

INNER STRENGTH
OUTER CONFIDENCE FOR GIRL ROWERS



A World Rowing / Women's Sport Network collaboration

FIND YOUR ROWING MOJO

- Physical Literacy
- Resistance training
- Core movement skills
- Balance balls
- Diet & Hydration
- Coping with anxiety
- Menstruation & training



OUT OF THE BOAT 'STUFF' TO BOOST IN-THE-BOAT PERFORMANCE

“You row like a girl... good for you”

At the World Rowing Championships recently I saw a T-shirt that said ‘You row like a girl, good for you’ and I wanted to buy one for every woman I know.

Rowing has been a transformational sport for me and for so many women, of all ages. Sport, and especially rowing, offers wonderful opportunities for teenage girls, whether you think you are “sporty” or not. Getting out and active with friends, looking after yourself and appreciating what a great gift our bodies are, is all part of growing up and preparing for the future. You’ll take the confidence, enthusiasm and friendships that your sport offers forward into the rest of your lives and hopefully join the growing number of women being active and playing sport – for fun or competitively.

This manual will help you develop physical and mental confidence in your rowing. Its approach to exercises will help you develop inner strengths for good, efficient, competitive technique and provide a better understanding of how your body works, to support you through the highs and lows of daily life.

Diet, injury prevention and a positive mental attitude are all part of being a strong active woman – use this manual to support you, your friends and crew in developing the inner strength and outer confidence your sport can offer. Be proud of what you can achieve and most of all – have fun!”

**Annamarie Phelps, CBE,
Chairman, British Rowing - (2013-2018)**



Women’s Sports Network gets ‘More Women, More Active’, by helping women & girls participate in amateur and professional sport and engage in physical activity in the community.

www.wsnnet.co.uk

MOJO ZONES

HERMOJO	HerMoJo – Inner Strength – Outer Confidence
SUPER YOU!	Anatomy Mobility Stability Strength
CORE4	The basic strengths
LOOKING GOOD	Food & Nutrition Hydration Sport drinks
FEELING GOOD	Body Image Anxiety Periods Breasts & bras Healthy bones Female Athlete Triad
ROW WELL	Programmes
STAYING STRONG	Injury prevention Posture Stability Cross Training
LET'S GO!!!	HerMoJo in the boat Other stuff - Running, Weights, Ergo, Periodisation

Order more copies or a DIGITAL version here:
www.wsnet.co.uk/EBooks

First published in 2017.
Republished May 2018.
St Aubyns House Publishing,
Leatherhead, Surrey, KT22 0LF. UK

Printed by StormPress

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Disclaimer: This manual is presented with care on the basis of available research and best practice. Programmes are designed for healthy individuals with normal levels of fitness unless under the supervision of a health professional. WSNet is not liable for misuse or misunderstanding of the materials herein, for any injury which may be incurred while pursuing the programmes provided, nor for any hyperlinked contact on routines/information.

FIND YOUR MOJO

HERMOJO

You've taken up a great sport and of course you want to do well. Your coaches, club, school and parents are always keen that you try a sport and hopefully compete.

We get encouraged to 'win' and often that means kicking harder, hitting harder, pulling harder or serving quicker. Sometimes, all you want to do is have a go... and do it right before going on to race or playing competitive matches.

Today's coaches talk more about 'Physical Literacy' and 'marginal gains' - getting our bodies to work at their best and build strong foundations for the future.

MoJoManuals are here to help you and your supporters (parents, coaches & teachers) get into competitive sport. In fact . . . to help you find your 'MoJo'.

Finding your ROWINGMoJo is about efficient

movement in a confident and economical way. We'll help you through some of the issues that you face getting into sport – and head off some of the concerns you may experience. How diet, sleep, periods and anxiety can affect you – and how you and your coaches can adapt your training and preparation to develop this 'Inner Strength and Outer

***HerMoJo – find the real you with
"Inner Strength & Outer Confidence"***

Confidence' – ready to participate competitively in your favourite sport.

Most teenagers experience some concerns when participating in sport – so try to discuss the contents of this manual with parents, coaches, teachers or your guardian. If you're really concerned about any of the matters raised please be confident to chat to your parent, guardian or doctor.

You can scan through the manual quickly by following the STAR .

PURPOSE



This manual provides guidance to help athletes use their bodies efficiently and effectively. It has been devised with health & safety as a priority and the publishers advocate careful and considered use of the programmes. These are designed for healthy individuals with normal levels of fitness. If in doubt you are advised to consult a healthcare professional before commencing to ensure you exercise safely and within your ability.

HerMoJo

HOW TO USE YOUR MOJOMANUAL

Digital version - click for video link where you see this sign 

HERMOJO

Find the inner you. There are eight MoJoZONES - some are exercise-focussed others supportive - ranging through diet and hydration to menstruation. You can read front to back OR, for ease of use we've signposted areas and routes for Coaches, Parents and Athletes. See page 40 on how to build these exercises into a programme or make them part of your cardio vascular sessions.

COACHES...

You will know much of the content - use the MoJoManual to pick out key issues as appropriate. Try to be proactive and if necessary sit down and have a joint discussion. Use questions to encourage and share 'issues' across your group. Shift the focus from 'strength training' - away from the big muscles to functional muscle groups. Posture and stability are key for teenage rowers - you need to emphasise this and avoid the temptation for quick gains from raw strength. Encourage parents to buy balance balls & bands to use at home. Why not set two home exercises each week? You may need to help your athletes through paragraphs with a rainbow.



PARENTS...

Physical Literacy (a commitment to Efficient & Effective movement) is really important throughout life and particularly in sport. You can support your daughter by better understanding physical and emotional issues. Use this manual to help answer questions she may have, to help to raise issues with her coach or teacher. Encourage her to use balls and bands at home and emphasise the importance of functional (HerMoJo) strength - not just for her sport but in helping her become a strong and confident women.

Don't push her to win too early - girls are great to coach, they want to 'get it right' - help them to do that and they will go on to be real winners! Try to engage her through sections marked with a heart.



ATHLETES...

Start by scanning the zones to get a feel for some of the wider things that make up your 'MoJo' and the things that affect you right now. Read the exercise 'bubbles' and try to work out how they can impact your boat work. Flick through and check for the STAR 

Focus on these areas in the text pages before you read in detail. Feel free to read, discuss with friends, parents, teacher or coach. They may suggest areas to read together.

If you have any concerns about the matters raised please do discuss with your parents, coach or medical professional.

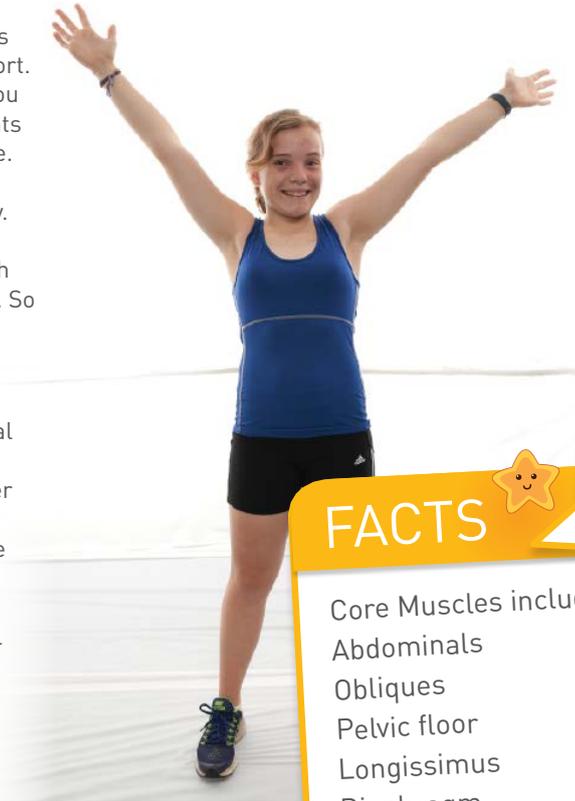


ANATOMY - YOUR FRAME

SUPER YOU!

 **Super you** - your skeleton provides the levers for sport – and levers are critical in every sport.  You have strong bones - most are rigid but you also have joints for flexion. Keeping your joints mobilised is key to being a successful athlete. Some joints are less flexible (e.g. spine & pelvis) but they need to be to provide stability. Spine and pelvic flexibility is very important for rowers to maximise stroke length & reach without over extending the back/hamstrings. So we'll be talking about that a lot.

