



# Ski Paddling

## Coaching Manual 5th Edition

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## Ski Paddling - Technique

### 1. Catch

- Blade should enter as close as possible to the side of the ski and be square to the water
- To maximize the reach the body should be leaning slightly forward
- Shaft of paddle should be roughly parallel to shoulders (i.e. via body twist)
- Torso should be rotated and braced, preparing for the impact of the blade on the water
- Top hand should start vertically around the level of the ear with the lower hand and arm horizontal at shoulder level



### 2. Pull Through

- Neck and shoulders should be relaxed, eyes looking straight ahead at the nose of the ski
- Shoulder, arm and hand on recovery side (top side) should be relaxed and should follow the arc created by the arm that is driving the paddle in the water
- Top hand should be kept on a horizontal plane at eye level and should cross the midline of the body
- The line of the stroke should be along the side of the ski curving outwards at the end with body rotation and being lifted clear of the water by bending at the elbow lifting the hand straight up to finish beside the ear thus setting up for the next stroke
- Main power input should come from the larger muscles via body twist (abdominal, latissimus dorsi and other back muscles) and leg drive (quadriceps)



### 3. Recovery

- Without losing the body rotation (twist) from the previous stroke the opposite blade should be set up for the catch
- Make sure the fingers, wrist and elbow are fully extended towards the front of the ski
- Bottom hand (side about to enter the water) should be dropped vertically down. The top hand (the side that has just finished the stroke) is kept at ear level and the upper arm horizontal to shoulders
- Minimal body rotation should be lost while the blade is out of the water



#### 4. Body Twist

- The body twist, along with the leg drive is the key factor in generating a long, powerful stroke
- Torso should rotate from the hips, causing the knees to rise and fall
- The shoulder about to engage in the stroke should be rotated towards the front of the ski
- Twist should only occur once the blade is in the water



#### 5. Leg Drive

- Very important for generating power throughout the stroke
- Drive or push the leg on the same side as the blade is in the water (i.e. Left blade in water = left leg drive)
- Focus leg drive pressure through the heels and minimize pressure on the toes as any movement of the rudder creates extra resistance.
- Leg drive should not occur before blade enters the water and should be slightly delayed at catch



Ski Paddling Technique Checklist	Yes	No
Smooth transition from the stroke on one side to the opposite side		
The catch should have an aggressive entry into the water		
Leg drive and body twist should lock in after the catch is complete		
Main drive of stroke comes from large muscles from body rotation and leg drive		
Shoulders and shaft of paddle remain approximately parallel throughout the stroke		



## Drills

Ski Paddling Drills Checklist	Yes	No
Drills are part of every training session		
Jump starts are practiced in every session on both flat water and surf		
Drills are progressed from small surf to more difficult conditions		
Paddling in to shore should be done perpendicular to the beach and never directly downwind		
One session per week should be devoted entirely to training drills and skills		

## Training Sessions

Surf ski paddling has great demands on physical strength and strength endurance. The need to reaccelerate sometimes many times in the one race because the ski is stopped by waves and chops puts extra demands on the paddlers body.

The aerobic demands of a ski paddler are of great importance. Often ski paddlers will compete in multiple events, such as the single ski, double ski, mixed double ski, taplin relay and ski relay events. This means that a ski paddler, even at the local club carnival level can compete in five races, each between three to five minutes in duration

The overall yearly program for a ski paddler is similar to many other disciplines in that it follows a structured progression in the components of skill, fitness and strength development. This “periodised” systematic approach to training helps ensure that maximum gains in all of these components are obtained. An equation that can be used for ski paddling to help emphasise the priorities of these physical components is:

### **SKI PADDLING = SKILL x AEROBIC FITNESS x STRENGTH**

In this formula, the most important aspect of a ski paddler’s development is the level of skill. This is due to the very unstable nature of the craft. It is no good being the strongest and fittest paddler on the beach if you fall off when paddling through the break. It is for this reason that the balance and technical drills outlined previously should be implemented in every training session, particularly given that the finals of ski events are always held in the afternoon when the wind has usually made the conditions even more unpredictable.

