



# 8 WEEK LEARN TO ROW PROGRAM ISSUE 1 - August 2024

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# OVERVIEW

# 1

This 8 week program is made up of a minimum 2 sessions per week; 1 on the rowing machine (ergo) and the other in the boat. Shown is a brief overview of what each week will entail. More detail is provided on each page.

Equipment and or other people are specified for each week for Ergo session and Rowing session.

## BEFORE THEY GET INTO IT

Prior to starting off your new rowers, ensure they are covered and ready to go. Under Policy SS05 All new members are able to jump into / use any surf craft equipment if they've met the following.

1. Financial member of a Surf Life Saving Club
2. Have completed and been signed off for their 400m pool swim
3. Are signed up for a Bronze course

Keep in mind, all new rowers are able to train and compete at local carnivals if they meet the above and at the minimum age of 15.

## ROWING MACHINE

### Week 1 - PG 2

Basics

### Week 2 - PG 4

Continuation of basics & full strokes

### Week 3 - PG 6

Timing & Breathing

### Week 4 - PG 8

Continuation Timing & Breathing

### Week 5 - 10

Rating & Ratio

### Week 6 - PG 13

Rating, Ratios & build into pieces

### Week 7 - PG 15

Piece & stroke consistency

### Week 8 - PG 17

Piece leadership

## BOAT SESSION

### Week 1 - PG 3

Ergo recap & Basics flat water (FW) session

### Week 2 - PG 5

Ergo recap & Basics FW w/ exp. rowers

### Week 3 - PG 7

Boat handling & Cont. Basics

### Week 4 - PG 9

Introduce side changes

### Week 5 - PG 11

Intro. Quick step ins & Surf calls on FW

### Week 6 - PG14

Recovery & Building pressure

### Week 7 - PG 16

Small surf & body positioning

### Week 8 - PG 18

Recap in small surf

## RESOURCES - PG 19

Ergo - Power Curve

Ergo - Drag Factor

## COMMON HAZARDS - 22

## BAD HABITS - PG 23 - 31

Ergo & Boat - Catch / Drive / Finish & Recovery



# WEEK 1 - ERGO

## BASICS

### RECOMMENDED EQUIPMENT

#### Mirror(s)

These are a great tool to allow the athlete to view themselves side on & front on in real time.

If you only have 1 Mirror available, locate to show the side view of the athlete.

#### Recording Device

To use if no mirror(s) is available or as an addition. Make sure to obtain permission prior to recording parts of the session.

### ONLINE RESOURCES

[www.rowerup.com](http://www.rowerup.com) - this AI rowing technique platform creates a technical analysis on the ergo and in the boat.

### ROWING MACHINE

It is recommended to have the screen down so the rowers can concentrate on technique rather than the numbers on the screen, drag factor between 80 - 100 (Damper 1 - 3) go through the following step by step

#### SET 1 - RECOVERY

- Legs straight, sitting upright, arm movement in and out
- legs straight, slight lay back, arm movement into body rock
- start at lay back > arms away > body rock > break knees. (Reset & repeat)

#### SET 2 - CATCH & DRIVE

- catch - catch position, progression of drive and opening up
- Legs only, body in catch position with arms straight
- Legs and body opening, arms straight
- Legs, body and arms (reset and repeat)

#### SET 3 - ALL TOGETHER

- Try and pull together full strokes (film this piece)

2



# WEEK 1 - ROWING SESSION

## ERGO RECAP & FLAT WATER

3

### ERGO RECAP

go through a brief refresh of the ergo session performed earlier in the week. Recommended to be between 10 - 20 minutes. This can also be used as a warm up prior to your boat session.

### BOAT SESSION

1. Have a boat on sand and rowers sitting in the boat with oars across.

2. Get them to slide the oars into the rowlocks and to push against the rowlock to get the feel of the oar locking into the rowlock.

DRILL - Get them to lean slightly inwards towards the middle of the boat with straight arms to feel the balance and stability the rowlock gives them and then to lean out of the boat to feel the lack of stability.

### FEATHERING

Still on the sand get them to sit with an upright position with straight legs and feather the blade back and forth (30 deg. to vertical) with that slight pressure from the inside arm against the rowlock.

DRILL - Follow on with the arms only drill and then body rock (square blade) then incorporate the feather into the sequence. Provide a physical reference point to come off the feather, eg. Over the knees.

### CATCH SIMULATION

Whilst still on the sand, get one rower at a time to come up to a catch position. The sweep can stand in front of the blade and brace it with his / her leg. Ask the rower to slowly apply some pressure so that the blade presses against the sweeps leg and trying to take a stroke. Look for the rower breaking their body alignment (shooting their bum or throwing their shoulders). This is a good drill to teach them the importance of maintaining a strong posture at the catch and throughout the stroke. Repeat for each rower.

Move boat into the water and have rowers step into the boat together on the sweeps call.

Have rowers sit with upright posture, straight legs and straight arms with blades feathered to flat. Make sure rowers maintain that slight inside arm elbow pressure against rowlock and also to very slightly lean into the boat (to assist with balance point).

Start with arm rowing only with no body rock, as practiced on the sand. Move into arms plus body rock. Repeat this sequence 2 - 3 times. Then ask rowers to come into a catch position to start a full rowing stroke. This will take practice, stop the athletes from rowing as soon as the rowing sequence falls apart and start again from arms only.



# WEEK 2 - ERGO

## CONT. BASICS & FULL STROKES



### RECOMMENDED EQUIPMENT

#### MIRROR(S)

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#### Recording Device

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### ROWING MACHINE

Screen down, drag factor between 80 - 100 (Damper 1 - 3)  
go through the following step by step

### RECAP OF WEEK 1 DRILLS TO START SESSION.

Continuation of proper sequence of recovery arms away, body rock, legs break and decelerate into catch.

Then, the correct drive phase is;  
hold body in slight forward lean, legs taking the pressure with body holding strong, body starts to open up and hinge from pelvis approx 1/4 to 1/3 into the drive, arms begin to draw in at approx 1/2 to 2/3 way through the stroke and finish strong.

### Key points to remember

1. Sitting up tall and strong with chest out and shoulder blades slightly retracted (in the catch position).
2. Maintain this tall strong position as if someone was pulling the rower up by the hair.
3. As the body rock begins, it should begin from the pelvis and ensure the rower doesn't slouch into the last 1/4 of the stroke.
4. As the arms draw in, the elbows should be slightly out (not next to the body) and the forearm should be roughly parallel to the ground. There shouldn't be a deviation in the angle of the forearm and wrist (T-Rex arms).



# WEEK 2 - ROWING SESSION

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## ERGO RECAP & BASICS W/ EXP. ROWERS

### BOAT SESSION

If possible have 2 experienced rowers assist with the session.

Have two experienced rowers in stroke pair with two new rowers in bow pair to start with. If only one experienced rower is available put them in stroke to start with, then move them to 2 seat or 3 seat.

Start with arms only and then into arms plus body rock. Repeat x 2 at least. at a slow rate, if progressing well, step up to a medium rating\*.

