



Southern Lions Rugby Union Football Club
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Southern Lions RUFC High Performance Program

Strength and Conditioning Newsletter No 2

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Topic: Injury Rehabilitation

Introduction

Most rugby players have heard about core stability and many may have been working to develop this physical capacity. I prefer to call core stability “control and endurance (CCE)” because this outlines what is really needed to develop this vital area of rugby performance. The core is enhanced by controlling the involved muscles which, in turn, creates endurance.

The Why

The core, the muscles between the ribs and the hips, creates the platform for everything that the arms and legs do. A strong core creates a stable connection for the transference of the power developed by the legs up to the arms and a base for the actions of the arms. Picture a top level sprinter in slow motion, Usain Bolt if you like, in the “cruise” phase of their sprint; whilst their arms and legs are working powerfully and moving at high speed, their trunk is essentially motionless. You can imagine that if this were not the case, then the quality of movement and therefore their ultimate performance would be negatively affected. It is equally important in rugby to have this capacity although the demands of the game are much more varied than simply running.

The What

We’re targetting the lateral and posterior (side and back) muscles of the abdomen. There are muscles that connect the ribs to the hips (transversus abdominus or TA) and the multifidus which connects the large bones in the lower spine. They work in unison to stabilise the trunk- when TA is switched on this activates the multifidus muscles. Interestingly, the “six-pack” muscles play a relatively minor role in trunk stability. Activating and training these muscles is the essence of developing CCE. The stabilising muscles are unable to contract powerfully, they’re not prime movers, but rather they do their bit by remaining switched on at low levels of force production. Sedentary activities (sitting) and injury can reduce the ability of these muscles to contract and lose their endurance. Intentionally switching these muscles on during a range of activities at work, leisure and during specific training is the way to develop them.

The How

Control - whilst there is an expensive way of visualising the TA muscles working (or not) the simplest and very effective way of switching on the TA/multifidus muscles is to simply elongate the spine. The action of these muscles can be checked through a simple self-test which I won’t describe here.



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Imagine that you have a hook attached to the top of the head pulling along the line of the spine. By simply doing this you will switch on the important muscles of the core. Whilst this is relatively simple to do for a short time the hard part is to remember and have the ability to do this for extended periods. The good news is that this “switching on” or control can become as automatic as walking. By this means low level endurance is developed.

Endurance

Higher level endurance is attained by maintaining a long spine and challenging the trunk with activities of gradually increasing difficulty. In the horizontal position the plank and the side plank are the simplest (but not the easiest) exercises. The key issue is to perform these with 100% control with no movement around the spine (more than 2-3mm.) Maintaining 60 seconds in these positions indicates a good level of static endurance. From a static foundation the next step is to maintain the long spine but perform increasingly difficult movements. It is too complex to list these exercises in this document but they will be demonstrated and included in club strength and conditioning sessions. Finally, your CCE is developed by performing your resistance training program with good form- particularly lifts such as the squat and deadlift.

Exercise Prescription: Resistance Training

Frequency Always when standing or sitting
When resistance training
2-3 times per week for a targeted program

Exercises 2-4

Sets and Reps 2-4 sets of 6 repetitions/holds for 30-60 second (depends on exercise)

General Comments

Core control and endurance is an easily trained physical capacity that can have a major positive impact on your performance. In the early stages it can be challenging but it worth persevering.

If you are carrying an injury and you require assistance with your rehabilitation program please discuss this with me.

If you have any comments regarding this newsletter please let me know, preferably by dropping me an email at simon.c@optimal.net.au.

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