

INJURY PREVENTION

STAYING STRONG

🧡 A strong core, proper stretch and warm up can help reduce the risk of injury and improve recovery times. Hip, ankle and knee injuries are common in teenage girls, particularly from running on hard surfaces. Developing fundamental movement skills for your sport isn't just about being a better athlete or player - it will help prevent injury.

These HerMoJo exercises will help strengthen and mobilise localised areas (shoulders, ankles, knees, elbows, wrists etc.). Helping to supplement and support the other muscles and reduce the risk of injury.

🧡 Developing a strong trunk is the best way to prevent injury (particularly to your back). It will improve your rowing technique, posture and, in the long term, your boat speed and love of the sport.

“My back shape changes between ‘lifting’ and ‘rowing’”



Lifting – stabilise the back and flex from the hips



Rowing – keep your pelvis upright and your spine quite relaxed

TOP TIPS



At the ‘catch position’ your hips should be upright with some gentle curvature in your back. Hips fully flexed and shins vertical.

Imagine your spine is a gently curved arch with load distributed evenly along it. Think how strong an arch is – and how it can prevent your back being injured.

STAY STRONG

- ➔ INJURY
- ➔ POSTURE
- ➔ STABILITY
- ➔ X TRAINING

POSTURE AND STABILITY

STAYING STRONG

TOP TIPS



Protect your back – don't 'slump'. Keeping your lower back stable will help you 'sit up' with a 'high' rib cage. And be proud of it!

Feel power transferring through your core. ("Strong Core")

Don't slump on your buttocks, 'sit up' on your sitting bones and imagine somebody is pulling a tuft of hair upwards

Try erging on a 'spongy' seat

"I think - hands, body and then reach off backstops with great posture"

HerMoJo exercises are designed to develop a strong centre around which joints and limbs can produce and transfer force, reducing uneven loading and overloading. Poor posture stems from a weak core and hips. If your hips are weak and cannot flex you will compensate for this by destabilising your lower back. This results in a loss of power transfer and increased risk of lower back injury.


Focus on hips – Hip strength and flexibility will increase stroke length and power delivery. Better flexion 'off backstops', by increasing the hip-to-spine angle, not only improves posture but has a huge impact on stroke length and power.


Posture v Power – never sacrifice posture for power in the boat or ergo. Particularly on the ergo – don't always focus on your score (cover the score up sometimes). Every stroke you pull with bad posture is a stroke backwards. If in doubt, drop the resistance /drag, keep full range of movement and rock-over (getting length from backstops).



CROSS TRAINING FOR ROWING

STAYING STRONG

 Rowing is a 'closed' highly restricted, repetitive sport – you do roughly the same thing every stroke. So you (and your coach) are likely to restrict training moves accordingly. This runs the risk of injury and boredom through repetition and overuse – particularly of the lower back. There's a list of good reasons for teenage sportswomen to try Xtraining.

 **XTraining is fun** – you can use another sport to enhance your first sport OR as a relief from your first sport (swimming with no impact and running with high impact are often used in this way). You may also find the sport you're currently playing may not end up being your favourite!

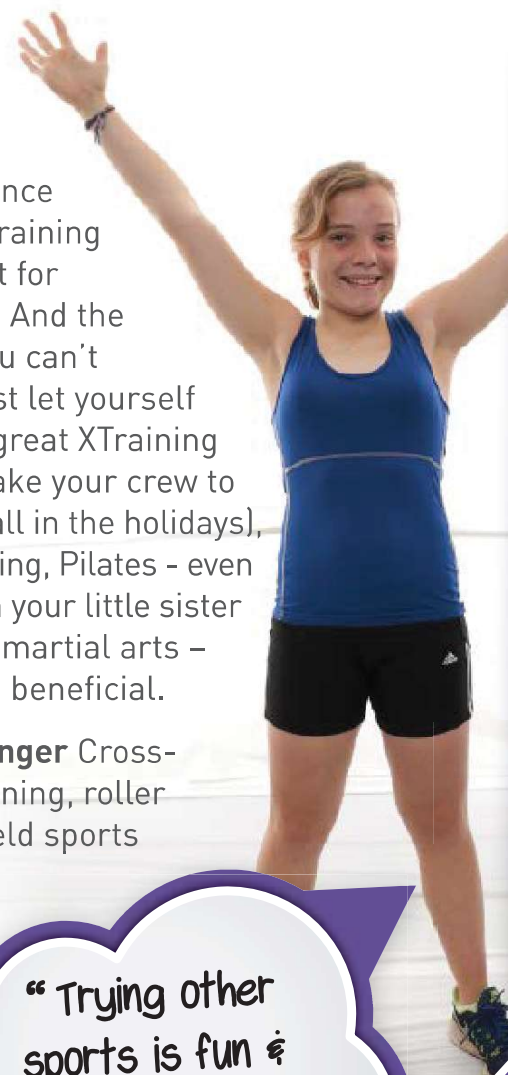
Cardio-Vascular (getting fitter) - maintain fitness and flexibility by cycling, running and swimming. All similar 'closed' sports which help support the Kinetic Chain used in rowing and improve your endurance and cardio-vascular performance. Many of these don't need to be performed intensively and can be done with mum, dad or friends! Keep thinking about stabilising your core when you do them.

