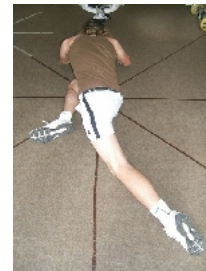


# **Physical Solutions**

Physiotherapy, Functional Training and Education



## Physical Solutions Cycling “Bodywork” Programme

[www.physical-solutions.co.uk](http://www.physical-solutions.co.uk)

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## Introduction

**physical-solutions.co.uk** presents a structured physical training programme now available online to all cyclists, and cycling fitness professionals.

This is a comprehensive cycling-specific training progression that targets all the main goals that will help you improve your performance on and off the bike.... we call this attending to your **“bodywork”**.

- The cyclist’s body is their engine, an organic machine that needs regular servicing and development if it is to perform to its optimum potential. Investing in the latest frame, rims or gear set is of little use unless equal investment and time is applied to the engines that powers them.
- There are specialist **“functional”** physical demands in the sport of cycling that if ignored will hold back performance.
- Successful and high performance cycling is a result of many factors coming together at the right time... “the sum of all the parts”, be they technical, tactical, nutritional, environmental and, of course, **physical**. All areas need to be attended to with high quality input.
- The body adapts to any sustained demands that are placed upon it. This adaptation of a cyclist’s physicality can be both desirable, and undesirable. The cycling machine can develop at the expense of other physical factors... suppleness, posture, symmetry, muscular recruitment patterns and co-ordination. The Physical Solutions “Bodywork” Programme not only aims to improve the sport-specific physical tools that cyclists need, but also puts in place a strategy to offset over-use and over-adaptation physical issues that are associated with the sport.

This programme will provide the workouts and exercise pathways needed to maintain the cycling athlete during the season and to build an effective off-season plan to improve physical performance.

The “Bodywork” programme draws upon the exercise pathways and workouts presented in the **Physical Solutions Functional Resource**. The Functional Resource is a stand-alone downloadable product. For the cyclist or trainer it provides a comprehensive physical training collection. It is designed with a quick access menu system, easy to navigate reference sections, and single button printing to help guide you through your own workouts, or your client’s sessions.

The Functional Resource provides clear introductions, theory and guidelines about each exercise pathway or workout presented, however it is always recommended that relevant health screening procedures are followed before initiating a training programme. The printable exercise pathways are all extensively illustrated with full colour images and offer ideal materials to use at home, in the gym, or with your current personal trainers and fitness professionals. They are exactly the same exercise pathways we use whilst training with our own cyclists and athletes, and can be used to develop training programmes across a variety of sports and activities.



### **Develop and Maintaining a Flexibility and Stability Base**

Laying down and maintaining a physical foundation that supports your cycling performance is the priority.

Cyclists are becoming familiar with the role that core and torso stability play in supporting a sustainable and powerful “technique”. There are also issues of specific flexibility to be found around the hips and lumbar spine that need to be developed in parallel with this stability.

What is becoming increasingly apparent is how a cyclist’s athletic performance off the bike can be sometimes negatively influenced by the hours of specialist performance in the saddle, and expansive flexibility training can help to reduce this influence.

#### **Programme 1 : 3-Dimensional Stretching**

In bio-mechanical terms cycling can be thought of as uni-planar activity. The same joints and the same muscles go through the same ranges of movement time and time again (sagittal plane). These foundation stretches target essential muscles and movements throughout their full 3-D planes. Being able to achieve and maintain a cycling “jack-knife” posture between the spine and femur requires that the lumbar extensor, gluteal and hamstring muscles are relatively “long”. However long hours in the saddle may also cause the opposing hip flexor groups to become short and dominant. Three-dimensional stretching helps to address both of these issues.



### **Programme 2 : Introduction to Sequence Stretching and Corrective Flexibility Sequence**

The foundation stretches are now taken into 2 similar sequences designed to “open out” specific movement patterns that helps the cyclist’s body to become flexible and supple as a combined unit... essential for a effective athletic function. Ideal for recovery routines and regular home maintenance stretching.

### **Programme 3 : Wall Rope Stretching**

More advanced and powerful stretches covering the whole body and using a fixed rope as a tool to facilitate greater range. There is a strong component of upper body and spinal stretches in this pathway... very important in a sport that can “shut-down” movement patterns of the upper torso. Particular target areas to pick out are the pectorals, the lats, and the thoracic spine.

### **Moving on to Stability**

Flexibility is of no use without also developing stability. To develop an efficient and powerful “action” on the bike requires that the legs push and pull from a stable chassis... this chassis being the lumbo-pelvis and torso of the rider. This core, or power centre, has to be posturally reliable and fatigue resistant. Recent training trends have seen cyclists valuing the physical performance gains offered by exercise systems such as “core stability” training and Pilates. At Physical Solutions we have realised that core function in cyclists may appear to be static in nature, but fundamentally is as dynamic as that of say a runner or a speed skater. Hence we train it with a progression through to dynamic stability. Later in the programme we move on to more targeted stability around the pelvis and hip.

