wins one on one.

To accommodate this, sprint training needs to focus on all the qualities needed on the field. Try using these different training techniques as part of your plan to improve your sprint speed on the field of play.

#### **Sprint Training Session 1**

Distance: 300 + 400metres

Reps: 3-5

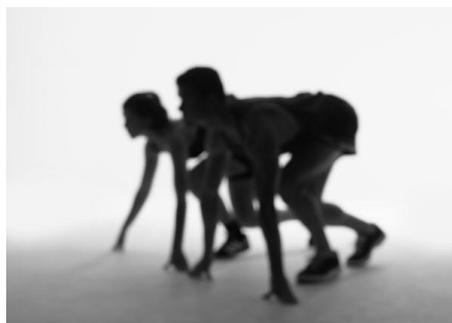
Rest: 5 minutes

#### **Sprint Training Session 2**

Distance: 125m, 100m, 75m, 50, 25m

Reps: 1-2 reps per distance

Rest: 3-5 minutes depending on distance run and fatigue



## **Agility Training**

Agility is your ability to stop explosively, change direction and accelerate again. It encompasses movements in non-linear directions, e.g. backward, diagonal running etc, as opposed to just straight line speed. Agility is a crucial requirement in rugby and most team sports, as movements more often than not are multi directional.

The player who can change his speed and direction the most effectively will often prove superior. Agility is determined by the athlete's fast speed strength in all movement directions and the body's neuromuscular co-ordination of the muscles involved.

Agility training provides a vital but underestimated component. The training develops your ability to change direction, speed, angle and movement type in all directions. Increased agility skills results in improved performance in one-on-one situations.

## **Agility Technique**

The correct technique is a vital component to producing an agile athlete. The technique should be developed through practicing good technique within the drills and restoring ideal posture. Efficient posture for multi-directional movements and changing speed, includes using a powerful arm action, staying relaxed while being on the balls of your feet with the head and eyes in correct alignment.

## **Agility Exercises**

The agility exercises use a variety of different movement drills, all of which are performed fatigue free to allow for effective practice of the technique. The agility training methodology is separated into different types of movements which have varying degrees of complexity. The movements are:

### **Foundation Movements**

These drills develop the foundation needed for multi-directional movement. The exercises are composed of simple non-linear movements upon which more complicated and demanding exercises are based.

### **Basic Movements**

The exercises combine the foundation movements to produce more advanced but still simple patterns. The protocol teaches the player simple transitions between movement types.

### **Combination Movements.**

The exercises develop more advanced movement patterns. The protocol focuses upon changes in speed, direction and types of movement.

### **Rugby Specific Movements**

The drills are designed to reproduce the forces and movements encountered during a game. The protocol includes some specific elements from the rugby field, to prepare the player fully for competition.

### **Combining the Techniques**

When and how to combine these different techniques and movements, depends upon the laws of periodization.

### **Getting Started on Agility Training**

If you are new to agility training, then try to practice these two simple foundation movements. Ideally do this before a sprint session or team practice.

#### **Agility exercise 1 - Diagonal Running**

Facing forwards, sprint diagonally (at a 45 degree angle) for 20m

Ensure your hips are facing directly forwards, not in the direction you are running

Repeat in the other direction

#### **Agility Exercise 2 - Backward Running**

Facing forwards with your weight balanced over your feet, sprint backwards for 20m

Ensure you remain facing forwards for the duration

Alternate foot starting position

**Plyometric Training**

There are two components to strength, maximum strength and fast speed strength (power). Your power is crucial to on-field performance. One major contributor of power is the ability to use the stretch shortening cycle, as it provides a significant amount of energy to any fast paced movement.

To develop and enhance the body's ability to store energy during the stretch shortening cycle, you can perform exercises that are called plyometrics. These involve short, fast and explosive movements that will, over time, improve your ability to store energy in a stretched muscle and use it for more powerful and explosive movements.

A testament to the power of plyometrics is the fact that every professional sprinter and track and field athlete uses them extensively in their training to improve their power and speed. Long term use of this training method will allow you to become quicker, stronger and more agile.

**Intensity of Plyometric Exercises.**

Plyometric exercises can be classified as low, medium or high intensity, from the effect and stress they put on the body. Unless you are familiar already with this training technique, you should begin by performing fairly low intensity drills. Try performing these two exercises listed below.

### **Plyometric Exercise 1 - Squat Jumps**

This exercise trains the muscles ability to produce force with a two-legged pushing action

*Technique:*

- Assume a squat Position
- Jump upwards as high as possible
- On landing immediately jump again and repeat for 10 repetitions
- Perform 2- 3 sets of this exercise



### **Plyometric Exercise 2 - Lateral Jumps**

The jump focuses on the ability of the muscles to produce rapid force in a lateral direction

*Technique:*

- Using a movable object that is knee height or below. (or use a line on pitch)
- Jump laterally over the object
- Upon landing immediately jump back to the other side and repeat for 10 repetitions
- Perform 2 -3 sets of this exercise



**Do not perform any these exercises if they produce pain or if you are suffering from any form of injury.**

## Core Training

This can be defined as the strength of the muscles that stabilize the hips and spine during movement. Strong core strength is essential to performance as it holds the body solid, to allow full force transfer.

For example, when tackling a player you hit them with your shoulder, a strong core would allow all the force in your legs to be transmitted through into your shoulder and onto the opponent. A weak core would not transmit anywhere near the same force and you could see your body buckle and collapse under the pressure, often resulting in a missed tackle.