Important for experienced rowers in stroke pair to start with very low rate and very slow movements. Although wrong technically, you can ask rowers to add a very slight “micro pause” at the arms away. This will often help new rowers be able to control their slide and not have a breakdown of the recovery sequence (arms, body-rock, legs).

### \* FOR SOME FUN

If progressing well with hands only, continually speed up the hands til they can go as fast as they can.

### SIDE NOTE

Typically, the speed of the movement in the stroke feels faster as you progress from stroke to bow. Try swapping experienced rowers to the middle seats or bow pair, for the new rowers to feel the difference between the seats when there's some power behind the strokes from the experienced rowers.

New rowers are encouraged to move slowly and make all their movements deliberate in each part of the stroke (Drive Phase) and throughout the recovery sequence.



# WEEK 3 - ERGO

## TIMING & BREATHING

### RECOMMENDED EQUIPMENT

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#### Aim

There should only be one rower and everyone else is just a mirror image or a shadow of that one rower so that everything happens together at the exact same time.

Ergo - following experienced rower/s. focus on timing and breathing

1. Have experienced rowers sitting in amongst new rowers on ergo. **Only the experienced rower should have their screen visible and get all other new rowers to turn the screen over.**

The experienced rower is the “lead” and calls out the rate and what aspects to focus on.

Areas to work on include making sure that **everyone’s bodies** as well as the **handles** all **move together** during both the drive phase and recovery phase.

The rate should be low and the damper on a lower setting (1-3). Do short durations where they work on full stroke, however they have one particular aspect that they really concentrate and focus on. An example would be:

### Example Session

Row for 2mins x easy pace and at the 1min mark they are going to do 10 strokes where they focus on all handles moving in towards the catch (during recovery phase) and away from the catch (drive phase) at the exact same time and same speed. There is no emphasis on pace or intensity or even the back half of the stroke.



# WEEK 3 - ROWING SESSION

## BOAT HANDLING & CONT. BASICS



### Aim

Rowers should be taught to practice both spinning and tilting the boat when a wave comes on shore in order to take as much impact out of it as possible and then to spin the boat back and level off the gunwales to continue moving the boat along the shoreline.

The most amount of accidents occur along the shore, so it is critical that all new rowers are aware of their surroundings in order to keep themselves and other safe.

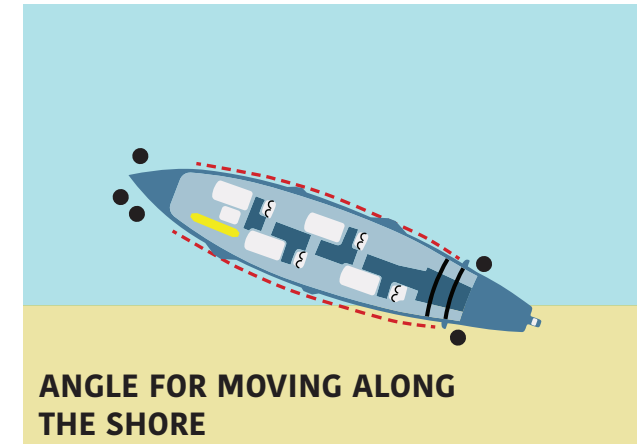
### ONLINE RESOURCES

#### ASRLQ Boat handling video

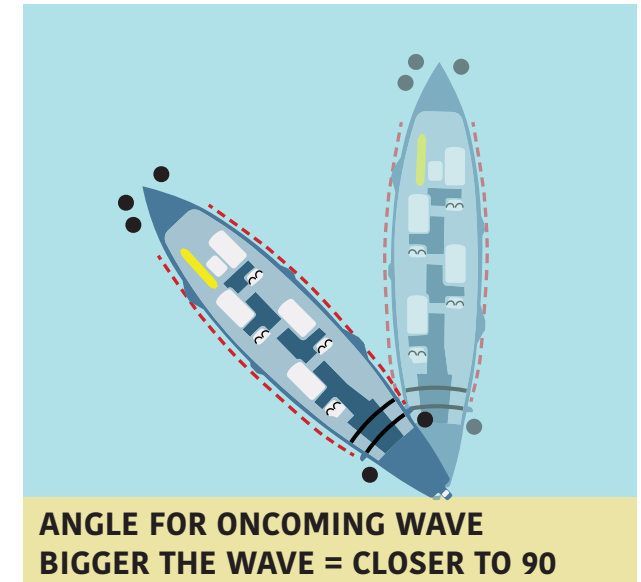
<https://www.facebook.com/share/v/LYZdZYqR2GyykXEi/>

### BOAT SESSION

1. have the boat in shallow water with no oars and have the rowers stand at either ends, making sure they stay out of the middle of the boat, where they are unable to get away from it if hit by a wave.
2. For a normal crew of 5 the best scenario is to have two people at the bow on the shore-side and one at the bow on the ocean side. The 4th rower and the sweep are both at the very stern of the boat, one on each side.
3. The sweep should mimic the calls used when in the surf. Rowers should practice a fast turn where they spin the boat as if bow was pointing out to see by 30 degrees or more initiated by a single call from the sweep, then spin the boat back to near parallel to the shoreline and walk along with it before repeating.
4. Whilst on the flat rowers can also be taught to use the natural curve of the hull to assist with the boat lifting over whitewash. As well as the boat being put on an angle of at least 30 degrees the seaward gunwale should also be raised slightly.



**ANGLE FOR MOVING ALONG THE SHORE**



**ANGLE FOR ONCOMING WAVE  
BIGGER THE WAVE = CLOSER TO 90**





# WEEK 4 - ERGO

## CONT. TIMING & BREATHING

### RECOMMENDED EQUIPMENT

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Ergo - following experienced rower/s. focus on timing and breathing

Timing as above, concentrating on all legs moving together and all knees driving down at the exact same time, all body rocks together and all handles moving together both during the drive phase and in the recovery.

Timing should also apply to breathing. If rowing with an experienced rower have them make a “forced exhalation” at the end of the stroke as the handle comes in to the chest and away.

Have other rowers work on the timing of their breathing also. The coach / sweep can emphasise this by counting the strokes with the calls being a strong, definitive count (e.g. One, Two, Three, etc) as the rowers do the forced exhalation.

Rowers will naturally hold their breath slightly at the catch and start to expire approx one quarter into the drive phase but again should over emphasise the strong exhalation at the end of the stroke which would also correlate to the extraction of the blade in the boat.

This exercise is establishing rhythm within the stroke, working in correlation to the sound of the fan wheel through the drive phase. Having your rowers understand the importance of timing in breathing will benefit them in the long run and keep their nerves leveled, as we tend to panic when there is no control of the breathe.

Understand that new rowers might find this exercise challenging, especially if they have had minimal experience of breathe work during exercise. They will have a tendency to take more and shallower breathes. Encourage the use of a double breathe if necessary.

Inhale at the catch;  
Exhale at the finish;  
Quick inhale through hands away; and  
Steady exhale through recovery.

This will also encourage them to slow their recovery into the catch.



