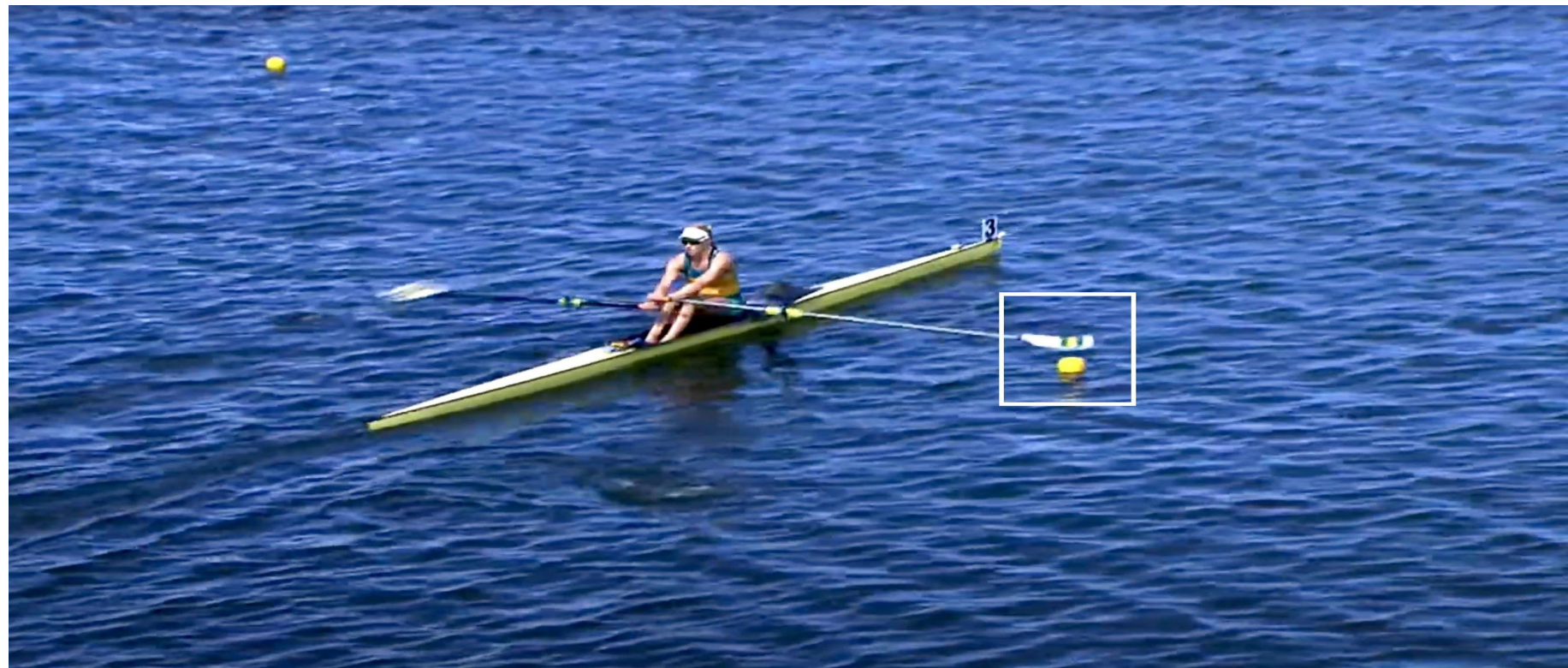


# Over The Buoy- On the Way to Condition-Free Technique

Kim Brennan, Australian 2016 W1X Olympic Champion



# Disclaimer

There are many ways to scull successfully. I choose to take a blade centric approach which relies on “condition-free technique”. I want athletes to be able to row and race in any conditions. Keeping in mind that whatever the hands and body does the blade does the opposite. I believe that sculling is at the intersection of Biomechanics(how you move in the shell) and Fluid Dynamics(the relationships between the blade, boat and water).

The following comments, pictures and videos all support this approach toward sculling.