The core muscles relate to, amongst others, the deep transverse abdominal (below the main stomach muscles) pelvic floor muscles (muscles that stop you going to the toilet), deep spinal muscles and the gluteus muscles (buttocks). Through ensuring these muscles are correctly working, then improving their strength, the body builds a solid foundation upon which to increase the strength of your limbs.

## Core Exercises

Core training is a subdivision of resistance training. The importance to performance is significant and therefore it is separated out into its own method. The technique for core exercises are divided into two aspects. Firstly, it is vital to learn how to correctly engage the protective muscles of the midsection. Once achieved, the focus is then placed on strengthening these muscles through various exercises.

## Core Recruitment

To learn how to correctly recruit the core muscles you must first learn how to hold a neutral spine. This refers to standing with correct posture and thus ensuring all the joints are optimally aligned. To find your neutral spine:

- Stand with your heels, buttocks, shoulders and head against a wall
- With one hand feel how much space there is in the arch of your lower back
- A neutral spine should have just enough room for one hand to slide into the arch of the lower back, while the heels, buttocks, shoulders and head remain touching the wall
- If you cannot get your hand in the arch or there is room for much more than one hand e.g. your fist, your posture needs to be adjusted, this will come from following the set out stretches and strengthening exercises.

In the neutral spine position you can then activate the core muscles. To do this you need to consciously

- Breathe in using your diaphragm (pushing your upper stomach outwards).
- Contract the pelvic floor muscles, by stopping yourself going to the toilet at the back, then the front
- Draw the stomach area below the belly button into the spine as close as possible. Imagine you are trying to pull on a really tight pair of trousers and must get them over your lower stomach

In addition to activating the core, it is necessary also to use the larger muscles of the buttock and midsection.

## Core Strength Exercises

The exercises are designed to challenge the core by using a series of holds and movements which combine your body weight and often a Swiss ball. Each of the exercises are designed to challenge the body to gain core strength in each movement direction. The exercises are progressed through increasing their difficulty and relevance to movements performed on the field of play.

### Core Exercise 1 - Ball Plank

- Ensure you maintain a straight spine and hold the position below (progress to 1 arm)
- Make the exercise harder by moving your arms further from your body



### Core Exercise 1 - Ball Bridge

- Ensure you maintain a straight spine and hold the position below
- Make the exercise harder by introducing movement by straightening your legs (progress to one leg)



## Variety in the Core Exercises

How to vary the core exercise by duration, difficulty and type of exercise is covered through the concepts of periodization. Without using these simple yet powerful concepts, your strength will be inhibited in the long term.

## **Flexibility Training**

Flexibility training focuses on the resting muscle lengths to restore ideal posture and the active movement ranges, to enhance performance. There are two types of stretching to cover this:

### **Active Flexibility.**

This refers to the amount of movement you can actively produce around a joint. For optimal force production the body needs to be able to stretch to certain lengths so the muscles are in an ideal position to produce the most force.

A player's active flexibility depends upon static flexibility and how warmed up the player is e.g. you would have better active flexibility in the evening than the morning, or after an active stretching routine than before.

### **Static Flexibility**

This can be defined as the range of movement around a joint. It is the length the muscle can reach when slowly stretched. This determines your active flexibility and is essential for optimal performance and injury prevention. Injuries occur when there is an imbalance between opposing muscles groups or muscles from side to side of the body.

Optimal strength is produced when the body is in perfect alignment. Through static stretching yourself into this position all the time, and without thinking about it, you will greatly enhance strength and performance levels.

### **How to Stretch**

An active stretching routine uses a series of movements that serve to warm up and lengthen the muscles and connective tissues. A short routine should be used before every training session and upon rising. An example exercise would be arm circles, torso twists etc.

Static stretching should be focused upon the tight muscles and there are three main techniques which can be used when stretching. These include tricking your nervous system to relax the tight muscle to give you dramatic increases in flexibility.

### **What to Stretch?**

For static stretching it is important to test which muscles are tight before starting a stretching routine. This guides you to which stretches you should concentrate upon. Active stretching should be used for the whole body with emphasis on movements required in the following activity.

**Options to help you dominate on the rugby field**

If this guide has opened your eyes to how you can greatly increase your fitness and performance on the field of play you may want to consider one of my personal services.

**Player of the Year Personalised Training programme**

This plan is ideal for anyone who has ambitions to win Player of the Year or most improved Player at their club. Surprise your teammates with your fitness transformation through following my personalised training programme which has helped numerous other players win awards. For more details go to:

<http://www.rugbyfitnessstraining.com/Products/Rugby-fitness-training-player-of-the-year-plan.htm>

**Power Nutrition for Rugby**

If you are looking to gain muscle and/or lose body fat then you must address your nutrition routine. With the right diet you will be able to accelerate muscle growth and strip body fat to look ripped. The Power Nutrition for Rugby programme uses individual nutrition testing. The programme delivers results and also allows you to be able to fit in with your teammates by having a few beers after the game. For more details go to:

<http://www.rugbyfitnessstraining.com/Products/Power-Nutrition-For-Rugby.htm>

**Optimal Rugby performance E-book and special gifts**

Transform your rugby performance with this comprehensive digital download. Follow the six months of training plans and combine in cutting edge advice on nutrition and motivation. Enjoy an accompanying audio programme which explains exactly how to maximise the benefits from the plan. For more details go to:

<http://www.rugbyfitnessstraining.com/Products/rugby-fitness-training-Rugby-E-book-buy.htm>