### **Programme 4 : Abdominal Facilitation**

Developing correct control of pelvis, spine and shoulder girdle alignment via the abdominals in order to take this forward into more advanced stability exercises. This is a fundamental pre-requisite to cyclists who are new to stability training.

### **Programme 5 : Reactive Core Stability**

A unique programme developing reflex/sub-conscious core and body stability, and also beginning to introduce dynamic and balance components. Simple to perform but producing great carry-over into the next sequence.

### **Programme 6 : Integrated Core Sequence... propulsion pattern**

This is an absolute must for all cyclists. We introduce it early and constantly re-visit it during our training programmes. The propulsive knee lift pattern is cross-referenced with torso stability. One hip flexor drives up as the opposing leg extensors drive down... all on a stable base. This programme trains the spine to hold a neutral posture whilst performing the leg action... essential for achieving aerodynamic posture on the bike. A massive training target for performance cyclists to master off the bike and take into their riding.

### **Programme 7 : Stability Ball**

A comprehensive collection of exercises incorporating the ever popular stability ball... still an effective tool to challenge and develop stability. Each position is fully illustrated and progressed. A strong element of centre of gravity displacement and balance control is also introduced.



### **Improving Balance**

With the flexibility/stability foundation in place you are now ready to develop one of the essential physical ingredients of a great athletic function... dynamic balance, or what we call “balance in motion”. Total trust in your ability to move powerfully and dynamically yet remain in perfect balance is your training goal. The functional carry-over of balance training into dynamic sports is quite obvious, and within cycling it is also becoming apparent. There are some disciplines within the sport where it is clearly essential and there are others where it may not seem as important. At Physical Solutions we believe in constructing athletes, and we do exactly this regardless of what sports they play. Integrated balance work offers potential “cross-training” activities that should be part of a cyclist’s over-all training activities.

**Programme 8 : Dynamic Balance**

A programme that we use with all our sportsmen and women, and particularly relevant to athletic function on and off the bike. It progressively builds from simple to more complex balance development exercises.

**Programme 9 : Three Dimensional Core Balance**

Progression to a more advanced level by challenging and enhancing the core/torso via control of balance and body momentum. An inventive workout that develops the core “engine” of the cyclist, and introduces functional core strength exercises.

**Programme 10 : Specialised Balance and Equilibrium Training**

As its name suggests we are now in a more specialised training zone with potentially more carry-over for the cyclist. The emphasis is on working with, and controlling, a mobile surface.... the feet are no longer on the ground.

**Combined Forces****Programme 11 : The Total Body Matrix**

We have now developed advanced skills and ability with 3 essential physical components of high performance cycling... flexibility, dynamic stability, and balance. All 3 are further refined within this next progression. A great “benchmarking” workout requiring minimal, or no equipment, it can be used throughout your continuing training programme to answer physical questions:

How flexible does my whole body feel?

Am I in control? Are my movements smooth and complete?

Can I get to my end ranges in perfect balance?

Do my movements have great timing and sequencing?

These are the questions asked by a dynamically healthy body, and mastering The Total Body Matrix will provide positive answers.

This matrix has an added advantage for the cyclist. It offers a “one stop” solution to potential over-training muscular and postural compensations and faults. The body is taken into its full functional ranges in one easy system. Performed regularly after hard riding sessions and during rest days/periods it provides a foil to these asymmetries and will also reduce post exercise muscle fatigue pain and tightness. It puts in place a system of nutritional multi-plane movements at the ankle, knee, hip and spine where previously there may have been none.





### **Advanced Corrective Flexibility**

There are two target areas of mobility dysfunction that we constantly see in cyclists... the thoracic spine, and its associated shoulder girdles, and the lateral glutes and ilio-tibial bands of the outer hip. Postural fixation and repetitive overuse lead to a shutting down and shortening/dominance of these structures. Over time you begin to look like a cyclist.... externally rotated feet, rounded upper back, internally rotated arms, you know the look... it's not always that pretty and can hold back general athletic function.

### **Programme 12 : Thoracic Spine Mobility**

So many cyclists are trying to achieve efficient and aerodynamic postures on the bike when they simply haven't got the flexibility and joint ranges to comfortably achieve it. This is an advanced corrective mobility pathway that mobilises the spine and shoulder girdles. It builds into a fully integrated programme that will maintain and improve spinal posture and function. There is also an emphasis on rotary movement, which can be suppressed by long saddle hours.



### **Programme 13 : ITB/TFL/Lateral Glute Flexibility and Release**

A mouthful, but again an essential "offset" programme for the cyclist. We have kept it uncomplicated but it includes effective stretching techniques to release lateral hip and thigh tension and dominance. This programme also has a direct and positive impact on knee health for the cyclist as this joint often suffers from a distortion force due to tight lateral thigh structures.