Core stability (getting stronger)

- It might not sound like XTraining but dance is not only our 'fav' training exercise it is brilliant for endurance and core. And the good news is that you can't make a mistake – just let yourself go and enjoy. Other great XTraining includes climbing (take your crew to the local climbing wall in the holidays), scrambling, yoga, skiing, Pilates – even playing 'Twister' with your little sister is good. Many of the martial arts – judo, karate are also beneficial.



Other – fitter & stronger Cross-country skiing & running, roller blading and some field sports especially Lacrosse are great for cardio vascular and core.



“Trying other sports is fun & makes me a better all-round athlete”

TOP TIPS

XTraining - allows you to:

- Try other sports
- Focus on other areas (e.g. running helps diaphragm breathing)
- Randomly destabilise your core
- Build asymmetric strength
- Alleviate boredom
- Train with different people in different environments
- Borrow movements, ideas and strengths from other sports
- Have fun with less pressure
- Fits with 'periodisation' in the closed season

HERMOJO IN THE BOAT

LET'S GO!!!



How do I apply HerMoJo in the boat?



Push the boat – Effective strokes originate from a series of muscles working in harmony. Look good whether you're rowing hard or just paddling. If your stroke looks relaxed and effortless you're probably using all the right muscles in harmony. In the boat or ergo – think about gradually increasing pressure on the handle as you draw to the hips. Don't jerk by using big muscles out of sync, compress more to get length and row longer – you are strengthening those core muscles – use them to transfer energy from your legs, to the water.



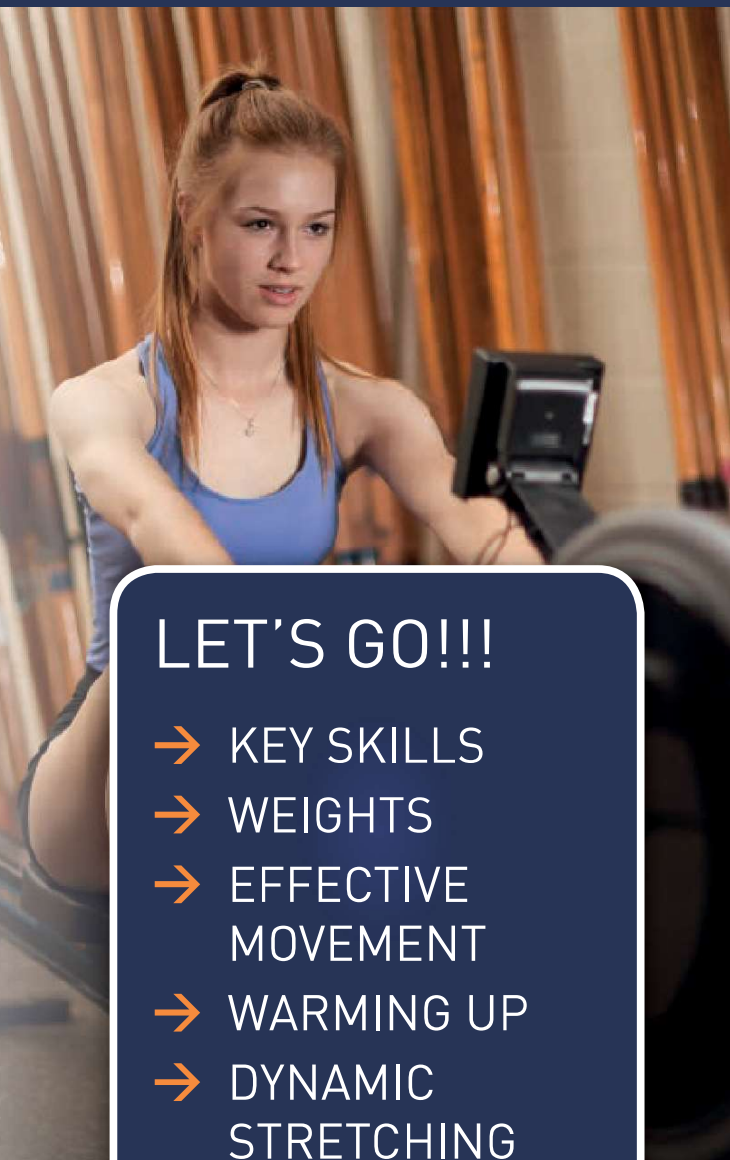
Don't slow the boat down – you spend lots of energy each stroke accelerating the boat – don't waste it. Be patient on the recovery – use your core muscles to rock over. Take most of your length forward before moving off backstops and maintain posture as you move up the slide. Feel your feet 'coming' to you and tucking up under your seat. Let your seat roll right out to length at the front and keep your upper body stable (head still) as you lift the blades into the water.