### **Aerobic Fitness**

With competitors participating in many events with multiple rounds, the need for a strong aerobic conditioning background is an essential part of an overall program

### **Strength**

The development of strength, especially for junior or novice paddlers, is less important than the other two components. Only when a ski paddler becomes more proficient in their skill and physical fitness levels does the development of strength become increasingly important. For ski paddling, the periodised approach to an overall yearly program of 48 weeks duration can be divided into four 12-week blocks, which are outlined below.

### **Base 1 Phase (12 Weeks)**

#### **Cross Training / Transition**

- Paddlers should still participate in exercise and other activities to help maintain some basic level of aerobic fitness and keep weight gain to a minimum
- This block has a heavy emphasis on cross training and alternative activities to prevent both physical and mental burnout (i.e. touch football, boxing, etc)
- Some specific paddling sessions should be employed in order to maintain some degree of “feel” for the ski and the paddle in the water.

- Paddling sessions should be of long duration (40 - 60+ minutes) and low intensity (65 - 75% MHR) or purely a skills session (i.e. catching waves)

### **Adaptation**

- Training should be mainly cross training and circuit training to ensure the athlete can adequately adapt to later increases in volume and intensity
- Use light weights (<60% 1RM) and high repetitions with a wide variety of exercises

### **Hypertrophy**

- Weights can be medium to heavy (70 - 85% 1RM)
- Number of sets can range from 3 - 5
- Repetitions can range from 8 - 15
- Speed of movement is slow

## **Base 2 Phase (12 Weeks)**

### **Aerobic Foundation**

- More sport specific sessions can be introduced
- Paddling sessions should still be of long duration (60+mins) but intensity should be progressively increased up to 85% MHR
- Technique and skill are of primary importance and the progression of intensity in training should not be at the expense of either components
- Running, swimming and other cross training should still be used to enhance aerobic fitness

### **Hypertrophy**

- First 6 weeks should follow on with maintenance and progression of muscular hypertrophy through weight training following the outline above
- Increases in reps, sets or weight should only occur if correct technique is used

### **Strength**

- Second 6 weeks is aimed at the development of general and paddling specific strength
- Weights should be heavy (>80% 1RM)
- Number of sets can range from 3 - 5
- Repetitions can range from 4 - 8
- Speed of movement can vary from slow to normal

## **Pre-Competition Phase (12 Weeks)**

### **Aerobic Development**

- Continued progression and maintenance of long duration sessions with progressively increased intensity
- Maintenance of technique throughout duration of session is still of primary importance

### **Ski Paddling Training**

- Running, swimming, bike riding and other high fitness activities should still be used to enhance aerobic fitness

### **Anaerobic / Race Specific Development**

- Sessions should utilise distances longer than anticipated for racing (i.e. Between 8 - 20 minutes)
- Intensity of approximately 80 - 90% MHR can be used to develop anaerobic threshold
- Shorter duration (3 - 8mins) and higher intensity (90%+ MHR) can be used to develop VO2max
- Short, interval cross training sessions such as running on the track should also be used

### **Strength**

- First 6 weeks should follow on with maintenance and progression of strength training following the outline given above
- Increases in reps, sets or weight should only occur if correct technique is used

### **Strength Endurance**

- Second 6 weeks in the pre-competition phase to focus on development of strength endurance
- Weights should be light (40 - 60% 1RM)
- Number of sets can range from 2 - 4
- Repetitions can start at 40 reps and increase in later weeks to 70 reps
- Speed of movement should mirror speed of movement in races
- There should be little rest between sets or between exercises

## **Competition Phase (12 Weeks)**

### **Aerobic Maintenance**

- Sessions of long duration should still be implemented throughout the competitive phase - useful as a recovery session
- Running, swimming and other high fitness orientated activities should also be maintained

### **Race Specific Development**

- There is a further progression of intensity (up to 100% MHR) and a decrease in interval duration towards actual race distances. Rest between efforts also increases.
- As intensity increases, training volume and duration of efforts decrease
- Development and maintenance of skills, tactics and technique should still be of great importance throughout the competitive phase

### **Power**

- Conversion of strength and power gained in the gym to paddling speed
- Duration is 6 - 8 weeks in the competitive phase
- Can be accomplished by using specific paddling sessions such as:
  - Tying an 'occy' strap or rope around front of ski
  - Most paddlers use 1 to 3 tennis balls tied to the ski and dragging in the water to increase and vary the resistance
  - Weights sessions should use heavy weights (90%+ 1RM)
  - Number of sets can range from 1 - 3
  - Repetitions can range from 1 - 5 reps
  - Speed of movement is very fast (explosive)
  - Exercise used should involve several major muscle groups (e.g. power cleans)