# Guiding Principles for “Condition Free Technique”

1. Practice does not make perfect, practice makes permanent.
2. Understand, “whatever my hands do the blades do the opposite”.
3. Position yourself in the shell to become, “one with the boat, blade and water” system.
  - a. Through the handle(closed grip), oar and oarlock system,
  - b. Position your butt and lumbar spine on the seat to maximize the seat’s connection to the boat.
  - c. Use your shoe connection to stabilize your lower body during the recovery and drive, and each transition point entry and release.

## **Guiding Principles cont.**

5. There is only one technique. The technique you use to go fast whether by yourself or in competition. Many of us row steady state one way and speed row another. Specificity of technique needs to mimic the technique for going fast.

6. Whenever you stop, start! Do not take off on the paddle with your hands in your belly. Start at the front end and take the first 3 to 8 strokes of the start. Learn to be strategic at the beginning of race whether in practice or on race day. If you are in lane one don't square your blades until lane 6 is called. With a squared blade let the back of the sleeve rest firmly against the back of the oarlock. Always have bow pressure on the handle at the start with the blade in the water.

7. When rowing into a stop or turning point always raise the rate for the last 10-15 strokes.

8. To avoid "flat-water-itis" force yourself to row "Condition Free Technique". Row over the buoy not through.

# Guiding Principles Cont.

9. Keep as much of the stroke skeletal in terms of posture, pivoting, and length of body parts, spine, arms and legs.

10. Always progress from largest strongest muscles to smallest least strong. The slowest portion of the stroke requires large muscles, fastest moving portion can be accomplished with smaller muscle groups.

# Being one with the shell

The four connection points.

## **Handle: (Closed Grip)**

1. Allow the hand to rest on the handle with the index finger close to the radius or curved portion of the handle.
2. The thumb assumes one of three positions: Under the handle, behind the handle or with the thumb/palm joint near the end of the handle.

Using slight outward pressure with the hand, forearm or elbow connect the inboard of the oar through the collar with the oarlock and pin.







# Handle/Upper body connection

3. When the blade is square the knuckles of the hand should be between 12:30 to 1:00 o'clock on the stern side of the handle.

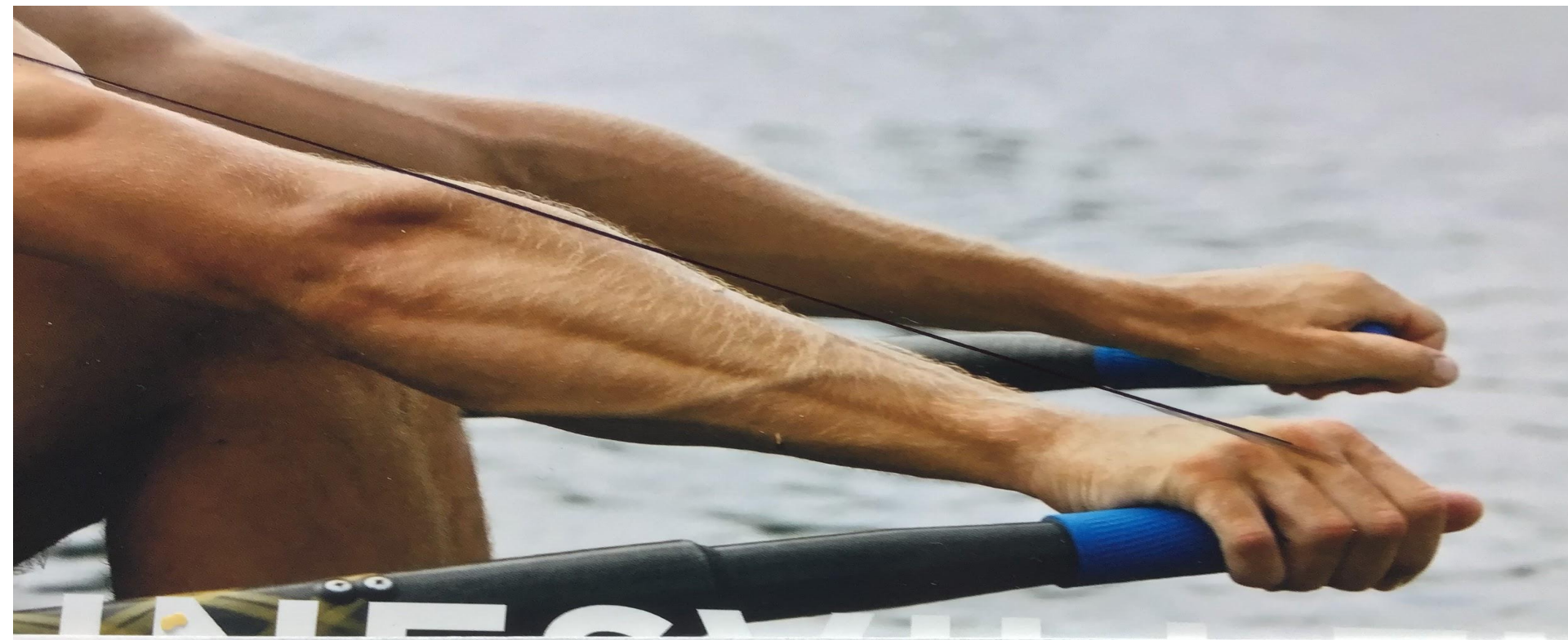
4. There should be a straight line between the knuckles and the shoulder.