 **Posture** – so apart from legs and arms (essential in rowing) posture, balance and stability in your hips & lower spine are crucial as you start to row competitively. 'Core strength', as it is often described, is the wider process of 'tying' the muscles listed on the next page, to work together. Stabilising these core muscles links the levers (arms & legs) together & helps focus on flexing your pelvis (hips). Particularly important to maintain full compression without 'collapsing' and still connecting with the flow from the leg drive.



FACTS

Growth spurts in your early teens can alter the balance & relative strengths of bones & ligaments. Lengthening bones may cause loss of flexibility until ligaments 'catch-up'. Stretching is essential for teenagers. Load bearing/impacts helps improve bone density & prevent fractures.

FACTS

Core Muscles include:
Abdominals
Obliques
Pelvic floor
Longissimus
Diaphragm

SUPER YOU

- ➔ ANATOMY
- ➔ MOBILITY
- ➔ STABILITY
- ➔ STRENGTH

ANATOMY - MUSCLES

SUPER YOU!



You don't have to 'bulk up' your big muscles with heavy weights yet. HerMoJo is all about building 'functional strength' using a combination of muscles and levers. Not BULK!

Here's some of the muscles we will be talking about - try to imagine where they are in your body and how they work. The best way to develop young muscle groups is resistance training. 'Destabilising' your core to test it is the best way to develop Core Strength & efficient posture.

FACTS

CORE Muscles include:

Abdominals

Obliques

Pelvic floor

Longissimus

Diaphragm

ANATOMY - YOUR SPINE

 **Transfer Energy** – whatever your sport, you rely on your spine and trunk for the transfer of energy between limbs. So the more effective the trunk is, the more easily energy can be transferred efficiently. Imagine your vertebrae as a string of beads. Try to hold them vertically at the base and the beads collapse. If you 'pinch' the string at the base – tension supports the beads in the vertical position. Just like the beads, there is a string of core muscles (particularly abs, pelvic floor, longissimus and multifidus) which support your vertebrae, provide stability and help efficient transfer of energy..

 **Shape up** – think about touching your toes – check in a mirror – are you flexing from your hips? Don't let your back 'sag' into a 'C' shape in an attempt to touch toes. Stretch slowly and pivot from the hips extending over several 'reps' and feel tension in your hamstrings. Your spine, along with your core holds everything together – make sure you look after it. Not just for sport . . . but for life.



Compare these pictures with the shapes on page 41 – spot the similarity?



SUPER YOU!

FACTS

- Spine is 'S' shaped
- 33 'stacked' vertebrae
- Protects spinal cord
- Shock absorbing discs
- Cervical – 7 Neck
- Thoracic – 12 Ribs/Chest
- Lumbar – 5 Lower back
- Body has 206 bones

MOBILITY - NEUTRAL SPINE

SUPER YOU!

TOP TIPS



What are ABS?

Four sets of muscles between the ribs and pelvis – essential for maintaining good posture and a Neutral Spine and 'asymmetric strength when twisting. Includes what are known as the 'six pack'



 Mobility is all about control of your spine and hips. It is vital to mobilise before any exercise to loosen tight muscles and 'wake up' the weaker, underutilised muscles. Particularly your core muscles as this will help improve performance and reduce injury. Your body will tend to compensate for any imbalance or restricted range of movement – increasing the chances of injury. So where to start?

Start in Neutral – A neutral spine is about establishing the most effective relationship between all the 'components' of your body. You can find your neutral spine whilst standing. You will have some natural curvature as can be seen in the diagram.

 **Stand up** – Relax and imagine somebody is gently tugging at a tuft of your hair. Let your head and shoulders move up to follow the 'pull'. Your chin lowers and your shoulders will drop away from your neck. And your chest will have opened a little. Tummy comes in and your pelvis sits level under your ribs.

Lie down – try to find it lying down. Midway between an arched & flattened spine – tail

bone on the floor, pelvis is lengthened and a small 'arch' appears in your spine.

Firing up! - Lying down in the neutral 'rest' position. Breathe in gently, hold for three seconds, then breathe out slowly. Now gently draw up 'inside' with the pelvic floor muscles as if you were trying not to pee! Do this at 30/40% of maximum muscle contraction and still maintain the neutral spine. This helps 'activate' all the 'core' muscles.



Your pelvic floor – lie on your back with a neutral spine. Press the small of your back onto the floor and tilt your pelvic bone up from the base. Try to focus on the muscles you use to control when peeing . . . and you've found your pelvic floor.



FLAT



ARCHED



NEUTRAL



CORE STABILITY

SUPER YOU!

 We have seen how the spine, trunk, skeleton and core muscles work independently. Great players and athletes learn how to combine and balance all these elements to maximise effort – using all the right muscles at the right time! Core is made up of the back, the upper (shoulder) and lower (pelvic) girdles.

The ‘core’ muscles are mostly connected to the spine - combined they create a base for support. It is important to have a strong core so you can effectively transfer energy from the muscles initiating the movement.

The shoulder girdle and pelvic girdle provide an anchor for arm and leg movements – transferring energy to your core and maintaining a stable base from which to work.

Recruitment – if you don’t identify and develop the chains of muscle used in each movement (the Kinetic Chain) the bigger primary muscles won’t be able to rely on the smaller ones for stability and support during training or matches. Your body

will compensate and try to find other ways to transfer energy. Leading to loss of posture, inefficient movement and risk of injury.

Your ‘Kinetic Chain’ – is only as strong as its weakest link – make sure you find it and eliminate it before trying to build bigger muscles. No matter how strong your big (primary) muscles are, if you can’t transfer energy your ‘kinetic chain’ will lose efficiency... or fail!

FACTS



All movement in your body emanates from your core. It’s the centre of power - so a strong core means confident movement when you kick, ride, swing a bat or just pick something up.

A weak core leaves you susceptible to poor posture, lower back pain & injuries, which occur as other muscles take up the load from a weak core – even if you don’t play sport.

TRY THIS!



Stand erect holding a large bottle of water

Lift the bottle to shoulder height, keeping the arms straight

Lift & lower the bottle several times & note what happens in your body

- Does your trunk & head stay steady? You may notice that your head tilts forwards slightly
 - Pay attention to the muscles in the front of your neck? Feel them contracting as they work to keep the head stable
 - Feel what is happening in your feet. As you lift the bottle you will notice a subtle backwards weight shift onto your heels
- You’re finding your CORE!

STRENGTH - BALLS AND BANDS

SUPER YOU!

 **Balls and bands** - help to train muscle function, strengthen abdominals (pelvic floor) and spinal muscles by challenging your core to find the supporting muscles as you destabilise. They are the best and simplest 'ancillary' exercise tools for young athletes.

Swiss Balls - some of the exercises require a Swiss Ball. Chose a 'burst-resistant' ball - probably a 55cm diameter.

Resistance bands - several of our recommended exercises use bands. You can buy these by the length, different colours for differing resistance - or buy a pack of several. They are made from strong, thin rubber and can have handles at each end. They help you with just about any type of strength training exercise, without the need for heavy weights.

 The most important thing is to move slowly and smoothly, don't jerk nor shorten the range of movement. If you feel you have to jerk - lower the resistance or range you are moving through. Jerking means you are relying on big muscles and not giving the supporting muscles a chance.

Remember you don't need big strong muscles - you need functional, connected muscle chains to support smooth, controlled movement in your limbs. Resistance and destabilising exercises will make a big difference and you'll enjoy your sport more.

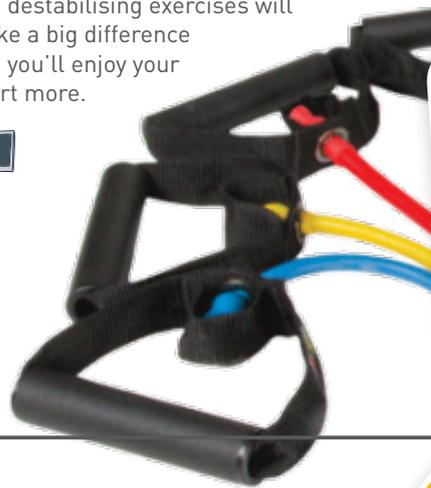


FACTS

Stability Balls will make your core 'wobble' as you try to remain stable. They are the best way to strengthen lower back & trunk!
Decreasing ball pressure makes it 'squidgy' & less stable! Harder!

TOP TIPS

- Try just sitting on the ball to watch TV
- Get used to being unstable - sit on your ball at your desk and study
- Try lifting one foot off the floor - then swap feet in a slow movement
- Try lifting both feet off the floor!



THE PLANK

 The Plank is the classic, isometric core exercise for most sports.