### **Maintenance**

- Duration is 4 - 6 weeks in the competitive phase
- All components of skill, fitness, strength that have been developed throughout the year should be maintained in the last 4 - 6 weeks of this phase around the major competitions
- Paddling technique and skills / drills sessions are useful low intensity sessions which can be used in the build up to major competitions

## Competition

### Starting

When starting, the paddler should never look up at the oncoming waves once in the starter's hands. Paddlers should look down and forward to the area around their foot pedals or foot straps and should focus on this area until they are on the ski and have taken their first stroke in the water. Similar to taking your eye off the ball before you catch it, many paddlers who look up at the oncoming waves as they start become distracted which results in a poor start.

There are several ways to jump onto a ski, double leg jump through, one leg jump through, bottom on first then swivel legs in. Some starts suit different paddlers but the key to successful confident starts is regular practice in all conditions. It is an extremely important skill that has to be mastered to be a successful ski paddler and the only way to master it is doing 100's of starts. As the start requires explosive effort from the gun, a good warm up is essential and the body should be kept warm till the race.

This is a description of a single leg jump through start for a right handed paddler which is currently the most popular starting technique:



### Key points

- The paddler stands on the left side of the ski with the paddle held by the right hand which is resting on the right edge of the ski in the middle of the seat well (or on a starting chock) with the front of the paddle balanced on the front of the ski above the water. The left hand is on the left edge of the ski at the start of the footwell.
- The head is over the middle of the ski midway between the two hands. The eyes are looking at the foot straps and the head is kept down. The arms are slightly bent and the weight of the body is evenly distributed through the shoulders onto the hands. The legs are bent and body crouched over
- The legs push forward while the body stays supported by the arms. The legs push off the ground in a leapfrog action with the right leg passing between the arms and finishing with the foot in the footwell. The left foot finishes outside the left hand (sometimes the left leg will slightly remain in the water to help with stability).
- As the left leg comes to the side of the ski the left hand lifts up to grab the paddle which has been moved up across the body by the right hand. The left hand catches the paddle and in the same forward motion reaches for the first stroke.
- The first few strokes are shorter with an earlier exit from the water than normal and lengthen as the ski increases in speed. These strokes are maximum explosive power and set up the paddlers position for the race.

### Heading Out Through the Surf

When negotiating the break on the way out, a paddler must time and practice their impact with the waves. In large surf, patience is often the best option. A surf ski allows a paddler to wait for a clear break before trying to get out instead of risking losing control of their ski. Paddlers have many skills to perfect and here are a few options that they can train for.

**Popping** a wave requires the paddler to accelerate or maintain their speed into a wave, time a stroke just before the wave then lean back lifting the nose slightly (depending on the size of the wave) then leaning forward on impact and catching a stroke on top of the wave to keep the ski's forward momentum.





**Punching** a wave about to break requires acceleration and then leaning forward into the wave with the paddle being pointed through the wave first then catching a stroke on the other side of the wave



When **rolling** the ski into a large wave the competitor should paddle close to the wave then (for right handed paddlers) keep the paddle in their left hand pointing into the wave grab their right footstrap with their right hand and roll off the ski. Forcing the ski forward and down close to their head. As the wave washes over, roll the ski back and start paddling as quickly as possible. In very large waves the paddler will have to grab the footstraps with both hands.

#### Key Points:

- Paddlers must time their impact, maintaining their speed or accelerating into the wave.
- The skills of popping, punching and rolling waves should all be practiced and mastered.
- In large surf, paddlers can be patient waiting for a clean break rather than risking losing their skis

#### Turning the Buoys

The buoy turn in a ski race can 'make or break' the race. Because of the speed a ski is able to travel, any time wasted by being caught up with other paddlers at the buoys will result in paddlers who get around unimpeded gaining a large lead. When approaching the buoys, the ski paddler should already have a good idea of what 'line' they will take. This line should be determined by: the position they are in the pack, who is on the inside and / or outside of them, and the conditions.