# WEEK 4 - ROWING SESSION

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## SWAPPING SIDES

If you haven't already - swap the rowers around within the boat, especially sides. This will be beneficial for them, understanding how other seats feel and how their body might take the adjustment. This will be a setback when it comes to their mind / body connection, and there may be some that can adapt faster than others, or gain understanding in their preferred side.

Building on previous week and highlight key body positioning to assist with changing sides.

- Ensuring outside elbow is up
- Leaning into the middle of the boat / applying pressure into the rowlock
- Rowing around the rowlock
- Chest to inside leg at the catch position



# WEEK 5 - ERGO

## RATING & RATIOS

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### RECOMMENDED EQUIPMENT

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#### Recording Device

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The sweep / coach should explain once again that ergo's are a training tool to help develop good technique and build good habits that are transferable to the boat. It should be emphasised that rowers are to maintain form, technique and timing at all times, in every session regardless of the stroke rate or the intensity.

The "Drive Ratio" refers to the association between the work phase (Drive) and the recovery phase (Rockover & Recovery) of the stroke. The **correct ratio** should be around **1:2** meaning that rowers should spend **twice as long to 'recover'** down the slide towards the catch position as was spent through the drive phase.

#### EXAMPLE SESSION

Session to emphasise maintaining the ratio

10mins (broken into 4mins x easy, 3mins x medium, 2mins x firm, 1min x hard) keeping the stroke rate at 16-18spm.

**4 Mins Easy** - rowers are told to break the recovery down so that each movement is noticeable and making sure that the last 1/4 of the slide into the catch position decelerates.

**3 mins Medium** - More pressure is applied to the footplate, however there is still a distinct ratio between the time taken on the drive and time taken on the recovery phase.

**2 mins firm** - firm pressure is applied to the leg drive. The stroke rate will naturally start to elevate due to the increased speed of the drive however for this exercise it is beneficial to keep it between 16-18spm throughout.

**1 min Hard** - The last 1min is done with a hard drive phase of the stroke. The tendency for most rowers will be to "rush" the recovery which would result in the overall stroke rate jumping up. Try to get rowers to once again maintain 16-18spm, apply hard pressure to the footplate or go at a hard / high intensity, yet maintain the controlled and sequential recovery phase of the stroke.

A normal session might see rowers repeat this and do 2 - 4 x 10mins. It could also be broken into 6-8min efforts with 2mins at each level and stepped through on a quicker progression such as: 6mins (2mins x easy, 2mins x medium, 2mins x hard). In this drill especially, the pace per 500m is irrelevant as this is a technical / technique based session and that should therefore be their entire focus.



# WEEK 5 - ROWING SESSION

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## Intro. Quick step in & Surf calls on FW

### BOAT SESSION

Simulate the following, Step ins and then rowing out to sea and back in with clear communication to the crew.

### STEP IN START

In shallow water have rowers step their inside leg into the boat on a call of “step”. Wait approx 3secs and then the sweep can call “in”. This needs to be done on very shallow water in order for bow pair especially to be able to clear their gunwales.

The progression from here is to speed up the “step” and “in” calls so that there is less of a pause between. Finally, the sweep can have a single call of “in”. The rower can still focus on their inside leg clearing the gunwale but the momentum of that leg should be followed through so that their body and outside leg naturally follows.

### SURF CALLS

Sweeps have slightly different calls or words that all mean the same thing. Regardless of the word used, it should be clear and concise so that the rowers know exactly what is expected of them.

### “Forward” “Front Chocks” “Chocks”

When rowing to sea some sweeps will call “forward” to have rowers slide to the very front of their seats in order to pop over whitewash or punch through a wave.

Used when rowing out to sea and popping over whitewash OR coming in on a steeper wave and getting weight out of the bow of the boat.

1. Rowers move to the very front of their seat, with arms out straight and handle as low as possible
2. Arms out straight
3. Handle as low as possible
4. blade on the feather (closer to horizontal)

Having the rowing blade horizontal with the blade face pointing towards the sky means there is less surface area for the water to hit and therefore less chance of the blade being shunted backwards and causing the handle to hit the rowers shins or catching a crab. This is both painful and extremely dangerous as the boat will usually be in the middle of the surf zone with at least one rower focusing on the pain they are in rather than the task of trying to clear the break quickly and successfully.

### “Hold” “Hold water”

Either when stopped in the impact zone going out to sea or backshot from a wave.

1. Rowers move to the 1/4 front of their seat, with arms out straight
2. Blades in the water at slight over angle / to 90 degrees
3. sitting slightly more upright to prevent being pulled over forward and losing handle
4. Can tap out and grab again if necessary

### “Back up”

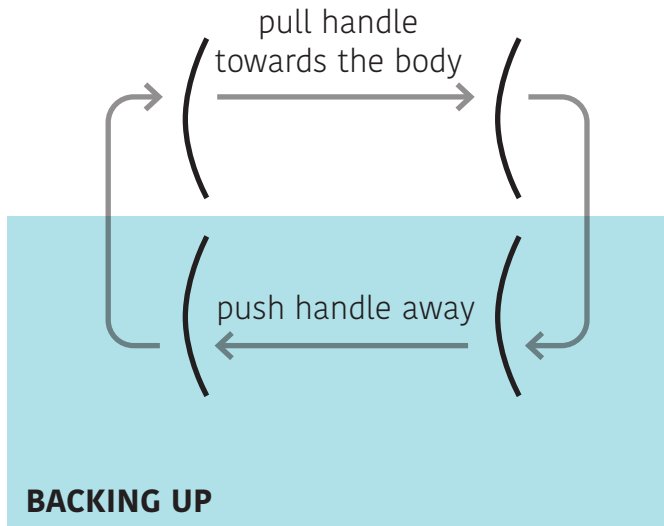
Either in the impact zone avoiding being hit by an unbroken wave or avoiding catching a wave in.

1. Rowers move to the centre of the seat
2. blades in the water and push hands away
3. release the blade at the front of the stroke
4. pull the handle back to them with the blade out of the water

Crucial to practice and complete together, as there is not much power in this stroke and is necessary to be done as one.