Lying on the floor face down, lift your hips and suspend your trunk between toes & elbows. Try to hold for 15 secs in the first instance. Check in a mirror or with a friend that your hips don't 'sag' nor are they lifted too high. Spend time to learn The Plank but don't make it part of your regular core work. Rowers need to build dynamic flexibility in the hips and lower back so whilst The Plank is a great way to help discover and strengthen the core for all athletes. Once mastered rowers should move to more dynamic routines.

Progression: Once you have mastered the plank – move on to pages 36/37 (Dynamic & Side Plank) or try 'reach throughs'.

Alternatively – move onto The Squat (page 30) – but revisit The Plank from time to time.

Easier: Start balancing on elbows & knees, practice holding a stable position. Tighten up your core and slowly raise your hips. Do this with control - DON'T jerk.



“When I do The Plank I can really feel my core muscles working together to hold the position”

CORE4

PURPOSE 

Great for firing and strengthening all those core muscles together and help you move onto more dynamic exercises for your sport.

TOP TIPS

Keep your hips straight – don't let them twist or wobble

Imagine your core acting as a trampoline stretched between your hips & shoulders

CORE 4

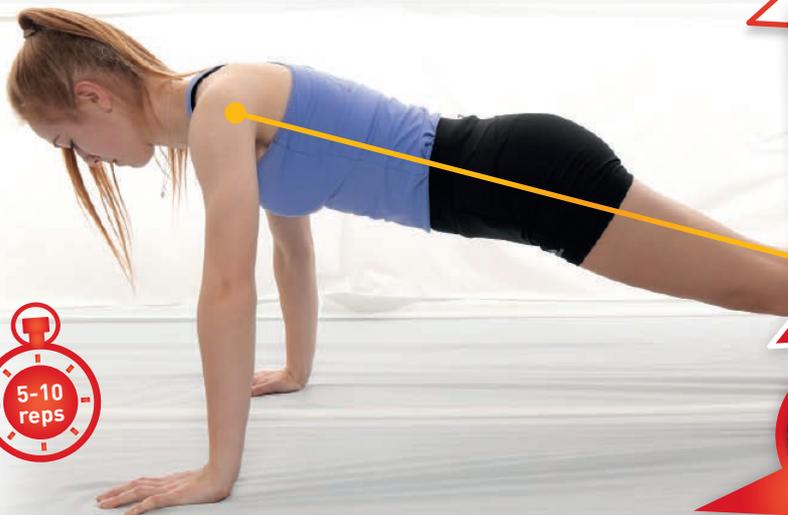
- ➔ THE PLANK
- ➔ THE PRESS UP
- ➔ SPINE CURL
- ➔ BALL CRUNCH

THE PRESS UP

 Lie on the floor face down with your hands flat on the floor either side of your shoulders. Tighten up your core and shoulders. Begin by sliding your shoulder blades towards your waist – as they tighten transfer that strength to your hips and core as you lift your body off the floor. Hold for two seconds then move slowly down until your chest touches the floor. Rest and repeat.

Progression: Add dynamic Press Ups to your circuits but ALWAYS make the action full range, controlled and focus on your core. After Press Ups hold the position and let your hips sink to the floor.

Easier: Start as above but pivot from the knees by leaving them on the floor. Keep your core stable, try two from the knees, then one from the toes.



CORE4

PURPOSE 

Press Ups are the original core exercise. They can be done anywhere and are great for stabilising hips, shoulders and spine and helping develop your core and posture.

TOP TIPS

Keep your hips straight – don't let them twist or wobble. Imagine your core acting as a trampoline stretched between your hips & shoulders

“Press ups really help me strengthen a range of deep core muscles without making them bulky”

THE SPINE CURL

 **Getting your spine mobilised and strengthened is a great way to prepare for more challenging exercise. Spine curls really work the hips, glutes and lower back. Lay on your back with knees bent & feet flat. Engage the core muscles and slowly tuck your 'tailbone' beneath you. Use your abs to press your spine to the floor. Slowly raise the hips until there is a straight line between knees & shoulders. Squeeze your glutes and keep the hips stable yet relaxed. Hold position for 5 secs with shoulders flat on the floor. Try again after a minute rest.**

Progression: In the hold position try lifting one foot off the ground. Replace, now try with the other. Extend the 'hold' time to 1 then 2 mins. Try Straightening one leg before lifting the hips. Keep the thighs horizontal without twisting

– this creates an offset load (asymmetric). Try spine curl with your feet on your balance ball - maintain stability and bring your heels to your hips.

Easier: Try using a pillow or two under your hips – always make sure you engage your 'core' and lift smoothly and slowly – don't 'jolt'



PURPOSE



Alternate this with The Plank – it works the opposing (Antagonistic) muscles and helps build a balance at the base of the spine

CORE4

TOP TIPS

Use downward pressure along the length of your arms to press on the floor to keep your hips stable

With practice reduce the amount of 'arm' pressure and rely more on core

"Really important as it strengthens parts of my lower back I don't normally work on"



BALL CRUNCH

CORE4

“Ball Crunchie helps me maintain a stable core as I rock off backstops”

 ‘Crunches’ are a great way to test and strengthen your abdominal muscles. Start by sitting on the ball with feet flat on the floor. Walk your feet forward slowly and lower your spine onto the ball as you continue walking until your shoulders, back and hips are resting on the ball and knees are bent to 90 degrees. Check your hips are at about 10 o’clock (imagine the ball is a clock face). Hands behind head, squeeze shoulder blades down and keep elbows horizontal. Keep your head in line with your spine. Engage abs & core, tuck in your chin and

slowly curl your trunk towards your thighs (exhale). Maintain contact with your pelvis & lower back & continue to curl until your upper back is off the ball. Hold for 5 secs. Roll gently down (inhale) and lower your back onto the ball. Relax & stretch out completely before next rep.

Progression: Destabilise your core by moving your feet closer together – try this first with a friend to check your balance.

Easier: Move feet apart to improve stability.



PURPOSE

Helps you make a confident & stable flexion of core muscles during dynamic flexion of the upper back.

TOP TIPS

Imagine a connection between your abs and rib cage (chest) – try to think about pulling these closer during the upward movement



HEALTHY EATING

FUELLING UP

 **Athlete or not** – all teenagers need a 'balanced diet': remember 'you are what you eat'. So a good range of Carbs (for energy), Fats (protection & as an energy store) and Proteins (for growth & body maintenance) is essential. But what does all that mean to you, particularly if you are starting to get more serious about your sport?

As you start to exercise more you'll feel great but also may need to take on more 'fuel'. Yet part of you is thinking "I need to be trim to be a better at my sport". Well, yes, but it's all a question of balance; building a strong core of 'functional' muscle (as opposed to bulk) takes time and a balanced diet. Poor diet really can impact your performance so try some of these ideas.

Home-cooked food is best – then you know what's gone into it and there's more chance that has a balance of carbs, protein & fats. Why not offer to help with food prep/shopping at home?

 **Sugary carbs** - will give you a great lift because they can be absorbed quickly, but many sports don't need that quick lift. Switch away from

these empty carbs (eg biscuits)' to non-sugary carbs (wholemeal bread/pasta).

Fresh vegetables - are a must for fibre, vitamins & minerals - the things that help you best use food you eat.

Snacking – 'snacking' isn't bad but mix it up - select from two of the food groups, see panel.

Before exercise - avoid eating big meals within 2 hours of exercise. Then stick to fruit, low fibre carbs or cereal bars.

After exercise - plan to eat something within 30 mins of exercise – sometimes you feel less hungry then so a yogurt, glass of semi-skimmed milk or a sandwich is perfect.

Supplements – you can get all sorts of supplements. Unless prescribed by your doctor there's no need – better to stick to the advice above.

If you have concerns about your weight or diet please do talk to an adult you trust or your doctor.

HEALTHY SNACKING

Banana/peanut butter (fruit/protein)

Grapes/cheese stick (fruit/dairy)

Yogurt/strawberries (dairy/fruit)

Cheese/crackers (dairy/grain)

Hummus/carrots (protein vegetable)

Nuts/dried fruit (protein/fruit)

FUELLING UP

- ➔ HEALTHY EATING
- ➔ PERFORMANCE
- ➔ HYDRATION
- ➔ SPORTS DRINKS
- ➔ ELECTROLYTES

POWERING PERFORMANCE

FUELLING UP

★ **Getting ready for a race?** It's often the last quarter in which winners 'win' . . . or is it when losers 'lose'? Sometimes you just run out of energy in those closing moments. Could it be the fuel you're using? Even before you start entering big competitions it's worth getting the right fuel.

You'll be getting ready for regattas or 'heads' (long distance time trials) – and will eat different food for each.