Maintain posture – HerMoJo is about improving core. Make sure you transfer this into the boat and ergo. Sit up and don't slouch. On the ergo – don't be afraid to do a ten minute ergo low drag, low rate – sitting 'up' on your sitting bones throughout. Get your coach/parent/friend to gently tug a tuft of hair up to encourage you to lift up from your hips and 'fire up' your core muscles.



Quiet paddling – as your core gets stronger you'll be better able to focus on moving the boat past the blade locked in the water. Try paddling 'quiet' – lifting the blades into the water and gently tapping them out at the finish smoothly without rushing or making a noise. Do it for 2-3 mins to really get cohesion in the crew – helping coordinate the crew's 'Kinetic Chain'. Try taking the rate down to 18 . . . then 16! How low can you go paddling quiet?



LET'S GO!!!

- KEY SKILLS
- WEIGHTS
- EFFECTIVE MOVEMENT
- WARMING UP
- DYNAMIC STRETCHING
- FOUR MORE

WEIGHT TRAINING FOR CORE

LET'S GO!!!

★ Weight training can really benefit sportswomen particularly in sports like rowing which need a lot of power. It can boost bone density and promote the strength of connective tissue (ligaments & tendons) but when and how to start?

DON'T start lifting heavy weights on your own. Without guidance, weights can be damaging to young developing bodies - affecting bone development, spinal posture and damaging connective tissues.

The resistance and destabilising techniques (Balls & Bands) we suggest will have a big impact on improving strength along the kinetic chain. This is really important for teenage girls to strengthen a wide range of muscles and connective tissue which support and stabilise your big power muscles (Quads, Biceps, Traps & Pecs).

★ Adjusted weight training

Weight training can be developed for teenage girls and be very beneficial. BUT the weights used should be much smaller. Rather than building bulk, routines are designed to help

build a wide range of muscles by destabilising and strengthening your core out to your limbs. Even low weight bearing helps sharpen your nervous system making your body more efficient.


★ It's all too tempting to try lifting heavy weights and ignoring the core and supportive muscles. So DON'T!

"Even using small weights I can feel how unequal loads improve my 'asymmetric' strength & help maintain good posture throughout the outing"



EFFICIENT, EFFECTIVE, CONFIDENT

LET'S GO!!!

 **Adjusted weight training** – use weights to increase the stabilising effect of exercises. Try combining them into the exercises in the Row Well Zone. Examples include:

Superwoman – hold a dumbbell in each hand and lifting that up to the horizontal. Try using different weight dumbbells 1Kg & 2Kg – then swap them between hands, feel the difference in your core.

Sitting Balance Ball – try doing a dumbbell arm press (2Kg weights max) – then try it with one, then two feet off the ground.

Side plank – try holding 1-2 Kg dumbbell in your upper arm.

Dead Lift – you won't be doing weighted deadlifts for a while BUT practice the movement using a broom handle and lift it from a position half way up your calf. Really stabilise your lower back and pivot your hips forward whilst curving your back inwards (concave).


Ball Crunchie - hold a 5kg weight on your chest. As always with any resistance and destabilising work, make your movement slow, full range and controlled.

"I started weight training without lifting heavy weights & made sure I was firing up all the little muscles to improve lifting technique and consistent power in the boat"



WARM UP ON THE LAND

LET'S GO!!!

 **Warm up your cardio vascular system**
- (heart and lungs) before exercise. This helps bring your body up to working temperature before too much load is applied. Opening up the small blood vessels helps oxygen transfer to the muscles. Extra bloodflow also reduces risk of injury by extending and challenging ligaments/tendons and joints to move across a wider range of movement.

Stretching - before a land session is just as important as before a water session. In some ways, more so as the stability you get from being on dry land lets you extend more comfortably and naturally focus on the length of your stretch (stroke) without the imbalance of the boat.