See diagram on the following page



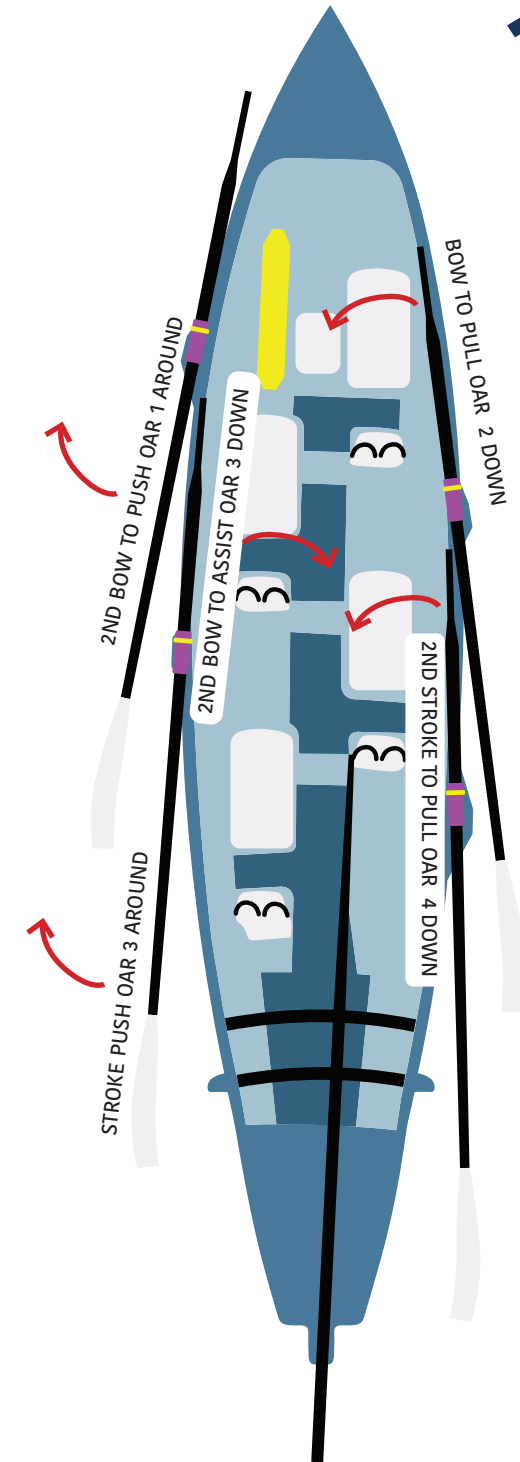


### 1. “Trail” “Come aft” “Come back”

This should be discussed with the crew before the boat ever goes to sea and should be practiced multiple times on flat water. The ability for a sweep to give early and clear instructions of what will most likely happen next gives the rowers more time to process the information and therefor minimise mistakes.

1. Rowers finish stroke, feather the blade and lay back. Pushing the oar clear of the gunwale
2. All sit up and move to the centre of the boat first
3. Move along the centre and sit where practiced. Some like to have the stroke pair split to either chock near the sweep, or stay in a central line facing the bow.
4. When instructed “back to seat” all rowers move together
5. The stroke calls “sit” and all sit and collect their oars together. Helping each other to push oars back around.

With all calls used in the surf and in race conditions the main priority is for rowers to follow those instructions calmly but quickly. Aiming to keep the boat as balanced as possible.



# WEEK 6 - ERGO

## Rating, Ratios & build into pieces

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### RECOMMENDED EQUIPMENT

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The sweep / coach should explain clearly that rowers are to maintain form, technique and timing at all times regardless of the stroke rate.

A set piece where rowers are given adequate time at each rate should be explained and experienced rowers take the lead and along with the coach make clear calls of what will happen next.

#### EXAMPLE

Total - 4 minutes & 30 seconds. Rating change every 1 min & 30 secs.

Coach and or experienced rowers to make the call rating change and provide enough time for others to be aware.

1st 1:30 rating at 22spm.

---- notify of change at 1:20 mark ----

2nd 1:30 rating at 24spm

---- notify of change at 2:50 mark ----

3rd 1:30 rating at 26spm

At all times and regardless of the rate, rowers should be reminded that there is a specific ratio of the drive phase to the recovery phase. Generally 1:2, which means that the length of time spent on the recovery should be twice as long as the amount of time spent on the drive.

The increase in stroke rate should always begin with a more forceful and faster drive phase with the recovery remaining controlled and smooth. The recovery phase will naturally start to speed up after several strokes of stronger drive which will in turn lift the whole stroke rate.

Other examples could be 1min at each of the following stroke rates where again the main focus is on form, technique and timing: 5mins x (1min @ 20spm, 1min @ 22spm, 1min @ 24spm, 1min @ 26spm, 1min @ 28spm).

Anything above a stroke rate of 28spm should be used sparingly with new and younger rowers as they will lose their technique and form and potentially reinforce bad habits.

It is important to allow plenty of time at each rating for the rowers to settle and find their rhythm.



# WEEK 6 - ROWING SESSION

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## Recovery & building pressure

### BOAT SESSION

Building on previous weeks boat and ergo work this week can focus on applying the Drive Phase in the boat. Rowers can be shown how to use the movement of the boat and the leverage of the oar to help them control their recovery phase and not rush into the catch. Once rowers have started to gain control of their slides a similar sequence to the ergo can be used (i.e. easy, medium, firm & hard / easy, medium, hard) to get rowers to feel the difference in pressure applied to the footplate and differing intensities in the drive phase whilst always maintaining the control in the recovery phase.

Further drills to enhance blade / oar control, technique and drive phase:

### PUSH BACKS - BLADE TO REMAIN IN THE WATER

1. Have rowers sit with straight legs, body leaning back and their arms in at their chest with their blade fully covered in the water.
2. Gently push away with their hands until

their arms straighten.

3. Continuing on they will follow the arms straightening with their body rock over into a catch position angle from hips to shoulders.
4. Slowly start to slide down the seat into a catch position.

Whilst they are doing all of these steps of the recovery phase the blade is to remain fully covered in the water, so that they are pushing back against the water and the boat will move backwards slightly.

Once into a catch position the sweep can say “go” or “drive” or “push” and rowers take a normal rowing stroke. reset and complete again.

Because the boat is moving backwards slightly the drive phase will feel heavier against their legs so it is a good drill for feeling (and seeing) whether they lose posture in their torso and whether they are trying to push the footplate with the leg drive or trying to rip the handle with their upper body.

### 4-COUNT & 6-COUNT

\*Once crews have got a feel for applying a firm pressure to the footplate and understand the drive ratio in the boat, they can start to apply this drill into longer pieces of rowing.

For example, rowing along easy and then the sweep calls “for the next 10 strokes concentrate on the drive”, etc. The drive phase can also be emphasised by using a “4-count” or “6-count” which is the time taken during the recovery phase.

With a 4-count drill, the sweep will say “on my call you are going to emphasise the drive phase and after the first stroke you are going to slow the recovery phase down so that you are catching on the count of 4.”

Crews start the first of X strokes (could be 10, 20 or 30 strokes) and then on the recovery phase after that first stroke emphasising the drive phase the sweep calls “1 - 2 - 3 - 4 - catch”.

To further illustrate breakdowns in the recovery phase and highlight rowers that might rush the next progression would be a “6-count: 1 - 2 - 3 - 4 - 5 - 6 - catch”. As this is much slower in the recovery phase the boat will also be much heavier at the catch and on the drive thereby allowing rowers to feel the “push” of their leg drive against the footplate (rather than trying to pull on the handle).



# WEEK 7 - ERGO

## Piece & stroke consistency

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### RECOMMENDED EQUIPMENT

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#### AIM

Aiming for a more consistent split across the piece and ratings. This may be daunting for some, keep an eye on their effort and encourage them to back off if they are pushing too hard to begin with and won't be able to maintain throughout the whole piece.