😊 **For heads** - carbs the night before (pasta or rice is ideal). Breakfast might be porridge, muesli, beans on toast or cereal with milk, toast and a smoothie. Pre-race (1-2 hrs) try a cereal bar, banana or fruit yoghurt. (Go for slow-release carbs – low GI)

😊 **Regattas** – again carbs are important the night before. Reduce fatty consumption in the lead up to a race. Always eat breakfast – similar to heads. You won't know exactly when your heats are so planning small snacks/drinks (cereal bars/ flapjacks/raisins/sultans/bananas/jelly babies) in between will really help.

After – your body will be crying out for carbs,

protein and fluids so plan to eat something within 30 mins. Sometimes you feel less hungry then, so a yogurt, glass of semiskimmed milk or a sandwich is perfect - you can take it as soon as you come off the water – perhaps with a banana. A more structured, yet light, refuel might be an omelette with juice or water.

★ **'Fast foods'** – won't, unfortunately, make you go any faster – so only eat them occasionally.



SMOOTHIE RECIPE

Why not try this recipe? It is ideal for after racing!

300g Greek yoghurt

100g fruit
e.g. **Strawberries/**
blueberries

Tbsp. honey

Directions: Blend together and add skimmed milk to taste

VEGETARIAN



Vegetarian? There is no reason why you can't eat a well-balanced diet whilst following a vegetarian or vegan diet. Include lots of legumes - especially if you don't eat animal products at all!

Examples of vegan sources of protein: beans, lentils, chickpeas, soya products, seeds, nuts. If you are a vegetarian, these sources of protein are also available to you: eggs, milk/ dairy and mycoprotein (such as Quorn) products.

DRUGS



Did you know coffee is a banned stimulant in some sports! Forget stimulants and other performance enhancing stuff – MoJo is all you need!

HYDRATION

 **Half Water** - half of your body is made up of water!!!! So it's really important to keep 'topped' up. Water is essential for all sorts of reasons. It is important in the regulation of body temperature, aids digestion, keeps the nervous system alert, joints lubricated (reducing injury risk) and provides a 'pathway' for nutrients, oxygen and waste to name a few. So keeping it in balance is pretty important.

Fluid Balance - it becomes doubly important when you start to exercise as you lose water through sweat keeping cool. Just breathing harder causes extra moisture to evaporate from your lungs (as moisture always evaporates from your lungs - just more when you are exercising).

Just 2% fluid loss has an immediate effect on both your physical and mental performance and can slow up your ability to recover between heats or at half time. Loss of more than 5% can reduce effectiveness by 30%! On top of that, dehydration can cause painful muscle cramps during exercise and even at night after a workout.

 **The 'PEE' test!!** - The best measure of hydration is the 'PEE' Test - the colour of your

urine. It should be a clear, light straw colour - and the lighter it is the better. Check the bottle on this page - aim for the top colour!

When & How Much'

- Check the chart.

If you notice signs of dehydration, rehydrate quickly.

It may not save that performance but you will recover more quickly. Experts recommend 6/8 glasses (2 Litres) every day, even for those not exercising heavily.

Fluid intake is highly dependent on your sport, body size, age, training experience, clothing etc. and the temperature.



FUELLING UP

TOP TIPS



Weigh yourself before & after exercise - calculate the weight loss in grams

Measure how much fluid you consumed during the exercise activity in grams and add this to your weight loss

This is the MINIMUM amount of fluid you need to consume to properly hydrate

In hot climates - don't forget any sweat in your clothes

REHYDRATION!



Training or racing over long periods - try this recipe for a rehydration drink:

500 ml fruit juice

500ml water

1-1.5g (1/4 tsp) of salt

SPORTS DRINKS AND ELECTROLYTES

FUELLING UP

Don't drink too much water - This can cause hyponatraemia (low salt concentration in your blood). Symptoms include nausea, dizziness, lethargy and a dip in performance.

If you're exercising for periods of 1-2 hours or more – it's a good idea to include electrolytes in fluids. If you're doing less than this, try adding a very small sprinkle of salt (Sodium) straight to your water bottle to help your body retain fluids. There's no need to buy expensive sports drinks when you first start endurance training.

Energy drinks and sodas - both contain similarly high amounts of sugar along with vitamins, herbs and proteins. The sugar used is often a simple carbohydrate, easy to digest and absorb but the effect wears off quickly causing a 'crash' in blood sugar levels. Some contain added protein, often described as 'amino acids' (the building blocks of your body). They are included to help muscle recovery but many of the same amino acids are found in semi-skimmed milk!

Hypotonics – there are also sports drinks

which are 'hypotonic'. These contain a less concentrated carbohydrate (sugars) solution (1-3%), which promotes quicker fluid adsorption but provide less carbohydrate energy (calories).

Maintaining your body's fluid balance is important – it helps control your heartrate and energy to 'output'. But until you are trialling for the national team or working out for over 60 mins you don't need specialist sports drinks and can use water or squash (with a very small sprinkle of salt) for rehydration and semi-skimmed milk for replenishing energy in between matches!

Watch out for the difference between 'energy' and 'rehydration' drinks!



TOP TIPS



Avoid coffee & caffeine enriched drinks, they may also contain a range of stimulants & excess sugar

Try adding a little salt to your drinks bottle – and stick to cordial

Semi-skimmed milk is a great recovery drink

Keep a drinks bottle with your warm-up clothes on the touch line & take advantage of any drinks offered

Try not to share bottles – even with your best friend

Check your urine colour is pale straw coloured

FEELING GOOD

 **Super confident** - Sport and generally being more active really can boost confidence. It will get you feeling good, looking good & being 'super-confident' about your body. Some of this 'feeling good' comes from your body releasing endorphins when you exercise. They work to reduce pain and it only takes about ten minutes of moderate exercise for you to start enjoying their effect.

Exercise increases blood circulation - getting your heart pumping to improve blood flow to all your organs. Particularly carrying blood to your brain and nutrients to your muscles.

But there's more to feeling good than just exercise. A whole series of 'issues' can challenge how you look, feel & generally perform. Combined, or on their own, these 'issues' can result in a general energy deficit and hence how you feel about yourself.

 **Body image** - sometimes the way you think other people are judging your appearance can affect the way you feel about yourself. Finding your MoJo can make a huge difference about how you feel about yourself.

 **Anxiety** - all athletes get anxious before a race or match and some anxiety can be a positive trigger to performance. Increased anxiousness can impact teenagers in life generally. Finding your inner MoJo can help balance sport and life.

 **Periods** - it's important to learn the effects of your period on your body and how you can work your training around your (menstrual) cycle. Find out more about how your period affects you and what you can do to manage it.

Breast health - developing breasts is a healthy sign that you're growing up. But it can be a confusing time. Staying active can really help you get through it.

Your bones - important as you grow up to set your bones up for a strong body later in life. Osteoporosis - or 'porous bones' shouldn't be a problem for you if you follow a healthy diet and don't overtrain.

FEELING GOOD

TOP TIPS

Teenage girls who under-eat and over-train are at risk of developing the Female Athlete Triad Syndrome

Make sure you know the warning signs and treatment to keep girls training safely

FEELING GOOD

- BODY IMAGE
- ANXIETY
- PERIODS
- BREAST HEALTH
- SPORTS BRAS
- BONES
- PERIOD TRACKING

BODY IMAGE

 **Body image** - is about how YOU feel about YOUR body and yet much of self-worth is based on the perceptions of others. Having negative thoughts about your body is not uncommon in teenagers - hey, your bodies are changing fast! So even small changes in approach can improve the way you feel about your body. So how do you foster a positive body image (and tackle negative thoughts)?

Appreciate your body – it is a miracle! Make a list of 10 things you like about you and some great things your body can do: laugh, jump, run, dance.

Negative thoughts – become aware of how these affect you and might hold you back. Now remind yourself that negative thoughts are just thoughts, and may not be realistic. Write down some alternative, positive, affirmations like:

- What I can do is more important than what I look like
- I am strong and I can do anything
- I do not have to look 'perfect' to be fit and healthy

Your crew matters – encourage your crew mates and friends to be positive and enthusiastic with each other.

Be aware of media tricks – remember that makeup, airbrushing and digital editing are used to create unrealistic images of women's bodies.

 **Social Media** - Take control of it. Post about things you have done /places you visit and don't be concerned that everyone appears to be having more fun than you – they probably aren't but they only post the good things they do. Use it to find and follow inspirational people (such sports women) and don't be bullied on body image issues – stand up to it! You don't need to go through it alone, talk to others and reach out to your doctor if it begins to affect your well-being.