The buoy turn is where aggression and the ability to dominate is important. Any impedence is both against the rules and slows both paddlers down but by emphasising the importance of lifting the effort to get ahead or stop the leading paddler cutting you off is vital at this stage of the race.

As paddlers progress to the more advanced stages, they should be taught about the turning capabilities of certain models of skis and how that will affect them in a turn when in specific positions. For example, if a ski paddler is on the outside of a certain model of ski that is known to have a wider turning circle, then the paddler should be thinking about how they can get around the buoys without being taken into a wider turn by the inside paddler.

### Key Points:

- Paddlers need to think about the 'line' they should take around the buoys well before they reach them
- When determining the correct line a paddler should look at who is around them, where they are in the pack, and the conditions
- More advanced paddlers should be taught about the turning capabilities of all models of ski to assist in determining the best line to get around the buoys without interference

## Catching a Wave



Catching a wave on a ski is one of the hardest skills to learn and master. Skis have a long water line and the rudder or rudders have great difficulty straightening the ski once it has gone 10 degrees off to the side.

- Always keep the ski at right angles to the wave (this is not always the same as right angles to the beach)
- Once the wave has peaked use the run down the wave and paddle flat out as the wave breaks. On larger waves when the white water catches the ski and lifts the tail, the paddler can lay back to help the rudder deeper through the foam to gain purchase. Then resume paddling or on small to medium waves don't stop paddling.
- If the ski broaches then the paddler lays back and braces on their paddle in the white water and can drop one or both legs over the side of the ski to maintain control. It is possible with practice to return the ski to a straight position when the wave decreases in size.
- The paddler has to be able to anticipate how the ski will react when the wave breaks. Every wave is different and extensive practice is needed to learn the "feel" of the ski under different situations.

### Key Points:

- Paddlers must be able to anticipate what the ski will do when the wave breaks behind
- Obtaining this "feel" for the movement of the ski can only be acquired through practice and experience
- Continuous paddling helps to control the ski

## Finishing

Paddlers should know exactly where the finishing flags are through the use of landmarks or markers. One end of the finish line often has an advantage because of the angle of the wave and the paddler should have worked out their return run home to take account of this. Paddlers must attempt to use the speed of the wave in the sprint for the finish line. This can only be done through practice and through the experience of knowing when it is best to start the sprint and get the most out of the lift from the wave. Paddlers should simulate a race finish on every return trip to the beach during every training session

### Key Points:

- Paddlers should know where the finishing line is and which end they are aiming for from the designated landmarks they have picked to aim for on the return journey
- Paddlers should utilise the lift and speed of the wave to help in the final sprint for the line
- This feel for the wave giving the ski an extra lift is only gained through practice. A race finish should be simulated on every return journey to the beach in every training session

## Safety Check

The ski should be checked regularly and before every competition for possible safety hazards or mechanical defects. These may include frayed rudder cable wires, sharp edges on screws holding foot pedals, start blocks and foot straps in as well as any areas that need repair or have sharp or rough edges.

Ski Paddling Competition Checklist	Yes	No
Eyes focused on foot straps or other region at the start and NOT at oncoming waves		
Paddler fully accelerates at start to avoid getting caught behind others through the waves		
Optimal "turning line" around buoys is determined before the paddlers reach the buoys		
Continuous paddling helps hold a wave. Paddler continues to paddle at all stages on a wave to assist in the control of the ski		
Paddlers are already aware of where the finish line is from landmarks they have chosen to aim for behind the finishing line		
The paddler uses the lift created by the extra speed of the wave to full advantage on the sprint to the finish line		

## Equipment

- Surf skis must comply with the specific weight, length and safety specifications set down by Surf Life Saving Australia
- Do not leave cork in the ski for any length of time whilst the ski is not in the water
- Do not drop or throw the ski
- Wash the ski down with fresh water after each use
- Always transport the ski in its cover
- Repair any dings immediately, before further use as water inside the hull will cause the ski to gain excess weight
- Check for any frayed wires or sharp edges regularly and replace if needed

Ski Paddling Equipment Checklist	Yes	No
Ski complies to SLSA's weight, length and safety specifications		
Ski is washed and stored properly on padded rack after each use		
Cork is never left in the ski for any length of time whilst not in the water		
The ski does not have any sharp or rough edges from previous repairs or frayed rudder cables		