### Session 1 Example - Power strokes

24s/p (70/80% effort) for 90secs  
(build for 2 at the end)

10 power strokes (90%) at **22**  
(holding same split or improve)

24s/p (70/80% effort) for 90secs  
(build for 2 at the end)

10 power strokes (90%) at **26**  
(improve split)

24s/p (70/80% effort) for 90secs  
(build for 2 at the end)

10 power strokes (90%) at **22**  
(holding same split or improve)

### Session 2 Example of 6 min sessions

6mins total - every 2mins change rate by 2 points. Aim for negative split on the previous

#### example only

20s/m - 2:10

22s/m - 2:05

24s/m - 2:00.

Rate drop down and maintain split / power

24s/m - 2:00

22s/m - 2:00

20s/m - 2:00

Rating pyramid - change every minute

20, 23, 26, 23, 20

try and hit the same split for same rates.  
eg.

20s/m - 2:10

23s/m - 2:05

26s/m - 2:00





# WEEK 7 - ROWING SESSION

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## Small surf & body positioning

### BOAT SESSION

Race Simulations: Simulate race as above from Week 5, incorporate calls.

**The steps and drills done on flat water in week 5 can now be practiced in small surf conditions.** Starting with the step in (or jump start) rowers can practice getting into the boat and then just sitting before taking a stroke.

Going through the surf zone the sweep should make all calls well in advance so that rowers have plenty of time to process the sweeps call and act.

For example, rather than rowing at an oncoming broken wave such as in a race, the sweep would call “forward” and then slowly let the boat drift forward over the next 2 - 5 seconds and allow the boat to pop over the whitewash. This allows the rowers plenty of time to get themselves and their oars in a position where they are less likely to cause injury to themselves, injury to other rowers or

damage to equipment.

Once out the back, the crew can practice various situations that would occur in the break / surf zone both on the way out and the way in. Situations such as the sweep calling for the crew to “back up” or row backwards to get away from the impact zone; repetitive “forward” or “hold” calls with minimal strokes in between to simulate multiple waves that are close together or practicing trailing and coming aft as if on a wave.



# WEEK 8 - ERGO

## Piece leadership

### RECOMMENDED EQUIPMENT

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#### Recording Device

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#### AIM

Ergo - Promote piece leadership / voice, 4 pieces - 1 each to call rating changes. Technical calls to be by the coach only.

The final week of the program on the ergo is a combination of all the previous weeks. All the skills and drills learned should now start to be combined and put into practice within set pieces or make up the overall session. Allocate a rower to be the “piece leader”, communicate any change in rating or steps in drill required.

#### EXAMPLE 1

\* 3 - 5mins x easy warm up  
(Focus on posture (sitting tall and strong) and working on drive ratio at low rate

\* Legs / Arm / Body Drills:  
10-15 stroke x Legs only + 10-15 strokes x Legs & Body Rock (arms remain straight) + 10-15 strokes of full rowing stroke (legs, body, arms) ~ repeat 2 - 4 times

\* 2 - 4mins x easy rowing, every 5th stroke do 1 stroke with legs only ~ repeat 1 - 3 times

\* 2 - 4mins x easy rowing, every 5th stroke hold shoulders back and hands away and pause for 3 secs (1,2,3 Hold drill) ~ repeat 1 - 3 times

\* Rowing at various durations and intensities

(3 - 5 x 4 - 10mins) always focusing on form, posture, technique and timing as a group. Ergo scores / pace / intensity should still not form any part of the session at this stage.

#### EXAMPLE 2

\* 5 - 10mins x warm up

\* 4 x 8mins (1min x drill + 3mins x rowing focusing on that drill ~ repeat), 2 - 8mins rest (longer rest so coach / sweep can review the previous piece and explain details of next 8 min and the drill rowers will focus on)

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# WEEK 8 - ROWING SESSION

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## Recap in small surf

### BOAT SESSION

The final week is a culmination and combination of everything in the previous 7 weeks. As an example, crews could do race courses or do a mock race scenario at very low intensity where they work on each of the components

- Starts
- Surf skills in the break
- Listening to the sweeps calls
- Rowing technique once clear of the break
- Working on the correct ratio of drive to recovery

Initially this could be done with one or two experienced rowers in the boat to help novice rowers as even though it should be done at a low intensity, beginner rowers will fatigue quickly so their mental processing of calls from the sweep and their reaction times will be delayed. If conditions permit and if the rowers are capable enough a complete crew of beginner rowers can do the mock race courses at very low speed and low intensities to further practice their rowing.

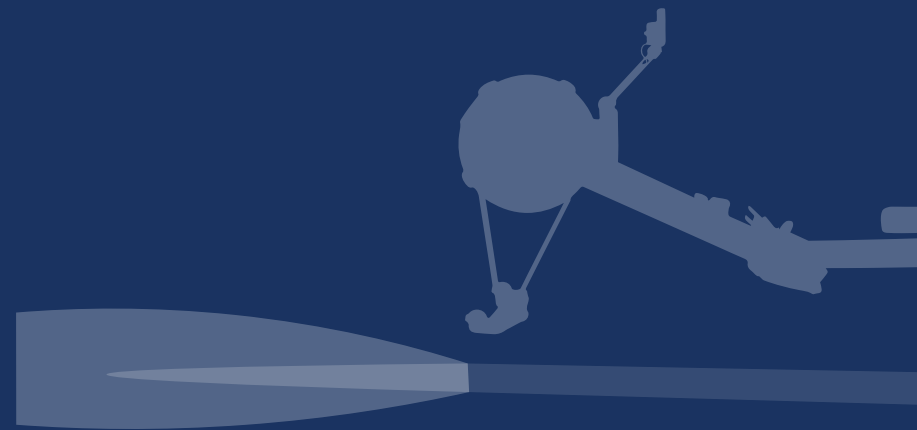
other various technical aspects of rowing technique (sweep calling out key words or cue words such as elbows out, hands away, etc), and practicing trailing oars and coming aft on wave).



# RESOURCES



**8 WEEK - LEARN TO ROW PROGRAM | Issue 1 - 2024**



The Force Curve graphically represents how you apply force (or power) during the rowing stroke, indicating how your total force varies as you use your legs, back and arms during the drive:

- The smoother the curve, the smoother the application of force.
- The larger the area under the curve, the greater the amount of force applied.

### Chunky front end means this:

A huge peak on the front end of the curve that tapers off means you are likely applying too much force too early and should distribute it more through the rest of the stroke.

### Valley in the middle means this:

A dip in the middle, depending on where it is can mean two things. A peak that dips peaks again and drops off is usually an issue in connection between legs, hips and arms. We would be looking at a disconnection somewhere in the transitional period in the middle.

### Chunky back end means this:

A dip or deviation at the back end of the curve can either be a problem connecting the hips to the arms or a problem with the arms.