 **Parents** – think about checking with your daughter BEFORE you post pix of her on social media. Remember, your daughter's success is hers first.

Don't deal with online (or real-time) body image issues on your own. Talk to friends, take it to your parents or your coach/school counsellor and get advice.

FEELING GOOD

TOP TIPS

- Build your self esteem by:
 - Going for a walk or run
 - Listen to music
 - Try a favourite activity with somebody you like being with
 - Thinking about good things you've achieved or places you like being
 - Watch some women's sport on TV
 - Talking to somebody you trust can also help – and if you get concerned your doctor or school counsellor can help

BEST TIP

Dance – on your own, at the gym, in your bedroom – and don't forget dance is a great way to develop your core & associated muscles.



MANAGING ANXIETY

FEELING GOOD

 **We all get anxious** – before a big test at school or when meeting new people. Much of the time this is quite normal. It's good to have 'nerves' as it helps you prepare for a challenge, but if you become too nervous, it can become overwhelming. Sport can help take your mind off things that make you anxious and being active enables you to focus on something else to plan for and be successful in. As you progress in your sport you might start to get anxious about a big race or match. Again that's quite normal and shows a healthy approach to competition.

Mixing with other teenagers (who are likely just as anxious as you are) and sharing sport can help you learn from and trust each other. You'll also feel more comfortable making mistakes without feeling judged. We often expect to be perfect and yet those who never make mistakes, never reach their full potential. So use sport to build confidence and help you take that strength into your everyday life.

 **Fear of Failure** - we all like to get things right – but worrying about failure can increase anxiety. This MoJo Manual can help you to be more

confident, to try new things and not worry so much about making mistakes.

Taking Control – focus on things you can control rather than things you can't.

Breathing – deep breathing exercises can really help you relax and focus on positive things. Make sure you breathe in through your nose, out through your mouth.

Music - can be used to reduce or raise your arousal levels. Choose fast rhythmic tracks if you are training, slower if you are relaxing'. Try a bit of dance for stress busting (it's great for strengthening your core as well).

 **Routines** - are good for sport and for everyday life. That way you focus and put your energy into positive triggers and push the things that make you anxious out of your head.



TOP TIPS



- Admit that some situations make you anxious
- Focus on 'controllables'
- Set goals and tick them off as you go
- Focus on success you have had or things you like doing
- Walk or go dancing
- No Failure – only Feedback
- If in doubt chat to an adult

SIGNS OF EXCESS ANXIETY

- Worrying about things you can't control 
- Constant checking you did it right
- Withdrawal from normal things
- Decline in appetite or sleep patterns
- Low energy or feeling sad
- Poor concentration

MENSTRUATION AND SPORT

FEELING GOOD

 **Periods and Sport** - periods are a normal, natural process which start as your body changes from being a child into an adult woman. Puberty happens to all girls, usually between 8 and 13 so your timing may be different to your friend's. As part of your menstrual cycle your period typically starts on average every 28 days (often ranging from every 21-35 days) and lasts for 3-5 days. You're likely to experience bleeding and perhaps cramps or pain and blood colour may vary during the cycle. This again is normal so try not to let it interfere with your sport. It is a good idea to track your cycle just to ensure you are prepared for your period. Tracking will help you to eat and train 'smart'.

 **Nutrition & Hydration** - at certain points in your cycle your body changes the types of food it predominantly uses to provide energy. Iron intake (combined with Vit. C to help absorption) is also important during your period as is replacing fluids lost through blood loss and other changes.

 **Training** - throughout your menstrual cycle

evidence suggests that the benefit you get from different training types may vary. For example resistance and HIIT are thought best during the first half of your cycle. Being active may also help - even though you may not feel like exercising on the days leading up to/during your period.

 **Pain** - cramps can often be alleviated with warm baths and over-the-counter medicines appropriate for your age. Exercise generally helps by releasing endorphins (hormones that make you feel happier). If the pain continues get a parent to help just in case you need to see your doctor.

Sleep - slight increases in temperature in the second half of your cycle may make sleep difficult. Make sure you have good 'sleep hygiene' (i.e. not using phones an hour before bed).

Train & Eat smart - too much exercise, psychological stress and a poor diet are primary risk factors which can affect your menstrual cycle.

IF:



Your period lasts longer than a week...

You have to change your pad very often (soaking more than one pad every 1-2 hours)...

You go longer than 3 months between periods...

You have bleeding in between periods...

You have an unusual amount of pain before or during your period...

Your periods were regular but became irregular...

...check with your mum or other female friend, and see your doctor.

TRACKING YOUR PERIOD

 **Work around your period** - when you're training regularly - be aware that exercise is good but the type and timing are important. You might want to track your cycle on a smart phone 'APP'. This can help you plan training/diet and have a better understanding of what's happening.

 **High oestrogen** - rising levels of the hormone oestrogen in the first half of your cycle help energise you and can help you feel ready to train hard. As oestrogen levels increase, some experts suggest that this is good time to do strength and resistance training. Eating carbohydrates and proteins are particularly important as these provide energy and help with recovery.

 **Second half of your cycle** - as the hormone progesterone kicks in, and then towards your period levels of both progesterone and oestrogen fall, you might begin to feel a little sluggish. Some experts say this is the time to focus more on endurance and reduce the intensity of your training. Your body is thought to use fats more at this time to provide energy, so try and get some good healthy fats into your diet.

FACT

OESTROGEN (Estrogen) The main female sex hormone responsible for changes in your body such as starting your period & development breasts



2 3 4
MENSTRUATION

10 11 12 13 14 15
OVULATION

FEELING GOOD

TOP TIPS

- Track your periods & training using a smart APP
- Provides daily training suggestions tailored to your changing hormone levels
- Recipes for stages of your period
- Maximise training on any given day
- Reduce fatigue & injury
- ... but learn to know your body



FitrWoman APP is free to download on most platforms.



www.fitrwoman.com
[@fitrwoman](https://twitter.com/fitrwoman)

BREASTS AND BRAS

FEELING GOOD

🍷 **All shapes & sizes** - but one thing that all breasts have in common is that if they are not properly supported during exercise they can move around. This movement can sometimes be embarrassing and can also be painful. But it is not all bad news. A well fitted, supportive sports bra can solve both these problems and help you exercise pain free and with confidence.

🌈 **Sports bras** - there are lots available and some may be more supportive than others. Many provide support to the breasts by pushing them against the chest; others by holding each breast in place in a separate cup, just like a regular bra. Some bras may do both of these things. However, not every bra suits every person, and wearing the wrong size, or style can reduce the level of support the bra gives you. Especially if it is the wrong size! When you are shopping for a sports bra, always try it on so that you can check the fit. You won't always be the same size in every bra and your breasts may change shape and size as you grow and develop.

Below are some tips on how to check the support of your bra and most importantly, make sure that it fits correctly.

- The underband of the bra should be level all the way around your body and be firm enough that it doesn't move when you exercise. Be careful that it is not so tight that it restricts your breathing or digs in to you!
- Your breasts should fit within the cups of the bra without your breast tissue bulging out of the top. If your breasts don't quite fill the cups then try a smaller cup size.
- Make sure the shoulder straps are tight enough that they support your breasts and don't slip off your shoulders. But be careful not to make them so tight that they dig in to your shoulders!
- Jump up and down or run on the spot in the changing room so you can check how much support the bra gives you.



Compression sports bra



TOP TIPS



Your sports bra is as important as your trainers – replace them both at the same time



Trouble getting your sports bra & heart rate monitor configured? Try adding in a Booband

BREAST HEALTH

 **Breasts and Sport** – We often begin to take sport seriously just as our breasts are starting to develop. So it can be a bit confusing and sometimes a bit of a challenge to deal with both at the same time. Breasts can take a little getting used to but having a better understanding of what's going on, and how to support your breasts during exercise, can make a big difference to how you feel about them.

 Your body goes through a number of the changes during puberty. Breasts start growing because of rising hormone levels (it's that oestrogen thing again!). The first change you might notice is a firm 'bump' starting to develop underneath your nipples. These are known as 'breast buds'! After this your breasts will go through growth spurts just like any other part of your body and will take around 3 to 5 years to fully develop.

Tissue - your breasts are made up of fatty tissues and glands (called mammary glands). The glandular tissue is where milk is produced and stored when a mother breastfeeds her baby.

Muscle? - There is no muscle in the breast

which is why it is really important to support the breasts during exercise and other general activity. Without support the soft tissues that provide a little support to the breasts (called Cooper's ligaments) may get stretched and damaged, especially during repetitive or high impact sports that might make your breasts bounce.