You can run to warm up your heart and lungs or perhaps go 'paddling' on the ergo. Once you're warmed up – stretching is essential.

Use some of the ball exercises or checkout the dynamic stretching exercises on the next page.

On the water - paddle off full stroke in pairs or fours. The extra load 'wakes up' your core without relying on the big power muscles. Then vary side length and sharpening.



DYNAMIC STRETCHING



These are a selection of dynamic stretching exercises suitable for rowers. They mainly work on your hip flexors, lower back, core and hamstrings. Try these after you have done your CV warmup. And don't forget a cool down stretch after intensive work.

LUNGE & REACH

Step forward, 'place' one leg forward into a traditional lunge until your 'back' knee almost touches the ground. Hold and reach across and over the forward knee. Feel a stretch in your 'outer' hip as you reach up and to the side. Hold then return to standing by pushing on the forward leg. Repeat other side.



SINGLE-LEG LIFT

Your hamstrings need attention every session. One foot firmly on the ground, kick back with your other heel and feel a stretch in your hamstrings. Keep both hips parallel and back flat. Extend gradually over a number of reps – hold for 2 secs. Whilst tightening into your core. Repeat both sides.



CAT & CAMEL

Your lower back transfers lots of energy so loosen it – on your hands and knees push your upper back up as much as possible, drop your head and round your lower back (Camel). Hold for 2 secs. Then arch your lower back downwards (Cat) and look up to the sky. Hold 2 secs. Alternate between these two. From the Cat drop back on to your haunches whilst leaving your hands fixed in position – try to drag your hands back along the floor as you compress down.



PRESS UP 'PLUS'

Warm up your shoulders – get into a press up (toe or knee) and at the top push your upper back up – feel your head, neck and centre of your shoulder girdle lifting up (protraction). Then squeeze blades together (retraction)



LET'S GO!!!

SUMO SQUATS

Get your glutes and quads going. Reach above your head and gently squat to a sitting position whilst maintaining a straight spine and neck. Reach both arms overhead, with hands above your head.



LOW BACK TWIST

Mobilise your entire spine. Lay on the floor bring right knee to chest and use your left hand to bring it across your body. Feel stretch in your glutes and lower back. Stretch your right arm away from your knee and turn your head to look at it. Hold 30 secs. Repeat both sides.



FOUR MORE X4

Resistance and stability training can be supplemented in a number of ways – we touch on four of them here. Use these as ‘tasters’ – but ask your coach/teacher to introduce you to these four and build them into your programme.

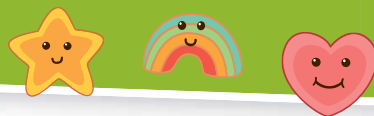
TOP TIPS RUNNING



Running is a great sport in itself but really important to develop all-round (cardio-vascular) fitness & endurance. You can run almost anywhere and running is one of the few sports that allows you to practice ‘diaphragm breathing’. Deep breathing which links contracting (pulling down) the diaphragm and the core. Run on as soft a surface as possible. This reduces jolting of the joints and also increases the training effort. Think about stabilising your core when running and keep your head still. Change your style of running - lift your knees up for 30 secs, then lift your feet up to almost to touch your bottom. Always wear good running shoes for ankle support and softer landings. Stretch before you run.

TOP TIPS WEIGHTS

Weights (and resistance weight machines) are a great way for you to supplement your core work. But **ONLY** use them to challenge balance and improve stability **NOT** to build strength in the big muscles. **DON'T** try to lift heavy weights too soon – use them to work your core. So kettle bells, small dumbbells and hand weights are ideal until you reach 16 and then **ONLY** with guidance. Much better to focus on your entire ‘Kinetic Chain’ & core.



TOP TIPS ERGO



The Ergo is a very efficient way of training most of the muscles used in rowing. Your coach/teacher will help you achieve good technique.

Every stroke should be perfect – if you were learning how to play tennis or golf your coach would stop you each time you swung the racquet badly – same with the ergo. Read up on injury prevention, think about ‘sitting up’ and be prepared to cover up the display and focus on length, full range of movement and consistent building of pressure on the handles – using your core. Try paddling light – and not using the usual big muscles (Quads, biceps, glutes) and seek out the core muscles.

LET'S GO!!!

TOP TIPS PERIODISATION

Most sports have a ‘season’ and tune their training appropriately. Rowing is a good example of how different types of training take place at different times of the year.

Generally use the winter to build your core with stability & resistance training. If rivers are flooded or snow forces you off the water – don't worry. Have fun in the gym and work that core. You'll be focusing on endurance work between October and March – then quicker exercises, higher rates and less recovery in the racing season. Work your core in the winter and it will pay you back in the summer.