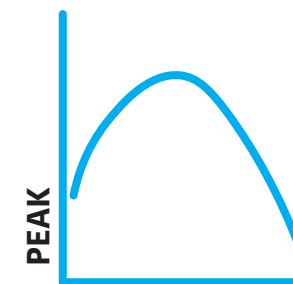
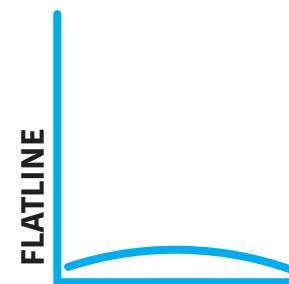
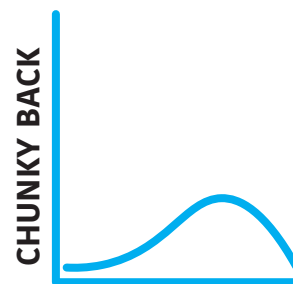
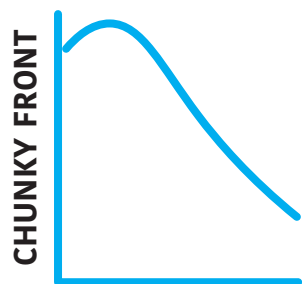
### Long flatline means this:

There isn't much power or area under the curve. You are not creating much force or are not able to apply much force to the machine. We should be working on how you connect, on better bracing at the catch, better application of force into the machine, and better positioning.

### Peak in the middle means this:

This is the ideal force curve, indicating good power through the drive and connection through the transition of the legs / hips to upper body.

Going forward, use this screen to check on the efficiency of your row technique and use it to help you improve the timing of the drive, transition and catch of your row. Ideally we want our rowing to be smooth as a knife in butter from the catch, through drive and pull to the catch.



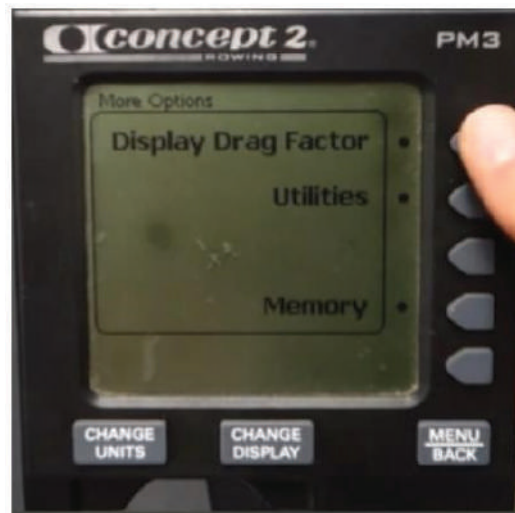
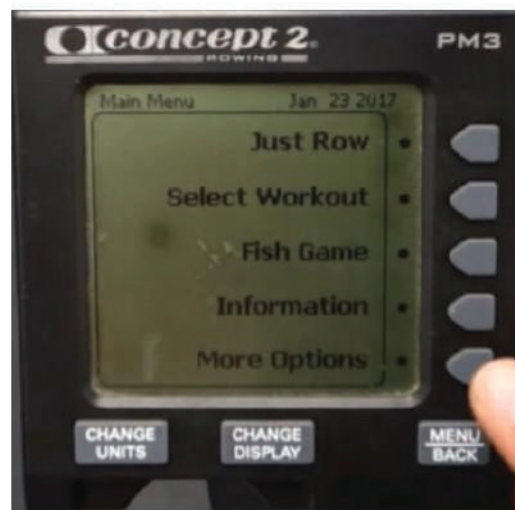
## Drag Factor

Concept 2 website - Damper settings 101  
<https://www.concept2.com/indoor-rowers/training/tips-and-general-info/damper-setting-101>

Typical drag to be set for surfboat rowing can be anywhere from 90 - 120, this can depend on the age, strength and purpose of session.

The benefit of setting the drag factor is because not every ergo is the same if set only by the flywheel. This ensures a more consist setting across ergos in different gyms and for your crew in comparing scores from week to week.

For a young beginning crew, it's encouraged that the wheel is on level 1 on the fan wheel. Ensuring the athlete is taught good technique first and slowing bring up the drag factor as they progress through the weeks. Building them into the resistance of the machine.



Follow the above steps and proceed to row for a few strokes until it displays the drag factor number.

## Foot placement

### Setting the Flexfoot

Strapping your feet into the machine in the right spot affects foot and seat comfort. In general, your heel should be positioned in the footstretcher so that the strap crosses over the ball of your foot.

If you are less flexible or are carrying extra weight around your midsection, you may want to adjust your feet lower. Make sure you don't place your feet so low that your hamstrings rest uncomfortably against the seat, cutting off circulation to the butt.

<https://www.concept2.com/training/articles/getting-comfortable-on-the-rowerg#>

Scene	Hazard	Risk	Control
Trailing / moving through the boat. Grabbing the Gunwale	fingers getting crushed between the oar and gunwale	High	Ensure to always keep your hands clear of the gunwale. Move through the boat holding onto foot straps or pressing on the inside of the boat to keep balanced
Moving the boat in the water, standing on the shore side in the centre area of the boat	Boat being shunted by a wave and falling onto / going over a person	High	Follow the guide in week 3. Always remain clear of the middle of the boat when moving along the shore
Grabbing the rowlocks with oars still inside	Fingers getting pinched / crushed	Moderate	Either remove the oar from the rowlock or hold onto something else to avoid fingers getting jammed.
Catching a wave and skimming blades on the water	Blade skimming flat, getting caught in the water and knocking into the rower	High	<ol style="list-style-type: none"> <li>1. Not skim - if that's the sweeps preference</li> <li>2. If skimming, ensure blades are on a 45 degree angle and have arms out straight, in case there is a chance of catching a crab. Straight arms will provide added brace against the oar. Always look at the blade and listen to the sweep for any additional calls.</li> </ol>
Moving the boat on the beach	Straining the body	High	Have multiple people assisting, and or use rollers to assist with moving the boat along the beach



# BAD HABITS

Every athlete will tend to form some 'bad habits' during their rowing journey. It's important to focus on technique first prior to applying any load. Aim is to reduce any poor technique forming which could lead to inefficient rowing and of course, injury.

Provided are some common habits seen on both the rowing machine and in the boat, along with some drills to correct the issue.

\* We understand that there are personal preferences to style of rowing, these are all generic cases of habits that are commonly seen. \*





# Rowing Machine

## CATCH

### 1. INVERTED SHINS

Shins have gone over 90 degrees and the seat is near touching the heels or is making contact.

- Set the athlete up into a strong catch position (show in a side on mirror if possible)
- Get them to take a mental note of how the body feels in said position and lightly practice stopping at the catch whilst looking at themselves in the mirror

#### Options to create a physical registration

A) Coach sit side onto the machine and use a hand as a touch point for the front of the shin, the athlete is not to push into the hand, but take the catch as soon as contact is made.

B) Set athlete in the catch position and place a stretch band over the slide, this will stop them from going any further down the slide. Best to use initially then change to option C.

C) Set athlete in the catch position (image 4) and mark the point of the slide with tape, thick enough for the rower to feel the change. This does not stop them from going over, but should make them conscious of the appropriate spot.

### 2. LIMITED PACK UP

On the ergo it is more common to have knees inverted (beyond 90 degrees)

Test the rowers mobility and get them to sit as far as they can at the catch

- If struggling to pack up, make sure rowers are properly warmed up and encourage the rower to work on hip and lower back mobility.

If they can reach the appropriate catch position, but are unaware of their body position

- Define a visual / physical reference.