Exercising your 'pecs' is generally a good thing – but, because your breasts are tissue, there are no recommended exercises for better breast support. So a well fitted sports bra is a must. Please check the section on sports bras and really look forward to your first sports bra fitting.

THE PILL...



...and other forms of contraception might be prescribed for teenage girls.

The 'pill' is taken orally but some other forms of personal protection may be implanted or injected. If you are 'prescribed' tell your doctor that you are sporty and make sure s/he explains how your prescription works.



Sometimes the 'pill' is prescribed to help moderate your periods – sometimes even for acne! So to be really sure – ask!

FEELING GOOD



Buying your first sports bra.

TOP TIPS



Posture – always try to stand up straight. Good posture is important for helping to maintain the strength of Cooper's ligaments because slouching shifts the weight of your breasts forward, putting more pressure on the ligaments

If you have concerns about the shape, colour or size of your breasts – don't worry all breasts are different, and please do talk to your parent or medical professional

HEALTHY BONES

FEELING GOOD

 We saw how important a strong frame is in the SUPER YOU section – well, there's more to know. Sport-related injury & fractures can occur, especially when the health and strength of your bones can't keep pace with your growth spurts. These growth spurts are triggered as you start to produce oestrogen. This is the female sex hormone which drives many of the changes that occur to our bodies throughout life – but particularly in your teens.

 If your diet lacks vital, bone-strengthening vitamins and minerals it will be harder to withstand the forces and impacts occurring as you get more active. Even simple fractures (greenstick, stress or even shin splints) can mean rest and reduction in exercise.

 A healthy diet, controlled training and period tracking are all essential to maintain bone health and fully protect you from bone damage. Make sure your diet contains vitamins (especially bone-essential vitamin D from egg yolk, some fish such as salmon/tuna and from just being outside in the sun). You also need minerals (such as Calcium from dairy

products, reputable nut milks and green leafy vegetables) and if you don't like these foods, try dried fruit, such as prunes, which are also really good for bone health.

Take charge of your own healthy lifestyle with the help of your family and coach! Why not post on social media about smart training for sport? Why not snapchat your own healthy menu creations and share them with teammates?



 **Cycling & Swimming:** Bone loading improves bone density when training. Swimming & cycling offer limited bone-loading – so make sure your training includes plenty of impact activity like running. XTraining in all three of the above - in sensible amounts - is good! Ask your coach for advice.

CALCIUM-RICH

30g of Cheese/cottage or Cheddar

200ml semi-skimmed/skimmed, fortified unsweetened almond/soya milk.

Yoghurt (natural is best)

Green-leafy vegetables like spinach, kale, broccoli etc.

Sardines (in olive oil)

Breakfast cereal: check your brand is fortified with calcium!

WHAT'S REDS-S?

 Or Relative Energy Deficiency Syndrome - looks at connections between fatigue, disordered eating, hormonal disruption, bone health and injury in male and female athletes. It looks also at the effect of the interplay between these on athlete performance. 

FEMALE ATHLETE TRIAD

 The advice we offer in the Feeling Good zone – bone health, healthy food, rehydration, the menstrual cycle and smart training – is there to help you train well and support you being a young woman as well as an athlete. We want to empower you so that you avoid unhealthy habits and excessive exercise which can eventually lead to lack of energy, disrupted periods, fragile bones and where your sport gets out of perspective. The interaction of disordered eating, menstrual problems and bone health in female athletes AND resultant energy deficit/lowered performance is referred to as the 'Female Athlete Triad'.

Food and water to fuel your exercise - Eating the right foods at the right times will keep your energy levels up. You could be left feeling overly tired from increasing training, over-exercising or decreasing the amount of food you eat. Abnormal eating habits (restricting foods, skipping meals, eating disorders) can result in low energy levels which can disrupt periods and increase risk of injury. So, remember to eat and drink smart to train smart!

Keep track of your menstrual cycle - By using a period tracker app (or tracking the start and end dates of you period in a diary or calendar) you will be able to work out your menstrual pattern. Irregular or multiple missed periods can impact bone health by disrupting estrogen levels.

If you have missed periods or your periods haven't started by the time you are 15 OR if you began breast development more than three years ago and haven't started your periods, it's worth arranging a check-up just to make sure everything is OK.



Bone growth – your bones are growing fast in the early teens so, again a healthy diet and controlled training and period tracking are all essential to keep them strong.

Disordered Eating



Amenorrhea

Osteoporosis

FEELING GOOD

TOP TIPS



Beat the Female 'TRIAD' by training sensibly around your menstrual cycle, eating & hydrating well and getting enough sleep. Make a note of the warning signs and treatments – if in doubt ask your coach, parent or teacher

WARNING SIGNS

Chronic tiredness 
Anaemia
Recurring infections/illnesses
Depression
Disordered-eating thoughts
Poor performance
Absent or irregular periods
Stress fractures or repeated bone injuries
Irritability
Frequent injuries
'Tummy' upsets
Weight loss

ROW WELL PROGRAMME

ROW WELL

 **So where now** – you're progressing in the boat with regular on-the-water coaching – how does core play into that? Here are some ideas and exercises that you can try with your friends, parents and coach. If the river is flooded or the pitches are waterlogged it's worth switching to a 'core' session – perhaps with a short dance/aerobics session too?

 **Key exercises** – your core muscles are best exercised when you are warmed up – they are easier to find and fire up when warm. Try practicing one each day when you come home from school OR build them into your daily routine – like sitting on your balance ball to watch TV. Practice them with a friend who is also keen to improve their rowing /sculling stroke. Mastering the 'Core 4' exercises will help you prepare for more 'core' work.

Programme – progress to having one dedicated session per week – after water work, a light ergo or gentle run (which you can do from home). Don't think of them as 'extra' exercises – think of them as the 'real deal' for that session. Take 10-20 mins and

practice a set number [try four] each session. You can also build some of these into cardio circuits - but as you speed up doing them as circuits please keep movements 'full range' and smooth.

Row 'smart' (& stable) – These routines are designed to complement water work. Strengthening your 'Kinetic Chain' (all the muscles that go towards propelling the boat through the water) will improve your posture and coordination and make your stroke more effective (faster!). Talk to your coach/sports teacher and get some of these routines included in gym work. And even have a special session once per week with 'balls & bands'.



How many 'reps'? – don't be tempted to 'bash out the reps' keep movement full range, slow and controlled. To help you we've added a guide number of reps to most exercises. This shows the range - start with the lower number, and progress to the higher as you improve.

"As you progress aim for two dedicated core sessions per week"

ROW WELL

- EXERCISES
- WARM UP
- SESSIONS
- KINETIC CHAIN



SQUAT

 Squats are a classic, multipoint exercise for most sports. They target all-body but particularly lower body muscles that extend your hips and knees. They build good ankle, knee and hip mobility as well as stable weight distribution, good alignment and thoracic control. They are also an excellent way to work the large muscles of your back.

Start with your feet shoulder width apart. Squat down with control so that your hips are lower than your knees (knee angle should be 90° or less). Return to standing position. The action is the same as sitting up and down from a low chair. Keep your knees in line with your toes as you go up and down, rather than moving left or right. Don't let your hips shift backwards.

Progression: Once mastered try from a low step/seat (no weights).

Change feet position every 5 reps (together, wide apart and staggered). Add small dumbbells – or bands over the shoulder and below your feet. Add VERY low weights to help stability – held in FRONT not BEHIND the shoulders.

Easier: Do quarter squats to a chair and slow them down until your control and strength improve.



TOP TIPS

Keep feet flat on the floor. Use a chair as a target to rehearse the movement, but only just touch your bottom on it, rather than sit down completely.

“Really helps connect my strong & stable leg drive putting more power into my stroke”

ROW WELL

PURPOSE



Improves lower limb strength, knee stability, lower limb joint mobility & core control when changing direction.

PURPOSE



A good squat is achieved through good ankle, knee, hip mobility and stability; good weight distribution (through the foot-weight will primarily be acting just under the ankle); good alignment (knees tracking over the toes with hips square on); good thoracic control where a neutral spine position is maintained throughout the movement.



SUPERWOMAN



In four-point kneeling; keep the knees perpendicular under the hips & the hands under the shoulders, with the spine in neutral.

Engage pelvic floor & slowly slide out one leg until straight, then lift. Slowly raise the opposite arm & balance keeping the back & hips still.

Return to start position & complete 10 reps on each side. Complete the transition smoothly.

Progression: Start with ten repetitions on each diagonal then progress to 3 sets on each diagonal. Transition between sides without moving the head. Increase the challenge further by bringing one knee across to the opposite elbow without flexing the spine or moving the head. Try lying on your balance ball, with hands/feet on the floor – head still with a smooth transition.