With the back of the hand, wrist, forearm, bicep and shoulder all touching an imaginary yardstick resting between your knuckles and shoulder.

Picture from August '20 of "Rowing Magazine" back cover. Notice the thumb position and location of index finger.



Wrist are depressed prior to squaring. Notice thumb position.



Cindy Shirts long arms at the beginning of drive. Notice how the knuckles, elbows and shoulders all rest against the straight line. Note also the position of the thumb.



# Hand location on the handle



# Lower Body Connection-Mid-thigh to feet

1. **Foot stretcher:** Drive through the big toe, inside the ball of the foot, the arch and screwing the heels down to the footboard as you complete the leg drive. Knees should be down but not locked.
2. If you have wobbling knees on the recovery apply pressure downward in the heel to stabilize your shins keeping the knees inline with the with the heels.

# Connecting the body to the boat through the seat

1. **SEAT:** Sitting toward the front of the seat so there is no butt cheek hanging off the back of the seat, engage the glutes so you sit on top of the seat not in the seat.

## The **oar/oarlock/rigger**-Where the body meets the water

1. Using the inboard of the oar to engage the oarlock and pin by creating an athletic posture.
2. This includes raising the sternum, moving the lumbar spine toward the belly button, keeping the elbows pronated and at the height of the handle.
3. Keeping your elbows within your peripheral vision.
4. Keeping the shoulders down by engaging the lats.
5. Keep the eyes on the horizon not fixed to your stroke coach.



Cindy Shirts demonstrating the recovery sequence. Notice the strong upper body position. The hands pull the arms and upper body to the stern. The hip and handle connections is critical to your connection to the shell. Pushing out against the oarlocks is like push pocket doors into the wall while sitting on a skateboard. Cindy demonstrates the reverse feather and the skimming feather while returning handles to the body.



Marlene Royle demonstrating tapping out and feather away. The the feather occurs at the beginning of the recovery and not the end of the drive. It is part of the transition from drive to recovery.



# Good Rowing 2- Andrew Campbell, LWT M1X, M2X Olympian



Xiuyun Zhang, Chinese W1X, W2X, W4X, 5x Olympian



# Olympic Level Sculling in Good Rowing 2- USRowing

## TakeAways #1:

1. Both scullers could follow the angle of the shins with the handle during middle of the recovery. This permits the blade to be slightly higher than the buoys. (Condition free technique-sculling above the buoy not through it)
2. Andrew needs to weight the handle at the release so the bottom edge of the blade leaves the water about the height of a tennis ball before he feathers. Feathering over the water not on or in it.
3. Both scullers have long flat arms from entry to knees.
4. Both have excellent hip handle connection both on the recovery and drive. Handle brings the hips to stern on the recovery, hips bring the handle to the bow on the drive.