#### Physical

- Chest will just be touching the legs

#### Visual

- There should be minimal / no gap between the chest and legs.

### 3. SLUMPING AT THE CATCH / OVER REACHING

#### Catch and drive drill

- Set athlete up in strong catch position (11 o'clock body angle, neutral head, good posture)
- Get them to take the catch and drive using legs only, not to open up the shoulders or arms.
- Run through this at 1/2 slide, 3/4 slide and finally full slide.

In addition, sit side onto the machine and use hand as a touch point for them to hit the handle with, not to push through. The handle does not need to hit the machine.



## 1. THROWING SHOULDERS / OPENING UP FIRST AT THE CATCH

Most commonly occurs due to 2 instances.

- 1) When the athlete is over compressing, leading to hitting heels with the seat and forming a 'worm' effect
- 2) More of a Crossfit style, of over applying power and throwing shoulders back first

Run through Catch and Drive Drill and also simulate taking load at the catch.

- Set athlete up in strong catch position and set yourself up behind the fan
- Take hold of the handle with the athlete and ask them to take the catch
- Practice until they've made appropriate body connection and should be able to lift themselves slightly off the seat, this is not possible if they throw their shoulders or shoot their bum.
- Either have a mirror side on or film the athlete and show them their body angles.

## 2. SHOOTING BUM

Most commonly occurs due to lack of body connection at the catch phase

Run through Catch and Drive Drill and also simulate taking load at the catch.

## 3. WOBBLY HANDS

Check that the drag factor isn't set too high. If this is still occurring with the fan on 1, check that the rower is engaging and drawing the shoulders down, making for better connection. Use the Catch and Drive Drill to confirm that their power is coming from their legs and not their upper-body. Continue to go through arms only drill, as well as body rock. Keep pieces to a shorter length to prevent major fatigue.

## 4. HUNCHED THROUGH DRIVE

Bring the rower to the catch and guide them to strong catch position, straight back with a slight forward lean, shoulders drawn down from head. Practice Catch and Drive drill, with them watching in a side mirror is possible.

## 5. BREAKING ARMS AT THE CATCH / TOO EARLY (NO IMAGE)

Load getting taken into the arms and biceps. Though this can be used on the ergo to improve splits, it will fatigue the muscles in the upper body quickly and cause a disconnect from the handle to the rest of the body.

- Put the screen down and practice catch and drive drill (not opening up), whilst focusing on straight arms through the drive.
- Place thumbs over the top of the handle. Mimicking a hook. Limiting the ability to over grip and break the arms



# FINISH

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## 1. DRAWING/FINISHING TOO HIGH

Aim is to finish just below the chest, generally where a HR monitor would sit or the line of a sports bra. Demonstrate where the handle is better positioned on the body and have the rowers set with a mirror in front, for them to see the point of contact.

## 2. BENT WRISTS (T-REX ARMS)

Commonly tied into drawing too high, this is where there can be a break at the wrist. This can cause an overload at the forearms and strain the wrists.

- Use a mirror in front of the athlete and ensure their elbows are flaring out at roughly 45 degrees from their body along with light hands at the finish to allow movement
- Get your athlete to sit at the finish and practice drawing hands in and away, focusing on where their elbows are angled
- For a physical alternative, tape a paddle-pop stick to their wrist, with the aim being for them to hold contact with the stick

## 3. A) MINIMAL LAYBACK / B) OVER LAYBACK

Minimal - Sitting closer to 90 degrees at the finish

Over - Laying back beyond 30 degrees

Optimal - 15 - 30 degrees

With minimal and over lay back, set up a side on mirror and guide the rower into the appropriate finish angle. Also, stand behind them and set your hand at the finish point. The rower, either needs to lean back more to touch the point, or sit up more and not push beyond the point.

## 4. HUNCHED FINISH (NO IMAGE)

Have the rower complete a few strokes and stop at the finish, with handle still at the chest. using a side mirror (if possible) let them see their body position and guide them into the appropriate finish position, prompts such as “chest up” “chest forward” will be enough for them to understand the change required. Another tip, is you can slightly push into the mid back, which prompts them to sit up more and not tuck their pelvis under.



# RECOVERY

## 1. BOUNCING OUT OF THE FINISH (NO IMAGE)

Generally caused by a lack of core stability. But, to keep the habit from developing, have the rower sit at the finish position and practice hands away, then build into body rock. Making sure there is still a definitive ratio from the drive to recovery phase and not just 1:1 in and out movement.

## 2. KNEES POPPING BEFORE ROCK OVER

Can be caused by limited flexibility within the hamstrings, hips / lower back. But, to keep the habit from developing, have the rower sit at the finish and break down the recovery motion while they look in the mirror or follow prompts.

Example - “Hands” “shoulders” “knees”

Visual references are also helpful, when the hands are mid shin, break the knees.

## 3. RUSHING THE SLIDE / BOUNCING INTO CATCH (NO IMAGE)

This can tie in with knees popping as well, or feeling like they are being “left behind”, which may not actually be the case.

2 things

- Ensure they are rocking over at the right point
- That they don't have inverted shins (see Catch section) and packing up too much, making their slide unnecessarily longer.

Though we do use our toes in order to assisting in pulling us to the slide, it shouldn't be the only thing. Have the rower rest their feet on top of the foot plate (not strapped in), with this they will need to engage their hamstrings in assisting them to move down the slide. This also sets them up to already be engaged at the catch and drive with better connection.

We don't allow ourselves to squat or sit without any brace / control. This applies in the recovery phase as well.



# In the Boat

## CATCH

### LIMITED PACK UP/ SHINS NOT VERTICAL

On the ergo it is more common to have knees inverted (beyond 90 degrees), however in the boat it can commonly be the other way around, where rowers are not quite making it to vertical shins at the catch. This can be caused by mobility within the boat, or being unaware of ones body position.

Test the rowers mobility and get them to sit as far as they can at the catch

- If struggling to pack up, make sure rowers are properly warmed up and encourage the rower to work on hip and lower back mobility.

Can reach the appropriate catch position

- Define a visual / physical reference.

Physical

- Centre of the chest is just touching the inside leg

Visual

- Generally in line or slightly in front with the front screw on the seat.

### SLUMPING AT THE CATCH / OVER REACHING

Catch and drive drill

- Set athlete up in strong catch position (11 o'clock body angle, neutral head, good posture)
- Get them to take the catch and drive using legs only, not to open up the shoulders or arms.
- Run through this at 1/2 slide, 3/4 slide and finally full slide.

- Define a visual / physical reference.

Physical

- Centre of the chest is just touching the inside leg

Visual

- Generally in line or slightly in front with the front screw on the seat.

### NOT ROWING AROUND THEIR OAR / CUTTING IT SHORT

At the catch position, but missing that last bit where the centre of the chest is in line with the inside leg. They could be coming into the catch and staying very in-line with the body and knees staying together.

This can be a mobility issue or a habit to protect the lower back.

Before adjusting the pins (below), first make the rower aware of the appropriate body position. Making sure they centre of the chest is in line with the inside leg. Stretching around more with their outside arm.