Easier: Just lift one arm, then the opposite leg - keep the transition smooth & controlled.

TOP TIPS

Hold your core as you transition from one side to the other

Focus on a spot on the floor, relax and use your stable core to make the movement smooth and consistent



ROW WELL

PURPOSE



Helps work your core ACROSS limbs to help rotational movement and give more depth (Asymmetry) to your core. Reduces risk of injury.

“I soon got the hang of ‘Superwomans’ – and then... I felt like one!”



SITTING BALANCE BALL - DYNAMIC

ROW WELL

 Sitting on the gym ball, slowly raise one leg off the ground keeping stable in your spine. If you are not controlled, raise the heel only. Slowly raise the arms overhead, relaxing the neck area & keeping the shoulder blades down. Repeat 3 sets of ten. As above, change legs & take the arms out to the side. As above take one arm simultaneously to the side. Do 10 on each side.

Progression: Add small dumbbells.

Easier: Instead of raising the whole foot off the floor raise up onto the toes. Observe in a mirror.



"This helps me find those deep muscles that support my back and coordinate my arm and leg movement"

PURPOSE

Establishes neutral spine & general support of lower back & challenges oblique muscles which are needed for sweep oar. Encourages sitting up on sitting bones.

TOP TIPS

Keep sitting up on sitting bones

Keep level in the pelvis. Keep lower trapezius engaged (under the shoulder blades)

SPINE CURL AND ARMS

ROW WELL

TOP TIPS

- Keep level in your pelvis & hips
- Keep neck muscles relaxed & breathe
- Perform flowing movements

PURPOSE



Maintain a stable pelvis whilst performing movement with the arms. Good transferable skills to the boat - letting you focus on energy transfer whilst maintaining stability.

 Perform the spine curl (bridge) with arms alongside your body. Pause and hold when your shoulders and feet are supporting your straight (and stabilised) core.

Progression: Raise the arms in the air above your chest. Keeping the shoulder blades engaged, slowly take one arm to the side at a time. Perform two sets of twenty.

Easier: Perform starting with arms wide, at your sides to improve shoulder-core stability. Once stable, lift alternate arms. 

“Helps me stabilise my pelvis whilst arms are moving. All my energy is then directed at moving the boat forward”



HAMSTRING CURLS ON BALLS

ROW WELL

 Really important routine for good slide control. With the heels resting on the gym ball & the legs extended, perform a spine curl & pause at the top.

Slowly dig the heels into the ball & roll the ball towards you then push back. Perform 2 sets of ten.

Progression: Try raising your hands straight up above your chest to destabilise shoulders to core.

Use one leg at a time, performing one set of ten on each side. Increases load on the oblique muscles used in sweep rowing.

Easier: Perform with a towel under your hips & don't lift off, just use legs to curl ball under your heels.



"Helps me control my slide recovery and have the confidence to be patient as I 'roll out' to front stops"

PURPOSE 

Shifts the slide recovery movement from back muscle to core and hamstrings. And helps to work - 'stretcher to seat' - rather than 'seat to stretcher'.

TOP TIPS

Keep your hips up & level, try to use core and hamstrings to draw the ball towards you - use glutes not back your muscles

Try this exercise whilst seated, pulling a fixed band back with each ankle



BANDS, BALL & RUBBER SCULLER

ROW WELL



Here's a great exercise that uses BOTH bands & balls to help you stabilise through the stroke to the finish. Sitting on gym ball with some rubber tubing or band connected to a central point, keep the shoulders down & perform a sculling action. Perform for 3 x 1 mins. Don't 'pull hard' pull slow & feel the band tension challenge your hip & lower back stability.



Progression: Raise one leg off the floor, fix band rigidly to one side and perform a rotational sweep action. Try 'sculling' with BOTH feet off the floor – you may want to have a friend help support you.

Easier: Get used to 'sculling' & side (asymmetric) movements before taking your feet off the floor.

"This is a fun way to help coordinate body movement round the finish – firing off most of my abs and reducing risk of shoulder injury"

PURPOSE



Helps you 'sit up' & maintain 'asymmetric' stability at the finish with a strong neck & spine linked to the core.

TOP TIPS

Keep neck relaxed & sit 'up' on your sitting bones

Maintain posture & lift the blade from the shoulders



DYNAMIC PLANK

“This helps me get all my power moving the boat at the finish by reducing energy wastage in my global muscles”

ROW WELL

PURPOSE



An essential exercise to work the oblique muscles in the abdomen creating a stable centre to the body as you move the arms. Great to improve stability during sweep oar movement.

TOP TIPS

Maintain neutral spine keeping hips level & shoulder blades flat on the spine

Don't let your head & shoulder girdle 'tip' to the side

 Go into a front plank position, stabilise (feel that core) & then slowly take one hand off the floor to touch the opposite elbow. Perform 10x then repeat on the opposite side. Repeat x 3.

Progression: Try extending your non-supporting hand above your head & twisting. Try to get your arms in a line.

Extend your arm movement to touch your shoulder.

Start in the plank position & take one leg out to the side directing the knee to the shoulder (hurdle action). Alternate performing 2 sets of twenty.

Easier: Practice the arm movements with your knees on the floor. Then try to lift up into the plank position.



SIDE PLANK - DYNAMIC



Set up a side plank by lying on one side on the floor with the knees one on top of each other (stacked). Engage your core as you lift up into a 'plank' position. Keep core engaged by deliberately focusing on those muscles. Hold & stabilise for 15-30 secs. Perform 2 sets of ten, then reverse to the opposite side.

Progression: Sweep your upper hand under your shoulder & through/under your body – raise arm up to the front, then above your head & then lower.

Easier: Start by just 'swiveling' your upper arm back & forth above your body. Feel the changes this creates in your core stability.

Rest from the side plank between reps.



"I can feel my oblique abs strengthening to help transfer power energy smoothly through my core and spine during the stroke drive"

ROW WELL

PURPOSE



This works the deep muscles in the side nearest to the floor and the outside of the bottom hip. Transferred to the boat you will be stable as you reach across to place the blade in the water.

TOP TIPS

Keep level in the centre of the body avoiding rolling the hips forwards or back

Let your head turn to look at the floor as you sweep your upper arm down

UPRIGHT ROW

“Strengthening my deltoids helps me maintain power at the finish”

ROW WELL



 All rowing-type exercises help you find and connect a broad range of muscles groups. Getting these muscles to fire at the right time and in the right order takes practice. Upright Row will particularly help your middle & posterior deltoids and biceps.

Start with one foot on the middle of the band, hold each side of the band in your hands. Then cross the bands so you are holding the left-side of the band in your right hand and vice-versa. Hold each end of the band in a fist with the palms of your hand facing your body. Your arms should be relaxed with your hands hanging freely.

Keep your hands close together; pull your elbows up to head height. Your fists should be around chin height with palms down. Slowly return to your starting position by lowering your hands first and then your elbows in a controlled manner.

Progression - Pick the band up closer to your feet & stand up straight before you begin the exercise. Try using a kettle bell - but don't 'jerk' the initial movement and keep

your head still. The great thing about bands is that the resistance increases progressively.

Easier - use a lighter band.

3 sets of 12 reps

PURPOSE

Helps to engage the upper (shoulder) and lower (hip) girdles and transfer power between them.