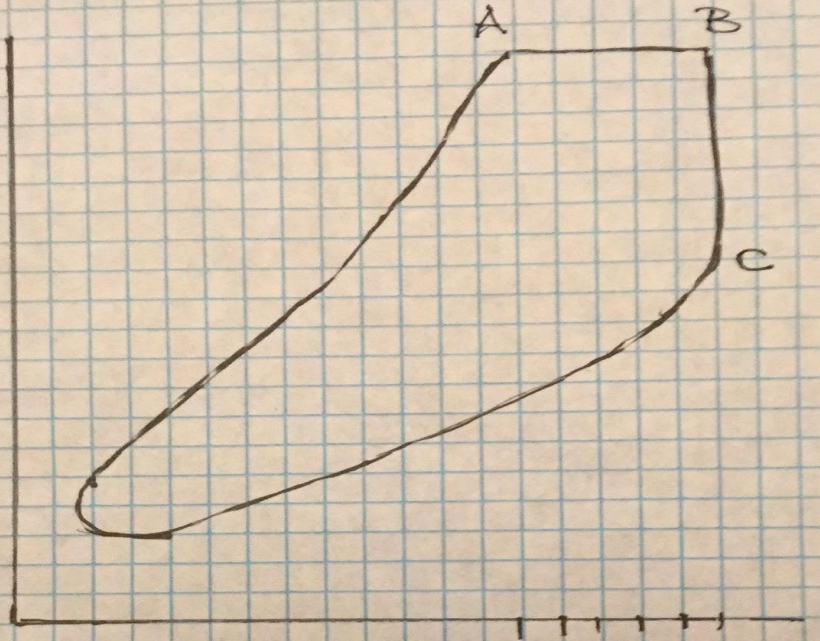
## **TakeAways #2**

5. Both square the blades down to the water well before the entry.
6. They place blade and are patient.
7. Their hips drive before anything else.
8. Both have flat forearms and elbows to the shoreline at the release

PER-OLAF ASTRAND 1922-2016  
Swedish Exercise Physiologist

VO<sub>2</sub> - AUMTA

STREZMNOHND



Fitness VO<sub>2</sub> ml/kg/min

"Text Book of Work Physiology"

## Astrand Graph Discussion Points

1. Account for why A and B performed at the same level given considerable different levels of fitness.
2. Account for why B and C performed at different level given the same level of fitness.



## Single Phrase concepts:

- a. Sculling sits at the intersection of Biomechanics and Fluid Dynamics.
- b. Whatever my hands do the blades do the opposite.
- c. Wherever the elbows go so goes your body weight.
- d. Hips and handles are never disconnected going to the stern or bow.
- e. Entry process begins with blade prep, placement and patience.
- f. Drive follows entry/blade placement with patience, press, pry and pull.
- g. Keeping the eyes on the horizon and your chin up will permit the body to achieve safe and effective athletic posture.
- h. Nothing is half as much worth doing..”as simply messing about in boats.” 1908, Ken Grahame, “Wind in the Willow”,

Videos etc,

Larry Gluckman, [gluckmanlarry@gmail.com](mailto:gluckmanlarry@gmail.com)

Gordon Hamilton's Favorite Drills from the Florida Rowing Center.

<https://www.youtube.com/watch?v=6gChwVL4uXA>

Gripping and feathering:

<https://www.youtube.com/watch?v=4oznK-VXSD>

General technique of National Team Athletes:

<https://www.youtube.com/watch?v=odljL02D8ec>

Thomas Langer

<https://www.youtube.com/watch?v=LztQXyhBVOY>

<https://www.youtube.com/watch?v=crYedwKMTeo>

Xeno Muller

<https://www.youtube.com/watch?v=JQNk6Fiu96o>

Ivanov

<https://www.youtube.com/watch?v=KfQ916xkevs>

[https://www.youtube.com/watch?v=ccuT8vGz\\_h8](https://www.youtube.com/watch?v=ccuT8vGz_h8)