If they are struggling at the catch, try the below.

Check the rowlock setting (pins). If the rower is feeling the catch may be too heavy, try adjusting the pin. This will change the arc length of the stroke and where the blade will enter and finish in the water. Best that all adjust to the same pin, so the pressure remains consistent

- Bow pin / front pin (heaviest)
- Middle pin
- Stroke pin / back pin (lightest)

### JAMMING THE CATCH / MISSING THE CATCH

Jamming the catch

As the sweep, you are more likely to feel and see this occur. It will feel like there's a slight check in the boat upon entry of the blade. The blade will more often than not also have a larger than necessary back splash. The rower is forcing the blade into the water and not allowing it to fall with gravity - lightly off the fingers.

Missing the catch

Visually the rower and sweep will be able to see that there is no back splash on the blade when entering the water, potentially a slight splash on the front. This is missing the entry point and initial lock on the water, to then build into the stroke.

Catch drill

- Have all the rowers come to the catch and sit with straight arms, blades in the water - as if they are about to take a stroke.
- They are to lift and drop their blades in at the same time by putting slight pressure on the hands down (to lift the blade out) and to release (to let it drop).



# DRIVE

## THROWING SHOULDERS / OPENING UP FIRST AT THE CATCH

Most commonly occurs due to 2 instances.

- 1) When the athlete is over compressing, sliding off the front of the seat and forming a 'worm' effect and throwing the head back.
- 2) More of a Crossfit style, of over applying power and throwing shoulders back first

Run through Catch and Drive Drill and also simulate taking load at the catch.

Use a physical and visual reference in the boat.

Physical

- Should not feel the edge of the seat at the catch
- Shins should still be at 90 degrees

Visual

- Generally in line or slightly in front with the front screw on the seat.
- If throwing their head, their line of site will not be horizontal to the shore line. Have them wear a cap (if they aren't already) and use the rim of the hat as a horizontal guide against the shore line. Keeping them parallel.

## SHOOTING BUM

Most commonly occurs due to lack of body connection at the catch phase

Run through Catch and Drive Drill and also simulate taking load at the catch.

## HUNCHED THROUGH DRIVE

Bring the rower to the catch and guide them to strong catch position, straight back with a slight forward lean, shoulders drawn down from head. Practice Catch and Drive drill and drawing through with straight posture and pushing through the legs, as opposed to pulling with the back.

## BREAKING ARMS AT THE CATCH

More common in male athletes that "muscle it" through the stroke, the load is getting taken into the arms and biceps. This will fatigue the muscles in the upper body quickly and cause a disconnect from the handle to the rest of the body.

- Place thumbs over the top of the handle. Mimicking a hook. Limiting the ability to over grip and break the arms, practice this at slightly higher rate as well, as this is where it's more likely to occur.



## DRAWING/FINISHING TOO HIGH / TOO LOW

Aim is to finish just below the chest, generally where a HR monitor would sit or the line of a sports bra. Demonstrate where the handle is better positioned on the body.

Things that could cause the handle to be too high or too low.

Seat & Oar rigging. To check this, have all rowers sit in the finish position with their blades in the water, make sure the boat is balanced and have them let go of their oars. This will highlight where the handle will naturally sit on the body.

Based on if there are no packers under the seat or spacers on the rowlock pins

### Handle sitting low

- Add a spacer to the rowlock pin

### Handle sitting high

- Ensure the rower has good posture  
- May require a slight seat packer. Keep in mind, the higher you go the less balanced the boat becomes.

### Handles are balanced, rigging is suited to the rowers

Finishing too high

- The rowing could have their blade too deep in the water and covering part of the shaft of the oar. The visual reference to minimise this is the connection point from the blade to the shaft. Any deeper and the boat becomes unbalanced and the rower is in a weaker drive position

Finish too low / drawing into lap

- They could be flicking their blade out at the finish and not having full coverage of the blade throughout the stroke, losing pressure on the blade.

Practice arms only, ensuring all have good body position and there is a definitive difference between the drive and recovery phase, in and out from the body. Aiming to have the blade finish at the same spot each time and making sure the blade is covered all the way through.

## BENT WRISTS (T-REX ARMS)

Commonly tied into drawing too high, this is where there can be a break at the wrist. This can cause an overload at the forearms and strain the wrists.

- Ensure their elbows are flaring out at roughly 45 degrees from their body along with light hands at the finish to allow movement
- Get your athlete to sit at the finish and practice drawing hands in and away, focusing on where their elbows are angled
- Outside elbow should be up slightly higher than inside, making the wrist turn outward.

## MINIMAL LAYBACK / OVER LAYBACK

Minimal - Sitting closer to 90 degrees at the finish

Over - Laying back beyond 30 degrees

Optimal - 15 - 30 degrees

This is harder to adjust within the boat and best viewed on the ergo. Have your sit at the finish with the handle on the chest and blade in the water. Communicate with them if they need to sit up or lay back further.

Having someone else film from the shore line or boat next to

## HUNCHED FINISH

Have the rower complete a few strokes and stop at the finish, with handle still at the chest. Using a side mirror (if possible) let them see their body position and guide them into the appropriate finish position, prompts such as “chest up” “chest forward” will be enough for them to understand the change required. Another tip, is you can slightly push into the mid back, which prompts them to sit up more and not tuck their pelvis under.

## LEANING OUT

Through the drive and finish the rower is leaning towards the outside of the boat, with their outside shoulder down and elbow tucked in.

- Have the rower sit at the finish, ensure their outside elbow is lifted in-line with the handle and their inside shoulder is dropped slightly.
- Throughout the stroke, have them continuously apply pressure to rowlock with the collar and keeping the inside shoulder down.

This will make the boat more balanced and secure the rower into a stronger position. Also, prevents the oar from slipping out and popping out of the rowlock.



# RECOVERY

## BOUNCING OUT OF THE FINISH

Generally caused by a lack of core stability. But, to keep the habit from developing, have the rower sit at the finish position and practice hands away, then build into body rock. Making sure there is still a definitive ratio from the drive to recovery phase and not just 1:1 in and out movement and defining the difference in movement from the hands and shoulders.

## KNEES POPPING BEFORE ROCK OVER

Can be caused by limited flexibility within the hamstrings, hips / lower back. But, to keep the habit from developing, have the rower sit at the finish and break down the recovery motion while they look in the mirror or follow prompts.

Example - “Hands” “shoulders” “knees”

Visual references are also helpful, when the hands are mid shin, break the knees.

## RUSHING THE SLIDE / BOUNCING INTO CATCH

This can tie in with knees popping as well, or feeling like they are being “left behind”, which may not actually be the case.

2 things

- Ensure they are rocking over at the right point
- That they don't have inverted shins (see Catch section) and packing up too much, making their slide unnecessarily longer.

### Roll up Drill

Have the rowers commence the drill at the finish, with handles on chest and blades in the water. On the call from the sweep “row”, all rowers tap out, push arms away, rock over and come down the slide together and place the blade in the water to make one splash sound.

This is to be done at an exaggerated slow pace, to make rowers more aware of what's happening around them and to not rush one another.