### **Strength Training**

Everything is now in place to move on to strength enhancement training but still within a cycling functional context. Cycling strength training should not be performed at the expense of other abilities... such as flexibility, and stability... hence at Physical Solutions we use strength programmes that also combine advanced elements of these qualities. It should also target the primary contributors to the cycling “engine” but in a functionally integrated way. We want to build cycling muscles, not beach muscles!

### **Programme 14 : Gluteal/Hip Stability Programme**

Headlined as stability, but with a strong strength element, this programme is a companion to programmes 15 and 16. A comprehensive and balanced workout that attacks the cyclist’s power source... the hips, pelvis and thigh musculature, preparing them to be further developed in the next two progressions.

### **Programme 15 : Improving Lunge and Separation**

One thigh drives up as the other thigh drives down, the pistons, the power strokes... the ability to “separate” with efficiency and force. This innovative workout pathway is an advanced strength development challenge with a high functional carryover for the cyclist.



**Programme 16 : Gluteal and Extensor Functional Strength**

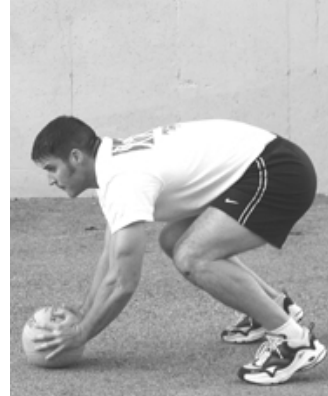
The cyclist's extensor muscle groups drive the bike forward. This is a programme designed to target this area in a highly imaginative but effective way. These are demanding full range strength exercises incorporating bodyweight and body positioning variables... if you have the foundation of all the previous programmes behind you your legs will become strong, if not it will hurt!

**Programme 17 : Training the Abdominals for Function**

A review programme that targets the "crossroads" of all athletic function... the abdominals and the torso musculature. At this stage of your programme this is a good time to revisit abdominal/torso training and to re-enforce the role this plays in performance cycling.

**Programme 18 : Single Leg Squat Facilitation**

Is the genuine full range single leg squat the ultimate expression of leg strength and functional ability? Much has been written about it... mostly rubbish. Our facilitation pathway takes on this "ultimate" exercise with a progressive approach that builds your single leg squat potential safely. It is the wrong place to start your strength training phase, but it is the right place to finally develop and challenge your true lower limb functional strength.



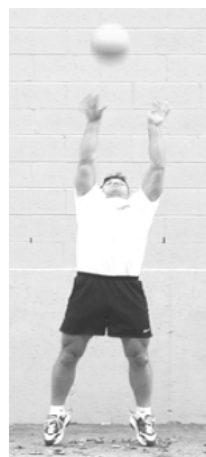
### **Power Production**

One of the final goals of any balanced training programme is to enhance your total body power production. This is not macho speak, but plain physics. It depends upon a foundation of flexibility and stability being taken into a phased strength programme and eventually being expressed as power. We can talk incessantly about “work” and “strength over time co-efficients”, but in cycling terms there will be a stage where you want to shift the same mass (you and the bike) a whole lot faster, and that’s going to smell of power.

Power training for cyclists has tended to be based around lower limb plyometrics, jumps, speed squats etc. This undoubtedly has a strong role to play, however functional training developments suggest that power, probably more than any other “ability”, is a cumulative expression of the total bodies “physicality” rather than the bit that looks like it is doing all the work. Put simply, all power production is produced from the “tongue to the toes” and should be trained with this in mind. At Physical Solutions one of our main power production tools is the medicine ball used in an expansive total body way.

### **Programme 19 : Medicine Ball Training**

Fully illustrated, as with all of the previous programmes, this is an extensive medicine ball programme that develops through basic warm-up and multi plane exercises to dynamic strength and finally power throwing activities. Great fun, practical and proven effective. It offers the cyclist a means to develop total body power, but also a way to alternatively challenge and develop their physical ability.



**And Lots More....**

Follow the Physical Solutions Cycling Bodywork Programme and you will be a more efficient and stronger performer on the bike, accelerate your recovery rate and bring a new and enjoyable dimension to your training programme. You will also become a more rounded and accomplished general athlete. However the programmes and progressions used represent less than half of those found in The Functional Resource. You will also find programmes on:-

- Functional and three-dimensional approaches to the Lunge, Squat, Press-up and Step Up. Traditional training with an innovative functional edge.
- Integrated Dumbbell training, Pulley Training.
- Forearm and Rotator Cuff training, Cervical Training.
- Corrective Exercises and Sequences.
- Chains, Slings and Highways... Kinetic Chain Training.
- Comprehensive guest sections from “primal” training specialists GoAnimal, and another collection from US company Perform Better.

We are confident that you will want to integrate many of the above into both your cycling training programme and your general training programme.

Use this programme with The Functional Resource,  
available at just £24.99  
download from:

[www.physical-solutions.co.uk](http://www.physical-solutions.co.uk)

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