

A stable spine



Bridge single leg raising

PHOTO: IAIN WEIR



Core strength will help your rowing posture, explains **Mark Edgar**, Head of Medical Services for the GB Rowing Team

Core and trunk strengthening plus core stability are crucial in strengthening the body zone between the shoulders and the upper thigh. The idea of strength in this region should be coupled with the coach's

load during the power phase.

We can divide the zones under consideration into a few areas...

Stability

The abdominal wall consists of layers of

muscles. These muscles initiate spinal extension and help control spinal flexion.

The relationship between the abdominal wall and the spinal extensors is much like a yacht mast with the stability of the mast to yacht being achieved by the port and

“The relationship between the abdominal wall and the spinal extensors is much like a yacht mast with the stability of the mast to yacht being achieved by the port and starboard stays”

impression / vision of the body position. This is the ability of the rower to transmit load from the leg drive to the hands when holding the oar or scull without allowing that area to deform under the increasing

muscles that, when contracting, assist spinal flexion (like curling) and spinal rotation but also resist, or control spinal extension (like the cobra exercise). The abdominal wall muscles work in synchrony with the spinal extensor

starboard stays. Tension in both sets of stays is required to keep the mast upright when the boat is pitching and tossing under the loading that the wind provides to the boat via the sail.

Take it further

British Rowing's posters are coming to your club soon! Look out for the following exercises:

- Curl to catch position
- Reverse curls
- Abdominal curl downs
- Abdominals with alternate leg straightening
- Plank – and progressions
- Side plank – and progressions
- Bridging – and progressions
- Leg raising over bench – and progressions
- Lunging – and progressions

At the catch, the abdominal wall helps stabilise the spine by compressing the abdominal contents in the attempt to make a solid fluid-filled cylinder. In comparison the spinal extensors load and compress the spine to assist in the load transmission controlling any possibility of deformation.

Your coach will be involved in deciding which spinal posture is optimal, what is achievable and what is actually being performed. Put clearly though, you should maintain the posture during the

loading phase, making sure that the abdominal wall does not collapse under the increasing drive phase load. But as discussed in previous articles, it is equally important not to overdo the posture thing and row as though you have a rod up your back.

Power

The actual drive power comes primarily from the quadriceps and the gluteal muscles. The quads' primary function is to drive the knees from a bent position to straight. This is fundamental to rowing.

The gluteals assist in driving the thigh bone (femur) from hip flexion (thigh to chest) to thigh down and with the pelvis in the finish position. The quadriceps are easy to train – squats, step-ups, leg presses and jumps are all good exercises. The gluteals are not so easy to train and so you will need to pay special attention to them in your programme. Exercises such as single leg squats, lying on your tummy and lifting your thigh off the floor or high step ups are all beneficial.

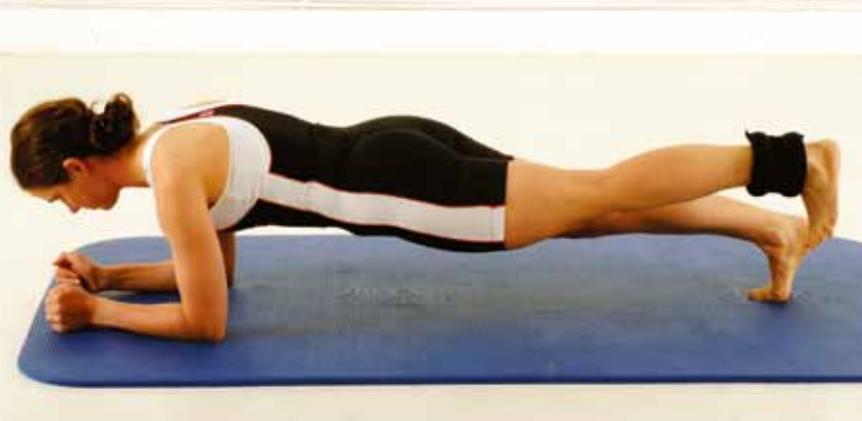
Remember that your hip should be flexed at the catch before stopping moving at the finish. ■



Reverse curl – a difficult exercise to do properly if you have tight hamstrings



The plank with a single leg elevated



Side plank – don't let your body sag in the middle

Jenny's tip



It is important not only to learn to engage the core muscles while keeping other muscles (e.g. shoulders, hip flexors) relaxed, but also to learn to keep the core engaged throughout the stroke, right through to the finish. A mistake that is common amongst more inexperienced rowers is to release the core too early, so losing the strong posture and connection.

Jenny Rachel has been coaching for ten years, predominantly with men's and women's senior groups. Currently coaching the senior women's group at Maidenhead RC, Jenny is also a qualified sports and remedial massage therapist.

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