TOP TIPS

Imagine you are standing between two glass panels - one in front and one behind you

Try not to let your elbows touch either panel



BALANCE AND STABILITY - ERGO

ROW WELL

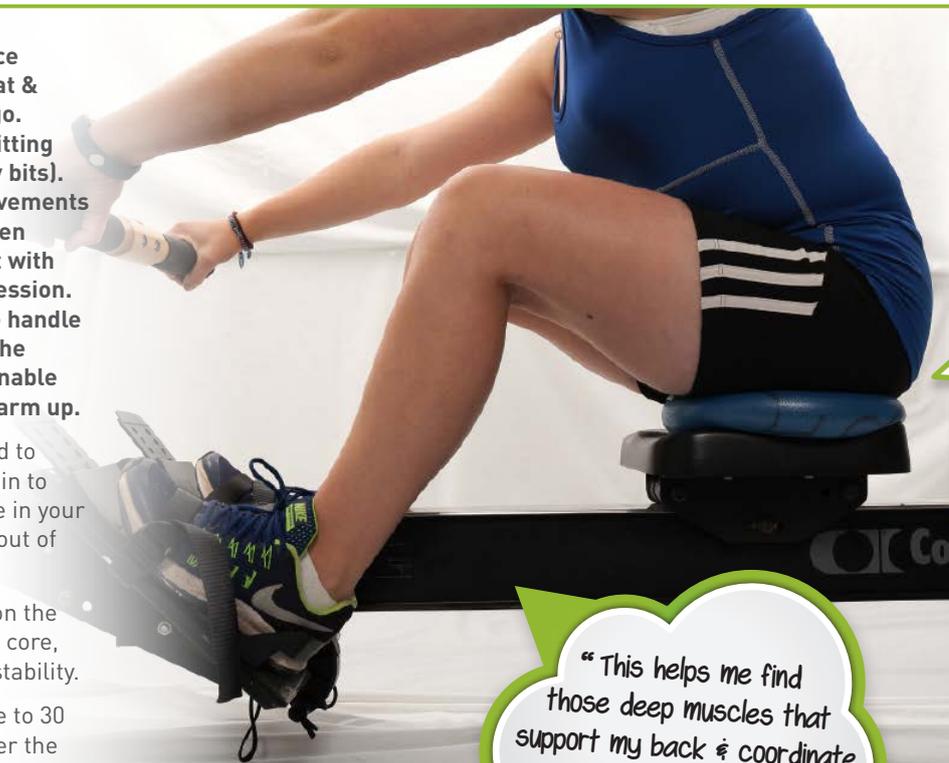


Use a Sit Fit (balance cushion), on the seat & warm up on the ergo. Stabilise on your 'sitting bones' (the knobby bits). Begin with arm movements from backstops. Then gradually reach out with normal slide progression. Try to 'hang' off the handle as you stabilise at the catch. Build up to enable you to do a 2 min warm up.

Progression: Extend to multiple sets of 2 min to establish endurance in your core. Take one foot out of the straps.

Reducing the drag on the ergo challenges the core, enhancing greater stability.

Easier: Reduce time to 30 sec then 1 min, lower the feet position.



"This helps me find those deep muscles that support my back & coordinate my arm and leg movement"

PURPOSE



Helps control & stabilise as you approach the catch. Maintain posture & lift the blade from the shoulders

TOP TIPS

Keep arms & neck area relaxed

Maintain a semi flexed knee throughout

Relax grip on the handle, maintain neutral & relax the spine

Activate leg drive with arms

These are just some of the routines that you can use to improve your performance in the boat. The digital version has 'in context' links to other content from our partners and contributors.

These HerMoJo exercises are all about developing functional strength for effective and economical movement – not building bulk strength! Mix them up with the other ideas, strategies and concepts in the manual to build your 'Inner Strength and Outer Confidence' MoJo.

Moving Forward - now you've mastered some of the routines you can start to include them in your training programmes.

 **Coaches** – use the CORE 4 to introduce your athletes to these ideas as part of your land sessions. At the same time get them used to the idea of functional strength for better, long term boat propulsion. Then see if you can introduce sessions after water work – ideally starting with one, then moving to two dedicated sessions per week for senior girls. You will already know how

important it is to get stabilising routines perfect. Working on their own, teenagers will find it very hard without some support from you, parents etc. So you might think about getting a proactive physiotherapist to join you for one session per month. Check out the OwnIT! Section below – help girls to tune it and maybe use a land session to help them set up shorter sessions at home – based on OwnIT!



OwnIT! - set your own core programme. Once you've mastered the CORE 4 and the ROW WELL section why not try your own sessions at home? Here's a suggested workout (and we mean workout – core work is hard!) which has a set intro - followed by variations which you can tailor to suit. Ask your coach for help with routines and check with your parents that where you are working out is safe. Don't forget you can supplement core sessions easily – just by sitting on a balance ball.

Try to build your dedicated core sessions into a programme something like this:

- Warm up – just sitting & chilling on a balance ball
- Start – kneel in front of your ball
- Roll out & stretch
- Superwoman on ball
- Press-up on ball
- Roll out – ab crunch
- Plank on Ball
- Ball Crunchie
- Hamstring curls
- Flies on ball
- Roll back with bands, oblique
- Hamstring curls with bands

Finish by injecting some general core work with bands

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

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.

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

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).



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

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!

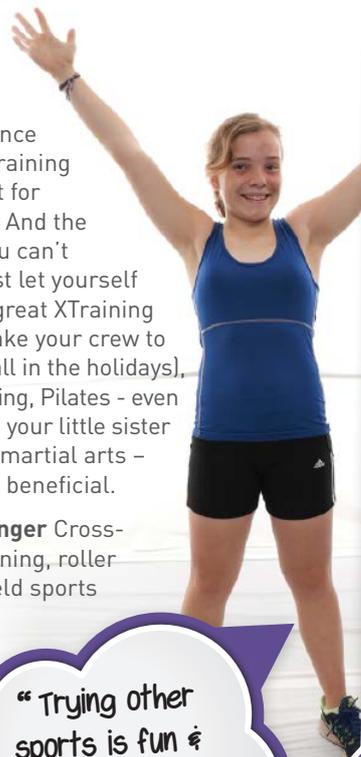
Cardio-Vascular (getting fitter) - maintain fitness and flexibility by cycling, running and swimming. All similar 'closed' sports which help support the Kinetic Chain used in rowing and improve your endurance and cardio-vascular performance. Many of these don't need to be performed intensively and can 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, rollerblading 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.

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.



LET'S GO!!!

GLOSSARY

LET'S GO!!!

Asymmetric strength – many exercises use balanced, symmetrical loading – squat, bench press etc. Yet in all sports the body moves in a variety of ‘planes’ around a central axis. Asymmetric strength improves movement efficiency between these planes. Even apparent symmetrical (sports such as sculling) can benefit from the increased stability from asymmetric training.

Cardio-Vascular (CV) – low to high intensity exercise that impacts the heart/lungs and the increasing ability to deliver oxygen to the muscles.

Core Strength/stability – the ability to find & stabilise the corset of muscles surrounding the back and abdomen. These core muscles provide a solid base for effective movement and efficient transfer of force.

De-stabilise – deliberate or unintentional destabilisation of (core) muscles. Done deliberately to help wake up and recruit smaller, supportive muscles as part of the Kinetic Chain. **See P 10.**

Kinetic Chain – effective and efficient use of muscles, nerves and joints which, when working together produce stable, confident and efficient movement. **See P 10.**

Neutral Spine – the natural position when all 3 curves of the spine – cervical (neck), thoracic (middle) and lumbar (lower) are in good alignment. This is the strongest position when standing or sitting. **See P 09.**

Oestrogen – the primary (group) of female sex hormones responsible for the regulation/development of the female reproductive system.

Osteoporosis - fragile bones causing an increased susceptibility to fracture. Bone density decreases after 35 years of age, and more

rapidly in women after menopause. See Female Triad – **See P 27.**

Pelvic Floor - the sheet of supporting muscles under the uterus, bladder, and colon (large intestine). Finding and strengthening it is like pretending that you have to pee, and then holding it.

Periodisation – systematic planning of athletic training in order to reach peak performance for one specific event or for a season. Typically, focusing on; endurance, power, technique etc. at various stages in the cycle – including rest. **See P 49.**

Physical Literacy – Body awareness, motivation, confidence, physical competence, knowledge and understanding - to value and want to engage in physical activity.

Pilates - Pilates strengthens your body in a balanced way, with particular emphasis on core strength to improve general fitness, wellbeing and efficient movement. Named after Joseph Pilates.

Plyometric – short quick exercises moving rapidly from muscle extension to contraction to develop power.

Proprioception – sensing relative position of body segments and their associated movement using stimuli from a range of organs – principally from nerve sensors in the limbs. Important for the precise co-ordination involved in sport.

Reps/Sets – No. of times/groups to repeat an exercise

Yoga - an ancient form of exercise focusing on strength, flexibility and breathing to boost physical and mental wellbeing. The main components are posture (movements designed to increase strength and flexibility) and breathing.

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Photography – Matt Pears ©

With special thanks to:

Leigh Hopper, Physiotherapist - whose beliefs & skills stimulated the team at WSNet and motivated them to develop the HerMoJo concepts of 'Inner Strength – Outer Confidence'.

The Women's Sports Network (WSNet) is a self-funded cooperative of individuals working independently as associates and part-time volunteers. It is a not-for-profit community approaching one hundred thousand worldwide. Crystallising the issues & coordinating opportunities around WomenSport & Fitness by working in partnership with commercial/NGBs/educational/Charity organisations to raise the profile of WomenSport & SportsWomen. Advocating better access to Sport/FITness, alleviating gender-bias and empowering women & girls through sport & fitness in their everyday lives.

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